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FASHION LAW BOOTCAMP: SPECIAL
EDITION FASHION & TECHNOLOGY

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**Mind-Body Connection:
Culture, IP, and the Emerging Wearable Tech Sector**

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ABA Model Rules of Professional Conduct

Client-Lawyer Relationship

Rule 1.1 Competence

A lawyer shall provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.

Rule 2.1 Advisor

In representing a client, a lawyer shall exercise independent professional judgment and render candid advice. In rendering advice, a lawyer may refer not only to law but to other considerations such as moral, economic, social and political factors, that may be relevant to the client's situation.

CALIFORNIA RULES OF PROFESSIONAL CONDUCT**Rule 3-110 Failing to Act Competently**

(A) A member shall not intentionally, recklessly, or repeatedly fail to perform legal services with competence.

(B) For purposes of this rule, “competence” in any legal service shall mean to apply the 1) diligence, 2) learning and skill, and 3) mental, emotional, and physical ability reasonably necessary for the performance of such service.

(C) If a member does not have sufficient learning and skill when the legal service is undertaken, the member may nonetheless perform such services competently by 1) associating with or, where appropriate, professionally consulting another lawyer reasonably believed to be competent, or 2) by acquiring sufficient learning and skill before performance is required.

PROPOSED NEW AND AMENDED CALIFORNIA RULES OF PROFESSIONAL CONDUCT

(Adopted by the Board of Trustees on November 17, 2016 and March 9, 2017. Rules of Professional Conduct must be approved by the Supreme Court of California in order to become operative. These rules have not been approved by the Supreme Court.)

CLIENT-LAWYER RELATIONSHIP**Rule 1.0 Purpose and Function of the Rules of Professional Conduct**

(a) Purpose.

The following rules are intended to regulate professional conduct of lawyers through discipline. They have been adopted by the Board of Trustees of the State Bar of California and approved by the Supreme Court of California pursuant to Business and Professions Code sections 6076 and 6077 to protect the public, the courts, and the legal profession; protect the integrity of the legal system; and promote the administration of justice and confidence in the legal profession. These rules together with any standards adopted by the Board of Trustees pursuant to these rules shall be binding upon all lawyers.

(b) Function.

- (1) A willful violation of any of these rules is a basis for discipline.
- (2) The prohibition of certain conduct in these rules is not exclusive. Lawyers are also bound by applicable law including the State Bar Act (Bus. & Prof. Code, § 6000 et seq.) and opinions of California courts.
- (3) A violation of a rule does not itself give rise to a cause of action for damages caused by failure to comply with the rule. Nothing in these rules or the Comments to the rules is intended to enlarge or to restrict the law regarding the liability of lawyers to others.

(c) Purpose of Comments.

The comments are not a basis for imposing discipline but are intended only to provide guidance for interpreting and practicing in compliance with the rules.

(d) These rules may be cited and referred to as the “California Rules of Professional Conduct.”

Comment

[1] The Rules of Professional Conduct are intended to establish the standards for lawyers for purposes of discipline. (See *Ames v. State Bar* (1973) 8 Cal.3d 910, 917 [106 Cal.Rptr. 489].) Therefore, failure to comply with an obligation or prohibition imposed by a rule is a

basis for invoking the disciplinary process. Because the rules are not designed to be a basis for civil liability, a violation of a rule does not itself give rise to a cause of action for enforcement of a rule or for damages caused by failure to comply with the rule. (*Stanley v. Richmond* (1995) 35 Cal.App.4th 1070, 1097 [41 Cal.Rptr.2d 768].) Nevertheless, a lawyer’s violation of a rule may be evidence of breach of a lawyer’s fiduciary or other substantive legal duty in a non-disciplinary context. (*Ibid.*) (*Mirabito v. Liccardo* (1992) 4 Cal.App.4th 41, 44 [5 Cal.Rptr.2d 571].) A violation of a rule may have other non-disciplinary consequences. (See e.g., *Fletcher v. Davis* (2004) 33 Cal.4th 61, 71-72 [14 Cal.Rptr.3d 58] (enforcement of attorney’s lien); *Chambers v. Kay* (2002) 29 Cal.4th 142, 161 [126 Cal.Rptr.2d 536] (enforcement of fee sharing agreement).)

[2] While the rules are intended to regulate professional conduct of lawyers, a violation of a rule can occur when a lawyer is not practicing law or acting in a professional capacity.

[3] A willful violation of a rule does not require that the lawyer intend to violate the rule. (*Phillips v. State Bar* (1989) 49 Cal.3d 944, 952 [264 Cal.Rptr. 346]; and see Bus. & Prof. Code, § 6077.)

[4] In addition to the authorities identified in paragraph (b)(2), opinions of ethics committees in California, although not binding, should be consulted for guidance on proper professional conduct. Ethics opinions and rules and standards promulgated by other jurisdictions and bar associations may also be considered.

[5] The disciplinary standards created by these rules are not intended to address all aspects of a lawyer’s professional obligations. A lawyer, as a member of the legal profession, is a representative and advisor of clients, an officer of the legal system and a public citizen having special responsibilities for the quality of justice. A lawyer should be aware of deficiencies in the administration of justice and of the fact that the poor, and sometimes persons* who are not poor, cannot afford adequate legal assistance. Therefore, all lawyers are encouraged to devote professional time and resources and use civic influence to ensure equal access to the system of justice for those who because of economic or social barriers cannot afford or secure adequate legal counsel. In meeting this responsibility, every lawyer should aspire to render at least fifty hours of pro bono publico legal services per year. In fulfilling this responsibility, the lawyer should provide a substantial* majority of such hours to indigent individuals or to nonprofit organizations with a primary purpose of providing services to the poor or on behalf of the poor or

An asterisk (*) identifies a word or phrase defined in the terminology rule, rule 1.0.1.

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relevant in determining whether they are a firm,* as is the fact that they have mutual access to information concerning the clients they serve.

[2] The term “of counsel” implies that the lawyer so designated has a relationship with the law firm,* other than as a partner* or associate, or officer or shareholder, that is close, personal, continuous, and regular. Whether a lawyer who is denominated as “of counsel” or by a similar term should be deemed a member of a law firm* for purposes of these rules will also depend on the specific facts. (Compare *People ex rel. Department of Corporations v. Speedee Oil Change Systems, Inc.* (1999) 20 Cal.4th 1135 [86 Cal.Rptr.2d 816] with *Chambers v. Kay* (2002) 29 Cal.4th 142 [126 Cal.Rptr.2d 536].)

*Fraud**

[3] When the terms “fraud”* or “fraudulent”* are used in these rules, it is not necessary that anyone has suffered damages or relied on the misrepresentation or failure to inform because requiring the proof of those elements of fraud* would impede the purpose of certain rules to prevent fraud* or avoid a lawyer assisting in the perpetration of a fraud,* or otherwise frustrate the imposition of discipline on lawyers who engage in fraudulent* conduct. The term “fraud”* or “fraudulent”* when used in these rules does not include merely negligent misrepresentation or negligent failure to apprise another of relevant information.

Informed Consent and Informed Written Consent**

[4] The communication necessary to obtain informed consent* or informed written consent* will vary according to the rule involved and the circumstances giving rise to the need to obtain consent.

*Screened**

[5] The purpose of screening is to assure the affected client, former client, or prospective client that confidential information known* by the personally prohibited lawyer is neither disclosed to other law firm* lawyers or nonlawyer personnel nor used to the detriment of the person* to whom the duty of confidentiality is owed. The personally prohibited lawyer shall acknowledge the obligation not to communicate with any of the other lawyers and nonlawyer personnel in the law firm* with respect to the matter. Similarly, other lawyers and nonlawyer personnel in the law firm* who are working on the matter promptly shall be informed that the screening is in place and that they may not communicate with the personally prohibited lawyer with respect to the matter.

Additional screening measures that are appropriate for the particular matter will depend on the circumstances. To implement, reinforce and remind all affected law firm* personnel of the presence of the screening, it may be appropriate for the law firm* to undertake such procedures as a written* undertaking by the personally prohibited lawyer to avoid any communication with other law firm* personnel and any contact with any law firm* files or other materials relating to the matter, written* notice and instructions to all other law firm* personnel forbidding any communication with the personally prohibited lawyer relating to the matter, denial of access by that lawyer to law firm* files or other materials relating to the matter, and periodic reminders of the screen to the personally prohibited lawyer and all other law firm* personnel.

[6] In order to be effective, screening measures must be implemented as soon as practical after a lawyer or law firm* knows* or reasonably should know* that there is a need for screening.

Rule 1.1 Competence

- (a) A lawyer shall not intentionally, recklessly, with gross negligence, or repeatedly fail to perform legal services with competence.
- (b) For purposes of this rule, “competence” in any legal service shall mean to apply the (i) learning and skill, and (ii) mental, emotional, and physical ability reasonably* necessary for the performance of such service.
- (c) If a lawyer does not have sufficient learning and skill when the legal services are undertaken, the lawyer nonetheless may provide competent representation by (i) associating with or, where appropriate, professionally consulting another lawyer whom the lawyer reasonably believes* to be competent, (ii) acquiring sufficient learning and skill before performance is required, or (iii) referring the matter to another lawyer whom the lawyer reasonably believes* to be competent.
- (d) In an emergency a lawyer may give advice or assistance in a matter in which the lawyer does not have the skill ordinarily required if referral to, or association or consultation with, another lawyer would be impractical. Assistance in an emergency must be limited to that reasonably* necessary in the circumstances.

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Comment

[1] This rule addresses only a lawyer's responsibility for his or her own professional competence. See rules 5.1 and 5.3 with respect to a lawyer's disciplinary responsibility for supervising subordinate lawyers and nonlawyers.

[2] See rule 1.3 with respect to a lawyer's duty to act with reasonable* diligence.

Rule 1.2 Scope of Representation and Allocation of Authority

- (a) Subject to rule 1.2.1, a lawyer shall abide by a client's decisions concerning the objectives of representation and, as required by rule 1.4, shall reasonably* consult with the client as to the means by which they are to be pursued. Subject to Business and Professions Code section 6068, subdivision (e)(1) and rule 1.6, a lawyer may take such action on behalf of the client as is impliedly authorized to carry out the representation. A lawyer shall abide by a client's decision whether to settle a matter. Except as otherwise provided by law in a criminal case, the lawyer shall abide by the client's decision, after consultation with the lawyer, as to a plea to be entered, whether to waive jury trial and whether the client will testify.
- (b) A lawyer may limit the scope of the representation if the limitation is reasonable* under the circumstances, is not otherwise prohibited by law, and the client gives informed consent.*

Comment*Allocation of Authority between Client and Lawyer*

[1] Paragraph (a) confers upon the client the ultimate authority to determine the purposes to be served by legal representation, within the limits imposed by law and the lawyer's professional obligations. (See e.g., Cal. Const., art. I, § 16; Pen. Code, § 1018.) A lawyer retained to represent a client is authorized to act on behalf of the client, such as in procedural matters and in making certain tactical decisions. A lawyer is not authorized merely by virtue of the lawyer's retention to impair the client's substantive rights or the client's claim itself. (*Blanton v. Womancare, Inc.* (1985) 38 Cal.3d 396, 404 [212 Cal.Rptr. 151, 156].)

[2] At the outset of, or during a representation, the client may authorize the lawyer to take specific action on the client's behalf without further consultation. Absent a material change in circumstances and subject to rule 1.4, a lawyer may rely on such an advance authorization. The client may revoke such authority at any time.

Independence from Client's Views or Activities

[3] A lawyer's representation of a client, including representation by appointment, does not constitute an endorsement of the client's political, economic, social or moral views or activities.

Agreements Limiting Scope of Representation

[4] All agreements concerning a lawyer's representation of a client must accord with the Rules of Professional Conduct and other law. (See, e.g., rules 1.1, 1.8.1 and 5.6. See also California Rules of Court, rules 3.35-3.37 (limited scope rules applicable in civil matters generally), and 5.425 (limited scope rule applicable in family law matters).)

Rule 1.2.1 Advising or Assisting the Violation of Law

- (a) A lawyer shall not counsel a client to engage, or assist a client in conduct that the lawyer knows* is criminal, fraudulent, or a violation of any law, rule, or ruling of a tribunal.
- (b) Notwithstanding paragraph (a), a lawyer may:
- (1) discuss the legal consequences of any proposed course of conduct with a client; and
 - (2) counsel or assist a client to make a good faith effort to determine the validity, scope, meaning or application of a law, rule, or ruling of a tribunal.

Comment

[1] There is a critical distinction under this rule between presenting an analysis of legal aspects of questionable conduct and recommending the means by which a crime or fraud* might be committed with impunity. The fact that a client uses a lawyer's advice in a course of action that is criminal or fraudulent* does not of itself make a lawyer a party to the course of action.

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[2] Paragraphs (a) and (b) apply whether or not the client's conduct has already begun and is continuing. In complying with this rule, a lawyer shall not violate the lawyer's duty under Business and Professions Code section 6068, subdivision (a) to uphold the Constitution and laws of the United States and California or the duty of confidentiality as provided in Business and Professions Code section 6068, subdivision (e)(1) and rule 1.6. In some cases, the lawyer's response is limited to the lawyer's right and, where appropriate, duty to resign or withdraw in accordance with rules 1.13 and 1.16.

[3] Paragraph (b) authorizes a lawyer to advise a client in good faith regarding the validity, scope, meaning or application of a law, rule, or ruling of a tribunal* or of the meaning placed upon it by governmental authorities, and of potential consequences to disobedience of the law, rule, or ruling of a tribunal* that the lawyer concludes in good faith to be invalid, as well as legal procedures that may be invoked to obtain a determination of invalidity.

[4] Paragraph (b) also authorizes a lawyer to advise a client on the consequences of violating a law, rule, or ruling of a tribunal* that the client does not contend is unenforceable or unjust in itself, as a means of protesting a law or policy the client finds objectionable. For example, a lawyer may properly advise a client about the consequences of blocking the entrance to a public building as a means of protesting a law or policy the client believes* to be unjust or invalid.

[5] If a lawyer comes to know* or reasonably should know* that a client expects assistance not permitted by these rules or other law or if the lawyer intends to act contrary to the client's instructions, the lawyer must advise the client regarding the limitations on the lawyer's conduct. (See rule 1.4(a)(4).)

[6] Paragraph (b) permits a lawyer to advise a client regarding the validity, scope, and meaning of California laws that might conflict with federal or tribal law, and, despite such a conflict, to assist a client in conduct that the lawyer reasonably believes* is permitted by California statutes, regulations, orders, and other state or local provisions implementing those laws. If California law conflicts with federal or tribal law, the lawyer should also advise the client regarding related federal or tribal law and policy.

Rule 1.3 Diligence

- (a) A lawyer shall not intentionally, repeatedly, recklessly or with gross negligence fail to act with reasonable diligence in representing a client.
- (b) For purposes of this rule, "reasonable diligence" shall mean that a lawyer acts with commitment and dedication to the interests of the client and does not neglect or disregard, or unduly delay a legal matter entrusted to the lawyer.

Comment

[1] This rule addresses only a lawyer's responsibility for his or her own professional diligence. See rules 5.1 and 5.3 with respect to a lawyer's disciplinary responsibility for supervising subordinate lawyers and nonlawyers.

[2] See rule 1.1 with respect to a lawyer's duty to perform legal services with competence.

Rule 1.4 Communication with Clients

- (a) A lawyer shall:
 - (1) promptly inform the client of any decision or circumstance with respect to which disclosure or the client's informed consent,* is required by these rules or the State Bar Act;
 - (2) reasonably* consult with the client about the means by which to accomplish the client's objectives in the representation;
 - (3) keep the client reasonably* informed about significant developments relating to the representation, including promptly complying with reasonable* requests for information and copies of significant documents when necessary to keep the client so informed; and
 - (4) advise the client about any relevant limitation on the lawyer's conduct when the lawyer knows* that the client expects assistance not permitted by the Rules of Professional Conduct or other law.

6

Intellectual Property and Fashion Design

Susan Scafidi

After decades on the margins of legal scholarship, fashion law is once again in style. The rise of digital technologies that facilitate copying, increased attention to the counterfeiting of trademarked goods, changes in the global locus of production following the elimination of textile import quotas, diffusion of original efforts across all levels of the industry, and growing recognition of fashion design as a form of creative expression—all of these have contributed to a new interest in the relationship between intellectual property and clothing.

In particular, the lack of protection under U.S. law for fashion designs themselves, as opposed to the trademarks or logos affixed to them, has come under scrutiny. Neither copyright law nor our societal norms against plagiarism allows an individual to copy this book verbatim and put his or her own name on it, but line-for-line knockoffs of the clothing that you are presumably wearing while reading it are perfectly legal. While some of those garments may be generic—a standard, white button-down shirt, perhaps?—others may be the result of a designer's unique vision.

Whether or not the United States should fill this gap in the law through an amendment to the Copyright Act or some other mechanism is a subject of ongoing debate, especially in light of recent developments in the European Union and other countries. American fashion designers are lobbying to put an end to what they perceive as legalized piracy, while copyists assert that any extension of intellectual property protection to fashion design would be yet another instance of harmful hyperprotection. To put this issue in context, a particularly important task given efforts to harmonize intellectual property protection across national boundaries, this chapter offers an overview of both the current state of the law and the historical factors leading to the protection, or lack thereof, for fashion design.

FROM RAW TEXTILES TO FAST FASHION

Although fashion design does not enjoy the same intellectual property protection as original works in other media, the field is not a legal blank slate. Clothing itself is a universal human phenomenon, and anthropologists have recently cited 100,000-year-old shell necklaces as the first evidence of symbolic thought.¹ Predictably, where there is human behavior, there are laws regulating it.

In the West, sumptuary laws governing the consumption and use of material goods, including clothing, date back at least to classical Greece.² Over the centuries, legislation aimed at regulating luxury placed limits on a plethora of physical adornments, from silks to furs to precious stones.³ In addition to curbing perceived excesses, sumptuary laws have also served to police the boundaries of social class. For example, English law long restricted the wearing of any silk of the color purple to members of the nobility.⁴ Similar laws were designed to identify specific professions, notably professors, prostitutes, and priests, or to identify characteristics like marital status or gender.⁵ Like modern laws regulating the copying of various forms of expression, both the letter and the spirit of these sumptuary laws were difficult to enforce.⁶ In one case the great fourteenth-century jurist Bartolo de Sassoferrato, often referred to simply as Bartolus, reportedly granted the appeal of a woman convicted of wearing prohibited pearls on the grounds that hers were actually fake.⁷

Despite the complexities of regulating dress, sumptuary laws continued to multiply during the late medieval and early modern period as changes in the distribution of wealth combined with new technologies to provide greater access to luxury clothing. Among these new technologies was the printing press, which not only facilitated the distribution of Bibles and political tracts, but also produced the forerunners of modern fashion magazines, thus disseminating images of new styles beyond the narrow circle of the elite. More advanced technology also provided a less expensive way to place images on fabric, as compared with labor-intensive hand painting or embroidery.⁸ At the same time, improvements in the means of textile weaving increased the availability of affordable fabrics—and thus the opportunities for copying fashionable garments. Ever cheaper copies of innovative new fabric designs soon followed.

These advances in the technologies of textile production and decoration, and the consequent growth of the textile industry, heralded a shift from laws focused on limiting consumption to laws focused on facilitating production—in other words, from sumptuary laws to intellectual property laws. In the early eighteenth century, the silk weavers of Lyon, France, became the first to demand intellectual property protection of their original designs, and by 1787 a royal decree had extended the protection to silk manufacturers nationwide.⁹ Not to be outdone, competing British textile manufacturers that same year secured protection for several types of fabric—namely linen, cotton, calico, and muslin—along “much the same lines as earlier Acts relating to engravings and prints.”¹⁰

Following the industrialization of textile production, the nineteenth century witnessed both the establishment of the modern *haute couture* in Paris and the rise of the ready-to-wear clothing industry. These two facets of apparel production would ultimately develop a complex legal and practical relationship, but at the outset only the couture had any significant influence on the development of new styles. When Charles Worth, generally acknowledged as the first couturier, established his atelier in the late 1850s, most garments were the unique creations of an individual sewing at home or giving instructions to her seamstress. Worth instead developed a system of presenting a series of new designs each season and then taking orders for the designs from individual clients, for whom the clothes were made to measure. This system, which exists to the present day, established the influence of professional clothing designers over the direction of fashion.¹¹ It also spawned an industry of knockoff artists eager to manufacture and sell less expensive versions of Paris originals.

The French couture industry responded to the rise of design piracy in two ways: first, by seeking intellectual property protection for original fashion designs; and second, by licensing those designs to reputable manufacturers, both domestic and foreign. In their quest for inclusion in the intellectual property system, French designers were able to rely on both the 1793 copyright law, as amended in 1902, and the 1806 industrial design law, as amended in 1909.¹² Both types of protection arguably applied to fashion design, an interpretation that the courts confirmed in lawsuits brought by in the early decades of the twentieth century well-known designers like Jeanne Paquin, Madeline Vionnet, and Gabrielle "Coco" Chanel.¹³

Thus armed with a legal weapon against blatant copyists in their own domestic market, couturiers exported French fashion to women around the world. The most affluent customers traveled to Paris for personal fittings and received their garments first, the middle classes bought licensed copies from local department stores and boutiques, and the relatively impecunious either sewed their own versions at home or waited for cheap ready-to-wear copies to become available.¹⁴ Apart from a brief hiatus during the Second World War, this top-down fashion system remained virtually unchanged until the 1960s, and it still exerts significant influence on current trends in fashion. Modern "fast fashion" chains, the sartorial equivalent of the fast food industry, are adept at quickly reinterpreting the innovations of the couture for the mass market; however, those items that stray too close to the original versions may find themselves subject to legal action.¹⁵

While French intellectual property law has by no means eliminated design piracy, at home or abroad, the protection enjoyed by designers working in Paris contributed to the strength of the industry and its global influence throughout the twentieth century and into the twenty-first. Today, the haute couture serves primarily as an advertisement for its designers' own ready-to-wear styles, and the hierarchical structure of creativity in the realm of fashion has been replaced with a far more democratic diffusion of influential ideas. Even so, France has

the world's strongest legal protections for fashion design, and Paris remains the world's fashion capital.¹⁶

THE STARS & STRIPES OR THE JOLLY ROGER?

While France was developing a creative fashion industry and intellectual property laws to protect it, the United States instead became a haven for design pirates who strenuously resisted efforts to introduce laws protecting fashion. As noted, some of this copying was the product of legitimate licensing arrangements with French couture houses, but New York's Seventh Avenue generally thrived instead on the manufacture and sale of cheap knockoffs.

In historical terms, the pattern of industrial development in the United States and more recent emerging economies often commences with a period of initial piracy, during which a new industry takes root by means of copying.¹⁷ This results in the rapid accumulation of both capital and expertise. The late eighteenth- and early nineteenth-century development of textile manufacturing in New England was a perfect example of this economic growth through intellectual property theft, as aspiring industrialists memorized and transported proprietary technologies across the Atlantic.¹⁸ Ideally, the pirate country begins to develop its own creative sector in the industry, which in turn leads to enactment of intellectual property protection to further promote its growth. This was the pattern followed in the music and publishing industries, in which the United States was once a notorious pirate nation but is now a promoter of intellectual property enforcement.

In the case of the American fashion industry, however, the usual pattern of unrestrained copying followed by steadily increasing legal protection is not present. An examination of the cultural factors that have contributed to the denial of specific intellectual property protections for fashion design is beyond the scope of this chapter.¹⁹ In order to understand the current state of U.S. intellectual property law with respect to clothing, however, a brief tour of past legal efforts is in order.

Textile and clothing designs, which are aesthetic creations that also serve useful functions, could theoretically be eligible for protection under either a copyright regime or an industrial design regime. France, as indicated, opted for both types of protection from at least the early twentieth century; the United States effectively elected neither. While U.S. law provided for design patents starting in 1842, the strict standards precluded registration of most fashion designs.²⁰ The 1882 denial of a patent to a silk manufacturing firm galvanized the industry, which began lobbying for protection, but to no avail.²¹ The copyright route was no more successful for creative designers, despite the Register of Copyright's explicit call in 1913 for amendment of the Copyright Act to follow the French model and allow registration of fashion designs alongside the "fine arts" then afforded protection.²² Indeed, the only U.S. legislative or judicial concession to protection of textiles or clothing during the early decades of the twentieth century

was the 1913 Kahn Act, which was intended to protect European designers who had refused to send their works for the impending Panama-Pacific International Exhibition without first receiving assurances against American piracy.²³

Fashion designers were not without allies in Congress, however. Over the following two decades, a series of bills sought to extend protection to fashion design and related or similarly situated industries. The most nearly successful of these, the Vestal Bill, was introduced in 1926. After a series of amendments, it passed the House in 1930 only to languish in the Senate until Congress adjourned the following year.²⁴ Even Judge Learned Hand's dictum regarding the necessary injustice of his decision in *Cheney Brothers v. Doris Silk Corp.*, a case in which one textile manufacturer admitted to deliberately copying another's original design despite the warning printed every few inches on the selvedge of the goods, was insufficient to provoke legislative action. In Judge Hand's words:

True, it would seem as though the plaintiff had suffered a grievance for which there should be a remedy, perhaps by an amendment of the Copyright Law, assuming that this does not already cover the case, which is not urged here. It seems a lame answer in such a case to turn the injured party out of court, but there are larger issues at stake than his redress. Judges have only limited power to amend the law; when the subject has been confined to the legislature, they must stand aside, even though there be a hiatus in completed justice.²⁵

Although there were several more attempts to pass a design protection law following defeat of the Vestal Bill, including one that cleared the Senate, textile and clothing manufacturers elected to supplement their lobbying efforts with more direct forms of action.²⁶

Chief among these self-help efforts to control design piracy was the establishment of the Fashion Originators' Guild of America in 1932. The Guild began as a voluntary organization of clothing manufacturers who agreed among themselves to sell exclusively to retailers who in turn formally committed to buy only original designs. In order to ensure compliance, the Guild created a system of design registration, policed retailers, engaged in arbitration proceedings, and notified its membership of violations by means of a card index. If a retailer either refused to eschew pirated designs or agreed to the Guild's rules but then cheated, the offender was listed on a red card sent out to Guild manufacturers. If a manufacturer ignored this boycott and sold merchandise to a red-carded retailer, the manufacturer was subject to a fine. The National Federation of Textiles soon developed a similar system of design registration and joined forces with the Guild, whose members agreed to incorporate only original textile designs into their finished garments.²⁷

These industry efforts might have been effective in controlling the distribution of pirated designs, at least among reputable retailers, had it not been for the intervention of antitrust law. Although the Guild survived a series of lawsuits by red-carded retailers, the Federal Trade Commission decided to investigate and

ultimately issued an injunction against the Guild. The question finally reached the Supreme Court, which upheld the decision of the Commission that the Guild had acted in unreasonable restraint of trade.²⁸ Although the manufacturers were still free to take action against copyists who obtained access to original designs through fraud or other forms of unfair competition, their private system of design protection had lasted less than a decade.

In the 1950s, the development of the doctrine of conceptual separability in copyright advanced the cause of a number of design-related industries. While the landmark case of *Mazer v. Stein* involved decorative lamps, the decision made reference to “works of artistic craftsmanship” more generally, including “artistic jewelry.”²⁹ So long as the artistic form of an otherwise utilitarian object was independent of its function, that form became potentially eligible for copyright protection. Subsequent cases clarified that this protection extended to costume jewelry (and much later to sculptural belt buckles),³⁰ although the same reasoning was not applied to clothing designs as a whole. That era also saw the end of textile manufacturers’ long battle for protection, as courts quietly decided that printed designs on fabric were indistinguishable in copyright terms from other printed designs.³¹

Renewed lobbying efforts in the late 1950s and the 1960s, this time under the auspices of the National Committee for Effective Design Legislation, proved no more effective in securing protection for fashion designs than their forerunners of thirty years earlier.³² Although the popular press publicized the complaints of both Parisian and New York fashion designers and exposed the various strategies of knockoff or “bump off” houses who plagiarized them, the opposition of the National Retail Merchants Association ultimately defeated the new generation of design protection bills.³³ Even the wide-ranging negotiations that culminated in the Copyright Act of 1976 did not generate protection for fashion design. In fact, the legislative history of the act specifically excluded “ladies’ dress” from the subject matter of protection.³⁴

After this series of legislative defeats, the fashion industry turned its attention to other potential avenues of protection. While individual designers continued to test the limits of conceptual separability in copyright,³⁵ the more widespread and successful strategy was the appeal to trademark (and to a lesser extent trade dress) protection. The design of a shirt or a handbag might be beyond the scope of U.S. intellectual property law, but a logo appearing on the outside of that garment or accessory enjoys the full protection of the trademark system. Thus, as fashion designers indulged the status-conscious consumers of the 1980s with conspicuous logo designs and exterior labels, the industry simultaneously cultivated the cooperative relationships with law enforcement officials that still play an important role in anticounterfeiting efforts.³⁶

Although intellectual property protection for fashion design remains the holy grail of industry lawyers in the United States, the absence of such protection does not reflect an indifference to design piracy or a lack of effort on the part of creative designers over the past century. Rather, history reveals a series of public

and private attempts to address the issue that, while falling short of their ultimate goal, have nevertheless carved out limited areas of protection ranging from textile patterns to designer logos.

AN AMERICAN QUILT: THE CURRENT PATCHWORK OF PROTECTION

As a result of the fashion industry's persistent legal efforts, American designers today have a range of intellectual property law options that, taken together, offer partial protection for innovative articles of clothing and accessories. The overall appearance of most items is still vulnerable to the encroachments of copyists; however, certain elements of a design may be protected through the application of U.S. trademark, patent, or copyright law. Enforcement of such rights, like in other creative industries, nevertheless remains a challenge.

The most universally applicable and flexible mechanism for the protection of fashion design is trademark law. Whether on an interior label or as an exterior design element, virtually all apparel items incorporate trademarks in some form. The ease of trademark registration, combined with limited protection for even unregistered marks, assures that virtually all designers have access to protection for the names and logos affixed to their goods.³⁷

The ready availability of trademark protection, as compared with the difficulty in establishing protection for the underlying designs, creates an interesting incentive for fashion houses, however. The more easily visible the logo is, the greater the intellectual property protection for the item, and the better the chance of successful actions against counterfeiters. Thus, designers, to the extent that they are influenced by legal concerns, are likely to feature their logos as prominently as possible and incorporate them into their designs to the greatest degree that customers are willing to accept. While this is a matter of taste and marketing as well as legal strategy, it remains an observable phenomenon that current styles are more likely to incorporate prominent external logos than their vintage counterparts. The more subtle approach of a luxury label—like Bottega Veneta, whose signature *intrecciato* or woven leather handbags were originally advertised with the slogan, "When your own initials are enough"—is the exception rather than the rule.³⁸

In addition, the primacy of trademark law as a means of protection for fashion designs offers a competitive advantage to more established companies with better-known logos. Even if a famous designer's new line is knocked off, consumers may still be willing to pay higher prices for the trademarked version. Emerging designers, by contrast, cannot depend exclusively on brand recognition for protection against design piracy. As one young designer expressed the problem, "They can just sell their trademarks. We have to sell our designs."³⁹

The advantage enjoyed by more established companies is further amplified within the small category of designs that have become so iconic as to qualify for trade dress protection. This subcategory of trademark law grants protection not

only to the usual discrete symbols or devices that comprise a trademark, but also to product packaging or even product designs that serve to indicate the source of the goods. According to the Supreme Court's unanimous opinion in *Wal-Mart Stores v. Samara Brothers*, product designs like the children's garments at issue in the case are never "inherently distinctive" or intrinsically capable of source identification.⁴⁰ Instead, the Court assumes that product designs are primarily the result of aesthetic or functional considerations and only point to their origin if they have developed "secondary meaning" in the minds of consumers.⁴¹ In other words, a never-before-seen handbag or shoe may appeal to consumers as chic or practical, but only later become instantly recognizable as an Hermès Birkin or a Converse Chuck Taylor All Star. The result is that even without registration famous designs with an existing fan base receive more protection, in the form of trade dress, than new arrivals on the fashion scene. In the event of design piracy, the successful owner of a famous design is therefore in a stronger legal position than a fledgling designer, and often in a stronger financial position as well.

Patent law, too, can play a role in the protection of clothing, albeit a much smaller one than trademark. Fashion designs or design elements that are not merely aesthetically pleasing but also functional can, if sufficiently innovative, meet the exacting standards of a patentable invention. Fasteners like Velcro or zippers, high-performance textiles like Lycra or Kevlar, protective garments like hazmat gear or spacesuits, and even more whimsical items of apparel have all been the subject of utility patents.⁴² For most fashion designs, however, the patentability requirements of novelty, utility, and nonobviousness,⁴³ the expense of prosecuting a patent, and above all the amount of time required to obtain a patent make this form of protection impractical if not impossible.⁴⁴

Design patents, which protect ornamental rather than functional design elements, are also theoretically available to fashion designs.⁴⁵ In practice, however, they share the same limitations as utility patents. The temporal constraints of the patent system as a whole, which requires prior examination of items to determine eligibility for registration, are particularly incompatible with the seasonal nature of fashion. In this context, it is important to recognize the distinction between the general category of clothing and the subcategory of fashion, which may be understood as a seasonally produced form of creative expression.⁴⁶ While some fashion designs are intended to last more than a season or two, most are available for only a short time before trends change and fashion-conscious consumers move on to new styles. By the time a fashion designer could obtain either a utility patent or a design patent, the item at issue (and even its copies) would already be passé.

Copyright law in the United States, as previously noted, does not permit the registration of fashion designs. The somewhat artificial distinction within intellectual property law between nonfunctional literary and artistic works, which are the subject matter of copyright, and useful inventions, which are the domain of patents, has generally excluded clothing from the subject matter of copyright on the grounds of its utilitarian nature. Only in limited circumstances have

courts invoked the doctrine of conceptual separability in copyright to distinguish between the artistic elements of a new fashion design and its basic function of covering the human body.⁴⁷

In a recent case involving a Halloween costume design, for example, the court noted that elements of a costume like a head or tail are at least in theory separable from the main body of the garment and thus potentially subject to copyright protection.⁴⁸ Similarly, the doctrine of conceptual separability can result in copyright eligibility for an original design on the front of a T-shirt or for an innovative textile pattern.⁴⁹ In addition to this limited accommodation for designs that are both aesthetic and functional, copyright law can apply to the two-dimensional representations of fashion designs, such as photographs or drawings, that often play a role in design piracy.

The U.S. intellectual property system, while deliberately excluding fashion designs from direct protection, is nevertheless adaptable to provide original clothing and textile designs with a degree of legal recognition.

MODEL BEHAVIOR: EXTRALEGAL MEANS OF PROTECTION

In the absence of more than a limited pastiche of intellectual property protection, and in the face of persistent enforcement difficulties with regard to existing laws, fashion designers have developed extralegal means to either limit the copying of original styles or mitigate its effects. These efforts fall into the categories of social control, mechanical or technological means, and exploitation of the fashion cycle. Each of these categories represents an attempt to influence or leverage the behavior of a different set of actors: fashion insiders, professional copyists, and consumers, respectively. While the utility of such efforts is limited, especially in light of the ever-increasing speed of information transfer, they nevertheless form part of the industry's efforts against knockoff artists.

Among fashion designers, editors, and cognoscenti, there are established social norms against copying. Designers, like artists who work in other media, regularly seek inspiration from earlier styles, as well as from visual artworks and from nature. When an ostensibly creative designer imitates another too literally, however, he or she takes a reputational risk. In 2002, for example, Balenciaga's rising star Nicolas Ghesquiere made a virtually identical copy of a 1973 patchwork vest by little-known designer Kaisik Wong and presented it as part of his spring collection.⁵⁰ Although members of the fashion community acknowledged that copying is not uncommon, the news still caused a scandal. Even three years later, influential fashion critic Cathy Horyn noted that the event "definitely did not help [Ghesquiere's] reputation as fashion's new messiah."⁵¹ The importance of this type of social disapprobation is underscored by the decision in a French lawsuit brought by Yves Saint Laurent against Ralph Lauren and involving a copy of a sleeveless tuxedo gown. The American designer was not only fined, but also ordered to advertise the court's decision in ten separate publications.⁵² A designer

who imitates another's style perhaps not as literally but too soon after the original innovation appears is similarly vulnerable to public censure.

As in other communities, the social norms of the fashion world are subject to change over time. Whereas in the past creative fashion design had, or was at least perceived to have, a strongly hierarchical structure, with true innovation occurring only among a small cadre of elite designers and at the highest price points, modern creativity exists at all levels of the industry. Many designers who would formerly have dressed only the elite few and perhaps licensed some of their designs to exclusive retail establishments now find it either necessary or desirable to create diffusion lines or enter into agreements with mass market retailers, thus disseminating their ideas at a range of retail levels. Isaac Mizrahi has an ongoing relationship with Target, for example, and Chanel designer Karl Lagerfeld has also produced a line for the fast fashion chain H&M.⁵³ While haute couturiers are still held to a higher standard of creativity, designers at all levels are expected to exercise their imaginations. Moreover, design originators prefer to have the opportunity to reinterpret their own work for the general public.

While some designers, faced with the impossibility of eliminating all knock-offs, publicly claim to be flattered by the tacit acknowledgement that their work is worth copying, these statements rarely reflect the whole story. Often the same designer's legal team is simultaneously taking whatever action may be available against copyists. Coco Chanel, for example, is sometimes quoted as having said, "Fashion should slip out of your hands. The very idea of protecting the seasonal arts is childish. One should not bother to protect that which dies the minute it is born."⁵⁴ In the 1930s, however, Chanel herself joined fellow designers as a plaintiff in a landmark French lawsuit that shut down a notorious design pirate.⁵⁵ Even today, the norms governing public relations and the reality of designers' responses to copying of their own work are sometimes at odds with one another. Creativity is nevertheless the stock in trade of the fashion world, and the professional disdain that designers express with respect to excessively derivative work by others is unmistakable.

In addition to social controls on copying, which operate primarily among established designers or those hoping to develop a reputation for creativity, fashion designers rely on mechanical or technological means to combat knockoff artists. These methods range from efforts to maintain secrecy and prevent potential copyists from previewing new styles to the creation of complex and difficult to replicate designs to the use of high quality materials and craftsmanship. In an attempt to bolster consumer confidence and clearly distinguish real from fake, generations of designers have also incorporated cutting-edge indicators of authenticity into the finished goods. In the 1920s and 1930s, the labels on garments issuing from Madeline Vionnet's atelier bore her thumbprint.⁵⁶ Today, designers are experimenting with holographic labels and RFID tags.⁵⁷ As in other creative industries, however, self-help measures directed at professional pirates are at best a match of wits between creators and imitators.

Less a method of discouraging copyists than a means of mitigating their effect, the fashion cycle is essentially a pattern of consumer behavior that luxury goods industries can under limited circumstances leverage to create desire for new products. Commentators identified this pattern at least as early as the nineteenth century,⁵⁸ and successive generations of scholars have repeated their analysis.⁵⁹ Described in modern sociological and economic terms, the cycle begins when high-status individuals or early adopters acquire an item. That item becomes a social signaling device, provoking demand among lower status individuals or outsiders who wish to emulate and perhaps interact with the original purchasers. As more consumers purchase the item, however, it loses its signaling value. This loss of value may be further exacerbated by third-party production of knockoffs, which make a version of the item accessible and affordable to still more aspirational consumers. Thus, the original individuals move on to new expensive or rare objects of desire in order to differentiate themselves, and a fashion cycle is complete.⁶⁰

Today, however, this fashion cycle scenario is rendered obsolete by the fact that poor-quality knockoffs can be manufactured and distributed even more quickly than the originals, leaving creative designers little opportunity to recover their investment before the item is already out of style. Even if the fashion cycle were ever sufficient to support the design industry in general and individual designers in particular, a questionable assertion, that is no longer the case.

In the absence of comprehensive or effective intellectual property protection, the denunciation of non-normative behavior and the use of extralegal methods to halt or limit the effects of copying have arguably helped maintain the ability of fashion designers to exercise their talents. Modern challenges to these mechanisms have nevertheless increased pressure on the industry and prompted a reinvigorated quest for legal support.

FASHION LAW'S CUTTING EDGE: RECENT DEVELOPMENTS AND FUTURE DIRECTIONS

In the first decade of the twenty-first century, the fashion industry has renewed its designs on intellectual property law. From the WTO to WIPO, clothing-related issues have become part of the global agenda.⁶¹ As a result, the United States and other nations are reexamining the relationship between law and fashion.

New challenges to the industry are manifold, stemming from both technological change and global economic shifts. The speed and accuracy of information flow in the Internet era disseminates images of new styles instantly, piquing consumer interest but also aiding in the production of knockoffs. At the same time, the movement of textile and clothing production to centralized production centers in Asia, a trend that increased dramatically after the dismantling of sector import quotas on January 1, 2005, has facilitated the manufacture of high-quality

fashion counterfeits—sometimes in the same factories licensed to produce legitimate merchandise.

At the same time, greater cultural recognition of fashion as a form of creative expression and the diffusion of original design efforts across all levels of the industry have increased sympathy toward fashion designers. At a time when aspiring young designers appear in independent documentaries and on reality television shows,⁶² it is no longer credible to claim that legal protection for fashion design is somehow elitist, especially in light of the expansive copyright protection enjoyed by other industries.⁶³

The European Union's legislative reaction to these changed circumstances has captured the attention of fashion designers in the United States and around the globe. In addition to the protection that countries like France and Britain already afforded designers,⁶⁴ the European Union in 2002 established community-wide protection for original designs, including apparel and accessories.⁶⁵ All original designs now receive three years of automatic, unregistered protection. Moreover, since 2003, creators may register their designs in order to receive a five-year term of protection, renewable for up to twenty-five years.⁶⁶

In the United States, the Council of Fashion Designers of America has responded to changed circumstances in the industry by seeking passage of the Design Piracy Prohibition Act.⁶⁷ In its current form this bill, if enacted, would amend the Copyright Act to provide three years of protection for registered fashion designs, after which they would enter the public domain.⁶⁸ The measure parallels the ten-year protection already available for boat hulls;⁶⁹ the shorter term of years for fashion reflects its seasonal nature, as well as a desire to respect designers' interest in their own creations while stopping short of full inclusion in the copyright system. Indeed, this bill arguably represents the triumph of the current low-protectionist orthodoxy within American intellectual property law scholarship, providing neither the expansive copyright protection of the French system nor the unregistered or longer-term registered design protection available in the European Union. Unlike the proposed legislation of previous decades, there has been little industry opposition to the bill to date, a circumstance that may result in part from a greater cultural emphasis on creativity rather than copying as an economic strategy. Nevertheless, it remains to be seen whether Congress will choose this particular means of addressing the challenges of a new era in fashion.

As art historian Anne Hollander has observed, "Clothes, even when omitted, cannot be escaped."⁷⁰ Intellectual property law, it would appear, is no exception to this maxim.

NOTES

1. Marian Vanhaeren et al., *Middle Paleolithic Shell Beads in Israel and Algeria*, 312 *Sci.* 1785 (2006).

2. Alan Hunt, *Governance of the Consuming Passions: A History of Sumptuary Law* 18–19, 140 (1996).
3. Reed Benhamou, *Sumptuary Laws*, in *Encyclopedia of Clothing and Fashion* 238 (Valerie Steele ed., 2005) [hereinafter *Encyclopedia*].
4. See, e.g., *Enforcing Statutes of Apparel*, 16 *Eliz.* (1574).
5. See, e.g., Marjorie Garber, *Vested Interests: Cross Dressing and Cultural Anxiety* 21–37 (1992); Hunt, *supra* note 2, at 71–72, 214–272.
6. See Fred Davis, *Fashion, Culture, and Identity* 58–59 (1992); Ann Hollander, *Seeing Through Clothes* 362 (1978).
7. Hunt, *supra* note 2, at 354.
8. For a comprehensive overview of textile technology, see *The Cambridge History of Western Textiles* (David Jenkins ed., 2003).
9. Jeanne Belhumeur, *Droit International de la Mode* 70 (2000).
10. A.D. Russell-Clarke, *Copyright and Industrial Designs* 3 (2d ed. 1951).
11. Philippe Perrot, *Fashioning the Bourgeoisie: A History of Clothing in the Nineteenth Century 184–188* (Richard Bienvenue trans., 1994).
12. Belhumeur, *supra* note 9, at 71–73.
13. Didier Grumbach, *Histoires de la Mode* 67–72 (1993); Mary Lynn Stewart, *Copying and Copyrighting Haute Couture: Democratizing Fashion, 1900–1930s*, 28 *French Hist. Stud.* 103, 118–30 (2005).
14. Teri Agins, *The End of Fashion: How Marketing Changed the Clothing Business Forever* 23–25 (2000).
15. Although few such disputes result in litigation, copyists who are challenged under French law frequently pay financial settlements to the original designers. Interview with Didier Grumbach, President of the Fédération Française de la Couture, du Prêt-à-Porter des Couturiers et des Créateurs de Mode (Aug. 2, 2006). Perhaps the best-known recent piracy trial in France involved a prominent American designer, Ralph Lauren, whose tuxedo dress was found to have infringed the Yves Saint Laurent original. *Société Yves Saint Laurent Couture S.A. et al. v. Société Louis Dreyfus Retail Mgmt. S.A. et al.*, [1994] E.C.C. 512 (Trib. Comm. (Paris)).
16. Article L112–2(14) of France’s Intellectual Property Code includes the following in its list of “works of the mind” that comprise the subject matter of copyright:

Creations of the seasonal industries of dress and articles of fashion. Industries which, by reason of the demands of fashion, frequently renew the form of their products, particularly the making of dresses, furs, underwear, embroidery, fashion, shoes, gloves, leather goods, the manufacture of fabrics of striking novelty or of special use in high fashion dressmaking, the products of manufacturers of articles of fashion and of footwear and the manufacture of fabrics for upholstery shall be deemed to be seasonal industries.

Articles of fashion may also qualify for protection as registered industrial designs, for a more limited term of up to twenty-five years. See Article L511 of the Intellectual Property Code, available at http://www.legifrance.gouv.fr/html/codes_traduits/cpiatext.htm.

17. Peter K. Yu, *From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-First Century*, 50 *Am. U. L. Rev.* 131, 180–182 (2000).

18. See generally Robert F. Dalzell, Jr., *Enterprising Elite: The Boston Associates and the World They Made* (1987); Barbara J. Tucker, *Samuel Slater and the Origins of the American Textile Industry, 1790–1860* (1984).

19. For a summary preview of forthcoming work on the cultural factors contributing to the deliberate exclusion of fashion design from the U.S. intellectual property regime, see *Law Profs, Part 2*, Posting of Susan Scafidi to *Counterfeit Chic* (Jan. 8, 2006 12:06 PM), http://www.counterfeitchic.com/2006/01/law_profs_part_2-1.php.

20. Maurice A. Weikart, *Design Piracy*, 19 Ind. L.J. 235 (1944).

21. Sylvan Gotshal, *The Pirates Will Get You: A Story of the Fight for Design Protection 10* (1945).

22. *Id.* at 11.

23. *Id.* Many U.S. designers opposed the Kahn Act, arguing, inter alia, that it would allow European designers to steal American designs, register them in their home countries, and file complaints against the original American manufacturers. *Differ on Way to Fight Kahn Act*, N.Y. Times, Nov. 22, 1913; *Kahn Law Needs Change*, N.Y. Times, Dec. 19, 1913.

24. Weikart, *supra* note 20, at 246, 250.

25. *Cheney Bros. v. Doris Silk Corp.*, 35 F. 2d 279, 281 (2d Cir. 1929).

26. See Weikart, *supra* note 20, at 251–256; Note, *Self-Protection of Design Creation in the Millinery Industry*, 49 Yale L.J. 1290 (1940).

27. Fed. Trade Comm'n, *Annual Report of the Federal Trade Commission for the Fiscal Year Ended June 30, 1939*, at 102 (1939).

28. *Fashion Originators' Guild v. Fed. Trade Comm'n*, 312 U.S. 457 (1941).

29. *Mazer v. Stein*, 347 U.S. 201, 212–213 (1954).

30. *Kieselstein-Cord v. Accessories by Pearl, Inc.*, 632 F.2d 989 (2d Cir. 1980); *Trifari, Krussman & Fishel v. Charel Co.*, 134 F. Supp. 551 (S.D.N.Y. 1955).

31. *Peter Pan Fabrics, Inc. v. Brenda Fabrics, Inc.*, 169 F. Supp. 142 (S.D.N.Y. 1959).

32. See Nat'l Comm. for Effective Design Legislation, *Protection for Designs* (1959); Nat'l Comm. for Effective Design Legislation, *Summary of the Provisions of Design Protective Bills S. 2075 and H.R. 9525, 86th Congress* (1960); *Silk's Potential Held Unrealized*, N.Y. Times, Oct. 24, 1957.

33. Robert E. Dallos, *The Fashion Pirates: Their Booty Is the Treasure of Design*, N.Y. Times, Jan. 25, 1966; Leonard Sloane, *Design Pirating Sets Off Battle*, N.Y. Times, Jan. 4, 1964.

34. H. Rep. No. 94–1476, at 55.

35. See, e.g., *Galiano v. Harrah's Operating Co.*, 416 F.3d 411 (5th Cir. 2005) (uniform design, like most clothing design, does not qualify for copyright protection); *Knitwaves, Inc. v. Lollytogs Ltd.*, 71 F.3d 996 (2d Cir. 1995) (applique design on sweater qualifies for copyright protection); *Poe v. Missing Persons*, 745 F.2d 1238 (9th Cir. 1984) (clear rock-filled bikini protected as soft sculpture); *Whimsicality, Inc. v. Rubie's Costumes*, 721 F. Supp. 1566 (E.D.N.Y. 1989), *aff'd in part, vacated in part* by 891 F.2d 452 (2d Cir. 1989) (costumes fail to meet separability standard); *Nat'l Theme Prods., Inc. v. Jerry B. Beck, Inc.*, 696 F. Supp. 1348 (S.D. Ca. 1988) (Halloween costume contains separable artistic elements); *Animal Fair, Inc. v. Amfesco Indus.*, 620 F. Supp. 175 (D. Minn. 1985) (bear paw slippers contain separable artistic elements); *Knitwaves, Inc. v. Lollytogs Lt. (Inc.)*, *Policy Decision*, Copyright Office, 65 Fed. Reg. 66530 (Nov. 5, 1991) (addressing inquiries as to copyright protection for garment and costume design).

36. See, e.g., *Barbara Kolsun: Counterfeit Cop*, *Women's Wear Daily*, May 25, 2006, at 12; Meredith Derby et al., *Vendors Step Up Efforts in Counterfeit War*, *Women's Wear Daily*, Apr. 11, 2005, at 13; Martha Groves, *In Jeans Business, Trademark Suits Are in Style*, *L.A. Times*, Apr. 13, 1986, § 4, at 5; Patricia Hurtado, *Louis Vuitton, Coach Fight \$23 Bln Flood of Fakes in New York*, *Bloomberg.com*, http://www.bloomberg.com/apps/news?pid=10000103&sid=aaTetDaRc_fQ&refer=us# (last updated Jan. 26, 2006); *Putting the Teeth in Trademark Laws*, *Bus. Wk.*, Oct. 8, 1984, at 75; Peter Wilkinson, *Federal Court Convicts 5 Men in Louis Vuitton 'Sting' Scheme*, *Women's Wear Daily*, May 25, 1984, at 2.

37. 15 U.S.C. §§ 1051–1052, 1125 (2004); U.S. Patent & Trademark Office, *Basic Facts About Trademarks*, <http://www.uspto.gov/go/tac/doc/basic/> (last modified Nov. 8, 2004). This is not to imply, however, that all trademark claims are straightforward or necessarily resolved in favor of the claimant. See, e.g., *Louis Vuitton Malletier v. Dooney & Bourke, Inc.*, 340 F. Supp. 415 (S.D.N.Y. 2004) (denying injunction to plaintiff on the grounds that allegedly infringing handbags were not likely to cause consumer confusion or trademark dilution).

38. Kate Betts, *The Height of Luxury*, *Time*, May 1, 2006, 67. In the case of Bottega Veneta, the *intrecciato* style also arguably serves as a trademark surrogate or a form of trade dress.

39. Interview with Gabi Asfour (Sept. 27, 2005). Asfour is one of the designers for the label ThreeAsFour (formerly AsFour).

40. *Wal-Mart Stores, Inc. v. Samara Bros.*, 529 U.S. 205 (2000).

41. *Id.* at 209–215.

42. U.S. Patent No. 7,089,995 (issued Aug. 15, 2006) (space suit); U.S. Patent No. 7,062,786 (issued June 20, 2006) (Hazmat suit); U.S. Patent No. 6,473,908 (issued Nov. 5, 2002) (garment having a buttocks cleavage revealing feature); U.S. Patent No. 3,819,587 (issued June 25, 1974) (Kevlar); U.S. Patent No. 2,717,437 (issued Sept. 13, 1955) (Velcro); U.S. Patent No. 2,692,874 (issued Oct. 26, 1954) (LYCRA); U.S. Patent No. 50,4038 (issued Aug. 29, 1893) (zipper clasp locker or unlocker for shoes).

43. 35 U.S.C. §§ 101, 103 (2004).

44. For 2005, the average total pendency for a patent application was 29.1 months. USPTO, *Performance and Accountability Report for Fiscal Year 2005*, at 2 (2005), <http://www.uspto.gov/web/offices/com/annual/2005/2005annualreport.pdf>.

45. See 35 U.S.C. § 171.

46. Joanne B. Eicher, *Clothing, Costume and Dress*, in 1 *Encyclopedia, supra* note 3, at 270; Valerie Steele, *Fashion*, in 2 *Encyclopedia, supra* note 3, at 12.

47. H. Rep. No. 94–1476, at 55.

48. *Chosun Int'l., Inc. v. Chrisha Creations, Ltd.*, 413 F.3d 324 (2d Cir. 2005).

49. See *Eve of Milady v. Impression Bridal, Inc.*, 957 F. Supp. 484 (S.D.N.Y. 1997) (bridal dress lace designs qualify for copyright protection); *Folio Impressions, Inc. v. Byer Cal.*, 937 F.2d 759 (2d Cir. 1991) (textile design protected as writing); *Peter Pan Fabrics v. Candy Frocks, Inc.*, 187 F. Supp. 334 (S.D.N.Y. 1960) (finding copyright infringement of floral pattern textile design).

50. Cathy Horyn, *Is Copying Really a Part of the Creative Process?*, *N.Y. Times*, Apr. 9, 2002, at B10; Miles Socha, *The Luxury Hangover: Designers Struggling with Harsher Reality*, *Women's Wear Daily*, July 1, 2002, at 1.

51. Cathy Horyn, *How Nicolas Got His Groove Back*, *Women's Fashion Mag.*, Aug. 28, 2005, at 261.
52. *Société Yves Saint Laurent Couture S.A. v. Société Louis Dreyfus Retail Mgmt. S.A.*, [1994] E.C.C. 512 (Trib. Comm. (Paris)). It is interesting to note that the eventual settlement of the case resulted in a lower fine and elimination of the publication requirement altogether. Agins, *supra* note 14, at 43–44.
53. Adam Jones & Elizabeth Rigby, *A Good Fit? Designers and Mass-Market Chains Try to Stitch Their Fortunes Together*, *Fin. Times*, Oct. 25, 2005.
54. Edmonde Charles-Roux, *Chanel and Her World: Friends, Fashion, and Fame* 377 (Daniel Wheeler trans., 2005).
55. Stewart, *supra* note 13, at 129–130.
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57. Christina Passariello, *Holograms Tell Fake from Fendi*, *Wall Street J.*, Feb. 22, 2006.
58. See, e.g., William Hazlitt, *On Fashion (1818)*, reprinted in William Hazlitt: *Selected Writings* 148 (Jon Cook ed., 1991).
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60. Note that the term “fashion cycle” is also used more generally to describe the periodic return of certain style trends, such as short or long hemlines, to the forefront of fashion, as well as the length of time between such stylistic revivals.
61. See, e.g., World Intellectual Prop. Org., *WIPO-Italy International Symposium on Intellectual Property and the Competitiveness of Small and Medium-Sized Enterprises in the Textile and Clothing Sectors*, <http://www.wipo.int/meetings/2005/smes.qtc/en/> (Nov. 30–Dec. 2, 2005); World Trade Org., *WTO Trade Topics: Textiles Monitory Body (TMB)*, http://www.wto.org/english/tratop_e/texti_e/textintro_e.htm (last visited Aug. 23, 2006).
62. See, e.g., *Project Runway* (Miramax Television 2004–present); *Seamless* (Douglas Keeve Studios 2005).
63. See 17 U.S.C. §§ 302–305 (2004).
64. For current French law, see *supra* note 16. Under the U.K. Copyright, Designs, and Patents Act of 1988, textiles and artistic works qualify for copyright protection, while clothing may qualify for a more limited term of protection as either an unregistered (three years) or registered (up to twenty-five years) design. See U.K. Copyright, Designs, and Patents Act, 1988, c. 48, §§ 4, 12, 51 (copyright); *id.* §§ 213, 216 (unregistered design right); *id.* § 269 (registered design right). For recent analyses of U.K. law regarding the protection of fashion design, see, for example, *Lambretta Clothing Co. Ltd. v. Teddy Smith (UK) Ltd.*, [2004] EWCA (Civ) 886; Ulla Vad Lane-Rowley, *Using Design Protection in the Fashion and Textile Industry* (1997).
65. Council Regulation 6/2002/EC, 2002 O.J. (L 003) 1.
66. *Id.*

67. See Design Piracy Prohibition Act, H.R. 5055, 109th Cong. (2006).
68. *Id.*
69. 17 U.S.C. § 1305(a) (2004).
70. Hollander, *supra* note 6, at 87.



Members of the Cincinnati Bengals cheerleading squad dance on the sidelines during a game between the Cincinnati Bengals and the Seattle Seahawks on October 11, 2015 in Cincinnati, Ohio (AFP Photo/John Grieshop)

US Supreme Court to consider cheerleader costumes

[AFP](#)

May 2, 2016

Washington (AFP) - Can a cheerleader uniform be copyrighted?

The US Supreme Court announced on Monday that it would take up the issue in a case that may end up redefining the scope of copyrights in the United States.

In a surprise decision, the venerable judges on the country's highest court said they would include in their schedule a seemingly trivial case between cheerleader uniform manufacturers Star Athletica and Varsity Brands Inc.

Varsity, the leading US cheerleading costume manufacturer, accuses its smaller rival of copying elements of its uniform designs.

Under federal law, a design may be protected by copyright if it is possible to separate its original decorative aspects from a product's essential functional elements.

Varsity originally sued Star Athletica, saying the herringbone patterns on the shirts and skirts of its cheerleader uniforms are original designs that are separate from the uniforms' function. After an appeals court ruled in the company's favor, Star Athletica appealed to the Supreme Court.

Now the court's eight justices are set to determine the boundary between aesthetics and function in order to clarify copyright law legal experts say is notoriously murky.

The case will almost certainly carry broader legal implications with important economic consequences.

"The Court's mission may be to state a single, unified test that will give the same result in every case involving items that are both artistic and functional -- whether that means clothing, carpets or cars," said Susan Scafidi, academic director of Fordham University's Fashion Law Institute.

The court will probably hear the case during its next term, which begins in October.

<https://www.yahoo.com/news/us-supreme-court-consider-cheerleader-costumes-223621882.html>

No. 15-866

IN THE
Supreme Court of the United States

STAR ATHLETICA, L.L.C.,

Petitioner,

v.

VARSITY BRANDS, INC., *et al.*,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE SIXTH CIRCUIT

**BRIEF OF FASHION LAW INSTITUTE
ET AL. AS *AMICI CURIAE* IN SUPPORT
OF RESPONDENTS**

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INTEREST OF *AMICI CURIAE*¹

Amici include the Fashion Law Institute joined by the following scholars, educators, award-winning fashion designers, industry executives, and business owners, all of whom have played a leading role in the fashion industry's efforts to address issues relating to intellectual property protection over the past decade and beyond:

Jeffrey Banks
Fashion Designer and Author

Maria Cornejo and Marysia Woroniecka
Creative Director / Founder and President,
respectively
Zero + Maria Cornejo

Nathalie Doucet
Founder, Arts of Fashion Foundation

Keanan Duffty
Fashion Designer

Barry Kieselstein-Cord
Artist, Designer, and Photographer

Melissa Joy Manning
Jewelry Designer

¹ Pursuant to Supreme Court Rule 37.3(a), all parties have consented to the filing of this brief. Pursuant to Rule 37.6, *amici* certify that no counsel for a party authored this brief in whole or in part, and no persons other than *amici curiae* or their counsel made a monetary contribution to its preparation or submission. Professor Susan Scafidi, Founder & Academic Director of the Fashion Law Institute, a nonprofit organization based at Fordham Law School, served as an expert witness for Respondents (then Plaintiffs) earlier in this case but did not and does not serve as counsel for a party.

Jack McCollough and Lazaro Hernandez
Creative Directors and Founders
Proenza Schouler

Narciso Rodriguez
Fashion Designer

Professor Susan Scafidi
Founder and Academic Director
Fashion Law Institute at Fordham²

The Fashion Law Institute, a nonprofit organization and the world's first academic center dedicated to the law and business of fashion, was founded with the assistance of the Council of Fashion Designers of America and its then-president and current board chairman, Diane von Furstenberg, and is headquartered at Fordham Law School. Fashion law itself emerged as a distinct legal field through the work of Professor Susan Scafidi, one of the *amici* joining this brief in her personal capacity. Professor Scafidi's research and engagement with the industry is also the primary source (with and without attribution) of leading arguments in favor of design protection, such as the need to protect emerging designers, the distortive effects of partial protection, the historical role of self-help, the problematic privileging of mimetic over transformational design, the cultural factors shaping limits on copyright protection, and

² The Fashion Law Institute's affiliation with Fordham Law School is noted for information purposes only and does not necessarily reflect the point of view of the law school or the university.

the significance of statutory reform narrowly tailored to the industry.³

Amici Jeffrey Banks, Lazaro Hernandez, Narciso Rodriguez, and Professor Scafidi have testified in Congress on the issue of intellectual property and fashion design,⁴ and fellow *amici* have shared their expertise and experience though

³ See, e.g., Susan Scafidi, *Intellectual Property and Fashion Design*, in 1 INTELLECTUAL PROPERTY AND INFORMATION WEALTH 115 (Peter K. Yu ed., 2006)(available online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1309735), [hereinafter Scafidi, *Intellectual Property and Fashion Design*]; *A Bill to Provide Protection for Fashion Design: Hearing on H.R. 5055 Before the Subcomm. on Courts, the Internet, and Intellectual Prop. of the H. Comm. on the Judiciary*, 109th Cong. 79 (2006) (statement of Professor Susan Scafidi)[hereinafter, Scafidi, Judiciary Committee statement]; Susan Scafidi, *F.I.T.: Fashion as Information Technology*, 59 SYRACUSE L. REV. 69 (2008) [hereinafter Scafidi, *Fashion as Information Technology*].

⁴ See, e.g., *A Bill to Provide Protection for Fashion Design: Hearing on H.R. 5055 Before the Subcomm. on Courts, the Internet, and Intellectual Prop. of the H. Comm. on the Judiciary*, 109th Cong. 11-12 (2006) (statement of Jeffrey Banks, Fashion Designer, Council of Fashion Designers of America); see generally Narciso Rodriguez and Susan Scafidi, *Knock it off! Quashing design pirates*, THE CHICAGO TRIBUNE (Aug. 29, 2010), http://articles.chicagotribune.com/2010-08-29/opinion/ct-perspec-0829-fashion-20100829_1_design-maria-pinto-fashion; Susan Scafidi and Narciso Rodriguez, *Fashion Designers Need Strong Legal Protection for Their Clothing*, THE NEW YORK TIMES (October 22, 2015), <http://www.nytimes.com/roomfordebate/2014/09/07/who-owns-fashion/fashion-designers-need-strong-legal-protection-for-their-clothing>.

extensive public education efforts, intra-industry discussion with established and emerging designers, and related engagement with the Copyright Office, members of Congress on both sides of the aisle, and many others. In addition, various amici have designed and participated in educational programming for both students and professionals.

We are extremely familiar on both a theoretical and a practical basis with the relationship between copyright and fashion designs under U.S. law, and our immediate concern is that the present case not upset over half a century of legal precedents relied upon by the fashion industry – including a well-known case won by *amicus* Barry Kieselstein-Cord – and diminish the already limited patchwork of intellectual property protection available to fashion designers.

SUMMARY OF ARGUMENT

Fashion is an information-bearing good, and the Copyright Act has long served “To promote the progress of...useful Arts” by protecting at least some of the original aesthetic and informational expressions that designers embody in their work. U.S. Const. art. I, §8, cl.8. We believe that the Court should affirm the result reached by the Sixth Circuit with regard to the copyrightability of Respondents’ designs, a result that is consistent with all of the various tests for conceptual separability identified by the panel below. The Court, however, should also clarify that separability is a flexible statutory standard that is best left unconstrained by maladaptive bright-line

rules or disparate treatment for fashion designs within the category of useful articles incorporating protectable expression.

The justifications for this approach are both prudential and doctrinal. Since the Court issued its landmark ruling in *Mazer v. Stein* over sixty years ago, 347 U.S. 201 (1954), the Copyright Office and a series of influential precedents have established the copyrightability of physically and conceptually separable expressive design elements embodied in fabric prints, bridal lace, jewelry, belt buckles, costumes, and other forms of fashion design. In light of the limited scope of copyright protection traditionally recognized for fashion designs under U.S. law, the fashion industry has come to rely on this longstanding protection for separable elements of expressive design.

This reliance by the fashion industry is consistent with the language and the logic of the Copyright Act itself. As the Court recognized long ago in *Mazer* and Congress confirmed in subsequent copyright reform, the Copyright Act is designed to encompass original expressive content regardless of the medium on which it is inscribed or the quality of its appearance or message. For protectable content embodied in useful articles, Congress enacted an adaptive standard that is intentionally open to context-sensitive judicial reasoning. The two-dimensional surface designs on articles of clothing worn by cheerleaders that are at issue in this case qualify for copyright protection under the statutory standard for separability, as do

countless other expressive design elements in fashion and other information-bearing goods.

ARGUMENT

I. COPYRIGHT CURRENTLY OFFERS INCOMPLETE BUT CRUCIAL PROTECTION FOR BOTH EMERGING AND ESTABLISHED FASHION DESIGNERS

While the question presented in this case concerns the general copyright standard for protecting the separable elements of useful articles, the immediate subject of the dispute — fashion — is one that has long received disparate treatment within copyright law.⁵ The district court’s discursion into “cheerleading-uniform-ness”⁶ in this cases exemplifies the law’s tendency to see what the legislative history of the Copyright Act tellingly refers to as “ladies’ dress”⁷ in a different light, unsuitable for the protections afforded other original works.

Nevertheless, despite the all-too-common mischaracterization of fashion as a sector of the economy wholly outside copyright, the fashion industry itself has an extensive history of using the limited patchwork of available protection to become

⁵ See, e.g., Scafidi, *Intellectual Property and Fashion Design*; Scafidi, *Fashion as Information Technology*.

⁶ *Varsity Brands, Inc. v. Star Athletica, LLC*, No. 10-2508, 2014 WL 819422, at *1 (W.D. Tenn. Mar. 1, 2014), vacated and remanded, 799 F.3d 468 (6th Cir. 2015), cert. granted in part sub nom. *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, 136 S. Ct. 1823, 194 L. Ed. 2d 829 (2016).

⁷ H.R.Rep. No. 94–1476, at 55 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5668.

a global leader in design. This section examines how U.S. fashion, from emerging designers to established brands, has come to rely on separability as an integral part of its strategy for continued growth.

A. Fashion is an Industry Essential to the U.S. Economy and American Culture

Over the past century, the fashion industry in the United States has undergone a major transition. What was once a provincial backwater known primarily for sweatshop manufacturing and knockoffs of European designs is now an economic powerhouse fueled by original creative works, and as the Respondent in this case illustrates, the industry's scope extends far beyond high-priced luxury couture. Sportswear, footwear, accessories, jewelry, denim, athletic apparel, swimwear, lingerie, bridal, even textiles themselves — the democratization of style in American culture in large part reflects the emergence of a multi-sector fashion business in which design is a primary driving force.

The evolution of the fashion industry in New York City provides a striking case in point. The city's early-to-mid-twentieth-century profusion of garment factories and stores hawking the latest copies of Parisian styles has given way to a new fashion economy: manufacturing accounts for only a little over eight percent of 98 billion dollars in total annual revenue, and the city is now home to hundreds of brands with their own original designs and signature styles. The twice-yearly New York Fashion Week alone has a local economic impact of

upwards of 900 million dollars a year and includes over 500 shows, from recent design-school graduates and emerging designers from local fashion incubators to iconic small and medium-size enterprises to multi-billion-dollar companies.⁸ Design education is another major presence; besides being the home of several leading design schools, including Parsons, Fashion Institute of Technology, and Pratt Institute, the city also has its own High School of Fashion Industries, a specialized public school where students study fashion design and create their own works.⁹

New York, of course, is not the only city where fashion is having a substantial economic and social impact. A recent Congressional study noted that as of 2015 the nation's fashion industry was approaching \$400 billion in annual sales, with localized fashion hubs extending beyond New York and Los Angeles to such cities as San Francisco, Columbus, Nashville, and Kansas City. Fashion design education has also taken root nationwide, with more than 200 postsecondary schools offering fashion programs.¹⁰

Along with democratizing style across socioeconomic classes and creating opportunities for

⁸ See *The City's Big NY Fashion Boost*, COUNCIL OF FASHION DESIGNERS OF AM. (Dec. 2, 2015), <https://cfda.com/news/the-citys-big-ny-fashion-boost>.

⁹ See *The Economic Impact of the Fashion Industry*, Joint Econ. Comm., U.S. Cong. (Sep. 6, 2016), http://www.jec.senate.gov/public/_cache/files/66dba6df-e3bd-42b4-a795-436d194ef08a/fashion---september-2016-final-090716.pdf.

¹⁰ See *id.*

achievement among native-born U.S. citizens and immigrants alike, the fashion industry serves as a cultural influencer in other ways. For example, presenting a racially diverse runway has become an integral part of maintaining brand integrity; transgender and disabled models are featured in shows and advertisements; and in the mere three years since the Fashion Law Institute garnered international media attention for producing the first plus-size fashion show held in the tents at New York Fashion Week, size diversity at fashion shows is becoming routine.

Reports estimating the size of the global fashion industry at approximately \$1.75 trillion annually¹¹ and describing its cultural influence are, if anything, under-representative of its full reach. The scheduled date of the Court's oral argument calls to mind two related and rapidly expanding sectors outside the realm of traditional fashion: Halloween costumes, which have become a multi-billion-dollar industry in the U.S.,¹² and geek fashion. In the space of less than a decade, the mimetic amateur cosplay prominent in the fan culture of comics and science fiction has given rise to an emerging geek fashion industry, including designers who transform licensed pop-culture intellectual properties into original and often subtle designs suitable for everyday office and even courtroom. This summer's Comic-Con International

¹¹ *See id.*

¹² *See* Halloween Headquarters, Nat'l Retail Fed'n, <https://nrf.com/resources/consumer-data/halloween-headquarters>.

in San Diego, an annual event attended by over 150,000 people, showcased geek fashion and such innovative creations as the first wearable Lego dress.¹³



*3D-printed threeASFOUR dress, Spring 2016, as displayed in the Metropolitan Museum of Art's "Manus x Machina" exhibit.*¹⁴

The emerging wearable technology sector, projected to reach \$25 billion by the end of 2019,¹⁵ and new production technologies like 3D-printing are pushing the boundaries of both form and

¹³ See Karen Yossman, *Comic-Con Makes a Fashion Statement*, THE NEW YORK TIMES (July 22, 2016), <http://www.nytimes.com/2016/07/22/fashion/comic-con-makes-fashion-her-universe.html>.

¹⁴ See Laird Borrelli-Persson, *A First Look at the Met's "Manus x Machina" Catalog*, VOGUE (Apr. 6, 2016), <http://www.vogue.com/13423848/manus-x-machina-costume-institute-chanel/>.

¹⁵ See *Wearables Market to Be Worth \$25 Billion by 2019*, CCS INSIGHT, <http://www.ccsinsight.com/press/company-news/2332-wearables-market-to-be-worth-25-billion-by-2019-reveals-ccs-insight>.

function in fashion design. These innovations are expanding the ability of designers to create not only on the surface of the body but also in the space around the body, as well as to experiment with new informational and communicative functions within the realm of fashion. Among the many expressions of wearable tech is the smart denim collaboration between Google and Levi's, named "Project Jacquard" after the revolutionary Jacquard loom and its punch-card programming system for the production of textile patterns, an invention that helped launch both the industrial revolution and the modern digital age.

B. The Rise of the American Fashion Industry to Global Prominence Parallels the Application of Intellectual Property Protection to Some Elements of Creative Design

Although protection for fashion designs under U.S. law is limited, one factor contributing to the American fashion industry's emergence as a global leader was the judicial recognition of copyright protection for certain elements of creative design starting in the 1950s. Together with changes such as the opportunity created for U.S. designers by the shuttering of Parisian fashion houses during World War II, post-war American affluence, advances in technology that expanded manufacturers' ability to produce sophisticated designs at lower costs, and the growth of a diverse textile and apparel sector including more ready-to-wear fashions, the extension of copyright protection to fabric prints and jewelry supported the expansion of a domestic

design industry. To some extent the U.S. followed a pattern evident in other countries with recognized global fashion capitals. Just as the fashion industries in Paris, London, and Milan developed in tandem with design protection, the position of original designers in the U.S. fashion industry benefitted from the long-desired, albeit circumscribed, establishment of legal means for protecting at least some elements of their work.

As is the case for most forms of intellectual property protection, the origins of legal protection of fashion are European and intended to support economically and culturally important creators and creative industries. The historical roots of copyright protection for the protection of creative design elements in the useful arts extend back to the beginning of the modern fashion industry in France, when, in the early 18th century, an ordinance in Lyons prohibited merchants and manufacturers from pirating the designs created by the city's innovative silk weavers. Protection was subsequently extended throughout the entire country, and England, its commercial rival, followed suit with the enactment of legal protections for its own textile industry. The scope of European fashion design protection continued to expand with the rise of haute couture fashion houses in the 19th century. Along with the utilization of legal means of protecting their work, designers also combatted fashion piracy through self-help methods such as trade association standards and new technology, including Madeleine

Vionnet's integration of her identifying thumbprint into her label.¹⁶

From a textile copyright perspective the United States was essentially a pirate nation until the mid-twentieth century, when the Supreme Court's holding in *Mazer v. Stein* established that the artistic elements of manufactured works are eligible for design protection.¹⁷ As the Court expressly noted, patent and copyright protection were not mutually exclusive in regard to the same design,¹⁸ and as the Brief for Respondents in this case discusses in more detail, the Copyright Office subsequently recognized copyright protection for fabric designs.¹⁹ In doing so the Copyright Office set forth the standard that, through its incorporation into the Copyright Act of 1976, is at the heart of the issue presented in this case, namely, that "if the shape of a utility article incorporates features, such as artistic sculpture, carving, or pictorial representation, which can be identified separately and are capable of existing independently as a work of art," these separable elements are eligible for copyright protection.²⁰

Although the House Report for the 1976 Act dismissed extending the scope of this protection to the shape of "ladies' dress"²¹ — a late Mad-Men-era

¹⁶ See Scafidi, *Intellectual Property and Fashion Design*, 116-117, 124.

¹⁷ *Mazer v. Stein*, 347 U.S. 201 (1954).

¹⁸ See *id.* at 217.

¹⁹ See Respondent's Br. 28.

²⁰ See 17 U.S.C. § 101.

²¹ H.R.Rep. No. 94-1476, *supra* note 8 at 55.

synecdoche for bodily covering regardless of gender — the fashion industry successfully relied on the fundamental principles of physical and conceptual separability to persuade courts to recognize copyright protection for certain aspects of fashion design, including textile patterns,²² bridal lace designs,²³ jewelry and artistic accessories,²⁴ and separable elements of masks and costumes.²⁵ Many designers and fashion houses have also sought to secure protection by registering eligible designs. The Copyright Office regularly engages in conceptual separability analysis and has issued tens of thousands of registrations related to textiles and fashion; in 2014 alone, textile designers sought copyright registration of over 4,700 works described as textiles, fabric prints, or fabric designs.²⁶

In addition, the fashion industry has integrated other available modes of legal protection into its overall design strategy. Trademark and trade dress have been prominent features of countless designs for several decades, particularly among well-known brands, at times skewing the creative process away

²² See, e.g., *Folio Impressions, Inc. v. Byer California*, 937 F.2d 759 (2d Cir. 1991); *Peter Pan Fabrics, Inc. v. Brenda Fabrics, Inc.*, 169 F. Supp. 142 (S.D.N.Y. 1959).

²³ See, e.g., *Eve of Milady v. Impression Bridal, Inc.*, 957 F. Supp. 484 (S.D.N.Y. 1997).

²⁴ See, e.g., *Kieselstein-Cord v. Accessories by Pearl, Inc.*, 632 F.2d 989 (2d Cir. 1980). The successful plaintiff in this landmark case, Barry Kieselstein-Cord, is a signatory to this brief.

²⁵ See, e.g., *Chosun Int'l, Inc. v. Chrisha Creations, Ltd.*, 413 F.3d 324 (2d Cir. 2005).

²⁶ Based on a search of the public catalog of the U.S. Copyright Office, available at <http://copyright.gov>.

from more original work and slowing the progress of design evolution in a bid to ward off piracy. Design and utility patents have also become a part of many companies' defensive arsenal, although, as in the *Mazer* era, patent protection remains inadequate for many designs and designers due to its expense, lengthy prior review process, procedural complexity, and high novelty standard.²⁷

As *amici* can personally attest, the legal protection available to designers and fashion houses – for all its gaps and imperfections – is a significant part of business models and design strategies throughout the industry, and the recognition of the applicability of copyright to separable design features for over half a century has been particularly useful. Redefining this right such that copyright would not extend even to an easily identifiable two-dimensional design capable of existing in wide range of media would have a decidedly negative impact on the fashion community, which has come to rely on whatever predictable protection it can find.

²⁷ See *Mazer*, *supra* note 20, at 216; see also Scafidi, *Intellectual Property and Fashion Design*, *supra* note 2, at 122. Although patent law can play a role in the protection of fashion, the requirements of novelty, utility, and nonobviousness along with the amount of time required to obtain a patent and the expense of prosecuting one make this form of protection impractical if not impossible.

**C. Protection for Creative Fashion Designs
Under U.S. Intellectual Property Law
Still Lags Behind Other Prominent
International Fashion Capitals,
Harming Emerging and Established
Designers**

Efforts by designers and brands to protect their designs reflect the significant investment of time and money in creative work. Far from being an endless cycle of repeated tropes, fashion advances through innovation, and true innovation is rarely inexpensive. A single design can take upwards of a year to develop into a marketable product, and creating new collections according to the relentless schedule of the fashion calendar is like launching a new business several times a year. Design pirates trade on this investment without the attendant risk by harvesting the most successful designs.²⁸

The result is a business environment that all too often runs counter to the fundamental principle embodied in *Mazer*, namely, that “sacrificial days devoted to ... creative activities deserve rewards commensurate with the services rendered.”²⁹

²⁸ See generally Diane von Furstenberg, *Fashion Deserves Copyright Protection*, L.A. TIMES, Aug. 24, 2007, <http://www.latimes.com/opinion/la- oew-furstenberg24aug24-story.html>; Laura C. Marshall, *Catwalk Copycats: Why Congress Should Adopt a Modified Version of the Design Piracy Prohibition Act*, 14 J. INTELL. PROP. L. 305, 311 (2007); see also Bureau of Labor Statistics, U.S. Dep’t Of Labor, Occupational Outlook Handbook: Fashion Designers (2014-2015 ed.), available at <http://www.bls.gov/ooh/arts-and-design/fashion-designers.htm#tab-3>.

²⁹ *Mazer*, *supra* note 20, at 219.

Contrary to the claims of commentators unfamiliar with the inner workings of the fashion industry, unfettered copying does not promote sustainable innovation. For all that macroeconomic statistics reveal about the industry's overall economic growth, the gross numbers obscure the effect of legal incentives that reward opportunistic imitation at the expense of truly transformative enterprise.³⁰

Behind the industry's strategically cultivated glamour and public disregard for copying that behind the scenes is treated as an existential threat, many celebrated and critically recognized designers and fashion houses live in constant fear of collapse, kept afloat by family, friends, loans, and, if they're lucky, the occasional investor convinced that with a bit more cash there is a chance of breaking the cycle. Emerging designers are typically among the less fortunate victims of predatory plagiarism; countless otherwise promising creators soon disappear, giving up fashion entirely or resigning themselves to churning out derivative product as hired hands. This does not even account for the would-be

³⁰ See generally *A Bill to Provide Protection for Fashion Design: Hearing on H.R. 5055 Before the Subcomm. on Courts, the Internet, and Intellectual Prop. of the H. Comm. on the Judiciary*, 109th Cong. 11-12, 79 (2006) (statement of Jeffrey Banks, Fashion Designer, Council of Fashion Designers of America and statement of Professor Susan Scafidi); *Innovative Design Protection and Piracy Prevention Act: Hearing on H.R. 2511 Before the Subcomm. on Intellectual Prop., Competition, and the Internet of the H. Comm. on the Judiciary*, 112th Cong. 7, 9 (2011) (statement of Lazaro Hernandez, Designer & Cofounder, Proenza Schouler).

creators who disappear without ever seeing their labels produced after enduring an experience that many signatories to this brief have heard recounted countless times — being invited to show one’s work to a company with the promise of being brought on board as an employee or a vendor, only to discover that the company’s sole intention was to steal original designs. Given the human impulse to create there will always be some new designers entering the market, but most will never reach their full potential.

Broader protection for fashion in all its forms is available in much of the world. A growing number of countries have established design rights as a separate category of intellectual property protection, including all of the 28 European Union member states, Japan, India, Pakistan, Singapore, and beyond. France for well over a century has maintained a copyright regime that treats fashion on an equal footing with other artistic works. At the same time, the most successful global fast-fashion chains are based in countries with established protection for fashion designs, indicating that the existence of intellectual property protection for original fashion designs is completely consistent with consumer access at a mass-market price point. The U.S., by contrast, has an incentive structure in which companies and designers with the best long-term chance of sustained success are those that strategically minimize risk by copying others’ original work — a result at odds with our typical official stance on the economic importance of intellectual property rights, the inclusion of such

rights in our international trade agreements, and our strong protection for other industries.

D. Conceptual Separability in Copyright, and the Partial Protection It Provides Designers, is Critical to the Fashion Industry

In the broader context of fashion and copyright law, conceptual separability has for decades played a particularly salient strategic role. The established protection that it offers to fabric designs and other two-dimensional patterns has provided textile and fashion designers relatively stable boundaries within which to stake claims to their original works. Now more than ever, with the advent of digital printing technologies that offer cost-effective means for fashion designers to produce custom fabrics even in small amounts, both small independent designers and large fashion houses can avail themselves of this relatively inexpensive and fast legal recognition of aspects of their original work.

Many jewelry and accessories designers, too, have come to rely on the principle of conceptual separability in designing items that transcend the material necessities associated with wearing them. Cases involving necklaces,³¹ artistic belt buckles,³² and even decorative eyewear³³ have all

³¹ See, e.g., *Trifari, Krussman & Fishel, Inc. v. Charel Co.*, 134 F. Supp. 551 (S.D.N.Y. 1955).

³² See e.g., *Kieselstein-Cord*, *supra* note 27.

³³ See, e.g., *On Davis v. The Gap, Inc.*, 246 F.3d 152 (2d Cir. 2001).

acknowledged the inclusion of three-dimensional wearable art within the subject matter of copyright. Indeed, the existence of protection is so clear to those within the industry that some recent instances of copying have not required legal intervention at all, much less litigation, but have instead resulted in withdrawal of the offending items once allegations of infringement became public.³⁴



*Onoculii Designs eyewear by On Ka'a Davis.*³⁵

In light of this history and reliance on clearly understood protection, a new interpretation of the 1976 Copyright Act that undoes decades of

³⁴ See Britt Aboutaleb, *Chanel Will Not Make its Pamela Love-Like Crystal Cuffs*, ELLE (Mar. 13, 2012), <http://www.elle.com/fashion/accessories/news/a8611/chanel-will-not-make-its-pamela-love-like-crystal-cuffs-39289/>; Danica Lo, *Hannah Bernhard Says Iris Apfel Ripped Off Her Toucan Pin Design*, RACKED (May 18, 2011), <http://www.racked.com/2011/5/18/7764333/hanna-bernhard-says-iris-apfel-ripped-off-her-jewelry-design-for-hsn>.

³⁵ Onoculii Designs eyewear by On Ka'a Davis, successful plaintiff in *On Davis*, *supra* note 34.

precedent built on the statute's integration of *Mazer* and subsequent regulatory language would inflict substantial harm an industry already at a comparative legal disadvantage with regard to copyright protection. Even more problematic, it would be inconsistent with the very design of the Copyright Act.

**II. FASHION IS AN INFORMATION-BEARING GOOD
INCORPORATING EXPRESSION PROTECTABLE
VIA THE CONCEPTUAL SEPARABILITY
STANDARD**

The various positions taken before the Court in this case express a deeper tension not only with respect to the copyrightability of certain aspects of fashion designs, but also in the perception of copyright itself. One approach sees copyright as a flexible, material-agnostic framework designed to protect all forms of expressive content with narrowly tailored exceptions. A rather different perspective sees the scope of copyright itself in constrictive terms and is thus more inclined to deny protection to entire categories of media or content. We believe that the statutory evolution of U.S. copyright reflects the first approach; the protectability of fashion is best determined by a standard designed to suit all forms of information technology.

A. The Existing Tests of Conceptual Separability Protect Expressive Elements of Fashion Design but Should Be Rationalized as a Standard Rather than an Additional Rule

A core strength of U.S. copyright law – indeed, of the common law itself – is its incorporation of broadly defined standards in tandem with bright-line rules, a system design that results in both consistency and flexibility over time. While the Sixth Circuit’s opinion in the present case meticulously catalogues the various tests for conceptual separability that have been applied or suggested in the past, and then applies its own hybrid test, the remarkable thing about the majority of these abstract descriptive formulations is that in practice they yield the same results. We believe that this points not to a critical lacuna in copyright law, but instead indicates why the statutory predicate for conceptual separability is sufficient in itself.

Rather than join other parties and *amici* in offering yet another test, we suggest that the statute may not truly require one. At base, the pertinent definitions in Section 101 of the Copyright Act establish standards, not rules, and in the statute’s broader context this appears to be a deliberate construction.

The brief survey of the history of U.S. copyright in *Mazer* highlights the root problem that the 1976 Act set out to solve. As the Court noted, our copyright regime can be seen as an ongoing process of expansion from its initial parameters, as

copyright protection for books, maps, and charts grew to encompass engravings and etchings, musical compositions, dramatic compositions, photographs and negatives, statues, works of fine art, and, in 1909, “all the writings of an author.” In keeping with this expansive trend, the Court found that the law reflects a broad, not narrow, understanding of protectable art.

In essence, the Court in *Mazer* approached copyright law as a design problem, in the sense of what we would now call a problem to be addressed by design thinking. The Court identified the systemic issue being addressed through repeated ad hoc changes and applied an adaptive standard capable of resolving the same issue over time. The addition of protected works on material other than flat paper had exposed a fundamental flaw in early copyright design: a failure to see the media forest for the dead trees. From one angle the decision made a certain degree of sense; words on paper presented a clear distinction between what we now call information technology and the information it conveyed. Other means of conveying visual and verbal information were more overtly hybrid in nature, and the proper way to deal with this was initially unclear. Separability, however, provided an accessible and adaptive principle for distinguishing expressive content from generative processes and underlying material.

By the time *Mazer* reached the Court in the early 1950s, decades of rapid advances in information technology had inspired new means of engaging it, and the Court’s *Mazer* analysis echoed

the observations of contemporary communications engineers, who had recently pioneered a technological framework for a material-agnostic approach to expressive content. Distinguishing channels of communication from the information they transmit, including aesthetic appearance; recognizing that the channels of communication can shape how information is conveyed; developing strategies from maintaining a clear signal distinct from the noise that distorts it — these are a few of the core insights that had already become part of the cultural landscape, particularly thanks to a rather unlikely bestseller on information theory by Claude Shannon and Warren Weaver.³⁶

Within the legal context, the separability language in *Mazer* and its corollary later incorporated into the Copyright Act served as an expansive solution to what had proven to be untenable circumscriptions of copyright's scope. In other words, the standard's openness to a variety of reformulations that effectively lead to the same result is a feature, not a bug. This adaptive strategy is consistent not only with the current statutory language Section 101, but the approach embodied in other areas of the Copyright Act — most notably the statutory standards for fair use.³⁷ Trying to circumscribe such standards by filling the

³⁶ See generally Claude E. Shannon & Warren Weaver, *THE MATHEMATICAL THEORY OF COMMUNICATION* (Univ. of Illinois Press 1949); Scafidi, *Fashion as Information Technology*, 72-73.

³⁷ See generally Pamela Samuelson, *Unbundling Fair Uses*, 77 *Fordham L. Rev.* 2537, 2537 (2009); Matthew Sag, *Predicting Fair Use*, 73 *Ohio St. L.J.* 47, 51 (2012)..

gaps with idiotropic metrics (*e.g.*, “marketability”³⁸) or reducing context-specific analysis to rigorous rules with procedures and prongs ultimately gives rise to unnecessary complication.

**B. The Definition of a “Useful Article”
under the Copyright Act Includes
Exceptions Related to Appearance and
Information that Together Establish the
Copyrightability of Expressive Elements
of Fashion Designs**

The standard for assessing the protectability of a useful article is straightforward, and the same principles that apply to any other useful article also apply to a fashion design. The key to avoiding the problems that occur with tests such as those devised by Petitioner and others is to read the elements of the standard in context.

Petitioner and its allies have challenged the copyrightability of a design that serves to identify the wearer or convey beauty, but to deny copyright on the basis of artistic or informational value would be contrary to both the language and the logic of the statute. In context, references to utility in Section 101 of the Copyright Act are bounded; the distinction is not between useful and useless, but between work that is utilitarian in non-copyrightable ways and work that has copyrightable aesthetic or informational utility. The definition of “useful article” expressly establishes

³⁸ See *Galiano v. Harrah’s Operating Co.*, 416 F.3d 411, 421 (5th Cir. 2005).

the latter distinction in limiting the term's scope to "an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information." Portraying appearance and conveying information are utilitarian functions, just not the utilitarian functions that fall outside the domain of copyright.

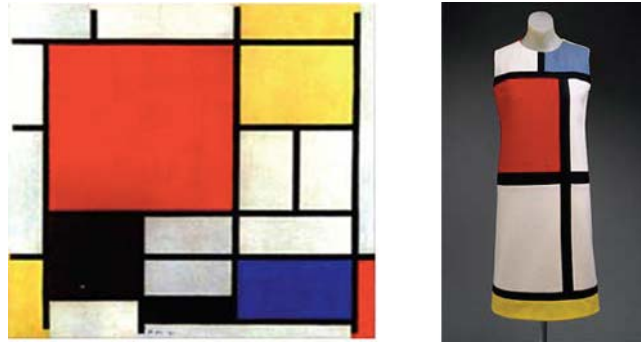
Instead, as the recurring terms "mechanical," "industrial," and "utilitarian" indicate,³⁹ the key legal concern here is to differentiate copyrightable work for the "useful processes, machines, articles of manufacture, and compositions of matter"⁴⁰ that are more appropriately the subject of a utility patent inquiry. Overlap with design patents is not an issue; once again as noted in *Mazer*, design aesthetics are integral to both copyright and design patents, albeit with different standards and scope of protection. If Congress wished to eliminate the overlap, it could – but it has not.

The Varsity designs at issue in this case are a clear example of the work the statutory standard was designed to protect. The graphic design elements can be identified separately from an article of clothing (cheerleader uniform or otherwise) and they are also capable of independently existing in other media as discrete patterns of lines, angles, and curves with no express or implied reference to dress, whatever the design's original intended or actual use. As the Sixth Circuit opinion noted, the designs in this case

³⁹ 17 U.S.C. § 101, *et seq.*

⁴⁰ 35 U.S.C.A. § 101.

are analogous to the series of copyrightable abstract designs by artist Piet Mondrian that have proven to be capable of replication in a wide array of media, from the original paintings to a dress by Yves Saint Laurent to cheerleader uniforms.



Piet Mondrian (1921)⁴¹ and Yves Saint Laurent (1965).⁴²



Mondrian-inspired cheerleader costumes (1988).⁴³

⁴¹ Piet Mondrian, *Composition with Large Red Plane, Yellow, Black, Gray, and Blue* (1921) (oil on canvas).

⁴² Yves Saint Laurent, "Mondrian" day dress, The Metropolitan Museum of Art, <http://www.metmuseum.org/toah/works-of-art/C.I.69.23> (wool jersey composed of separate color blocks).

⁴³ "Mondrian" cheerleader apparel designed by Katie Graham in *Toyota –Car Launch*, BRAZEN HUSSY (April 27, 2010),

Whether a dress replicates the design of a painting or a painting reproduces the conceptually separable design elements a dress, the result is the same: the original design is included in the subject matter of copyright.

If, as has been suggested by certain briefs filed in this case, there is a concern that judges do not have the capacity to understand design, it is one that can be addressed in the same manner as with the physical sciences, forensic accounting, linguistics, and any number of other areas where most judges do not have specialized training or knowledge. This case provides an instructive instance, inasmuch as the Sixth Circuit's discussion of the Mondrian dress was adapted from an analogy in the expert report written by one of the current *amici* and subsequently mentioned in Respondents' appellate brief.⁴⁴ That said, the assumption that judges lack capacity to identify and to assess the replicability of most designs is highly dubious given the ever-increasing importance of images and visual literacy in contemporary life.

Similarly, the fact that separable designs are capable of having aesthetic or informational utility does not disqualify them from copyright protection – to the contrary, works that embody expressive content are what copyright exists to protect. For

<http://www.brazenhussy.com.au/?p=253> (separate color blocks and strips sewn together using patchwork quilting techniques).

⁴⁴ Brief of Plaintiffs-Appellants at 71-72, *Varsity Brands, Inc. v. Star Athletica, L.L.C.*, 799 F.3d 468 (6th Cir. 2015) (citing and quoting expert report of Professor Scafidi).

instance, the expression of individual and collective identity is intrinsically concerned with conveying information, and it has been an integral aspect of creative art from the earliest expressions of symbolic thought.⁴⁵

In protecting the conveyance of information in either verbal or visual form, the Copyright Act is not only material-agnostic but also content-neutral; that is, it does not differentiate on the basis of subject matter or the content of expression. In the case of fashion, the expression is often twofold: first, the designer's original aesthetic statement, and second, information about the eventual wearer, which may include such details as personal taste, mood, group affiliation, socioeconomic level, religious practice, marital status, or type of employment, and which almost inevitably includes at least some indication of body size and shape.⁴⁶ Whatever the dubious merits of judging someone by this last bit of information – her apparent figure, as represented through clothing – it is nevertheless part of the information conveyed through the wearing of fashion or costume.

Of course, this information may be accurate or not – in the case of information regarding body shape and size, we might say flattering or not, depending on the idealized body shape of a particular era or culture, whether an hourglass or a gamine absence of curves – but inaccuracy does not erase the copyrightability of information conveyed by fashion design any more than a novel is barred

⁴⁵ Scafidi, *Fashion as Information Technology*, 75-76.

⁴⁶ *Id.*, at 79-82.

from copyright protection because the information it conveys is fictional. Cutting-edge designers' experimentation with silhouette, design in the space around the human body rather than on or following the lines of the body itself, is perhaps the most striking reminder that some artistic expression in fashion is closely related to sculpture.⁴⁷ No human body is actually the shape of Charles James' famous 1953 "Clover Leaf" gown,⁴⁸ Rei Kawakubo's controversial padded and distorted shapes from Spring 1997,⁴⁹ or the flying saucer dresses that Jeremy Scott sent down the runway for next spring⁵⁰ – and the advent of 3D printing continues to expand the creative possibilities.



Dresses by Charles James, Rei Kawakubo for Comme des Garçons, Jeremy Scott (L to R).

⁴⁷ See generally Karen Van Godtsenhoven *et al.*, *FASHION GAME CHANGERS: REINVENTING THE 20TH-CENTURY SILHOUETTE* (2016).

⁴⁸ Charles James, *Clover Leaf* (1953), available at <http://www.metmuseum.org/art/collection/search/159347>.

⁴⁹ Rei Kawakubo for Comme des Garçons, Spring 2017, available at <http://collections.lacma.org/node/185545>.

⁵⁰ Jeremy Scott, Look 54, Spring 2017, available at <http://www.vogue.com/fashion-shows/spring-2017-ready-to-wear/jeremy-scott#collection>.

The assessment for copyright purposes of other information conveyed through clothing, too, is independent of whether or not it is true in certain limited contexts. A brightly colored article of apparel with a print or design composed of colorblocking and stripes may call to mind a cheerleader, collegiate athletics in general, or a runway look from the current Gucci collection.⁵¹



Gucci sweater, designed by Alessandro Michele (2016).

As another example, camouflage may against certain backgrounds convey the deliberately misleading information that there is nobody present, though in other contexts it is merely a military-inspired fashion statement. Indeed, all *trompe l'oeil* designs across copyrightable media, including two-dimensional images that incorporate perspective to create the illusion of depth, are analogous to copyrightable fiction – and there is

⁵¹Gucci, Look 14, Fall/Winter 2016,
https://www.gucci.com/us/en/lo/runway/women/fall-winter-2016-runway/look-14-p-FW16_FSWLook14US .

nothing in the Copyright Act that requires artists who work on such media as walls, ceilings, 3D movies, or dresses to choose either keeping the human imagination in check or being denied legal protection for their work.⁵²



Trompe l'oeil dress by Thom Browne, shown on trompe l'oeil tile "swimming pool" runway, Spring 2017.⁵³

While copyright protection for the conceptually separable elements of fashion designs does not depend on their artistic value or merit, we note that many museums include fashion items – including

⁵² *Contra* Brief of Professors Christopher Buccafusco and Jeanne Fromer as Amici Curiae Supporting Petitioner, *Star Athletica, L.L.C. v. Varsity Brands, Inc.*, No. 15-866 (U.S. Sup. Ct. July 22, 2016); Jeanne C. Fromer, *An Information Theory of Copyright Law*, 64 EMORY L.J. 71 (2014).

⁵³ Thom Browne, Look 1, Spring 2017, available at <http://www.vogue.com/fashion-shows/spring-2017-ready-to-wear/thom-browne/slideshow/collection#1>.

those designed by some *amici* – in their permanent collections and feature them in special exhibitions. These items are no longer worn at all, if they ever were, but are instead presented for the very purpose of displaying their own appearances and conveying information – the aesthetic and informational utility that is so clearly described in the Copyright Act.

C. This Court Should Adopt a Conceptual Separability Standard Not Only Consistent with the 6th Circuit’s Result But Also With Long-Established Protection for Certain Elements of Fashion Designs

We believe that the optimal outcome of this case is one that affirms the copyrightability of respondent’s designs while providing a more stable framework, grounded in the language of the copyright statute, for assessing separability for useful articles. As written, the standard for separability enables the Copyright Act to extend the same copyright protection for expressive aesthetic or informational content regardless of the material in which it is embodied. Supplementing the standard with an additional test is unnecessary; it has provided a relatively predictable means of assessing copyrightability for designers and judges alike, and the protection it provides should remain.

The Sixth Circuit’s opinion reflects the standard’s intrinsic utility as well as the difficulty that can result when tests are multiplied beyond necessity. On the one hand, the tests delineated by

the panel reach the same result when applied in this instance and others; Respondents' designs at issue are paradigmatic examples of the identifiable and independently replicable design elements the separability standard has long served to protect. Nonetheless, the characterization of each instance of judicial reasoning as a discrete test typifies the confusion that can result when standards designed to facilitate judicial reasoning are reduced to bright-line rules that inhibit it. The fact that the district court reached a different conclusion in regard to Respondents' designs speaks less to the useful article doctrine than to how disputes involving fashion tend to inspire extra-legal reasoning directed toward keeping fashion unprotected, with little regard for the potential negative consequences for other types of works.

In raising these issues, this case provides the Court with an opportunity to address the problem of applying verbal standards to visual design. For designers and designs of all stripes – fashion, graphic, architectural, and more – the statute has made identifying potentially copyrightable design features intuitively obvious more often than not. Although the separability of a given design may likewise be evident to lawyers and judges in a particular case, explaining why a design is or is not copyrightable requires, at least for now, reducing the information-rich imagery into words. Keeping the standard flexible and open-ended would be an important contribution toward giving judges the space to develop a more sophisticated jurisprudential reasoning in design assessment,

which is likely to be essential as visual literacy becomes a universal requisite.

As expected, this case has attracted a number of briefs admonishing the court that the scope of copyright protection has become too broad, but this is ultimately a question for Congress to decide. This case does, however, provide an apt occasion for addressing a recurring weakness in contemporary fashion and copyright jurisprudence: the counterintuitive reduction of original, creative design elements to mere bodily covering. There is often a striking disconnect between the determination to treat the design of a garment, however original or fanciful, as merely utilitarian for purposes of copyright law versus its aesthetic and identity-expressing significance for designers and consumers. When designers have devised truly original stylistic elements that have no practical function whatsoever beyond conveying appearance or information and are capable of transmedia replication, confidence in the law is only increased when judges feel free to see more creative value than in a screwdriver or wrench.

The fact that the legal interpretation of fashion design in the U.S. can be so radically reductionist reflects in part the persistence of deep-rooted cultural prejudices no longer tolerated in other contexts. The express reference to “ladies’ dress” in the House Report is a telling case in point. In the U.S., fashion has for too long been categorized as a feminine, frivolous, and inherently irrational domain, the province of women and gay men. While not the primary aim of this amicus brief or of

Respondents, nor a necessary step in deciding this case, it would be entirely consistent with the deeper logic of separability to scuttle the House Report's exclusion of "ladies' dress" once and for all and reconsider all of the original, separable elements of fashion designs within the context of copyright protection. Putting that aside, what is at issue now is the longstanding copyrightability of conceptually separable designs visible on the surface of articles of clothing, and that, at least, should be affirmed.

CONCLUSION

For the reasons explained herein, *amici* respectfully request that the Court acknowledge the Copyright Act's established protection for the aesthetic and information-bearing designs embodied in otherwise useful articles, including in the context of fashion design, and affirm the result reached by the court of appeals with respect to the copyrightability of Respondents' designs.

Respectfully submitted,

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September 21, 2016

(Slip Opinion)

OCTOBER TERM, 2016

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Syllabus

NOTE: Where it is feasible, a syllabus (headnote) will be released, as is being done in connection with this case, at the time the opinion is issued. The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States v. Detroit Timber & Lumber Co.*, 200 U. S. 321, 337.

SUPREME COURT OF THE UNITED STATES

Syllabus

STAR ATHLETICA, L.L.C. *v.* VARSITY BRANDS, INC.,
ET AL.

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR
THE SIXTH CIRCUIT

No. 15–866. Argued October 31, 2016—Decided March 22, 2017

The Copyright Act of 1976 makes “pictorial, graphic, or sculptural features” of the “design of a useful article” eligible for copyright protection as artistic works if those features “can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article.” 17 U. S. C. §101.

Respondents have more than 200 copyright registrations for two-dimensional designs—consisting of various lines, chevrons, and colorful shapes—appearing on the surface of the cheerleading uniforms that they design, make, and sell. They sued petitioner, who also markets cheerleading uniforms, for copyright infringement. The District Court granted petitioner summary judgment, holding that the designs could not be conceptually or physically separated from the uniforms and were therefore ineligible for copyright protection. In reversing, the Sixth Circuit concluded that the graphics could be “identified separately” and were “capable of existing independently” of the uniforms under §101.

Held: A feature incorporated into the design of a useful article is eligible for copyright protection only if the feature (1) can be perceived as a two- or three-dimensional work of art separate from the useful article, and (2) would qualify as a protectable pictorial, graphic, or sculptural work—either on its own or fixed in some other tangible medium of expression—if it were imagined separately from the useful article into which it is incorporated. That test is satisfied here. Pp. 3–17.

(a) Separability analysis is necessary in this case. Respondents claim that two-dimensional surface decorations are always separable, even without resorting to a §101 analysis, because they are “*on* a useful article” rather than “*designs of* a useful article.” But this argu-

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ment is inconsistent with §101’s text. “[P]ictorial” and “graphic” denote two-dimensional features such as pictures, paintings, or drawings. Thus, by providing protection for “pictorial, graphical, and sculptural works” incorporated into the “design of a useful article,” §101 necessarily contemplates that such a design can include two-dimensional features. This Court will not adjudicate in the first instance the Government’s distinct argument against applying separability analysis, which was neither raised below nor advanced here by any party. Pp. 4–6.

(b) Whether a feature incorporated into a useful article “can be identified separately from,” and is “capable of existing independently of,” the article’s “utilitarian aspects” is a matter of “statutory interpretation.” *Mazer v. Stein*, 347 U. S. 201, 214. Pp. 6–10.

(1) Section 101’s separate-identification requirement is met if the decisionmaker is able to look at the useful article and spot some two- or three-dimensional element that appears to have pictorial, graphic, or sculptural qualities. To satisfy the independent-existence requirement, the feature must be able to exist as its own pictorial, graphic, or sculptural work once it is imagined apart from the useful article. If the feature could not exist as a pictorial, graphic, or sculptural work on its own, it is simply one of the article’s utilitarian aspects. And to qualify as a pictorial, graphic, or sculptural work on its own, the feature cannot be a useful article or “[a]n article that is normally a part of a useful article,” §101. Neither could one claim a copyright in a useful article by creating a replica of it in another medium. Pp. 7–8.

(2) The statute as a whole confirms this interpretation. Section 101, which protects art first fixed in the medium of a useful article, is essentially the mirror image of §113(a), which protects art first fixed in a medium other than a useful article and subsequently applied to a useful article. Together, these provisions make clear that copyright protection extends to pictorial, graphic, and sculptural works regardless of whether they were created as freestanding art or as features of useful articles. P. 8.

(3) This interpretation is also consistent with the Copyright Act’s history. In *Mazer*, a case decided under the 1909 Copyright Act, the Court held that respondents owned a copyright in a statuette created for use as a lamp base. In so holding, the Court approved a Copyright Office regulation extending protection to works of art that might also serve a useful purpose and held that it was irrelevant to the copyright inquiry whether the statuette was initially created as a freestanding sculpture or as a lamp base. Soon after, the Copyright Office enacted a regulation implementing *Mazer*’s holding that anticipated the language of §101, thereby introducing the modern separa-

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bility test to copyright law. Congress essentially lifted the language from those post-*Mazer* regulations and placed it in §101 of the 1976 Act. Pp. 8–10.

(c) Applying the proper test here, the surface decorations on the cheerleading uniforms are separable and therefore eligible for copyright protection. First, the decorations can be identified as features having pictorial, graphic, or sculptural qualities. Second, if those decorations were separated from the uniforms and applied in another medium, they would qualify as two-dimensional works of art under §101. Imaginatively removing the decorations from the uniforms and applying them in another medium also would not replicate the uniform itself.

The dissent argues that the decorations are ineligible for copyright protection because, when imaginatively extracted, they form a picture of a cheerleading uniform. Petitioner similarly claims that the decorations cannot be copyrighted because, even when extracted from the useful article, they retain the outline of a cheerleading uniform. But this is not a bar to copyright. Just as two-dimensional fine art correlates to the shape of the canvas on which it is painted, two-dimensional applied art correlates to the contours of the article on which it is applied. The only feature of respondents' cheerleading uniform eligible for a copyright is the two-dimensional applied art on the surface of the uniforms. Respondents may prohibit the reproduction only of the surface designs on a uniform or in any other medium of expression. Respondents have no right to prevent anyone from manufacturing a cheerleading uniform that is identical in shape, cut, or dimensions to the uniforms at issue here. Pp. 10–12.

(d) None of the objections raised by petitioner or the Government is meritorious. Pp. 12–17.

(1) Petitioner and the Government focus on the relative utility of the plain white uniform that would remain if the designs were physically removed from the uniform. But the separability inquiry focuses on the extracted feature and not on any aspects of the useful article remaining after the imaginary extraction. The statute does not require the imagined remainder to be a fully functioning useful article at all. Nor can an artistic feature that would be eligible for copyright protection on its own lose that protection simply because it was first created as a feature of the design of a useful article, even if it makes that article more useful. This has been the rule since *Mazer*, and it is consistent with the statute's explicit protection of "applied art." In rejecting petitioner's view, the Court necessarily abandons the distinction between "physical" and "conceptual" separability adopted by some courts and commentators. Pp. 12–15.

(2) Petitioner also suggests incorporating two "objective" com-

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ponents into the test—one requiring consideration of evidence of the creator’s design methods, purposes, and reasons, and one looking to the feature’s marketability. The Court declines to incorporate these components because neither is grounded in the statute’s text. Pp. 15–16.

(3) Finally, petitioner claims that protecting surface decorations is inconsistent with Congress’ intent to entirely exclude industrial design from copyright. But Congress has given limited copyright protection to certain features of industrial design. Approaching the statute with presumptive hostility toward protection for industrial design would undermine that choice. In any event, the test adopted here does not render the underlying uniform eligible for copyright protection. Pp. 16–17.

799 F. 3d 468, affirmed.

THOMAS, J., delivered the opinion of the Court, in which ROBERTS, C. J., and ALITO, SOTOMAYOR, and KAGAN, JJ., joined. GINSBURG, J., filed an opinion concurring in the judgment. BREYER, J., filed a dissenting opinion, in which KENNEDY, J., joined.

Cite as: 580 U. S. ____ (2017)

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Opinion of the Court

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SUPREME COURT OF THE UNITED STATES

No. 15–866

STAR ATHLETICA, L. L. C., PETITIONER *v.* VARSITY
BRANDS, INC., ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF
APPEALS FOR THE SIXTH CIRCUIT

[March 22, 2017]

JUSTICE THOMAS delivered the opinion of the Court.

Congress has provided copyright protection for original works of art, but not for industrial designs. The line between art and industrial design, however, is often difficult to draw. This is particularly true when an industrial design incorporates artistic elements. Congress has afforded limited protection for these artistic elements by providing that “pictorial, graphic, or sculptural features” of the “design of a useful article” are eligible for copyright protection as artistic works if those features “can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article.” 17 U. S. C. §101.

We granted certiorari to resolve widespread disagreement over the proper test for implementing §101’s separate-identification and independent-existence requirements. 578 U. S. ____ (2016). We hold that a feature incorporated into the design of a useful article is eligible for copyright protection only if the feature (1) can be perceived as a two- or three-dimensional work of art separate from the useful article and (2) would qualify as a protecta-

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ble pictorial, graphic, or sculptural work—either on its own or fixed in some other tangible medium of expression—if it were imagined separately from the useful article into which it is incorporated. Because that test is satisfied in this case, we affirm.

I

Respondents Varsity Brands, Inc., Varsity Spirit Corporation, and Varsity Spirit Fashions & Supplies, Inc., design, make, and sell cheerleading uniforms. Respondents have obtained or acquired more than 200 U. S. copyright registrations for two-dimensional designs appearing on the surface of their uniforms and other garments. These designs are primarily “combinations, positionings, and arrangements of elements” that include “chevrons . . . , lines, curves, stripes, angles, diagonals, inverted [chevrons], coloring, and shapes.” App. 237. At issue in this case are Designs 299A, 299B, 074, 078, and 0815. See Appendix, *infra*.

Petitioner Star Athletica, L. L. C., also markets and sells cheerleading uniforms. Respondents sued petitioner for infringing their copyrights in the five designs. The District Court entered summary judgment for petitioner on respondents’ copyright claims on the ground that the designs did not qualify as protectable pictorial, graphic, or sculptural works. It reasoned that the designs served the useful, or “utilitarian,” function of identifying the garments as “cheerleading uniforms” and therefore could not be “physically or conceptually” separated under §101 “from the utilitarian function” of the uniform. 2014 WL 819422, *8–*9 (WD Tenn., Mar. 1, 2014).

The Court of Appeals for the Sixth Circuit reversed. 799 F. 3d 468, 471 (2015). In its view, the “graphic designs” were “separately identifiable” because the designs “and a blank cheerleading uniform can appear ‘side by side’—one as a graphic design, and one as a cheerleading uniform.”

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Id., at 491 (quoting Compendium of U. S. Copyright Office Practices §924.2(B) (3d ed. 2014) (Compendium)). And it determined that the designs were “capable of existing independently” because they could be incorporated onto the surface of different types of garments, or hung on the wall and framed as art. 799 F. 3d, at 491, 492.

Judge McKeague dissented. He would have held that, because “identifying the wearer as a cheerleader” is a utilitarian function of a cheerleading uniform and the surface designs were “integral to” achieving that function, the designs were inseparable from the uniforms. *Id.*, at 495–496.

II

The first element of a copyright-infringement claim is “ownership of a valid copyright.” *Feist Publications, Inc. v. Rural Telephone Service Co.*, 499 U. S. 340, 361 (1991). A valid copyright extends only to copyrightable subject matter. See 4 M. Nimmer & D. Nimmer, *Copyright* §13.01[A] (2010) (Nimmer). The Copyright Act of 1976 defines copyrightable subject matter as “original works of authorship fixed in any tangible medium of expression.” 17 U. S. C. §102(a).

“Works of authorship” include “pictorial, graphic, and sculptural works,” §102(a)(5), which the statute defines to include “two-dimensional and three-dimensional works of fine, graphic, and applied art, photographs, prints and art reproductions, maps, globes, charts, diagrams, models, and technical drawings, including architectural plans,” §101. And a work of authorship is “‘fixed’ in a tangible medium of expression when it[is] embodi[ed] in a” “material objec[t] . . . from which the work can be perceived, reproduced, or otherwise communicated.” *Ibid.* (definitions of “fixed” and “copies”).

The Copyright Act also establishes a special rule for copyrighting a pictorial, graphic, or sculptural work incor-

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porated into a “useful article,” which is defined as “an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.” *Ibid.* The statute does not protect useful articles as such. Rather, “the design of a useful article” is “considered a pictorial, graphical, or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article.” *Ibid.*

Courts, the Copyright Office, and commentators have described the analysis undertaken to determine whether a feature can be separately identified from, and exist independently of, a useful article as “separability.” In this case, our task is to determine whether the arrangements of lines, chevrons, and colorful shapes appearing on the surface of respondents’ cheerleading uniforms are eligible for copyright protection as separable features of the design of those cheerleading uniforms.

A

As an initial matter, we must address whether separability analysis is necessary in this case.

1

Respondents argue that “[s]eparability is only implicated when a [pictorial, graphic, or sculptural] work is the ‘design of a useful article.’” Brief for Respondents 25. They contend that the surface decorations in this case are “two-dimensional graphic designs that appear *on* useful articles,” but are not themselves designs *of* useful articles. *Id.*, at 52. Consequently, the surface decorations are protected two-dimensional works of graphic art without regard to any separability analysis under §101. *Ibid.*; see 2 W. Patry, Copyright §3:151, p. 3–485 (2016) (Patry)

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(“Courts looking at two-dimensional design claims should not apply the separability analysis regardless of the three-dimensional form that design is embodied in”). Under this theory, two-dimensional artistic features on the surface of useful articles are “inherently separable.” Brief for Respondents 26.

This argument is inconsistent with the text of §101. The statute requires separability analysis for any “pictorial, graphic, or sculptural features” incorporated into the “design of a useful article.” “Design” refers here to “the combination” of “details” or “features” that “go to make up” the useful article. 3 Oxford English Dictionary 244 (def. 7, first listing) (1933) (OED). Furthermore, the words “pictorial” and “graphic” include, in this context, two-dimensional features such as pictures, paintings, or drawings. See 4 *id.*, at 359 (defining “[g]raphic” to mean “[o]f or pertaining to drawing or painting”); 7 *id.*, at 830 (defining “[p]ictorial” to mean “of or pertaining to painting or drawing”). And the statute expressly defines “[p]ictorial, graphical, and sculptural works” to include “two-dimensional . . . works of . . . art.” §101. The statute thus provides that the “design of a useful article” can include two-dimensional “pictorial” and “graphic” features, and separability analysis applies to those features just as it does to three-dimensional “sculptural” features.

2

The United States makes a related but distinct argument against applying separability analysis in this case, which respondents do not and have not advanced. As part of their copyright registrations for the designs in this case, respondents deposited with the Copyright Office drawings and photographs depicting the designs incorporated onto cheerleading uniforms. App. 213–219; Appendix, *infra*. The Government argues that, assuming the other statutory requirements were met, respondents obtained a copyright

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in the deposited drawings and photographs and have simply reproduced those copyrighted works on the surface of a useful article, as they would have the exclusive right to do under the Copyright Act. See Brief for United States as *Amicus Curiae* 14–15, 17–22. Accordingly, the Government urges, separability analysis is unnecessary on the record in this case. We generally do not entertain arguments that were not raised below and that are not advanced in this Court by any party, *Burwell v. Hobby Lobby Stores, Inc.*, 573 U. S. ___, ___ (2014), because “[i]t is not the Court’s usual practice to adjudicate either legal or predicate factual questions in the first instance,” *CRST Van Expedited, Inc. v. EEOC*, 578 U. S. ___, ___ (2016) (slip op., at 16). We decline to depart from our usual practice here.

B

We must now decide when a feature incorporated into a useful article “can be identified separately from” and is “capable of existing independently of” “the utilitarian aspects” of the article. This is not a free-ranging search for the best copyright policy, but rather “depends solely on statutory interpretation.” *Mazer v. Stein*, 347 U. S. 201, 214 (1954). “The controlling principle in this case is the basic and unexceptional rule that courts must give effect to the clear meaning of statutes as written.” *Estate of Cowart v. Nicklos Drilling Co.*, 505 U. S. 469, 476 (1992). We thus begin and end our inquiry with the text, giving each word its “ordinary, contemporary, common meaning.” *Walters v. Metropolitan Ed. Enterprises, Inc.*, 519 U. S. 202, 207 (1997) (internal quotation marks omitted). We do not, however, limit this inquiry to the text of §101 in isolation. “[I]nterpretation of a phrase of uncertain reach is not confined to a single sentence when the text of the whole statute gives instruction as to its meaning.” *Mara-cich v. Spears*, 570 U. S. ___, ___ (2013) (slip op., at 15).

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We thus “look to the provisions of the whole law” to determine §101’s meaning. *United States v. Heirs of Boisdoré*, 8 How. 113, 122 (1849).

1

The statute provides that a “pictorial, graphic, or sculptural featur[e]” incorporated into the “design of a useful article” is eligible for copyright protection if it (1) “can be identified separately from,” and (2) is “capable of existing independently of, the utilitarian aspects of the article.” §101. The first requirement—separate identification—is not onerous. The decisionmaker need only be able to look at the useful article and spot some two- or three-dimensional element that appears to have pictorial, graphic, or sculptural qualities. See 2 Patry §3:146, at 3–474 to 3–475.

The independent-existence requirement is ordinarily more difficult to satisfy. The decisionmaker must determine that the separately identified feature has the capacity to exist apart from the utilitarian aspects of the article. See 2 OED 88 (def. 5) (defining “[c]apable” of as “[h]aving the needful capacity, power, or fitness for”). In other words, the feature must be able to exist as its own pictorial, graphic, or sculptural work as defined in §101 once it is imagined apart from the useful article. If the feature is not capable of existing as a pictorial, graphic, or sculptural work once separated from the useful article, then it was not a pictorial, graphic, or sculptural feature of that article, but rather one of its utilitarian aspects.

Of course, to qualify as a pictorial, graphic, or sculptural work on its own, the feature cannot itself be a useful article or “[a]n article that is normally a part of a useful article” (which is itself considered a useful article). §101. Nor could someone claim a copyright in a useful article merely by creating a replica of that article in some other medium—for example, a cardboard model of a car. Al-

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though the replica could itself be copyrightable, it would not give rise to any rights in the useful article that inspired it.

2

The statute as a whole confirms our interpretation. The Copyright Act provides “the owner of [a] copyright” with the “exclusive righ[t] . . . to reproduce the copyrighted work in copies.” §106(1). The statute clarifies that this right “includes the right to reproduce the [copyrighted] work in or on any kind of article, whether useful or otherwise.” §113(a). Section 101 is, in essence, the mirror image of §113(a). Whereas §113(a) protects a work of authorship first fixed in some tangible medium other than a useful article and subsequently applied to a useful article, §101 protects art first fixed in the medium of a useful article. The two provisions make clear that copyright protection extends to pictorial, graphic, and sculptural works regardless of whether they were created as free-standing art or as features of useful articles. The ultimate separability question, then, is whether the feature for which copyright protection is claimed would have been eligible for copyright protection as a pictorial, graphic, or sculptural work had it originally been fixed in some tangible medium other than a useful article before being applied to a useful article.

3

This interpretation is also consistent with the history of the Copyright Act. In *Mazer*, a case decided under the 1909 Copyright Act, the respondents copyrighted a statuette depicting a dancer. The statuette was intended for use as a lamp base, “with electric wiring, sockets and lamp shades attached.” 347 U. S., at 202. Copies of the statuette were sold both as lamp bases and separately as statuettes. *Id.*, at 203. The petitioners copied the statuette and

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sold lamps with the statuette as the base. They defended against the respondents' infringement suit by arguing that the respondents did not have a copyright in a statuette intended for use as a lamp base. *Id.*, at 204–205.

Two of *Mazer's* holdings are relevant here. First, the Court held that the respondents owned a copyright in the statuette even though it was intended for use as a lamp base. See *id.*, at 214. In doing so, the Court approved the Copyright Office's regulation extending copyright protection to works of art that might also serve a useful purpose. See *ibid.* (approving 37 CFR §202.8(a) (1949) (protecting “works of artistic craftsmanship, in so far as their form but not their mechanical or utilitarian aspects are concerned”)).

Second, the Court held that it was irrelevant to the copyright inquiry whether the statuette was initially created as a freestanding sculpture or as a lamp base. 347 U. S., at 218–219 (“Nor do we think the subsequent registration of a work of art published as an element in a manufactured article, is a misuse of copyright. This is not different from the registration of a statuette and its later embodiment in an industrial article”). *Mazer* thus interpreted the 1909 Act consistently with the rule discussed above: If a design would have been copyrightable as a standalone pictorial, graphic, or sculptural work, it is copyrightable if created first as part of a useful article.

Shortly thereafter, the Copyright Office enacted a regulation implementing the holdings of *Mazer*. See 1 Nimmer §2A.08[B][1][b] (2016). As amended, the regulation introduced the modern separability test to copyright law:

“If the sole intrinsic function of an article is its utility, the fact that the article is unique and attractively shaped will not qualify it as a work of art. However, if the shape of a utilitarian article incorporates features, such as artistic sculpture, carving, or pictorial repre-

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sentation, which can be identified separately and are capable of existing independently as a work of art, such features will be eligible for registration.” 37 CFR §202.10(c) (1960) (punctuation altered).

Congress essentially lifted the language governing protection for the design of a useful article directly from the post-*Mazer* regulations and placed it into §101 of the 1976 Act. Consistent with *Mazer*, the approach we outline today interprets §§101 and 113 in a way that would afford copyright protection to the statuette in *Mazer* regardless of whether it was first created as a standalone sculptural work or as the base of the lamp. See 347 U. S., at 218–219.

C

In sum, a feature of the design of a useful article is eligible for copyright if, when identified and imagined apart from the useful article, it would qualify as a pictorial, graphic, or sculptural work either on its own or when fixed in some other tangible medium.

Applying this test to the surface decorations on the cheerleading uniforms is straightforward. First, one can identify the decorations as features having pictorial, graphic, or sculptural qualities. Second, if the arrangement of colors, shapes, stripes, and chevrons on the surface of the cheerleading uniforms were separated from the uniform and applied in another medium—for example, on a painter’s canvas—they would qualify as “two-dimensional . . . works of . . . art,” §101. And imaginatively removing the surface decorations from the uniforms and applying them in another medium would not replicate the uniform itself. Indeed, respondents have applied the designs in this case to other media of expression—different types of clothing—without replicating the uniform. See App. 273–279. The decorations are therefore separable from the

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uniforms and eligible for copyright protection.¹

The dissent argues that the designs are not separable because imaginatively removing them from the uniforms and placing them in some other medium of expression—a canvas, for example—would create “pictures of cheerleader uniforms.” *Post*, at 10 (opinion of BREYER, J.). Petitioner similarly argues that the decorations cannot be copyrighted because, even when extracted from the useful article, they retain the outline of a cheerleading uniform. Brief for Petitioner 48–49.

This is not a bar to copyright. Just as two-dimensional fine art corresponds to the shape of the canvas on which it is painted, two-dimensional applied art correlates to the contours of the article on which it is applied. A fresco painted on a wall, ceiling panel, or dome would not lose copyright protection, for example, simply because it was designed to track the dimensions of the surface on which it was painted. Or consider, for example, a design etched or painted on the surface of a guitar. If that entire design is imaginatively removed from the guitar’s surface and placed on an album cover, it would still resemble the shape of a guitar. But the image on the cover does not “replicate” the guitar as a useful article. Rather, the design is a two-dimensional work of art that corresponds to the shape of the useful article to which it was applied. The statute protects that work of art whether it is first drawn on the album cover and then applied to the guitar’s surface, or vice versa. Failing to protect that art would create an anomaly: It would extend protection to two-dimensional designs that cover a part of a useful article but would not protect the same design if it covered the

¹We do not today hold that the surface decorations are copyrightable. We express no opinion on whether these works are sufficiently original to qualify for copyright protection, see *Feist Publications, Inc. v. Rural Telephone Service Co.*, 499 U. S. 340, 358–359 (1991), or on whether any other prerequisite of a valid copyright has been satisfied.

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entire article. The statute does not support that distinction, nor can it be reconciled with the dissent’s recognition that “artwork printed on a t-shirt” could be protected. *Post*, at 4 (internal quotation marks omitted).

To be clear, the only feature of the cheerleading uniform eligible for a copyright in this case is the two-dimensional work of art fixed in the tangible medium of the uniform fabric. Even if respondents ultimately succeed in establishing a valid copyright in the surface decorations at issue here, respondents have no right to prohibit any person from manufacturing a cheerleading uniform of identical shape, cut, and dimensions to the ones on which the decorations in this case appear. They may prohibit only the reproduction of the surface designs in any tangible medium of expression—a uniform or otherwise.²

D

Petitioner and the Government raise several objections to the approach we announce today. None is meritorious.

1

Petitioner first argues that our reading of the statute is missing an important step. It contends that a feature may exist independently only if it can stand alone as a copyrightable work *and* if the useful article from which it was extracted would remain equally useful. In other words,

²The dissent suggests that our test would lead to the copyrighting of shovels. *Post*, at 7; Appendix to opinion of BREYER, J., fig. 4, *post*. But a shovel, like a cheerleading uniform, even if displayed in an art gallery, is “an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information.” 17 U. S. C. §101. It therefore cannot be copyrighted. A drawing of a shovel could, of course, be copyrighted. And, if the shovel included any artistic features that could be perceived as art apart from the shovel, and which would qualify as protectable pictorial, graphic, or sculptural works on their own or in another medium, they too could be copyrighted. But a shovel as a shovel cannot.

Opinion of the Court

copyright extends only to “solely artistic” features of useful articles. Brief for Petitioner 33. According to petitioner, if a feature of a useful article “advance[s] the utility of the article,” *id.*, at 38, then it is categorically beyond the scope of copyright, *id.*, at 33. The designs here are not protected, it argues, because they are necessary to two of the uniforms’ “inherent, essential, or natural functions”—identifying the wearer as a cheerleader and enhancing the wearer’s physical appearance. *Id.*, at 38, 48; Reply Brief 2, 16. Because the uniforms would not be equally useful without the designs, petitioner contends that the designs are inseparable from the “utilitarian aspects” of the uniform. Brief for Petitioner 50.

The Government raises a similar argument, although it reaches a different result. It suggests that the appropriate test is whether the useful article with the artistic feature removed would “remain] *similarly* useful.” Brief for United States as *Amicus Curiae* 29 (emphasis added). In the view of the United States, however, a plain white cheerleading uniform is “similarly useful” to uniforms with respondents’ designs. *Id.*, at 27–28.

The debate over the relative utility of a plain white cheerleading uniform is unnecessary. The focus of the separability inquiry is on the extracted feature and not on any aspects of the useful article that remain after the imaginary extraction. The statute does not require the decisionmaker to imagine a fully functioning useful article without the artistic feature. Instead, it requires that the separated feature qualify as a nonuseful pictorial, graphic, or sculptural work on its own.

Of course, because the removed feature may not be a useful article—as it would then not qualify as a pictorial, graphic, or sculptural work—there necessarily would be some aspects of the original useful article “left behind” if the feature were conceptually removed. But the statute does not require the imagined remainder to be a fully

Opinion of the Court

functioning useful article at all, much less an equally useful one. Indeed, such a requirement would deprive the *Mazer* statuette of protection had it been created first as a lamp base rather than as a statuette. Without the base, the “lamp” would be just a shade, bulb, and wires. The statute does not require that we imagine a nonartistic replacement for the removed feature to determine whether that *feature* is capable of an independent existence.

Petitioner’s argument follows from its flawed view that the statute protects only “solely artistic” features that have no effect whatsoever on a useful article’s utilitarian function. This view is inconsistent with the statutory text. The statute expressly protects two- and three-dimensional “applied art.” §101. “Applied art” is art “employed in the decoration, design, or execution of useful objects,” Webster’s Third New International Dictionary 105 (1976) (emphasis added), or “those arts or crafts that have a *primarily utilitarian function*, or . . . the designs and decorations used in these arts,” Random House Dictionary 73 (1966) (emphasis added); see also 1 OED 576 (2d ed. 1989) (defining “applied” as “[p]ut to practical use”). An artistic feature that would be eligible for copyright protection on its own cannot lose that protection simply because it was first created as a feature of the design of a useful article, even if it makes that article more useful.

Indeed, this has been the rule since *Mazer*. In holding that the statuette was protected, the Court emphasized that the 1909 Act abandoned any “distinctions between purely aesthetic articles and useful works of art.” 347 U. S., at 211. Congress did not enact such a distinction in the 1976 Act. Were we to accept petitioner’s argument that the only protectable features are those that play absolutely no role in an article’s function, we would effectively abrogate the rule of *Mazer* and read “applied art” out of the statute.

Because we reject the view that a useful article must

Opinion of the Court

remain after the artistic feature has been imaginatively separated from the article, we necessarily abandon the distinction between “physical” and “conceptual” separability, which some courts and commentators have adopted based on the Copyright Act’s legislative history. See H. R. Rep. No. 94–1476, p. 55 (1976). According to this view, a feature is *physically* separable from the underlying useful article if it can “be physically separated from the article by ordinary means while leaving the utilitarian aspects of the article completely intact.” Compendium §924.2(A); see also *Chosun Int’l, Inc. v. Chrisha Creations, Ltd.*, 413 F. 3d 324, 329 (CA2 2005). *Conceptual* separability applies if the feature physically could not be removed from the useful article by ordinary means. See Compendium §924.2(B); but see 1 P. Goldstein, *Copyright* §2.5.3, p. 2:77 (3d ed. 2016) (explaining that the lower courts have been unable to agree on a single conceptual separability test); 2 Patry §§3:140–3:144.40 (surveying the various approaches in the lower courts).

The statutory text indicates that separability is a conceptual undertaking. Because separability does not require the underlying useful article to remain, the physical-conceptual distinction is unnecessary.

2

Petitioner next argues that we should incorporate two “objective” components, Reply Brief 9, into our test to provide guidance to the lower courts: (1) “whether the design elements can be identified as reflecting the designer’s artistic judgment exercised independently of functional influence,” Brief for Petitioner 34 (emphasis deleted and internal quotation marks omitted), and (2) whether “there is [a] substantial likelihood that the pictorial, graphic, or sculptural feature would still be marketable to some significant segment of the community without its utilitarian function,” *id.*, at 35 (emphasis deleted and internal quota-

Opinion of the Court

tion marks omitted).

We reject this argument because neither consideration is grounded in the text of the statute. The first would require the decisionmaker to consider evidence of the creator's design methods, purposes, and reasons. *Id.*, at 48. The statute's text makes clear, however, that our inquiry is limited to how the article and feature are perceived, not how or why they were designed. See *Brandir Int'l, Inc. v. Cascade Pacific Lumber Co.*, 834 F.2d 1142, 1152 (CA2 1987) (Winter, J., concurring in part and dissenting in part) (The statute "expressly states that the legal test is how the final article is perceived, not how it was developed through various stages").

The same is true of marketability. Nothing in the statute suggests that copyrightability depends on market surveys. Moreover, asking whether some segment of the market would be interested in a given work threatens to prize popular art over other forms, or to substitute judicial aesthetic preferences for the policy choices embodied in the Copyright Act. See *Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 251 (1903) ("It would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of pictorial illustrations, outside of the narrowest and most obvious limits").

3

Finally, petitioner argues that allowing the surface decorations to qualify as a "work of authorship" is inconsistent with Congress' intent to entirely exclude industrial design from copyright. Petitioner notes that Congress refused to pass a provision that would have provided limited copyright protection for industrial designs, including clothing, when it enacted the 1976 Act, see *id.*, at 9–11 (citing S. 22, Tit. II, 94th Cong., 2d Sess., 122 Cong. Rec. 3856–3859 (1976)), and that it has enacted laws protecting

Opinion of the Court

designs for specific useful articles—semiconductor chips and boat hulls, see 17 U. S. C. §§901–914, 1301–1332—while declining to enact other industrial design statutes, Brief for Petitioner 29, 43. From this history of failed legislation petitioner reasons that Congress intends to channel intellectual property claims for industrial design into design patents. It therefore urges us to approach this question with a presumption against copyrightability. *Id.*, at 27.

We do not share petitioner’s concern. As an initial matter, “[c]ongressional inaction lacks persuasive significance” in most circumstances. *Pension Benefit Guaranty Corporation v. LTV Corp.*, 496 U. S. 633, 650 (1990) (internal quotation marks omitted). Moreover, we have long held that design patent and copyright are not mutually exclusive. See *Mazer*, 347 U. S., at 217. Congress has provided for limited copyright protection for certain features of industrial design, and approaching the statute with presumptive hostility toward protection for industrial design would undermine Congress’ choice. In any event, as explained above, our test does not render the shape, cut, and physical dimensions of the cheerleading uniforms eligible for copyright protection.

III

We hold that an artistic feature of the design of a useful article is eligible for copyright protection if the feature (1) can be perceived as a two- or three-dimensional work of art separate from the useful article and (2) would qualify as a protectable pictorial, graphic, or sculptural work either on its own or in some other medium if imagined separately from the useful article. Because the designs on the surface of respondents’ cheerleading uniforms in this case satisfy these requirements, the judgment of the Court of Appeals is affirmed.

It is so ordered.

APPENDIX TO OPINION OF THE COURT



Design 299A



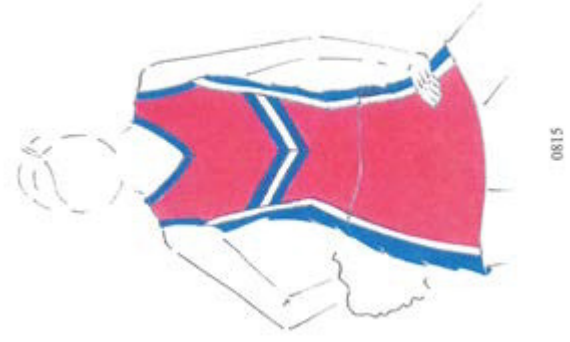
Design 299B



Design 074



Design 078



Design 0815

Cite as: 580 U. S. ____ (2017)

1

GINSBURG, J., concurring in judgment

SUPREME COURT OF THE UNITED STATES

No. 15–866

STAR ATHLETICA, L. L. C., PETITIONER *v.* VARSITY
BRANDS, INC., ET AL.ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF
APPEALS FOR THE SIXTH CIRCUIT

[March 22, 2017]

JUSTICE GINSBURG, concurring in the judgment.

I concur in the Court’s judgment but not in its opinion. Unlike the majority, I would not take up in this case the separability test appropriate under 17 U. S. C. §101.¹ Consideration of that test is unwarranted because the designs at issue are not designs *of* useful articles. Instead, the designs are themselves copyrightable pictorial or graphic works *reproduced on* useful articles.²

¹Courts “have struggled mightily to formulate a test” for the separability analysis. 799 F. 3d 468, 484 (CA6 2015); see 2 W. Patry, Copyright §3:136, p. 3–420 (2016) (noting “widespread interpretative disarray” over the separability test); Ginsburg, “Courts Have Twisted Themselves into Knots”: U. S. Copyright Protection for Applied Art, 40 Colum. J. L. & Arts 1, 2 (2016) (“The ‘separability’ test . . . has resisted coherent application . . .”); 1 M. Nimmer & D. Nimmer, Copyright §2A.08[B][6], p. 2A–84 (2016) (separability is a “perennially tangled aspect of copyright doctrine”).

²Like the Court, I express no opinion on whether the designs otherwise meet the requirements for copyrightable subject matter. See *ante*, at 11, n. 1; 17 U. S. C. §102(a) (“Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated.”). In view of the dissent’s assertion that Varsity’s designs are “plainly unoriginal,” *post*, at 11, however, I note this Court’s recognition that “the requisite level of creativity [for copyrightability] is extremely low; even a slight amount will suffice,” *Feist Publications, Inc. v. Rural*

GINSBURG, J., concurring in judgment

A pictorial, graphic, or sculptural work (PGS work) is copyrightable. §102(a)(5). PGS works include “two-dimensional and three-dimensional works of fine, graphic, and applied art.” §101. Key to this case, a copyright in a standalone PGS work “includes the right to reproduce the work in or on any kind of article, whether useful or otherwise.” §113(a). Because the owner of a copyright in a pre-existing PGS work may exclude a would-be infringer from reproducing that work on a useful article, there is no need to engage in any separability inquiry to resolve the instant petition.

The designs here in controversy are standalone pictorial and graphic works that respondents Varsity Brands, Inc., et al. (Varsity) reproduce on cheerleading uniforms. Varsity’s designs first appeared as pictorial and graphic works that Varsity’s design team sketched on paper. App. 281. Varsity then sought copyright protection for those two-dimensional designs, not for cheerleading costumes; its registration statements claimed “2-Dimensional artwork” and “fabric design (artwork).” Appendix, *infra*, at 4–7, 9–10, 12–14. Varsity next reproduced its two-dimensional graphic designs on cheerleading uniforms, also on other garments, including T-shirts and jackets. See, e.g., App. 274, 276.³

Telephone Service Co., 499 U. S. 340, 345 (1991); see *Atari Games Corp. v. Oman*, 979 F. 2d 242 (CA DC 1992).

³That Varsity’s designs can be placed on jackets or T-shirts without replicating a cheerleader’s uniform supports their qualification as fabric designs. The dissent acknowledges that fabric designs are copyrightable, but maintains that Varsity’s designs do not count because Varsity’s submissions depict clothing, not fabric designs. *Post*, at 10–11. But registrants claiming copyrightable designs may submit drawings or photos of those designs as they appear on useful articles. See Compendium of U. S. Copyright Office Practices §1506 (3d ed. 2014) (“To register a copyrightable design that has been applied to the back of a useful article, such as a chair, the applicant may submit drawings of the design as it appears on the chair[.]”), online at

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3

GINSBURG, J., concurring in judgment

In short, Varsity’s designs are not themselves useful articles meet for separability determination under §101; they are standalone PGS works that may gain copyright protection as such, including the exclusive right to reproduce the designs on useful articles.⁴

<https://www.copyright.gov/comp3/docs/compendium.pdf> (as last visited Mar. 8, 2017). And, as noted in text, Varsity’s registration statements claimed “2-Dimensional artwork” and “fabric design (artwork).” Appendix, *infra*, at 4–7, 9–10, 12–14.

The dissent also acknowledges that artwork printed on a T-shirt is copyrightable. *Post*, at 4. Varsity’s colored shapes and patterns can be, and indeed are, printed on T-shirts. See, *e.g.*, App. 274. Assuming Varsity’s designs meet the other requirements for copyrightable subject matter, they would fit comfortably within the Copyright Office guidance featured by the dissent. See *post*, at 4 (citing Compendium of U. S. Copyright Office Practices, *supra*, §924.2(B)).

⁴The majority declines to address this route to decision because, it says, Varsity has not advanced it. *Ante*, at 5–6. I read Varsity’s brief differently. See Brief for Respondents 25 (explaining that the Copyright Act “expressly provides that PGS designs do not lose their protection when they appear ‘in or on’ a useful article,” quoting §113(a)); *id.*, at 52 (disclaiming the need for separability analysis because the designs are themselves PGS works).

4 STAR ATHLETICA, L. L. C. v. VARSITY BRANDS, INC.

Appendix to opinion of GINSBURG, J.

APPENDIX

EXHIBIT 15

Certificate of Registration	Form VA
Additional certificate	For a Work of the
(17 U.S.C. 706)	Visual Arts
[Seal of the United States	UNITED STATES
Copyright Office 1870]	COPYRIGHT OFFICE
This Certificate issued	RE VA 1-417-427
under the seal of the	EFFECTIVE DATE
Copyright Office in	OF REGISTRATION
accordance with title 17,	<u>5 21 07</u>
<i>United States Code</i> ,	Month Day Year
attests that registration	Maria A. Pallante
has been made for the	Acting Register of
work identified below.	Copyrights, United
The information on this	States of America
certificate has been made	
a part of the Copyright	
Office records.	

**DO NOT WRITE ABOVE THIS LINE. IF YOU
NEED MORE SPACE, USE A SEPARATE CON-
TINUATION SHEET**

1 Title of This Work	NATURE OF THIS
<u>Design Number 078</u>	WORK See instructions
	<u>2-dimensional artwork</u> ←

Previous or Alternative Titles

Publication as a Contribution If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. **Title of Collective Work**

Cite as: 580 U. S. ____ (2017)

5

Appendix to opinion of GINSBURG, J.

If published in a periodical or serial give:
Volume Number Issue Date On Pages

2 NOTE Under the law the “author” of a “**work made for hire**” is generally the employer, not the employee (see instructions). For any part of this work that was “made for hire” check “Yes” in the space provided, give the employer (or other person for whom the work was prepared) as “Author” of that part, and leave the space for dates of birth and death blank.

a **NAME OF AUTHOR**

Varsity Brands, Inc. _____

DATES OF BIRTH AND DEATH

Year Born _____

Year Died _____

Was this contribution to the work a “work made for hire”? Yes No

Author’s Nationality or Domicile

Name of Country _____

Citizen of _____

or

Domiciled in United States _____

Was this Author’s Contribution to the Work

Anonymous? Yes No

Pseudonymous? Yes No

If the answer to either of these questions is “Yes,” see detailed instructions.

Nature of Authorship Check appropriate box(es)

See Instructions

3-Dimensional sculpture

2-Dimensional artwork



6 STAR ATHLETICA, L. L. C. v. VARSITY BRANDS, INC.

Appendix to opinion of GINSBURG, J.

EXHIBIT 16

<p>Certificate of Registration Additional certificate (17 U.S.C. 706)</p> <p>[Seal of the United States Copyright Office 1870]</p> <p>This Certificate issued under the seal of the Copyright Office in accordance with title 17, <i>United States Code</i>, attests that registration has been made for the work identified below. The infor- mation on this certificate has been made a part of the Copyright Office records.</p> <p>Title _____</p> <p>Title of Work: 0815</p> <p>Nature of Work: 2-dimensional artwork ←</p> <p>Completion/Publication _____</p> <p>Year of Completion: 2007</p> <p>Date of 1st Publication: January 2, 2008</p> <p>Nation of 1st Publication: United States</p> <p>Author _____</p> <p>Author: Varsity Brands, Inc.</p> <p>Author Created: 2-dimensional artwork ←</p> <p>Work made for hire: Yes</p> <p>Domiciled in: United States</p> <p>Anonymous: No</p> <p>Pseudonymous: No</p> <p>Copyright claimant _____</p> <p>Copyright Claimant: Varsity Brands, Inc.</p>	<p>Registration Number: VA 1-675-905</p> <p>Effective date of registration: May 12, 2008</p> <p>Maria A. Pallante Acting Register of Copyrights, United States of America</p>
--	---

Cite as: 580 U. S. ____ (2017)

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Appendix to opinion of GINSBURG, J.

EXHIBIT 17

Certificate of Registration	Form	VA
Additional certificate (17	For a Work of the	
U.S.C. 706)	Visual Arts	
[Seal of the United States	UNITED STATES	
Copyright Office 1870]	COPYRIGHT OFFICE	
This Certificate issued	RE VA	1-319-228
under the seal of the Copy-	EFFECTIVE DATE	
right Office in accordance	OF REGISTRATION	
with title 17, <i>United States</i>	<u>April 29 2005</u>	
<i>Code</i> , attests that registra-	Month Day Year	
tion has been made for the	Maria A. Pallante	
work identified below. The	Acting Register of	
information on this certifi-	Copyrights, United	
cate has been made a part	States of America	
of the Copyright Office		
records.		

**DO NOT WRITE ABOVE THIS LINE. IF YOU
NEED MORE SPACE, USE A SEPARATE CON-
TINUATION SHEET**

1 Title of This Work	NATURE OF THIS
<u>299A</u>	WORK See instructions
	<u>FABRIC DESIGN</u>
	<u>(ARTWORK)</u>



Previous or Alternative Titles

Publication as a Contribution If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. **Title of Collective Work**

8 STAR ATHLETICA, L. L. C. v. VARSITY BRANDS, INC.

Appendix to opinion of GINSBURG, J.

If published in a periodical or serial give:
Volume Number Issue Date On Pages

2 NOTE Under the law the “author” of a “**work made for hire**” is generally the employer not the employee (see instructions) For any part of this work that was *made for hire* check “Yes” in the space provided, give the employer (or other person for whom the work was prepared) as “Author” of that part and leave the space for dates of birth and death blank.

a **NAME OF AUTHOR**
Varsity Spirit Fashions & Supplies Inc

DATES OF BIRTH AND DEATH
 Year Born _____ Year Died _____

Was this contribution to the work a “**work made for hire**”? Yes No

Author’s Nationality or Domicile

Name of Country _____

Citizen of _____

or

Domiciled in United States

Was this Author’s Contribution to the Work

Anonymous? Yes No

Pseudonymous? Yes No

If the answer to either of these questions is “Yes,” see detailed instructions.

Nature of Authorship Check appropriate box(es)
See Instructions

3 Dimensional sculpture

Cite as: 580 U. S. ____ (2017)

9

Appendix to opinion of GINSBURG, J.

- 2 Dimensional artwork
 Reproduction of work of art
 Map
 Photograph
 Jewelry design
 Technical drawing
 Text
 Architectural work

**b Name of Author**

Dates of Birth and Death

Year Born _____

Year Died _____

Was this contribution to the work a “work made for hire”? Yes No

Author’s Nationality or Domicile

Name of Country _____

Citizen of _____

or

Domiciled at _____

Was this Author’s Contribution to the WorkAnonymous? Yes NoPseudonymous? Yes No

If the answer to either of these questions is “Yes,” see detailed instructions.

Nature of Authorship Check appropriate box(es)
See Instructions

- 3 Dimensional sculpture


10 STAR ATHLETICA, L. L. C. v. VARSITY BRANDS, INC.

Appendix to opinion of GINSBURG, J.

EXHIBIT 18

Certificate of Registration	Form	VA	
Additional certificate (17	For a Work of the		
U.S.C. 706)	Visual	Arts	
[Seal of the United States	UNITED	STATES	
Copyright Office 1870]	COPYRIGHT OFFICE		
This Certificate issued	RE VA	1-319-226	
under the seal of the Copy-	EFFECTIVE	DATE	
right Office in accordance	OF	REGISTRATION	
with title 17, <i>United States</i>	Month	Day	Year
<i>Code</i> , attests that registra-	<u>April</u>	<u>29</u>	<u>2005</u>
tion has been made for the	Maria A. Pallante		
work identified below. The	Acting Register of		
information on this certifi-	Copyrights, United		
cate has been made a part	States of America		
of the Copyright Office			
records.			

**DO NOT WRITE ABOVE THIS LINE. IF YOU
NEED MORE SPACE, USE A SEPARATE CON-
TINUATION SHEET**

<u>1 Title of This Work</u>	NATURE OF THIS	
<u>299B</u>	WORK See instructions	
	<u>FABRIC DESIGN</u>	
	<u>(ARTWORK)</u>	

Previous or Alternative Titles

Publication as a Contribution If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared.

Cite as: 580 U. S. ____ (2017)

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Appendix to opinion of GINSBURG, J.

Title of Collective Work

If published in a periodical or serial give: **Volume Number Issue Date On Pages**

2 NOTE Under the law the “author” of a “**work made for hire**” is generally the employer not the employee (see Instructions) For any part of this work that was made for hire, check Yes in the space provided, give the employer (or other person for whom the work was prepared) as “Author” of that part and leave the space for dates of birth and death blank.

a **NAME OF AUTHOR**VARSAITY SPIRIT FASHIONS & SUPPLIES INC**DATES OF BIRTH AND DEATH**

Year Born

Year Died

Was this contribution to the work a “**work made for hire**”? Yes No

Author’s Nationality or Domicile

Name of Country

Citizen of _____

or

Domiciled in USA**Was this Author’s Contribution to the Work:**Anonymous? Yes NoPseudonymous? Yes No

If the answer to either of these questions is “Yes,” see detailed instructions.

Nature of Authorship Check appropriate box(es)
See Instructions

12 STAR ATHLETICA, L. L. C. v. VARSITY BRANDS, INC.

Appendix to opinion of GINSBURG, J.

- 3 Dimensional sculpture
 2 Dimensional artwork
 Reproduction of work of art
 Map
 Photograph
 Jewelry design
 Technical drawing
 Text
 Architectural work



b Name of Author

Dates of Birth and Death

Year Born _____ Year Died _____

Was this contribution to the work a “work made for hire”? Yes No

Author’s Nationality or Domicile

Name of Country _____

Citizen of _____

or

Domiciled in _____

Was this Author’s Contribution to the WorkAnonymous? Yes NoPseudonymous? Yes No

If the answer to either of these questions is “Yes,” see detailed instructions.

Nature of Authorship Check appropriate box(es)**See Instructions**

Cite as: 580 U. S. ____ (2017)

13

Appendix to opinion of GINSBURG, J.

AMENDED EXHIBIT 19

Certificate of Registration	Form VA
[Seal of the United States Copyright Office 1870]	For a Work of the Visual Arts
This Certificate issued under the seal of the Copyright Office in accordance with title 17, <i>United States Code</i> ,	UNITED STATES COPYRIGHT OFFICE RE VA 1-411-535 [BARCODE] EFFECTIVE DATE OF REGISTRATION <u>May 09 2007</u> Month Day Year
attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.	
[Marybeth Peters] Register of Copyrights, United States of America	

RATE CONTINUATION SHEET:

1 Title of This Work	NATURE OF THIS
<u>Design Number 074</u>	WORK See instructions
	<u>2-dimensional artwork</u> ←
Previous or Alternative Titles	

Publication as a Contribution If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work

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Appendix to opinion of GINSBURG, J.

If published in a periodical or serial give:
 Volume Number Issue Date On Pages

2 NOTE Under the law the “author” of a “work made for hire” is generally the employer, not the employee (see instructions). For any part of this work that was “made for hire” check “Yes” in the space provided, give the employer (or other person for whom the “work” was prepared) as “Author” of that part and leave the space for dates of birth and death blank

a NAME OF AUTHOR

Varsity Brands, Inc. _____

DATES OF BIRTH AND DEATH

Year Born _____ Year Died _____

Was this contribution to the work a “work made for hire”? Yes No

Author & Nationality or Domicile

Name of Country _____

Citizen of _____

or

Domiciled at United States

Was this Author a Contribution to the Work

Anonymous? Yes No

Pseudonymous? Yes No

If the answer to either of these questions is “Yes,” see detailed instructions.

Nature of Authorship Check appropriate box(es)

See Instructions

3 Dimensional sculpture

2 Dimensional artwork

Reproduction of work of art



Cite as: 580 U. S. ____ (2017)

1

BREYER, J., dissenting

SUPREME COURT OF THE UNITED STATES

No. 15–866

STAR ATHLETICA, L. L. C., PETITIONER *v.* VARSITY
BRANDS, INC., ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF
APPEALS FOR THE SIXTH CIRCUIT

[March 22, 2017]

JUSTICE BREYER, with whom JUSTICE KENNEDY joins,
dissenting.

I agree with much in the Court’s opinion. But I do not agree that the designs that Varsity Brands, Inc., submitted to the Copyright Office are eligible for copyright protection. Even applying the majority’s test, the designs *cannot* “be perceived as . . . two- or three-dimensional work[s] of art separate from the useful article.” *Ante*, at 1.

Look at the designs that Varsity submitted to the Copyright Office. See Appendix to opinion of the Court, *ante*. You will see only pictures of cheerleader uniforms. And cheerleader uniforms are useful articles. A picture of the relevant design features, whether separately “perceived” on paper or in the imagination, is a picture of, and thereby “replicate[s],” the underlying useful article of which they are a part. *Ante*, at 1, 10. Hence the design features that Varsity seeks to protect are not “capable of existing independently o[f] the utilitarian aspects of the article.” 17 U. S. C. §101.

I

The relevant statutory provision says that the “design of a useful article” is copyrightable “only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from,

BREYER, J., dissenting

and are capable of existing independently of, the utilitarian aspects of the article.” *Ibid.* But what, we must ask, do the words “identified separately” mean? Just when is a design separate from the “utilitarian aspect of the [useful] article?” The most direct, helpful aspect of the Court’s opinion answers this question by stating:

“Nor could someone claim a copyright in a useful article merely by creating a replica of that article in some other medium—for example, a cardboard model of a car. Although the replica could itself be copyrightable, it would not give rise to any rights in the useful article that inspired it.” *Ante*, at 7–8.

Exactly so. These words help explain the Court’s statement that a copyrightable work of art must be “perceived as a two- or three-dimensional work of art separate from the useful article.” *Ante*, at 1, 17. They help clarify the concept of separateness. Cf. 1 M. Nimmer & D. Nimmer, *Nimmer on Copyright* §2A.08[A][1] (2016) (Nimmer) (describing courts’ difficulty in applying that concept). They are consistent with Congress’ own expressed intent. 17 U. S. C. §101; H. R. Rep. No. 94–1476, pp. 55, 105 (1976) (H. R. Rep.). And they reflect long held views of the Copyright Office. See *Compendium of U. S. Copyright Office Practices* §924.2(B) (3d ed. 2014), online at <http://www.copyright.gov/comp3/docs/compendium.pdf> (as last visited Mar. 7, 2017) (Compendium).

Consider, for example, the explanation that the House Report for the Copyright Act of 1976 provides. It says:

“Unless the shape of an automobile, airplane, ladies’ dress, food processor, television set, or any other industrial product contains some element that, *physically or conceptually*, can be identified as separable from the utilitarian aspects of that article, the design would not be copyrighted” H. R. Rep., at 55 (emphasis added).

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These words suggest two exercises, one physical, one mental. Can the design features (the picture, the graphic, the sculpture) be physically removed from the article (and considered separately), all the while leaving the fully functioning utilitarian object in place? If not, can one nonetheless conceive of the design features separately without replicating a picture of the utilitarian object? If the answer to either of these questions is “yes,” then the design is eligible for copyright protection. Otherwise, it is not. The abstract nature of these questions makes them sound difficult to apply. But with the Court’s words in mind, the difficulty tends to disappear.

An example will help. Imagine a lamp with a circular marble base, a vertical 10-inch tall brass rod (containing wires) inserted off center on the base, a light bulb fixture emerging from the top of the brass rod, and a lampshade sitting on top. In front of the brass rod a porcelain Siamese cat sits on the base facing outward. Obviously, the Siamese cat is *physically separate* from the lamp, as it could be easily removed while leaving both cat and lamp intact. And, assuming it otherwise qualifies, the designed cat is eligible for copyright protection.

Now suppose there is no long brass rod; instead the cat sits in the middle of the base and the wires run up through the cat to the bulbs. The cat is not physically separate from the lamp, as the reality of the lamp’s construction is such that an effort to physically separate the cat and lamp will destroy both cat and lamp. The two are integrated into a single functional object, like the similar configuration of the ballet dancer statuettes that formed the lamp bases at issue in *Mazer v. Stein*, 347 U. S. 201 (1954). But we can easily imagine the cat on its own, as did Congress when conceptualizing the ballet dancer. See H. R. Rep., at 55 (the statuette in *Mazer* was “incorporated into a product without losing its ability to exist independently as a work of art”). In doing so, we do not create

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a mental picture of a lamp (or, in the Court’s words, a “replica” of the lamp), which is a useful article. We simply perceive the cat separately, as a small cat figurine that could be a copyrightable design work standing alone that does not replicate the lamp. Hence the cat is *conceptually separate* from the utilitarian article that is the lamp. The pair of lamps pictured at Figures 1 and 2 in the Appendix to this opinion illustrate this principle.

Case law, particularly case law that Congress and the Copyright Office have considered, reflects the same approach. Congress cited examples of copyrightable design works, including “a carving on the back of a chair” and “a floral relief design on silver flatware.” H. R. Rep., at 55. Copyright Office guidance on copyrightable designs in useful articles include “an engraving on a vase,” “[a]rtwork printed on a t-shirt,” “[a] colorful pattern decorating the surface of a shopping bag,” “[a] drawing on the surface of wallpaper,” and “[a] floral relief decorating the handle of a spoon.” Compendium §924.2(B). Courts have found copyrightable matter in a plaster ballet dancer statuette encasing the lamp’s electric cords and forming its base, see *Mazer, supra*, as well as carvings engraved onto furniture, see *Universal Furniture Int’l, Inc. v. Collezione Europa USA, Inc.*, 618 F. 3d 417, 431–435 (CA4 2010) (*per curiam*), and designs on laminated floor tiles, see *Home Legend, LLC v. Mannington Mills, Inc.*, 784 F. 3d 1404, 1412–1413 (CA11 2015). See generally Brief for Intellectual Property Professors as *Amici Curiae*.

By way of contrast, Van Gogh’s painting of a pair of old shoes, though beautifully executed and copyrightable as a painting, would not qualify for a shoe design copyright. See Appendix, fig. 3, *infra*; 17 U.S.C. §§113(a)–(b). Courts have similarly denied copyright protection to objects that begin as three-dimensional designs, such as measuring spoons shaped like heart-tipped arrows, *Bonazoli v. R. S. V. P. Int’l, Inc.*, 353 F. Supp. 2d 218, 226–227

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(RI 2005); candleholders shaped like sailboats, *Design Ideas, Ltd. v. Yankee Candle Co.*, 889 F. Supp. 2d 1119, 1128 (CD Ill. 2012); and wire spokes on a wheel cover, *Norris Industries, Inc. v. International Tel. & Tel. Corp.*, 696 F. 2d 918, 922–924 (CA11 1983). None of these designs could qualify for copyright protection that would prevent others from selling spoons, candleholders, or wheel covers with the same design. Why not? Because in each case the design is not separable from the utilitarian aspects of the object to which it relates. The designs cannot be physically separated because they themselves make up the shape of the spoon, candleholders, or wheel covers of which they are a part. And spoons, candleholders, and wheel covers are useful objects, as are the old shoes depicted in Van Gogh’s painting. More importantly, one cannot easily imagine or otherwise conceptualize the design of the spoons or the candleholders or the shoes *without that picture, or image, or replica being a picture of spoons, or candleholders, or wheel covers, or shoes*. The designs necessarily bring along the underlying utilitarian object. Hence each design is not conceptually separable from the physical useful object.

The upshot is that one could copyright the floral design on a soup spoon but one could not copyright the shape of the spoon itself, no matter how beautiful, artistic, or esthetically pleasing that shape might be: A picture of the shape of the spoon is also a picture of a spoon; the picture of a floral design is not. See Compendium §924.2(B).

To repeat: A separable design feature must be “capable of existing independently” of the useful article as a separate artistic work that is not itself the useful article. If the claimed feature could be extracted without replicating the useful article of which it is a part, and the result would be a copyrightable artistic work standing alone, then there is a separable design. But if extracting the claimed features would necessarily bring along the underlying useful arti-

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cle, the design is not separable from the useful article. In many or most cases, to decide whether a design or artistic feature of a useful article is conceptually separate from the article itself, it is enough to imagine the feature on its own and ask, “Have I created a picture of a (useful part of a) useful article?” If so, the design is not separable from the useful article. If not, it is.

In referring to imagined pictures and the like, I am not speaking technically. I am simply trying to explain an intuitive idea of what separation is about, as well as how I understand the majority’s opinion. So understood, the opinion puts design copyrights in their rightful place. The law has long recognized that drawings or photographs of real world objects are copyrightable as drawings or photographs, but the copyright does not give protection against others making the underlying useful objects. See, *e.g.*, *Burrow-Giles Lithographic Co. v. Sarony*, 111 U. S. 53 (1884). That is why a copyright on Van Gogh’s painting would prevent others from reproducing that painting, but it would not prevent others from reproducing and selling the comfortable old shoes that the painting depicts. Indeed, the purpose of §113(b) was to ensure that “copyright in a pictorial, graphic, or sculptural work, portraying a useful article as such, does not extend to the manufacture of the useful article itself.” H. R. Rep., at 105.

II

To ask this kind of simple question—does the design picture the useful article?—will not provide an answer in every case, for there will be cases where it is difficult to say whether a picture of the design is, or is not, also a picture of the useful article. But the question will avoid courts focusing primarily upon what I believe is an unhelpful feature of the inquiry, namely, whether the design can be imagined as a “two- or three-dimensional work of art.” *Ante*, at 1, 17. That is because virtually any indus-

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trial design can be thought of separately as a “work of art”: Just imagine a frame surrounding the design, or its being placed in a gallery. Consider Marcel Duchamp’s “ready-mades” series, the functional mass-produced objects he designated as art. See Appendix, fig. 4, *infra*. What is there in the world that, viewed through an esthetic lens, cannot be seen as a good, bad, or indifferent work of art? What design features could not be imaginatively reproduced on a painter’s canvas? Indeed, great industrial design may well include design that is inseparable from the useful article—where, as Frank Lloyd Wright put it, “form and function are one.” F. Wright, *An Autobiography* 146 (1943) (reprint 2005). Where they are one, the designer may be able to obtain 15 years of protection through a design patent. 35 U. S. C. §§171, 173; see also McKenna & Strandburg, *Progress and Competition in Design*, 17 *Stan. Tech. L. Rev.* 1, 48–51 (2013). But, if they are one, Congress did not intend a century or more of copyright protection.

III

The conceptual approach that I have described reflects Congress’ answer to a problem that is primarily practical and economic. Years ago Lord Macaulay drew attention to the problem when he described copyright in books as a “tax on readers for the purpose of giving a bounty to writers.” 56 *Parl. Deb.* (3d Ser.) (1841) 341, 350. He called attention to the main benefit of copyright protection, which is to provide an incentive to produce copyrightable works and thereby “promote the Progress of Science and useful Arts.” U. S. Const., Art. I, §8, cl. 8. But Macaulay also made clear that copyright protection imposes costs. Those costs include the higher prices that can accompany the grant of a copyright monopoly. They also can include (for those wishing to display, sell, or perform a design, film, work of art, or piece of music, for example) the costs

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of discovering whether there are previous copyrights, of contacting copyright holders, and of securing permission to copy. *Eldred v. Ashcroft*, 537 U. S. 186, 248–252 (2003) (BREYER, J., dissenting). Sometimes, as Thomas Jefferson wrote to James Madison, costs can outweigh “the benefit even of limited monopolies.” Letter from Thomas Jefferson to James Madison (July 31, 1788), in 13 Papers of Thomas Jefferson 443 (J. Boyd ed. 1956) (Jefferson Letter). And that is particularly true in light of the fact that Congress has extended the “limited Times” of protection, U. S. Const., Art. I, §8, cl. 8, from the “14 years” of Jefferson’s day to potentially more than a century today. Jefferson Letter 443; see also *Eldred*, *supra*, at 246–252 (opinion of BREYER, J.).

The Constitution grants Congress primary responsibility for assessing comparative costs and benefits and drawing copyright’s statutory lines. Courts must respect those lines and not grant copyright protection where Congress has decided not to do so. And it is clear that Congress has not extended broad copyright protection to the fashion design industry. See, e.g., 1 Nimmer §2A.08[H][3][c] (describing how Congress rejected proposals for fashion design protection within the 1976 Act and has rejected every proposed bill to this effect since then); *Esquire, Inc. v. Ringer*, 591 F. 2d 796, 800, n. 12 (CA DC 1978) (observing that at the time of the 1976 Copyright Act, Congress had rejected every one of the approximately 70 design protection bills that had been introduced since 1914); e.g., H. R. 5055, 109th Cong., 2d Sess.: “To Amend title 17, United States Code, to provide protection for fashion design” (introduced Mar. 30, 2006; unenacted). Congress has left “statutory . . . protection . . . largely unavailable for dress designs.” 1 Nimmer §2A.08[H][3][a]; Raustiala & Sprigman, *The Piracy Paradox: Innovation and Intellectual Property in Fashion Design*, 92 Va. L. Rev. 1687, 1698–1705 (2006).

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Congress' decision not to grant full copyright protection to the fashion industry has not left the industry without protection. Patent design protection is available. 35 U. S. C. §§171, 173. A maker of clothing can obtain trademark protection under the Lanham Act for signature features of the clothing. 15 U. S. C. §1051 *et seq.* And a designer who creates an original textile design can receive copyright protection for that pattern as placed, for example, on a bolt of cloth, or anything made with that cloth. *E.g.*, Compendium §924.3(A)(1). “[T]his [type of] claim . . . is generally made by the fabric producer rather than the garment or costume designer,” and is “ordinarily made when the two-dimensional design is applied to the textile fabric and before the garment is cut from the fabric.” 56 Fed. Reg. 56531 (1991).

The fashion industry has thrived against this backdrop, and designers have contributed immeasurably to artistic and personal self-expression through clothing. But a decision by this Court to grant protection to the design of a garment would grant the designer protection that Congress refused to provide. It would risk increased prices and unforeseeable disruption in the clothing industry, which in the United States alone encompasses nearly \$370 billion in annual spending and 1.8 million jobs. Brief for Council of Fashion Designers of America, Inc., as *Amicus Curiae* 3–4 (citing U. S. Congress, Joint Economic Committee, *The New Economy of Fashion* 1 (2016)). That is why I believe it important to emphasize those parts of the Court's opinion that limit the scope of its interpretation. That language, as I have said, makes clear that one may not “claim a copyright in a useful article merely by creating a replica of that article in some other medium,” which “would not give rise to any rights in the useful article that inspired it.” *Ante*, at 7–8.

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IV

If we ask the “separateness” question correctly, the answer here is not difficult to find. The majority’s opinion, in its appendix, depicts the cheerleader dress designs that Varsity submitted to the Copyright Office. Can the design features in Varsity’s pictures exist separately from the utilitarian aspects of a dress? Can we extract those features as copyrightable design works standing alone, without bringing along, via picture or design, the dresses of which they constitute a part?

Consider designs 074, 078, and 0815. They certainly look like cheerleader uniforms. That is to say, they look like pictures of cheerleader uniforms, just like Van Gogh’s old shoes look like shoes. I do not see how one could see them otherwise. Designs 299A and 2999B present slightly closer questions. They omit some of the dresslike context that the other designs possess. But the necklines, the sleeves, and the cut of the skirt suggest that they too are pictures of dresses. Looking at all five of Varsity’s pictures, I do not see how one could conceptualize the design features in a way that does not picture, not just artistic designs, but dresses as well.

Were I to accept the majority’s invitation to “imaginatively remov[e]” the chevrons and stripes *as they are arranged* on the neckline, waistline, sleeves, and skirt of each uniform, and apply them on a “painter’s canvas,” *ante*, at 10, that painting would be of a cheerleader’s dress. The esthetic elements on which Varsity seeks protection exist only as part of the uniform design—there is nothing to separate out but for dress-shaped lines that replicate the cut and style of the uniforms. Hence, each design is not physically separate, nor is it conceptually separate, from the useful article it depicts, namely, a cheerleader’s dress. They cannot be copyrighted.

Varsity, of course, could have sought a design patent for its designs. Or, it could have sought a copyright on a

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textile design, even one with a similar theme of chevrons and lines.

But that is not the nature of Varsity’s copyright claim. It has instead claimed ownership of the particular “treatment and arrangement” of the chevrons and lines of the design as they appear at the neckline, waist, skirt, sleeves, and overall cut of each uniform. Brief for Respondents 50. The majority imagines that Varsity submitted something different—that is, only the surface decorations of chevrons and stripes, as in a textile design. As the majority sees it, Varsity’s copyright claim would be the same had it submitted a plain rectangular space depicting chevrons and stripes, like swaths from a bolt of fabric. But considered on their own, the simple stripes are plainly unoriginal. Varsity, then, seeks to do indirectly what it cannot do directly: bring along the design and cut of the dresses by seeking to protect surface decorations whose “treatment and arrangement” are *coextensive with that design and cut*. As Varsity would have it, it would prevent its competitors from making useful three-dimensional cheerleader uniforms by submitting plainly unoriginal chevrons and stripes as cut and arranged on a useful article. But with that cut and arrangement, the resulting pictures on which Varsity seeks protection do not simply depict designs. They depict clothing. They depict the useful articles of which the designs are inextricable parts. And Varsity cannot obtain copyright protection that would give them the power to prevent others from making those useful uniforms, any more than Van Gogh can copyright comfortable old shoes by painting their likeness.

I fear that, in looking past the three-dimensional design inherent in Varsity’s claim by treating it as if it were no more than a design for a bolt of cloth, the majority has lost sight of its own important limiting principle. One may not “claim a copyright in a useful article merely by creating a replica of that article in some other medium,” such as in a

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picture. *Ante*, at 7. That is to say, one cannot obtain a copyright that would give its holder “any rights in the useful article that inspired it.” *Ante*, at 8.

With respect, I dissent.

APPENDIX TO OPINION OF BREYER, J.

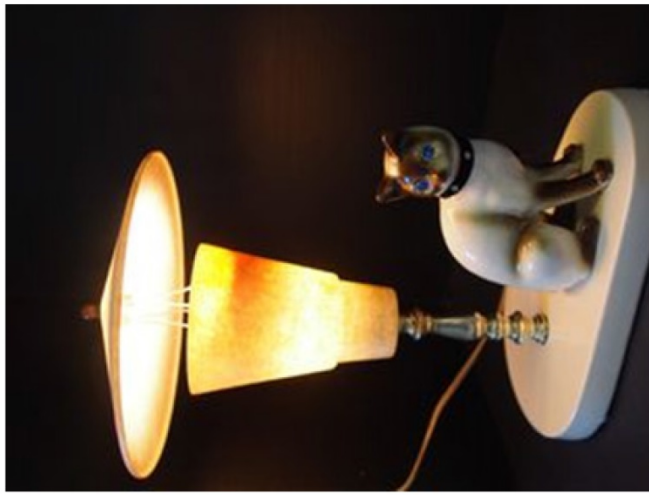


Fig. 1



Fig. 2

APPENDIX TO OPINION OF BREYER, J.



Fig. 3: Vincent Van Gogh, "Shoes"

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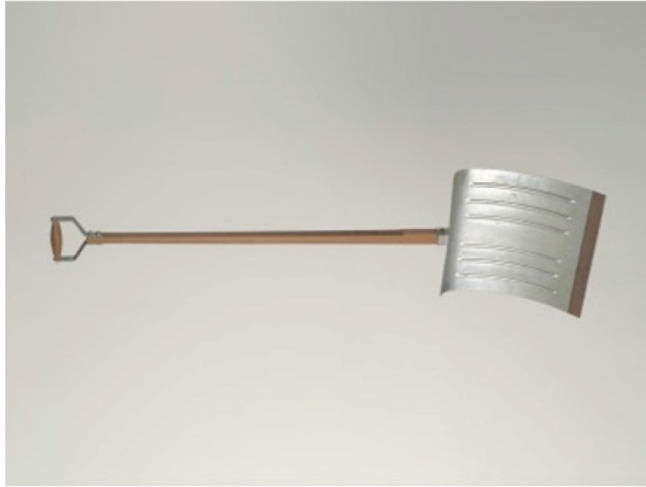


Fig. 4: Marcel Duchamp, "In Advance of the Broken Arm"

Ivanka Trump Must Answer Questions in ‘Wild Thing’ Shoe Suit

By **Bob Van Voris**

June 23, 2017, 6:20 PM EDT

Updated on June 23, 2017, 6:50 PM EDT

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- Shoemaker claims Trump's company copied its footwear design
 - Judge rejects argument she's too busy, important to testify
-

Ivanka Trump must answer questions in a lawsuit over whether her company ripped off a rival's shoe design, as a judge rejected her claim that she's too busy as a "high-ranking government official" in the White House to sit for a deposition.

U.S. District Judge Katherine Forrest in Manhattan on Friday said Trump must spend two hours responding to questions about the design of a shoe sold by her company.

"Ms. Trump's public statements regarding active and comprehensive brand management lead to a reasonable inference that the shoe at issue would not have been released without her approval," Forrest said in a three-page order. "In such a situation, a deposition is appropriate."

Aquazzura Italia SRL sued Trump, her company IT Collection LLC and shoemaker Marc Fisher Holdings, claiming they illegally copied its pricey "Wild Thing" shoe in designing the Ivanka Trump "Hettie" model. Aquazzura wants to question Ivanka Trump before a trial, but her legal team asked Forrest to rule she doesn't have to testify.

Trump, whose White House title is "Assistant to the President of the United States," is too important and busy to testify, her lawyer, Darren Saunders, argued in a June 16 letter to the judge.

"The deposition of Ms. Trump would be an unnecessary distraction and would interfere with her ability to perform her duties at the White House," he wrote.

Trump also claimed she lacked relevant information about the shoes, which are sold with her name stamped on them in gold letters.

'Hettie Shoe'

"I had no involvement in the conception, design, production or sale of the 'Hettie Shoe,'" Trump said June 16 in a declaration filed with the court. "My involvement was strictly limited to the final sign-off of each season's line after it was first reviewed and approved by the company's design team."

Trump's lawyers offered Abigail Klem, IT Collection's president, to answer Aquazzura's questions.

In her ruling, Forrest noted Trump's "competing professional obligations," limiting the deposition to two hours and ordering it be held in Washington. Forrest also extended deadlines in the case so Trump will have until the end of October to give her testimony.

Aquazzura's lawyers cited a 2012 interview with Footwear News in arguing that Trump shouldn't be permitted to minimize her role as a shoe designer.

"Individually, I focus not only on brand position and the direction of any given collection, but also on the individual product," Trump told the trade publication. "There's not a shoe I'm not intimately involved in designing."

Aquazzura claims Trump and Fisher intentionally designed the Hettie as a low-cost knockoff of Wild Thing, an Italian-made open-toed red suede sandal with four-inch heels, a fringed strap over the toes and ankle ties adorned with "flirty" tassels. Wild Thing sells for \$785.

The Ivanka Trump Hettie also featured a fringed strap and tasseled ankle ties. It retailed for around \$130.

The case is *Aquazzura Italia SRL v. Trump*, 16-cv-04782, U.S. District Court, Southern District of New York (Manhattan).

SOURCE: <https://www.bloomberg.com/news/articles/2017-06-23/ivanka-trump-must-answer-questions-in-wild-thing-shoe-suit>

WHO OWNS 660 CULTURE?

APPROPRIATION AND AUTHENTICITY
IN AMERICAN LAW



SUSAN SCAFIDI

PREFACE AND ACKNOWLEDGMENTS

IN WRITING *Who Owns Culture?*, I have found that questioning the ownership and authenticity of “cultural products”—whether cuisine, dress, music, dance, folklore, handicrafts, images, healing arts, rituals, performances, natural resources, or language—seems guaranteed to produce the sort of mild indignation often caused by the discussion of politics over a holiday dinner. One outraged soul will demand immediate justification: “Hold on! Why exactly doesn’t the legal system protect our community against cultural appropriation? We’ve given a lot to this country, and we deserve to benefit from our contributions.” At the other end of the table, someone is certain to interrupt: “Wait a second—it’s the mix of cultures that makes America great! Are you telling me I can’t borrow from other groups?” (In this vein, one of my more fashion-conscious students was overheard telling classmates in a horrified whisper, “I’ve read one of Professor Scafidi’s articles. I don’t think she believes in accessorizing!”) From the family intellectual provocateur may come a semi-historical factoid such as, “You know, Marco Polo really brought spaghetti from China,” a remark likely to spark debate over which aunt or uncle makes the best old-style tomato sauce to accompany the pasta—cooked al dente, of course. The practical peacemaker at the dinner table, level-headed and eager to move on to dessert, will remind everyone that culture is fluid and evolving, and, in any case, it would be quite difficult to establish restrictive forms of ownership or to police cultural borrowing of everyday art forms. And so back to the particular fish or fowl, sweets or savories, and especially family recipes that mark a particular cultural occasion. Whether they are called objects of cultural elaboration, traditional knowledge, folklore, cultural heritage, or intangible cultural

property, it is far easier to consume cultural products than to analyze them.

To address the threshold challenge of nomenclature, I have chosen the term “cultural products,” which emphasizes the ongoing nature of the products’ creation and the often controversial but significant role of the market in their life cycles. International interest in this category of cultural goods, in particular the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Convention for the Safeguarding of the Intangible Cultural Heritage, adopted on October 17, 2003, has emphasized documentation, education, and preservation.¹ If this convention is ratified, it will become the first binding multinational instrument for the protection of intangible expressions of culture. While the values associated with protection are of tremendous importance, especially given the current state of international and domestic law, the benefits of interaction and exchange in the service of cultural understanding are similarly compelling. Although the United States should strongly consider joining the UNESCO convention, mechanisms such as national inventories speak to the warehousing rather than the evolution of living culture. Ratification of the convention or a similar initiative is more likely if it appears sympathetic to concerns regarding trade and commercial interaction, while avoiding misappropriation or exploitation. In exploring possibilities for the balanced protection of cultural products, American law should be tailored to facilitate the initiative of old and new source communities—whether directed toward commodification or preservation of their cultural products—and their participation in the life of the nation as self-defining cultural groups.

The concept of “culture” itself, particularly as an object of ownership or as a locus of authenticity, offers an additional challenge. According to one literary theorist, “‘Culture’ is said to be one of the two or three most complex words in the English language. . . .”² Among academic disciplines, the concept of culture is originally the anthropologists’ turf and even there is subject to widespread agnosticism.³ Such persistent ambiguity is not necessarily a barrier to lawyers, judges, or even legal academics, however, as the law itself evolves along with understanding of its terms of art, as in the case of reasonableness, pri-

vacy, and even justice itself.⁴ Although a definitive ruling must await another day, a working legal definition of culture might begin in the Habermasian “lifeworld” of everyday actions and beliefs.⁵ Self-defined subsets of individuals who share particular beliefs, practices, experiences, or forms of expression thus form cultural groups.

Despite these complexities, *Who Owns Culture?* attempts to open a wider public, interdisciplinary conversation about the importance of cultural products in American life, as well as their nearly invisible status within our legal system. Now, more than ever, we are eager to bind ourselves into one nation—but, at the same time, to preserve our separate traditions and cultures. The early twenty-first century may be an *e pluribus unum* moment, and we may all love New York, but few of us wish to bring the homogenizing melting pot to a rapid boil. We instead celebrate our diversity (and demonstrate our individual *savoir-faire*) through consumer culture, as we eat, dress, dance, and speak in the idiom of our neighbors. Indeed, the tension-filled history of American immigration and even internal migration indicates that the cultural products of others are often easier to accept and assimilate than the individuals (or huddled masses) themselves.

When it comes to disagreement about the ownership and authenticity of cultural products, however, or about their appropriate context and uses, there are few rules or even guideposts to ensure quality, prevent faux pas, or give credit where it is due. Although public awareness of the value of creative enterprise rose dramatically with the Internet Revolution, the legal protections of copyright, patent, and trademark do not ordinarily extend to cultural creations. In fact, group authorship creates legal unease, and communal or traditional artistry often goes unrecognized.

This lack of protection for cultural products does not automatically suggest that more laws are the answer, however. As both a legal historian and a professor of intellectual property, I share the concern of many of my colleagues that, in some areas, intellectual property protection has over the years expanded to a degree that threatens to impoverish the public domain and strangle creative enterprise.⁶ This is not to suggest that intellectual property protection is unnecessary; even Hobbes warned that in the state of nature “there is no place for

Industry; because the fruit thereof is uncertain: and consequently no Culture of the Earth . . . no Arts; no Letters; no Society . . .”⁷ Nevertheless, community-based artworks, and the informal networks that produce them, receive no such expansive protection. It would be unfortunate if, in the rush to denounce congressional extension of copyright term limits or the judicial expansion of patentable subject matter, we were to overlook the lack of protection for cultural products—without even asking ourselves why. The choice to forego legal protection is as socially significant as the choice to expand protection, and the unregulated freedom to engage in cultural appropriation may be as powerful a stimulus to creativity as the promise of protected economic rewards.

When we consider the protection of cultural products, moreover, we must concurrently remain aware of the effect of such protection on the source communities themselves. International discussion regarding indigenous heritage underscores the importance of this inquiry.⁸ Culture is naturally fluid and evolving, and well-intentioned legal protections may provoke ossification of a culture and its artifacts. In addition, a source community may include dissenting voices, and a grant of legal protection to those who speak on behalf of the community may silence those voices—always an issue when rights are vested in a group rather than an individual. Any determination regarding the ownership and protection of cultural products must thus proceed with caution, taking into account both cultural and economic effects on the source community, as well as the interests of the nation and world community as a whole.

National pride, communal identity, law, tradition, value, consumerism, appreciation, and habit all play a role in the production and adaptation of cultural products in the ongoing search for an authentic America.⁹ At the end of the day, however, the central question, “Who owns culture?”, can be answered only by its creators—all of us.

CHAPTER 1

*The Commodification
of Culture*

[S]he was surrounded by her garments as by the delicate and spiritualized machinery of a whole civilization.

—Marcel Proust

AMERICA IS A nation of nations. Our imagined community rests not only on a unifying mythology of freedom and independence but also on intertwined tales of regional and ethno-cultural character.¹ We are Italian-American mafiosi and African-American gangsta rappers, WASP country clubbers and Jewish intellectuals, gay decorators and Latin lovers, rednecks and computer geeks. These labels reek of stereotype and foment prejudice, yet they remain the signposts of multicultural America—often (although not always) with the advice and consent of the labeled.²

The origins of the ethnic, regional, social, and cultural groups that make up the American landscape are as diverse as the groups themselves. Some are the product of waves of immigration, as economic opportunity, war, natural disaster, the quest for religious freedom, and the rise and fall of immigration quotas prompted the relocation of groups large enough to form new communities on U.S. shores. Other groups, like African-American slaves and their descendants, Native Americans forced onto reservations, and gay and lesbian activists fighting for civil rights, take shape through domestic adversity. Still other communities, like the Daughters of the Confederacy or Maine lobstermen, coalesce through shared regional and historical ties; more recently, the poverty and violence of urban areas have produced a

distinctive culture of their own. Personal hardship, such as losing a loved one in the 9/11 terrorist attacks or living with a physical disability, can also bring individuals together as a recognizable group. Even shared avocations may produce distinctive cultural groups, such as science fiction enthusiasts, opera buffs, and sports-team fans.

While some cultural groups remain largely invisible to outsiders, others occupy significant territory in the majority consciousness. An announcement of Bavarian heritage or of support for a local badminton team is likely to draw a blank stare or, at best, a polite nod. By contrast, mentioning a childhood in Pennsylvania Dutch country or wearing a Yankees baseball cap leads to immediate recognition—in the latter case, not always positive.

Many characteristics affect public recognition or ignorance of particular cultural groups. These include the size of the group, its geographic concentration or distribution, its historical significance, the physical appearance or behavioral characteristics of group members, the group's collective interaction with the majority public, and its economic or political influence. The public identity of a cultural group and its variation over time are determined by a complex range of circumstances and interactions.

CULTURAL APPRECIATION

One of the most significant differences between recognizable and invisible cultural groups, and the most relevant factor for purposes of this study, is the degree to which a particular group has been commodified. As a nation of consumers, we define many of our experiences and associations through acquisition. When we travel, we purchase miniature replicas of Mount Rushmore or the Statue of Liberty; when we graduate, we collect diplomas; when we enjoy a concert or a sports event, we buy the T-shirt. Similarly, when we encounter other cultural groups, we are most likely to pay attention to those that offer us the potential to acquire distinctive merchandise, experiences, or souvenirs. If these cultural products are not readily available, we collectively lose interest and move on to the next opportunity for interaction.

Consumers respond to cultural products in the marketplace and

elsewhere much the way that decorator crabs gather seaweed and adorn their shells. In an educational exhibit at the Monterey Bay Aquarium, the marine biologists placed decorator crabs in separate tanks with different materials—not only the seaweed ordinarily found growing on the ocean floor but also brightly colored yarn available at local craft shops. Skilled in the art of camouflage, the crabs living with the yarn affixed bits of the foreign material to their shells in lieu of seaweed. When we decorate our homes, dinner tables, and persons with others' cultural products, we exhibit behavior similar to that of the decorator crabs, albeit with more complex motives.³ Distinguished anthropologist Clifford Geertz notes that human intellectual capacities evolved in the presence of culture and require the presence of significant symbols in order to function; he concludes, "We are, in sum, incomplete or unfinished animals who complete or finish ourselves through culture."⁴

Similarly, when bohemians in 1920s Manhattan visited Italian restaurants in Greenwich Village or when modern gastronomes comb Chinatown for the perfect dim sum, the goal is not only to procure lunch but to add cosmopolitan luster to the identity of the diner.⁵ In his critique of the role of taste in enforcing social-class distinctions, French sociologist Pierre Bourdieu refers to this selective version of cultural appreciation as the acquisition of "cultural capital."⁶ When the transaction is voluntary, it may benefit both the source community and the general public.

In order for an ethnic, regional, social, or cultural group to register upon the American mental landscape, then, the nation as a whole first extracts what might be termed an identity tax. This tax is payable to the public domain in the form of distinctive cultural products, including cuisine, dress, music, dance, folklore, handicrafts, healing arts, language, and images. Chinese medicine, Ethiopian restaurants, Australian Aboriginal instruments used in the theme of the *Survivor* reality television series, and Andean street musicians all contribute to the national culture. In many cases, consumption of these cultural products is the first—or indeed only—contact that many Americans have with cultural groups other than their own. Were it not for their cultural products, many groups would remain largely invisible.

When cultural products enter the marketplace or otherwise become accessible to outsiders, society at large claims the right to sample them and in return recognizes a group identity constructed from a simplified set of defining characteristics. This identity is necessarily limited—an entire culture cannot be read in the gold embroidery of an Indian woman's sari or illuminated by the flames from a dish of American-style Greek *saganaki*. Cultural products do, however, provide a starting point for recognition of the source community as well as a means of allowing outsiders a degree of participation in and appreciation of that community.

Although the commercial availability of cultural products is one means of cultural exchange, payment of the identity tax can also involve the informal or even inadvertent contribution of images, aromas, superstitions, melodies, or spoken phrases. The locus of this exchange might be the street festivals and family-owned restaurants of immigrant America, the society columns and shelter magazines of urban society, or the home pages and bulletin boards of cyberspace. Wherever cultural groups or their everyday art forms come into contact with the general public, they enrich the public domain of American culture and work to establish their own communal identities within it.

The perceived advantage to American consumers of an ever-expanding range of cultural products is fairly straightforward. Nativist sentiments or certain strains of extreme social conservatism aside, we are cultural gourmards. The more parades, radio stations, publications, and decorative housewares are available, the greater our pleasure in the diversity of choice. This sentiment has echoes in classical antiquity: Herodotus praised ancient Greek society for its cultural acquisitiveness, noting that Greek and Libyan armies copied elements of one another's armor and that the Greeks borrowed many of their gods from Egypt. Even manners and morals could be borrowed, according to one scholar who notes that "nearly all the people on Herodotus's map shop around for the *nomoi* they find most useful or pleasurable."⁷ Similarly, the European Renaissance owed much to open trade routes with the Islamic world and Asia. From the point of view of the American majority public today, the appreciation of others' cultural products—

although not necessarily the presence of the others themselves—is a fringe benefit of globalization, integration, and the commodification of culture.

CULTURAL APPROPRIATION

Far from an uncontested process, however, the movement of cultural products from subculture to public domain provokes both majority-minority struggles and fraternal conflict. Outsiders attracted by particular art forms are seldom content to limit themselves to recognition and appreciation of the source community or even to limited consumption at the invitation of the community. Instead, members of the public copy and transform cultural products to suit their own tastes, express their own creative individuality, or simply make a profit. This “taking—from a culture that is not one’s own—of intellectual property, cultural expressions or artifacts, history, and ways of knowledge” is often termed “cultural appropriation.”⁸

Some cultural products can be freely shared with the public; others are devalued when appropriated by the majority culture: consider the distinction between popularizing a Caribbean dance rhythm and secretly recording and distributing a Native American sacred chant. German philosopher Jürgen Habermas addresses the problem of cultural commodification and the distorting effects of commerce on tradition and culture, stating, “The media of money and power can regulate the interchange relations between system and lifeworld only to the extent that the products of the lifeworld have been abstracted, in a manner suitable to the medium in question, into input factors for the corresponding subsystem, which can relate to its environment only via its own medium.”⁹ The abstraction of a dance rhythm from its cultural lifeworld, whether via a market system or an intellectual property system that permits unfettered copying, may not severely harm either the source community or the cultural product itself. By contrast, the appropriation of a secret or sacred cultural product is much more likely to cause damage.

Even when voluntary, contributions to popular culture are subject to gross distortion: can Mexican national cuisine be faithfully represented by Taco Bell? The large-scale culture industry is perennially

under attack for its tendency to simplify and standardize, to the detriment of “authentic” culture or artistry. German scholars Max Horkheimer and Theodor Adorno, writing from Los Angeles during World War II, noted, “Pseudo individuality is rife: from the standardized jazz improvisation to the exceptional film star whose hair curls over her eye to demonstrate originality.”¹⁰ For Horkheimer and Adorno, cultural conformity raised the specter of fascism. In the realm of cultural appropriation, replacement of homemade tortillas or the small neighborhood *taquería* with a mass-market product or chain store may create a barrier to cultural identity and national diversity.

Within a cultural group, members may debate the authenticity of particular cultural products, a difficulty exacerbated by their constantly evolving nature. Which version of a recipe or folktale is the “real” one? In some cases, there may be a reasonably clear ur-product, like Neapolitan pizza, and competing regional versions, like those made with a thin crust in New York, in a deep-dish style in Chicago, and with unusual gourmet toppings in California. In other cases, the origin of a cultural product may lie in an obscure past, or splinter groups may exert competing claims to the true tradition. When claims of originality or authenticity move beyond good-natured rivalry, which may actually spur creativity, they can hamper the ability of certain members of a cultural group to participate in the creation of cultural products or distort the identity of the group as a whole.

Perhaps the most contentious internal issue of all is how to regulate the general public’s access to the cultural goods of a particular community—and who should benefit economically from their distribution. Since cultural groups are often loosely organized networks with shifting membership or degrees of affiliation, they tend to lack a single authoritative voice that might channel cultural appreciation or prevent cultural appropriation. The power to control economic exploitation of cultural products is similarly decentralized; while source communities may lament the loss of profits to outsiders or the uneven sharing of economic benefits within the community, they cannot remedy the situation.

The commodification of culture, and especially the role of cultural products, is a mixed blessing for the general public and for source

communities. If the identity tax were not involuntary and automatic, cultural groups might choose to forego the benefits of potential public recognition in favor of protection against appropriation. Alternatively, they might exercise greater influence over the copying and reinterpretation of their cultural products, offering the public a guarantee of quality, historical knowledge, and the elusive promise of authenticity. At present, however, cultural products that catch the public eye circulate in a largely unregulated sphere of mixed appreciation and appropriation.

LEGAL CULTURE

Despite the significance of artistic and social conflicts over the nature of cultural products in American life, these disputes occur in a legal vacuum. Other forms of creative production receive extensive, even excessive, protection against copying under our system of intellectual property law. Cultural products, however, are indefinite works of unincorporated group authorship, and they present a particular challenge.

Intellectual property law is a relatively young discipline with a distinguished family tree. From its Romantic ancestry, intellectual property derives an emphasis on individual genius. From its Enlightenment parentage, it inherits a tremendous confidence in the ability of the rational mind to create, to solve, to progress, to assign value. So great is this confidence in the power of intellectual creation that intellectual property law challenges the market itself, granting limited monopolies and blocking access to otherwise public goods in order to ensure continued “Progress of Science and useful Arts,” in the constitutional phrase.¹¹ With the late twentieth-century rise of the Information Age and the recognition of ideas as wealth-generating capital, intellectual property protection has risen dramatically in importance. Its limitations, consequently, are becoming apparent.

One of the limitations of our current scheme of intellectual property protection, besides the often-cited narrow scope and great expense, is the treatment of group authorship. From high tech to low tech, from the Linux operating system to Native American folklore, our system struggles to assign intellectual property rights to authors

who fail to evoke the Romantic image of the solitary artist scribbling away in an unheated garret or the unkempt scientist waking from a fitful nap on a cot in the laboratory with a sudden flash of insight. Even a patent “owned” by a multinational conglomerate must list its humble human inventor. Lawmakers have been subjected to extensive criticism and even legal challenge for their expansions of intellectual property protection in other areas, yet our system continues to neglect the intellectual property rights of a group, especially one without a preestablished corporate identity.

This legal neglect of cultural products may be ascribed to the history of intellectual property law, the complex nature of cultural products and the concomitant difficulty of providing a legal framework, or simply cultural bias. Before proposing an extensive system of protection for cultural products, however, we should consider the possibility that the relative absence of law—like law itself—may spark creativity or even preserve national character. As we strive to maintain the rich texture and common goals of our heterogeneous polity, we must attempt to balance the tension between the public domain and private property, cultural appreciation and cultural appropriation.

CHAPTER 11

*The Civic Role of
Cultural Products*

To steal a book is an elegant offense.

—Chinese epigram

Steal This Book

—Title of a work by Abbie Hoffman

ACROSS AMERICA, INTELLECTUAL property professors are having a dystopian moment. It started positively enough when the Internet Revolution, sparked by advances in technology, produced a tremendous outpouring of creative artistry and commerce. Because the new technologies encouraged ordinary folks to engage in cutting and pasting, sampling, downloading, and otherwise copying preexisting works, however, this madcap digital quilting bee made some large, powerful content owners quite nervous. As a result, efforts to enforce the protections granted through copyright, trademark, and patent law increased, both by fighting technology with technology and by waging legal battles. Congress, federal courts, law professors, and editorial writers all debated how best to adapt intellectual property law to the new Information Age. Along the way, some policymakers arguably forgot that the law is supposed to promote creativity, not merely to build fences around existing creations. The law thus placed too much control in the hands of content owners and of giant corporations, who now control and police the very infrastructure that made our creative revolution possible in the first place.

Today, public intellectuals gather to lament the shrinking public domain, those freely available ideas and creations that should serve as

grist for our (soon to be silenced) mills. Joining legal scholars such as Jessica Litman, James Boyle, Pamela Samuelson, Yochai Benkler, Mark Lemley, Eugene Volokh, David Lange, and many others, Lawrence Lessig warns that unless the children of the Internet Revolution take action to secure its freedoms for a new generation, the “future of ideas” is a bleak one.¹ In his words, “The promise of many-to-many communication that defined the early Internet will be replaced by a reality of many, many ways to buy things and many, many ways to select among what is offered. What gets offered will be just what fits within the current model of the concentrated systems of distribution: cable television on speed, addicting a much more manageable, malleable, and sellable public.”² Although concerned parties differ as to the extent of the danger, virtual portraits of Aldous Huxley and George Orwell nevertheless grace the halls of the academy.

WHY DOESN'T THE LAW ABHOR THE CULTURAL PROTECTION VACUUM?

This overprotection of intellectual property makes the systemic lack of protection for cultural products all the more curious. The artistic expressions of source communities circulate freely; indeed, unless they are sequestered as secret or sacred, they are nearly always discovered and swept into the public domain. Given the increased public awareness of the value of intangible goods, why does this differential treatment of intellectual property and cultural products persist?

One solution to this puzzle might rest with the historical conceptualization of intellectual property law according to the paradigm of Romantic genius rather than communal creation.³ Not only is the vesting of authorship in an individual simply more efficient than the acknowledgment of multiple contributions, especially those of an unincorporated cultural group, but it also satisfies a particular conception of human creativity.⁴ Individual authorship emphasizes an initial moment of inspiration, while cultural production is perceived as emerging and developing organically over time. As a result of their extended agency and temporal scope, society may take cultural products for granted and remain unaware of the potential need for protection.

The relative fluidity of culture also provides an excuse for the

failure to protect cultural products. Since “culture” is an ever-shifting construct and societies have borrowed from one another from time immemorial, the argument goes, the vesting of legal rights in a source community would artificially halt cultural development on a national scale and produce frivolous lawsuits.⁵ “Authenticity,” if defined by slavish adherence to the styles or practices of a particular time and place, is an anachronism unworthy of legal protection; the law of a heterogeneous, mobile polity should not reify and privilege cultural boundaries as they might have existed in 1492.⁶ Indeed, the market in local and tribal handicrafts already exerts substantial pressure on source communities to cling to a storied past and produce commercial versions of their artifacts. From this point of view, the protection of cultural products and their source communities would be an exercise in misguided political correctness.

A more activist political response to the legal vacuum might point out that cultural appropriation is often a prerogative of majority groups, colonial powers, and affluent individuals.⁷ Destructive misappropriation, in particular, is most likely to occur when the source community has relatively little political power or is otherwise outside of mainstream culture. Under these circumstances, lawmakers have little incentive to address the issue.

The strength of liberal political theory suggests an additional explanation for the lack of protection of cultural products. Civil and political rights in modern Western cultures are the domain of autonomous individuals rather than heads of household or other communal groups, as was often the case less than a century ago—a shift that has allowed greater equality and personal self-determination as well as a more fluid social structure. In the interests of preserving individual rights as a precondition of democratic discourse, liberal theorists may overlook the significance of cultural groups. Jürgen Habermas, for example, challenges the communitarian arguments of Michael Walzer and Charles Taylor that the law is nonneutral, that the current system of individual rights is unable to ensure the survival of certain minority groups, and that the law must therefore intervene to provide protection.⁸ Unlike fellow liberals John Rawls and Ronald Dworkin, Habermas does not rest his argument on the assertion of an

ethically neutral legal order, but relies on a proceduralist conception of rights intended to safeguard both public and private autonomy.⁹ Political liberalism, then, tends to view the recognition of cultural groups, as opposed to individuals who may belong to those groups, as both unnecessary and potentially dangerous to democratic unity. In a thoughtful discussion of multiculturalism, Will Kymlicka acknowledges the concern that the recognition of ethnic and national differences could undermine democracy but argues that only self-government rights pose a threat to social unity.¹⁰ Nevertheless, liberal theorists might logically tend to overlook or resist communitarian efforts to locate property rights in cultural groups rather than exclusively in individuals. The protection of cultural products is not incompatible with liberal theory, but neither is such protection its natural consequence.

Freedom of expression and intellectual property exist in tension with one another, a factor that may also contribute to the extralegal status of cultural products.¹¹ When intellectual property law protects a particular creation, the rights holder owns a limited monopoly over it. Since a significant aspect of property ownership is the right to exclude others, those who wish to use a protected creation to express themselves may face legal constraints. Sampling someone else's music to create a new recording, borrowing and transforming a ubiquitous advertising slogan, or writing fan fiction all run the risk of infringement. While doctrines such as fair use and parody theoretically protect some forms of expression, the threat of legal action is often enough to deter or silence a speaker.¹² By remaining outside the scope of intellectual property protection, cultural products neither challenge the First Amendment nor limit the availability of their own expressive use.

Perhaps the most pragmatic explanation for the lack of cultural-product protection is that it would be quite difficult. This suggestion may be deceptively simple, however. Laws against speeding, drug use, and littering are next-to-impossible to enforce, yet they remain in force because society disapproves of these activities. If unlimited cultural appropriation were recognized as similarly harmful, the law would at least attempt to assign rights and set guidelines for behavior. Nevertheless, the complexity of the task is a logical deterrent to legislative activity.

While these negative theories have clear explanatory force and assist in maintaining the current legal vacuum, it may also be the case that unfettered appropriation of intangible cultural products plays a positive role in society. Sociological interpretations as diverse as Max Weber's Protestant ethic and Pierre Bourdieu's description of cultural capital affirm the socially constitutive function of markets and acquisition of resources.¹³ In a heterogeneous society that seeks to harmonize and reproduce itself, the material cultures and rituals of diverse source communities can be domesticated through market exchange. An ethnoreligious devotional procession honoring the patron saint of a foreign city lacks resonance with a constructed "American" life, but the opportunity to eat—or, better yet, to sell and profit from—*zeppole* or sausage and peppers at the publicly advertised Festival of San Genaro is a civic act. From this perspective, legal protection is not simply absent but is outweighed by other civic virtues.

FROM AMERICANS TO AMERICA

Many different processes can contribute to the forging of individuals and peoples into a nation with a common myth of origin and shared values.¹⁴ These processes may involve deliberate or dramatic action, such as a struggle for freedom from outside domination or the creation of a constitution. Collective response to a crisis, such as a natural disaster or a terrorist attack, also promotes national solidarity. On an ongoing basis, public education may be a medium for inculcating national values. Even regular economic interaction and interdependence offer incremental steps toward unity, a function exploited by the creation of the European Economic Community as a mechanism for regional stability and a precursor of the European Union. Consumerism facilitates the performance of national identity, as tastes in entertainment, fashion, cuisine, decor, and other indicia of culture come to be shared or experienced in common. From a cultural-products perspective, those that are made available in the marketplace and then widely adopted, whether through voluntary contribution or appropriation, become part of the fabric of the nation.

In the United States and other countries defined by immigration, the political apparatus of the state precedes the formation of a subjective nation. While some nationally celebrated holidays, for example,

are the product of underlying majority religious tradition, others are created by law. The normative composition and definition of the nation, moreover, is a subject of ongoing debate and evolution. In each generation, historic events and organic processes, including interactions among cultural groups, combine to influence the tenor of the nation. Public debate further defines the parameters of nationhood: questions regarding the participation of homosexual, Muslim, and apocalyptic communities challenge the limits of citizenship in our era, much as the presence of abolitionist, Jewish, and Amish communities did in the past.

From melting pot to salad bowl, assimilation to multiculturalism, public intellectuals have sought metaphors and theories to describe the desired transformation of Americans into America. Historian David Hollinger, arguing for a new conception of “postethnic America,” refocuses attention from rigid cultural categorization to individual agency. According to his definition, “A postethnic perspective favors voluntary over involuntary affiliation, balances appreciation for communities of descent with a determination to make room for new communities, and promotes solidarities of wide scope that incorporate people with different ethnic and racial backgrounds.”¹⁵

The availability of multiple options facilitates this modern shift from destiny to choice, from being to becoming part of one or more culture groups, all of which are in some sense American.¹⁶ Indeed, the range of cultural affiliations continues to widen beyond ethnoracial classifications, as apparent in Hollinger’s call for attention to religiously defined cultures and sociologist Nathan Glazer’s description of the inclusion of women and homosexuals in the multicultural canon.¹⁷ Even changing fashions within the academy that might appear to diminish the realm of culture, such as the disappearance of “class” as a frequently invoked category, do not preclude individual self-identification with a still-extant group.¹⁸ The experience of culture beyond the ivory tower is broader still, as individuals form associations on the basis of shared profession, avocation, age, geographical region, political commitment, disability, and multiple combinations of these and other cultural markers. Although as yet not all Americans have equal freedom to choose or to reject association with an ethnic

or racial group, all have the opportunity to select additional cultural affiliations.¹⁹ Postethnic America is still aspirational, but it offers a useful model of modern (or postmodern) nationhood.

CIVIC BENEFITS OF CULTURAL APPROPRIATION

Material culture provides access to a myriad of embodied cultural products and thus facilitates the voluntary selection of cultural affiliation that Hollinger envisions. Source communities are (figuratively) taxed to secure the contribution of artifacts, rituals, practices, and styles. Outside individuals may then enter the bazaar, examine the merchandise, and adopt what suits them. Such exchange, whether voluntary or involuntary on the part of the source community, creates a series of potential civic benefits.

As anthropologists and sociologists have noted in studies of individuals and their relationships to and through material objects, each source community can employ cultural products to communicate its identity and values, albeit simplified for public consumption.²⁰ Such community self-expression may take the form of either direct communication with the public or indirect symbolic statements. Religious tracts or party campaign buttons convey a direct message; a Japanese bento lunchbox or a teenager's extreme hairstyle and multiple body piercings embody cultural values or aesthetics without verbal explanation.²¹ In both cases, the public is invited to recognize the existence of a cultural group through its distinctive cultural products and to associate it with a particular embodied expression of viewpoint or identity. This recognition may remain closer to an "orientalist" stereotype than to a nuanced, comprehensive understanding of the source community, but it is at least formulated with a modicum of contribution from the source community rather than cut from the whole cloth of mainstream ignorance.²² By sharing their cultural products, many source communities are able to have an impact on the popular culture.

Another civic benefit of cultural appropriation is that otherwise xenophobic outsiders may develop the preeminent postmodern virtue of toleration or even respect for the source communities.²³ As Walzer has described, the concept of toleration at the state level encompasses

a variety of approaches, from indifference to cultural engagement.²⁴ In the context of cultural products, the promotion of toleration depends more on outside appropriation over time than on mere acknowledgment or Rawlsian recognition of reasonable differences.²⁵

In many cases, the passage from intolerance to toleration of a cultural group may be charted in the wake of appropriation. During the late nineteenth and early twentieth centuries, social reformers sought to assimilate Native Americans, Latinos, and new immigrants by encouraging them to abandon their respective “inferior” cultures and cuisines.²⁶ These reformers measured success according to the distance an individual had traveled from his or her non-Anglo culture of origin, as illustrated by *Life* magazine’s approval of baseball star Joe DiMaggio: “Although he learned Italian first, Joe, now 24, speaks English without an accent, and is otherwise well adapted to most U.S. mores. Instead of olive oil or smelly bear grease he keeps his hair slick with water. He never reeks of garlic and prefers chicken chow mein to spaghetti.”²⁷ Americans, it seems, were willing to adopt the baseball hero, but not his language or cuisine. Efforts at culinary (though not linguistic) assimilation declined between 1920 and 1940, and wartime meat shortages further cemented the acceptance of previously “foreign” cuisines.²⁸ Today, Mueller’s elbow macaroni shares shelf space with gourmet “pasta,” pizza graces school lunch trays, nutritionists extol the virtues of the Mediterranean diet, and the historical denigration of Italian Americans as “spaghetti benders” is a quaint anachronism. Even the great DiMaggio’s role as a symbol of successful assimilation may have given way to an affirmation of ethnic roots, as suggested by his postretirement return to the public eye as a spokesperson for Mr. Coffee.²⁹ Acceptance of the source community has apparently followed acceptance of its cultural products.

An unlikely example of this toleration effect appears in an interview with white rap artist Eminem, known for his virulently homophobic lyrics. The performer defended his use of a derogatory label for homosexuals, but when asked whether he would use a similarly negative slur against African Americans on a recording, he responded, “That word is not even in my vocabulary. . . . Those are two completely different things. . . . And I do black music, so out of respect,

why would I put that word in my vocabulary?"³⁰ While Eminem achieved celebrity through uncompensated appropriation of an urban, African-American cultural product, he at least recognizes publicly the importance of the source community.

Even fashion trends that turn to the street in search of authenticity claim to do so out of respect. Like hip-hop before it, cholo style originated in an urban, ethnic context. The Mexican-American gangster image, which evolved in East Los Angeles, incorporates gothic letters, bandanas, Roman Catholic religious imagery, tank tops, and cropped trousers. In the course of cholo style's move from the streets to pop stars to upscale department stores, it has drawn attention to its community of origin. According to the owner of one clothing line, "That's our way of giving props—respect—to the West Coast."³¹ If the law were to impose prohibitions on cultural appropriation, it might also limit the range of source-community influence on public discourse and over individual nonmembers.

In its strongest form, the argument that cultural products promote toleration suggests that community groups most in need of protection also stand to gain the most by allowing cultural appropriation. A source community with little social standing or political influence, or even one toward which the majority culture is hostile, might advance its cause by feeding, clothing, instructing, or entertaining the general public with distinctive cultural products. If this result can be achieved without undue harm to the source community or its cultural products, then both community identity and the discursive foundation of a liberal democracy are strengthened.

An additional civic benefit of cultural appropriation is a complex mutual assimilation or homogenization that might best be described as a form of cultural syncretism, or the Reese's peanut-butter-cup effect. Assimilation to American life has traditionally involved the loss of non-Anglo cultural characteristics in order to conform to a mainstream norm, which is perceived as the absence of ethnic culture. White, Anglo-Saxon, Protestant, educated, healthy, straight males from reasonably affluent Mid-Atlantic or Midwestern backgrounds allegedly have "no" accents, eat "normal" food, wear "regular" clothes, play "popular" music, engage in the "usual" pastimes, share "common"

opinions, and have “ordinary” tastes. Newly minted or socially disenfranchised Americans once aspired to embody this paragon of citizenship, or so some would claim.

Today, the basic force of American culture flows in the same channel; John Q. Citizen, however, is as likely to absorb new cultural influences as he is to set a uniform standard. The live audience for the State of the Union address is still largely a sea of white men in dark suits, but “everybody” now eats Thai food, listens to the Gypsy Kings, and incorporates urban slang into daily conversation. The gay community offers a particularly vivid example of mutual transformation. Since the mid-1980s, homosexual men and women have metamorphosed from an alien threat to American “family values” into a source of urbane wit and style, while at the same time embracing traditional images of domesticity. Middle America applauds the five gay superheroes who each week rescue a different hapless heterosexual from his sloppy, unkempt ways on *Queer Eye for the Straight Guy*, and promotional material for the *Ellen DeGeneres Show* touts the lesbian comedian’s “approachability and relatability” as well as her “‘everywoman’ approach to everyday situations.”³² Meanwhile, gay Americans turn to the venerable *New York Times* Sunday Styles section to read notices of gay and lesbian commitment ceremonies alongside the marriage announcements of heterosexual women and men, or at least those who have escaped the reported epidemic of straight-male commitment phobia. Formal marital status and the associated legal benefits may be generally denied to same-sex couples, but the mimetic nature of rituals surrounding such unions indicates that something more than inheritance rights or state recognition is at stake. While many heterosexuals have internalized a stereotypical gay aesthetic, many homosexuals now imitate and celebrate a family structure based on traditional marriage bonds.

This serendipitous chocolate-meets-peanut-butter model of civic evolution through the exchange of cultural products can have concrete effects on formal expressions of national identity. In *Lawrence v. Texas*, the Supreme Court declared unconstitutional a Texas law prohibiting certain homosexual conduct and overruled its own 1986 precedent, noting, “When sexuality finds overt expression in intimate

conduct with another person, the conduct can be but one element in a personal bond that is more enduring.”³³ Rather than allowing Texas to continue to label homosexual individuals as criminals and thus impaired citizens, the Court interpolated a necessary link between sexual activity and personal relationships, perhaps including modern companionate marriage.

Justice Antonin Scalia, in a scathing dissent, accused his brethren of cooing about homosexual relationships and paving the way for a constitutional defense of same-sex marriage.³⁴ Although Justice Scalia couched his argument in terms of the Court’s proper role, he was apparently livid about what he perceives as a misappropriation of matrimony. In the language of cultural products, a fraternal dispute is taking place over the correct source–community response to the appropriation of a ritual that instantiates certain core values—and the forces that favor inclusive use of the contested cultural product have won this round, with definite civic effect. Same-sex marriage has blossomed overnight into a grass-roots movement, sparking intense political debate and widespread civil disobedience with respect to restrictive, traditional marriage laws. Whether this trend will continue and result in national recognition of same-sex marriage, or even whether the gay and lesbian community as a whole would have previously endorsed this goal, remains an unanswered question. Whatever the legal result of this burgeoning civil rights contest, it has permanently altered the American cultural landscape. One might ask whether the cultural syncretism that has produced a breed of suspiciously well-dressed and coifed heterosexual men, dubbed “metrosexuals,” will provoke a similar examination of national (or at least masculine) identity.

Among the occasional civic benefits of cultural appropriation is the preservation of certain cultural products themselves. While misappropriation may destroy fragile communal creations, and unrestrained commodification may denature others in the eyes of both the source group and the public, some cultural products continue to exist primarily through the medium of appropriation. The audience for jazz remains more robust in Europe than in the United States and includes more whites than African Americans. The quilts of Gee’s Bend would

long since have been replaced by inexpensive coverlets from Wal-Mart or Target were it not for the interest of collectors in the women's labor-intensive communal art form. Even indigenous languages around the world are at risk of disappearing in the face of encroaching modernity, save for the efforts of linguists dedicated to their study. Assuming that abundance and variety are positive values, the role of appropriation in saving certain cultural products from extinction enriches the life of the nation.

Viewed from the perspective of utility rather than simple quantity, those cultural products that circulate among outsiders provide raw material for further creation. While few young Indian-American women wear saris on a daily basis, and even fewer Japanese-American or even Japanese women wear kimonos regularly, the exposure of Western designers to elaborate Asian textiles and shapes inspires the creation of new fashions.³⁵ Similarly, the flavors of South America, Africa, Asia, and Europe appear on cutting-edge restaurant tables as fusion cuisine. Far from lost, the public domain mourned by many intellectual property professors receives a continual infusion of cultural products, and a source of creative ferment is refreshed. To the extent that creation itself is a Judeo-Christian religious value expressed in the Hebrew Bible or Old Testament and thence throughout Western culture, as Roberta Rosenthal Kwall and David Noble have insightfully suggested, any such enhancement of creative potential provides a clear civic benefit.³⁶

The absence of legal protection against unrestrained cultural appropriation, then, may not be merely the result of historical oversight or a Foucaultian exercise of power via knowledge of a subaltern other.³⁷ Cultural products, moreover, are not merely the neglected half-siblings of intellectual property, lacking the requisite spark of genius that would inspire legislative action. Instead, cultural appropriation has the potential to deliver civic benefits to the nation as a whole, as well as to the source communities within it. While the harms of misappropriation are present realities in need of evaluation and corrective measures, the positive contributions of cultural appropriation are important constitutive elements of an expansive and malleable American society.

CHAPTER 12

An Emerging Legal Framework

Life is not a having and a getting, but a being and
a becoming. —Matthew Arnold

SHAKESPEARE FAMOUSLY LIKENED the world to a stage, and its inhabitants to players on it. Had he been a modern visual artist, however, he might have imagined instead an interactive art installation and a steady stream of visitors—or at least remembered to thank the set and costume designers. Society does not continually reinvent itself on an empty platform but is instead enmeshed in systems of property rights, market exchange, and material culture, tangible and intangible. The cultural contribution of voluntary immigrants, involuntary immigrants, and indigenous peoples to the American national project not only asserts the presence of those cultural groups, often well before their members are considered full citizens in a civil or political sense, but also serves as a catalyst for the construction of an “authentic” American culture.

This quest for authenticity in an era of impeccable, immediate copies reveals a peculiar anxiety of our age, to once again invoke T. J. Jackson Lears.¹ The invention of the printing press bypassed monastic scriptoria and ecclesiastical control over the reproduction of texts, prefiguring the Protestant Revolution. The Industrial Revolution removed production of everyday objects from craftsmen and created mass markets, prompting a yen for nature that produced both the Boy Scouts and the Arts and Crafts movement.² Our own Internet Revolution gives us ever-increasing access to commodified culture and digital clones of creative works, yet we remain suspicious of the value of these too-perfect, acontextualized forgeries even as we consume

them. The market recognizes our ambivalence and promises us goods that are “authentic,” “original,” “genuine,” and even “retro.” Meanwhile, starlets with unlimited access to couture creations tap into the *zeitgeist* by wearing “vintage” gowns on the red carpet, and world-class chefs offer “home cooking” in the form of gourmet mashed potatoes, meatloaf, and macaroni and cheese. A taste for the “cultural” joins this emphasis on the venerable, as we associate the products of communities outside the mainstream with more genuine, organic lifeways. We do not collectively aspire to belong to working-class, foreign, or transgendered communities, but we congratulate ourselves on our easy familiarity with trucker hats, sushi, and RuPaul.

No less an observer than Alexis de Tocqueville has noted that American society is defined by a central tension between individual and community, independence and interdependence.³ In the arena of cultural appropriation, existing legal structures have focused on individual rights and on the nation as a whole at the expense of the sub-communities that constitute the American polity. It might be said that American law embraces the principles of *liberté* and *égalité* but neglects *fraternité*. Only through private means or the awkward invocation of analogous legal principles have source communities been able to protect their cultural products against misappropriation. At the same time, proponents and practitioners of cultural appropriation have overlooked its civic benefits and focused instead on individual autonomy and negative rationales for the exclusion of cultural products from legal notice. Perhaps it is time the law move to correct these omissions by striking a balance between protection and appropriation of cultural products in American life.

BEYOND THE LIMITS OF INTELLECTUAL PROPERTY

Extending limited intellectual property protection to intangible cultural products would involve several stages. To begin, the law must reconceive the concept of “authorship” or creation to reflect the reality of unincorporated group collaboration, malleable Foucaultian notions of authorship, and the value of cultural products.⁴ This process would

harmonize with both utilitarian and ethical theories of intellectual property protection. Cultural products would fall under the utilitarian constitutional classification of “Science and useful Arts,” which Congress is empowered to promote by securing exclusive rights to their “Authors and Inventors,” the source communities.⁵ Similarly, “moral rights” would as easily apply to a source community as to an individual genius; claims of authenticity, in particular, could easily be assimilated to a limited moral right of attribution. Under either theory, source communities would receive a bundle of property rights similar to those of their individual counterparts, albeit with more robust exceptions for fair use designed to promote the civic benefits of limited appropriation.

Next, the law must alter its temporal restrictions on intellectual property protection. The maximum term of protection could reflect the life span of a source community, in place of the life of the author or a simple term of years, or could be divided into shorter terms renewable on a periodic basis. While many source communities endure almost infinitely, some disband or expire. Any cultural products left behind by the American Whig party are long abandoned; likewise, Minnesota Vikings fans need not seek permission to don horned helmets. The novelty and originality requirements of patent and copyright law, respectively, are meaningless in the case of continually evolving cultural products. Instead, the law might adopt a trademark-like emphasis on current use, drawn from the Commerce Clause, or a trade secret-like requirement that the source community continue to derive benefit from the cultural product. In order to preserve the flow of creations and inventions into the public domain, especially in light of the longevity of source communities, the exclusiveness of ownership should be established in rough inverse proportion to the duration of protection, taking into account the relative cultural significance of particular artifacts or rituals.

In addition, the legal system must revise its common law emphasis on the reduction of cultural products to concrete form as a requirement for protection. While individual or defined groups of authors and inventors generally anticipate embodiment or reduction of their work to tangible form prior to its legal recognition, cultural groups may have longstanding preferences and practices regarding intangibil-

ity and orality. Since material form is a useful but not strictly necessary precursor to intellectual property protection, as apparent from the protection of aural and olfactory trademarks and the absence in civil law of any requirement of tangibility in copyright, source-group election in favor of intangibility should not affect the availability of protection for cultural products.

These modifications to the class of beneficiaries, as well as to the temporal and material limitations of intellectual property law, would serve to establish the broad outlines of a category of cultural-product protection. This is not necessarily to suggest that current intellectual property law statutes be modified to include cultural products, a process that might result in overprotection of cultural products at the expense of beneficial cultural exchange, particularly in light of current international minimum standards for the established categories of intellectual property protection. Instead, the current system of intellectual property law provides a functional template that can be modified to address the concerns of source communities regarding intellectual property protection and societal concerns regarding cultural development and the public domain. Such protection would complement the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, which calls upon nations to engage in protective and educational activities such as documentation and education.⁶

DEGREES OF CULTURAL-PRODUCT PROTECTION

Protection of cultural products ideally should involve not merely the expansion of intellectual property law, but also an institutionalized mechanism to facilitate cultural exchange. One method of promoting a balance between source-community interests and the civic role of intangible cultural products might be for intellectual property law to develop multiple levels of protection corresponding to the nature of the protected good. Such differentiation among protected works within the separate intellectual property categories of copyright, trademark, and patent occurs in only a few cases, and it is generally disfavored or forbidden by international treaty. Cultural products as yet enjoy no such worldwide recognition, despite growing global

concern. A *sui generis* legal regime of cultural-product protection could therefore be more narrowly tailored to different types of cultural production on a national basis. As indicated in the table, the type of protection afforded each cultural product would depend on its source-community classification as a private good or public good (in the sense of a product voluntarily released outside the community, rather than a noncompetitive good) and on whether or not the source community has voluntarily commodified the product. As in defining the scope of property itself, the law may choose to exclude elements such as human life and aspects of human sexuality from the rubric of cultural-product ownership altogether.

Cultural-Product Protection

	Private	Public
Noncommodified	Enhanced trade secret -style protection	©/Patent-style protection
Commodified	©/Patent-style protection	®-style/"Authenticity- mark" protection

Private, Noncommodified Cultural Products

Sacred, secret, or exclusive products that would otherwise risk destruction through cultural appropriation, such as the ceremonial dance of the Pueblo of Santo Domingo described in Chapter Eight, could receive a high level of protection in a manner similar to that of trade secrets. The source community would bear reasonable responsibility for excluding the general public from the cultural product or placing strict limitations on access, and outside appropriation in violation of these community restrictions would be strictly forbidden. A sacred song entrusted to a particular individual, a set of scriptures intended only for initiates, or the use of a particular plant ingested in the context of a religious ritual could each be protected in this manner. Unlike trade secrets, however, disclosure of the private, noncommodified product by a single dissenting or careless insider should not result in loss of protection and thus harm the entire community.

Private, Commodified Cultural Products

Cultural products intended for use and market exchange primarily among members of the source community, or private, commodified products, could receive a slightly lesser degree of protection analogous to patent or copyright. This category might include an object used in the practice of religion, like a menorah, rosary, or prayer rug. In such cases, it is important that the form of the cultural product and perhaps even the process of its creation follow community specifications. The source community could exercise the usual rights to exclude, to transfer, and to use or possess its embodied cultural products, subject to limited outside appropriation analogous to the fair use of copyrighted material or experimental use of a patented invention. Outsiders might legitimately possess, display, or critique these objects, or even copy or use them in an expressive fashion to invoke or criticize the source community. This limited appropriation, however, would not extend to outside commodification of the cultural products, which must retain a degree of purity or objective authenticity in order to instantiate the values of the source community.

Public, Noncommodified Cultural Products

As in the example of open-source code discussed in Chapter Nine, some source communities choose to make their cultural products public without commodifying them. While the principal open-source standards organization, OSI, has worked within existing trademark law to create a certification mark, and the use of licenses to protect the free distribution of open-source software is commonplace, hackers and similarly situated source communities could have significantly more control over their cultural products if a regime similar to copyright or patent law were to protect those products. The open-source software community's situation is unusual in that few outsiders have the technical capacity to appropriate and commodify its cultural products. If that circumstance were to change, or if other source communities wished to share their cultural products on the condition that they remain uncorrupted and virtually free of charge, stronger protection could assist in both enforcing the creators' wishes and ensuring the continued vitality of their cultural products. Source communities

would not have absolute control under such a regime, which would be subject to broad limitations analogous to fair use, but would retain an affiliation with their products.

Public, Commodified Cultural Products

The largest category of cultural products, those both deliberately commodified and made available to the public, should theoretically enjoy the least protection against outside appropriation. These intangible goods are likely to be more durable than their protected, private counterparts, and their appropriation is least likely to seriously damage the source communities. The pervasive civic benefits bestowed on a heterogeneous polity through cultural group contributions in the form of distinctive cuisine, popular music, habits of dress, and elements of language, moreover, are too extensive to support legal elimination of cultural appropriation.

Nevertheless, the law should not continue to deny source-community interest in these creations. The Australian Aboriginal didgeridoo, for example, is a sacred instrument traditionally made from a tree hollowed out by insects and painted with designs that vary according to region and intended ceremonial use. Knockoffs for the tourist trade are made of artificial materials and incorporate non-Aboriginal designs, to the distress of the source community. While the Australian government makes no attempt to halt the trade in didgeridoo copies, it has instituted a program for the labeling of authentic Aboriginal art destined for the market, including musical instruments.⁷

A general program for the creation, registration, and placement of “authenticity marks” on commodified, tangible cultural products that originate from within the source community would preserve the relationship between community and product and create an affiliative ownership without halting the fertile exchange inherent in much cultural appropriation. This balance could be facilitated through specially designed laws or programs, as in the case of protection of indigenous handicrafts in the United States and Australia, or through source-community adaptation of existing trademark provisions.⁸ Periodic renewal of the grant of an authenticity mark according to evolving community standards could avoid reifying the communal culture.

Even fraternal disputes over authenticity could be addressed through a trademark-style system of authentication. The possibility of multiple or competing grants of product recognition analogous to kosher certifications would permit the public expression of multiple points of view from within the source community. As with each suggested degree of cultural-product protection, existing federal administrative agencies would provide a suitable forum for source communities seeking the assistance of law.

BOTH OUR DIVERSE nation and our postmodern consciousness have taught us to appreciate commodified cultural products. Intellectual property law should reinforce this lesson not by allowing unlimited appropriation of these intangible goods, but instead by protecting them. While the above schema represents only one attempt to balance the interests of communal creation and the public domain and to systematize a complex pattern of exchange steeped in history and habit, culture and pride, it is a balance central to the past and the future of American national culture.

THE ROLE OF LAW IN CULTURAL PERSPECTIVE

The problem of unincorporated group authorship invokes issues of cultural evolution versus authenticity, constructed communal identity versus free expression, ownership versus appropriation, privacy versus collaboration. Resolution of these tensions now occurs on an ad hoc basis, if at all. Absent a jurisprudence of cultural protection or even the shared understandings that undergird customary law, each source community and its intangible cultural products are largely subject to the values of the general public. Although the social cohesion of a heterogeneous nation rests in part on cultural groups' payment of an identity tax in the form of these cultural products, the social contract that should in turn protect cultural groups resembles instead an exaction of tribute. Intellectual property law may provide the mechanism to balance the scales, to temper cultural contribution with cultural protection.

The suggestion that law cease to ignore cultural products, what-

ever the benefits of unregulated cultural appropriation, should not be interpreted as tantamount to an encouragement of more lawsuits or other means of formal dispute resolution. Contrary to popular belief, not all lawyers aspire to run late-night commercials informing unsuspecting members of the public that they may have been harmed and should pursue (potentially lucrative) justice. Except in cases of demonstrable harm to a source community, courts should not be at the forefront of the everyday business of regulating culture.

Admittedly, the association of even limited, associative property rights with cultural products bears the risk of distorting relations within source communities and altering cultural products, as their value as both signifiers and economic resources increases. In cases of misappropriation, outside intervention may already have harmed communal artistry, and the law is less likely to do additional damage. For examples of cultural appropriation more generally, the proposed creation of authenticity marks attempts to avoid trapping culture in the corridors of legal formalism by establishing ownership rights only in the marks themselves rather than in the cultural products they legitimate. Still, even this *via media* is not free of risk.

The function of law is nevertheless not only to decide cases, but also to establish values and reasonable expectations around which citizens can order their interactions. If the law states that cultural products are valued creations of their source communities, should be treated with respect according to the norms of those source communities, and yet should in most cases be accessible in the public domain for civic reasons, then well-intentioned members of society are afforded guidelines for civil interaction. Similarly, internal community disputes regarding cultural products may not be resolved through the application of statutes, but the law can at least provide a vocabulary and framework for discussion that acknowledges the significance of the matters at hand. This role of law as pedagogue, rather than exclusively as judge and jury, is a feature of Western jurisprudence dating back at least to Aquinas, who attributes many of his insights on this matter to Aristotle. Humanity “has a natural aptitude for virtue, but the perfection of virtue must be acquired by man by means of some kind of training,” whether through social interaction or the mechanisms of law.⁹ For a

heterogeneous polity in which differing community norms may exist in relative ignorance of one another, law is called upon to facilitate the development of a national culture, not least in the matter of cultural appropriation.

According to Oscar Wilde, “‘Know thyself’ was written over the portal of the antique world. Over the portal of the new world, ‘Be thyself’ shall be written.”¹⁰ An authentic American society in the subjective philosophical sense consists not only of autonomous individuals or of separate communities defined by consanguinity or a multitude of affinities, but also of a would-be nation continually striving to create itself. Much of this interaction takes place in the world of material culture, property, and now virtual property, as we exchange, borrow, create, and construct a common—or at least aspirational—identity. Legal recognition of cultural products is a totemic element of this project.

WHEN I FIRST concluded a series of arguments for the limited regulation of cultural appropriation, I was sitting in a West Coast café named for an Italian city. Outside the window, the sun shone on a university campus where the student body no longer includes a majority of any single cultural group. Around me were patrons of every race and multiple nationalities, several displaying symbols or head coverings of different religious groups and many with T-shirts proclaiming additional cultural affiliations. The multilingual buzz of conversation competed with the periodic hiss of the industrial-strength espresso machine downstairs, expertly operated by a Latino and a woman of northern European descent. At the time I blithely concluded, if this scene were to any extent a dividend of the appropriation of one of my ancestral cultural products, “Let them drink coffee!”

Since that time, the postmodern era in America has ended—or rather, we are all postmodernists now. The watershed moment of our generation is, of course, 9/11. While the liberal project of toleration and the postmodern emphasis on diverse perspective still pervade our national consciousness, perhaps with more urgency than before, we aspire to reclaim a unity of purpose that would fulfill the promises of our national myth. Whether through the adoption of a prophetic

pragmatism, a revival of nineteenth-century idealism, or some other emergent projection of unity in diversity, America seeks not only to absorb the authenticities of its constituent communities but also to achieve its own internal authenticity.¹¹ As Lionel Trilling reminds us in the context of artistic culture, the quest for authenticity is an inherently powerful and even violent project, requiring an extreme exercise of personal will to overcome the sentiment of nonbeing.¹² If we are to succeed, our collective performance of America will both appropriate and preserve its constituent cultures and their contributions to the project of nationhood. And, as companions in this quest, we will not only break bread or matzoh or pita or naan or tortillas or *injera* together, but also share that cup of coffee.



Salesforce.com CEO Marc Benioff wears "cloud shoes" at Dreamforce Nov. 19 Credit: Salesforce.com

Next up in smart devices: The Internet of shirts and shoes

Avert Dennison and IoT startup Evrythng will give shoes and apparel unique online identities

[Stephen Lawson](#)

IDG News Service

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Some clothes already hang out on the Internet. Pharrell Williams's [hat](#) has its own Twitter account, as does Mark Zuckerberg's [hoodie](#). Your clothes could be next to get online identities, though it won't make them famous.

IoT startup Evrythng is teaming up with packaging company Avery Dennison to give apparel and footwear products unique identities in Evrythng's software right when they're manufactured.

The companies have high hopes for the Janela Smart Products Platform, seeing a potential to reach 10 billion products in the next three years. The system could put a simple form of IoT into the hands of millions of consumers who weren't even shopping for technology.

Evrythng and Avery Dennison don't want to make your clothes into online celebrities, they want to make them more useful. What they're doing may make it harder to counterfeit desirable products and commit fraud at the returns counter. There could be some fun features for consumers, too.

When a shoe or piece of clothing rolls off the assembly line, it will get a physical marker that matches a specific entry in the Janela platform. That pairing will last for the life of the product.

The system can use different kinds of markers, including RFID (radio frequency identification) tags that can be read over the air and two-dimensional tags, such as barcodes, that smartphone cameras can read.

A piece of clothing that can account for itself might be a boon to makers of widely copied items. The OECD estimated the global trade in [counterfeit goods](#) at US\$461 billion in 2013. Presumably, a product "born" with a unique identity that's stored in the cloud would be harder to fake. Sports brands, which include makers of highly coveted athletic shoes, are among the target markets for the system.

Retailers might also be able to clamp down on returns. The U.S. National Retail Federation [estimated](#) last year that fraudulent returns during the year-end holiday season would cost \$22 billion. With Janela, products would carry data with them about where and when they were purchased, making it harder to fake having bought an item.

The perks for consumers are small extras that might come in handy. Smartphone apps could read the label and tell a shopper about the product's history, including where it was made, what's in it, and how it was distributed. After buying the product, the owners could use an app to call up special offers and services associated with it.

The Janela platform could also be used for reordering a product, or others related to it, and ultimately it could deliver information about how to reuse or where to recycle the product.

Evrythng, based in London, was founded in 2011 and has attracted [investments](#) from companies including Cisco Systems and Samsung.

<http://www.pcworld.com/article/3058325/internet-of-things/next-up-in-iot-the-internet-of-shirts-and-shoes.html>

WIPO | MAGAZINE

The Brave New World of Wearable Technology: What Implications for IP?

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By *Emma Poole*, Executive Research Officer, WIPO

Wearable tech is both the newest technology trend and one of the oldest – we have been wearing functional objects ever since watchmakers like Peter Henlein developed portable clocks in the 16th Century. Now a sector that consists of multifunctional watches, pedometers, heart rate monitors, and GPS tracking devices, wearable technology, which some estimate could be worth \$42 billion within five years, promises to revolutionize marketing, retail, fitness and medicine. This article explores how and points to some of the IP issues that may arise as the sector matures.

What is wearable technology?

Wearable technology encompasses innovations such as wearable computers or devices; augmented reality (AR); and virtual reality (VR). The existing wearable technology market is dominated by a small number of devices: smart glasses, watches and fitness bands, many of which interact with smartphones and tablets via apps to track users' sleep, health, and movement in a trend known as the 'quantified self'. Deloitte describes the sector as a 'mass niche' that will generate about \$3 billion in this year alone.



Google Glass is a wearable computer that features a small LCD display. It is voice activated and users can scroll through menus using a touch pad at side of the device. It supports a growing range of applications and among other things allows users to take photos, shoot video clips, upload files to the web, search the web and send e-mails. Its use has, however provoked privacy and security concerns (Photos: Google).

Early IP issues

The “intellectual property arms race” in the wearables’ sector has begun. The first patent litigation is now underway in the US as Adidas takes issue with Under Armour over its MapMyFitness app; and tech companies, like Google, are acquiring and developing patent arsenals. In 2013 alone, Google was awarded over 2,000 US patents, almost double the number of all previous years combined, including one for a “gaze-tracking system.”

The wearable tech sector is in its infancy, but will raise a number of intellectual property (IP) challenges. It seems likely, however, that these will mirror the pattern set by innovations in the mobile and semiconductor sectors. If they do, the breadth and quality of the [patents](#) that have already been granted may cause concern. The question of the validity of poor quality patents is prompting heated debate and is up for reform in the US. Conversely, industry standards for the wearable sector will be influenced by recent national and international developments – for example, in the US and Europe - in standard-essential patents and FRAND-licensing agreements (see box). Difficulties may also arise if more countries follow Germany and New Zealand in questioning the patentability of software.

About FRAND

To ensure compatibility and interoperability of devices manufactured by different companies, industry standards are established whereby, for example, a patent on a technology that is essential for the implementation of a given standard must be licensed to third parties on fair, reasonable and non-discriminatory (FRAND) terms. Such licensing terms are designed to enable smooth and wide dissemination of standardized technologies, while, at the same time, maintaining incentives for companies to innovate and participate in standardization processes.

Similarly, challenging questions will arise about the operation of [trademarks](#) in the sector, particularly in terms of how to handle competing marks in different jurisdictions, branding in virtual environments, and trademark enforcement in the ever-expanding domain name system.

Design: the elision of form with function

Intellectual property has traditionally made a neat distinction between design and patent law that wearable tech may well explode. Steve Jobs once said of design: “*It’s not just what it looks like and feels like. Design is how it works.*” The elision of form with function in wearable tech is seen most clearly in the increasing interaction between the tech and fashion industries. Tech firms have recruited senior fashion executives – Apple having recently recruited Paul Deneve

from Yves Saint Laurent and Angela Ahrendts from Burberry - and both industries have formed partnerships and collaborations to design functional fashion – consider Google’s partnership with Ray Ban and Oakley and Apple’s work with the Nike+ platform and devices. Existing products include smart jewelry and sportswear with “smart” garments made of conductive fibers that can interact with other devices or determine product authenticity, not too far away.



The broadest adoption of wearable technologies relates to products designed to monitor, track and record physical activity. Nike was one of the earliest adopters with the introduction in 2006 of the Nike+iPod Sports Kit. Its product line has since expanded to include iOS and Android apps, a multi-functional GPS watch, and the Nike Fuel Band (Photos: Nike, Inc.).

These new developments will be affected by existing uncertainties and differences in international IP protection for three dimensional designs of clothing and footwear. The lack of clarity around the protection of unregistered designs and virtual designs may also affect innovation in this sector but existing forms of IP protection (such as trademarks or patents) may well fill the gap.

The next stage: augmenting life

The next wave of wearable tech to be released into the market will consist of devices that incorporate either AR or VR technologies. Both technologies involve computer-generated environments – in AR that environment is superimposed over the real world (think Google

Glass) and in VR the user is immersed in that environment (think the virtual reality headset, Oculus Rift).

AR devices may help improve efficiency, safety and productivity in customer service or logistics, and may be used by doctors during consultations or surgeries. Most early VR devices are designed for gaming environments but in time, they may allow all of us to chat across continents or for specialists to interact with remote devices to conduct remote-surgery, defuse bombs or explore inaccessible territories.

Second screens and personal broadcasting

Both AR and VR provide entirely new ways for consumers to experience content. VR devices could transform broadcasting by enabling users to virtually attend live events like sports matches, concerts or university lectures. Watching any television show while wearing an AR device could bring up related content on the device (similar to the 'second screen' experience of mobile phone apps providing related content to viewers). Reading a book or e-book could trigger a search function or prompt a dictionary app.

These new ways of interacting with creative content are likely to have serious implications for the copyright system. Any film or show could be recorded or live-webcast unobtrusively. [Copyright](#) on the proliferation of related content will be almost impossible to monitor; virtual infringement will continue to be hard to track; and evidence of infringement even more difficult to access. When anyone can record anything at any time, concepts of fair use or fair dealing will also become thorny.



The smart baby onesie, the Mimo Baby, made by Rest Devices in the US is a wearable baby monitor – durable sensors are woven into the fabric – keeping parents up to speed on a baby’s vital statistics, such as breathing, activity level and skin temperature (Photo: Rest Devices).

Blurring the boundary between body and technology

Wearable tech will also blur the lines between the human body and technology. The use of assistive technology by people with disabilities (including advanced prostheses used by athletes like Aimee Mullins and the transformative development of cochlear implants) has fuelled a continuing conversation about the use of tech to enhance human capabilities. As new devices become more permanently part of us (on our heads – consider Sony’s SmartWig or tattooed onto our skin – consider Motorola’s plans for a “sticker-like” tattoo containing passwords for authentication), new possibilities arise, using remote sensors, for example, to track vulnerable people such as children or those with dementia or using geo-location data for public health or sociological analysis.

There will also be questions about the use of technology that is always with us - the privacy implications of facial recognition capabilities on wearable devices and the security implications of technology installed in our bodies. More complicated issues may arise in relation to the use of haptic technology in wearable devices which may blur the boundary between virtual and actual touch.

New modes of interaction developed for these devices will raise their own IP questions. Gestures are an important aspect of our use of technology (for example, pinching and swiping); there have already been applications to patent and trademark gestures. It is possible to imagine a lucrative trade in the generation of a brand new form of creative content – choreographers may be about to get rich.

Learning and helping – perfect information for perfect advice

Wearable tech’s full potential will be realized when the technology moves from devices observing us to platforms using the data generated from that observation to give us tailored advice (or target marketing at us). The possibilities are extraordinary: devices will direct us to meetings; improve our productivity; tell us about security threat alerts; and deliver drugs, manage pain and restart our hearts. Devices will also interact with the expanding internet of things (see box): switching off an alarm, warming the house and opening the garage door. Already you can open a car boot by waving your foot under the rear of a car.

The problem is that, in order to anticipate what we need, the platforms will need to have learned correctly what we usually do. That means that the quality of the data analytics or how often we do or don’t wear our device could make the data inaccurate or incomplete and the advice unhelpful.

Ownership of data

As the wearable tech sector develops and allows tech companies to acquire more and more information about us, it will be interesting to consider who owns this newest form of intangible property. A European Commission report called it ‘life data’ and described it as encompassing both our personal identification information and the information about ourselves that we upload to online services. The poet Ted Hughes once said “*I hope each of us owns the facts of his or her life.*” In a digital environment in which tech companies exchange free use of services for almost unlimited use of our data, it may not be at all clear that we do.

Any uncertainty about the ownership of this life data will have multiple consequences. The interaction with the internet of things will be particularly important – will we and our devices be legally one identity? If our device is stolen, will it still open our garage door? If not, why and how? This will relate to the interoperability of the various devices and how permissions for use of data and information are sought and obtained.

The Internet of things

The next industrial revolution involves connected devices – industrial objects that have processing power and that are connected wirelessly to each other. This “internet of things” includes the fabled refrigerator that orders milk when you are nearly out; aircraft parts that can send engineers alerts when they need to be serviced; and heating systems that switch themselves on when your mobile phone tells them that you are nearly home.

The legal consequences of using or wearing technology have already started to be explored: from a driver allegedly distracted by Google Glass, to a person texting a driver held potentially responsible for accidents that driver causes. An Australian will made on a mobile phone has just been found to be valid. Will uploads from wearable devices be evidence of contracts, agreements, testaments and, indeed, criminal activity? Who will give permission for those uploads to be used as evidence – the person who generated them or the tech firm who financially benefits from them?

The life data of certain individuals may have a greater financial value than the life data of others (a new way to follow your favorite celebrity). Will we all have a form of copyright over our life data and if we do when will it arise? This may be particularly important as digital technologies like wearable tech will “hugely expand the notion of collaboration” by making real-time complex collaborations between people across the world (and between people and machines) possible. Knowing how to quantify these contributions will be crucial in assigning economic value to them.

Finally, the aggregation of life data for communities or whole societies will be extremely valuable to both the private and public sectors. How will governments make sure that they have access to life data for public interest and public health initiatives?

The future

While it is clear that these technologies could create exponential value for business, at the moment it is not so clear why and how they will be of value to the bulk of consumers. The up-take of devices is modest - it is estimated that less than one percent of the UK population now owns a smartwatch.

There are other concerns: limited battery life, skin irritations, data security, and weariness with invasive technology. One of the pioneers of virtual reality, Jaron Lanier, has described the 'creepiness' of tech firms that use the incidents of our lives to market their products to us. In his novel, *The Circle*, Dave Eggers presents a tech dystopia dominated by wearable tech in which "privacy is theft." The reluctance of digital natives to wear watches may impede the take up of smartwatches and the Star Trek dream of tricorders and communicator badges is arguably already being met by smartphones and tablets.

The future of the wearable tech sector is a blank slate with these concerns balanced against considerable potential. The slow growth of the sector may be easy to explain: consumers may not be ready for the full functionality of wearable technologies. Apple was working on 'multi-touch' technology long before the creation of the iPad but did not release it until consumers developed an instinctive understanding of how that technology would be valuable to them. As we must run before we can walk, possibly we have to absorb tracking, augmenting and learning devices before they can really help us. Or will we lose enthusiasm for these new devices – how many fitness bands and heart rate monitors are already gathering dust among middle-aged gym kits?

In 1986, Apple Launched a Clothing Line

[Jennifer M Wood](#)



IMAGE CREDIT:

[RICKH3255/IMGUR](#)

With a brilliant sense of product design and a knack for always knowing exactly what their customers want next, Apple has developed a cult-like following in its 40 years in business. But that isn't to say the company hasn't made a few missteps.

In 1986, one year after Steve Jobs resigned as chairman following a power struggle with John Sculley, the company attempted to see just how far their fans would follow them with the launch of The Apple Collection, a line of Apple-branded clothing, accessories, and lifestyle items that encouraged customers to show their support of the company in the most public way possible. Because nothing says "I love my Mac" more than an \$1100 sailboard. So pop your collar and prepare to travel 30 years into the past to browse through The Apple Collection. (Keep your eyes peeled for the \$35 "Apple Watch.")

E. These heavy-weight 100% brushed cotton polo shirts are perfect for the court or the club. Unisex sizes (S-XL) in yellow, teal, and royal blue. Polo Shirt # 1550, \$32.

F. Apple cotton T-shirts feature the Apple name on the front, the Apple logo on the back. Available in kids' sizes, too. Adult T-shirts (S-XL) #5960, \$7.50. Kids' T-shirts (4T, 5-4) #5940, \$6.50.

F. Apple cotton sweatpants work out well with our letter sweatshirts. Unisex sizes (S-XL) in black, white, and sage. Sweatpants # 4210, \$15.



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A. For beginners and seasoned sailors alike, the F2 America 360 Sailboard offers superior equipment for the most exhilarating of sports. Constructed of ultralight EPS wrapped with impact-resistant ASA, this board combines speed with high-wind maneuverability. Adjustable footstraps and daggerboard provide comfort and control. This 11'10" board is best for sailors over 145 pounds. Included are two polyester-reinforced ripstop Mylar sails - a 6-square-meter powerhead and a 5-square-meter sail with gigantic Apple logo. Sailboard #0205, \$1700 (freight collect).

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A. Take a dive. The Apple watch is water-resistant to 100 feet. Comes with quartz movement and a 90-day warranty. **Apple Watch #0287, \$35.**

B. Amazing how often you'll use the 12 features of this Victorinox knife. Open wire. Full splinters. Turn screws. Open cans. Strip wires. Pick teeth. Even use it as a knife. **Swiss Army Knife #0288, \$34.**

C. Very hot lunch. High-tech lunch box of high-impact—virtually indestructible—plastic. Yellow with black shoulder strap. **Lunch Box #0185, \$9.50.**

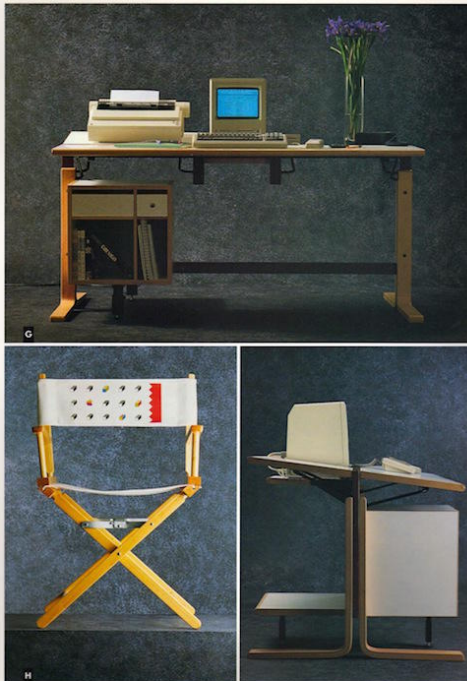
D. Sink your hands into the double-entry pockets of this oversized, fashionable-yet-functional pocket. Hot stuff for women or men, from Mistral. 100% cotton unisex sizes (S-XL) in white or yellow. **Mistral Jacket #4920, \$78.**

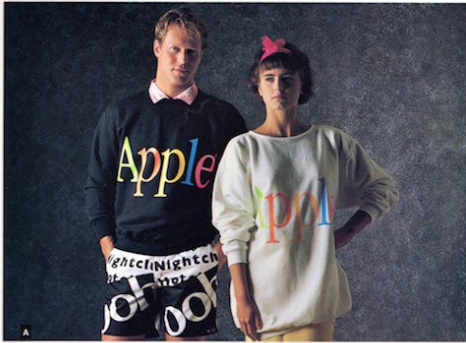
E. Clean design distinguishes the Braun wall clock. Made in Germany, the black clock boasts a quartz movement. **Braun Wall Clock #0420, \$42.**

F. This compact kit can turn your office seat or hotel room into an office. It contains a scaled-down stapler, scissors, tape dispenser, tape measure, razor cutter, ruler, glue stick, and holder for paper clips and rubber bands. **Travel Kit #0175, \$12.**

G. What if you were to design a table around the two most important things of the table—your Macintosh and your Macintosh and you? Two famous Danish designers did exactly that. So here follows function in this 30" x 60" white MacTable. Height and tilt are fully adjustable to accommodate all your Macintosh peripherals. Trimmed in solid beechwood. **MacTable #0920, \$399.**

H. The Apple director's chair with natural wood frame and Apple design will complement any decor. **Director's Chair #0905, \$39.**





A. This thing is big. Our white oversized sweatshirt looks great over jeans. One size fits all. Oversized Sweatshirt #4511, \$17.

A.D. After a rough day wind surfing, the Apple sweatshirt is just the thing. And a perfect companion to our sweaters. Unisex sizes (S-XL) in pink and black. Letter Sweatshirt #3950, \$15.

The Segrets Collection. All natural fibers and hand silk-screening are trademarks of these unique designs. Each piece in the collection features painstaking attention to fine detail. Segrets sweaters and flannel shirts all work together as perfect color coordinates.

B,C. The best thing about our 100% heavyweight-cotton oversized sweatshirt isn't that you can get in bed, blueberry, and wine. It's that you can keep your treasures in the side pockets. Apple logo on side pocket. Pre-shrunk in special unisex sizes (S-M, M-L, L-XL). Segrets Cotton Sweatshirt #4610, \$36.



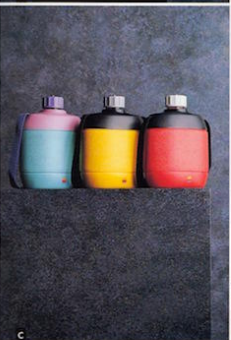
A. Let's go to the beach! Your movable feast will fit easily into this 20-liter Corning thermal cooler, crafted in Italy of high-impact plastic. Please choose from red, yellow, or aqua. Cooler #0070, \$32.

B. This 1-liter Corning thermal bottle features a high-impact polypropylene exterior over a virtually unbreakable plastic interior. Lid doubles as a cup. Made in Italy. Choose from red, yellow, or aqua. Thermal Bottle #0080, \$12.

C. Our unbreakable Corning canteen with screw-top lid and woven shoulder strap features the same rugged construction as the Corning thermal bottle. Canteen #0090, \$8.

D. Our hand-blown crystal beer mug has an Apple logo etched in its base. Imported from Germany. Crystal Mug #0270, \$10.50.

E. When you tell this alarm clock to shut up—it does. The Brown quartz timepiece has a voice-activated snooze alarm and increasing alarm volume. Complete with world-time zone dial and a safety cover. Brown Travel Clock #0426, \$40.



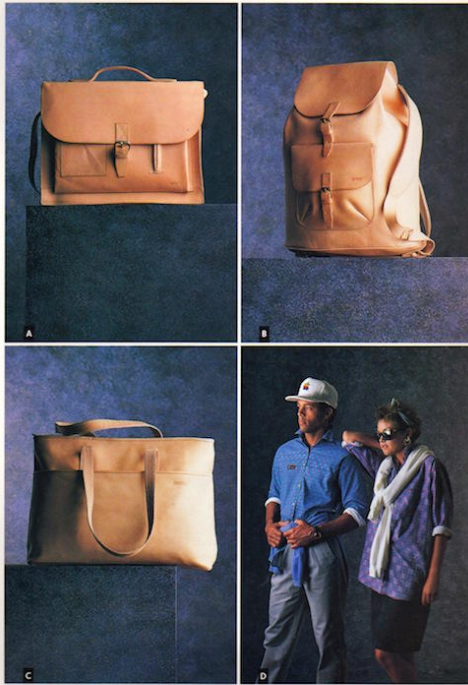
A. You know how they used to make things in the olden days? Well, in Germany a company named Bree still does. Our Bree brief is hand-crafted from the sturdiest natural leather that darkens with age. It has two outer pockets, brass fittings, a handle, and a shoulder strap. **Leather Brief #8525, \$125.**

B. Another small masterpiece from the hands of the German craftsmen of Bree — the leather daypack. All natural vegetable-tanned leather with brass fittings make this a personal treasure you're likely to have for the rest of your life. **Leather Daypack #8526, \$154.**

C. The Bree all-leather satchel is exactly what you need for a hard day's shopping. Its main pocket has brass zipper closure to hold almost everything, a side pocket holds the rest. Shoulder straps are stitched and brass-riveted for extra strength. **Leather Satchel #8527, \$149.**

The Segrets Collection. All natural fibers and hand silk-screening are trademarks of these unique designs. Each piece in the collection features painstaking attention to fine detail. Segrets sweatshirts and flannel shirts all work together as perfect color coordinates.

D. The softest 100% cotton flannel you ever felt, and they perfectly match our Segrets sweatshirts. They're cut a little big and feel sooo good. Each is silk-screened by hand, so each is unique. Special unisex sizes (S/M, M/L, L/XL) in teal print or purple print. Please specify size and color. **Segrets Flannel Shirt #4710, \$42.**

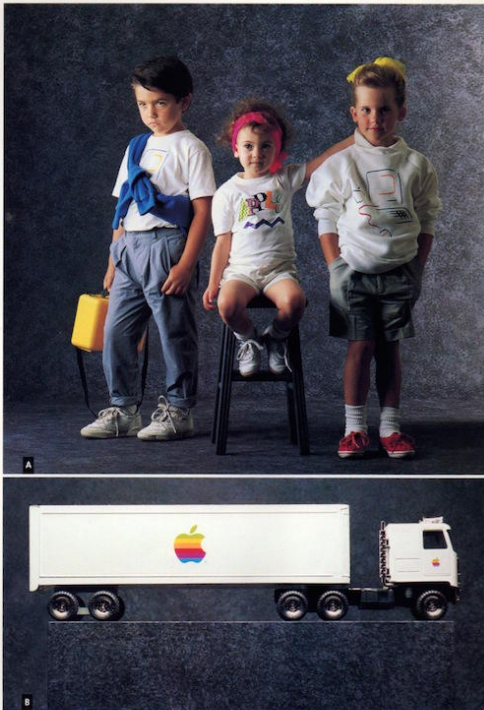


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A. Kids' cotton Apple T-shirts feature the Apple name on the front and the Apple logo on the back. Macintosh T-shirts feature the Macintosh design on the front and the Apple name on the back. **Kids' Apple T-shirts (KT, S-L) #5940, \$6.50. Kids' Macintosh T-shirts (KT, S-L) #5720, \$6.50.**

A. Macintosh cotton sweatshirt with crew neck. **Kids' Macintosh Sweatshirt (KT, S-L) #3600, \$14.**

B. The truck the future comes in. It runs just as well on big kids' desks as on little kids' floors. **Truck #0162, \$29.**



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F. Keep tabs on everything with this black ribbed portfolio by the Japanese design group iziz. Made of ribbed vinyl, it features inner pockets, Velcro closures, grid paper, and colored dividers. **iziz Portfolio #0325, \$15.** **iziz Divider Refill #0326, \$1.** **Grid Paper Refill #0328, \$1.50.**

G. For skiing, biking, or hiking, our 420-denier nylon pocketish belt pack by Caribou is perfect for carrying the things you don't want to leave behind. This 5" x 11" x 2.5" pack comes in three colors: red, royal blue, and teal. **Belt Pack #9420, \$13.**

H. Apple's sturdy canvas satchel is an expandable carry-all with shoulder strap, leather handle, and natural leather trim. It comes in blue or natural. **Canvas Satchel #7950, \$29.**

I. You'll never lose your glasses again—but if you do, the Apple eyeglass leash will make it a lot easier to find them. Choose from multi-colored design or solids in white, black, purple, or red. **Eyeglass Leash #0160, \$5.**

J. From our rigorous testing grounds on the slopes of California and the beaches of Mexico come the best sunglasses we could find. Rose lenses absorb 95% of infrared and ultraviolet radiation. Made in France by Suncloud. Comes with an Apple eyeglass leash. Two styles. **Black Sunglasses #0353, \$80.** **White Sunglasses #0354, \$80.**

A. Who's in its pockets? This roomy black water-resistant polypropylene attaché case with embroidered Apple logo has pockets for all the things you'd usually carry to and from the office, and then more room for all the extras. **Attaché #7975, \$49.**

B. This acrylic disk box with fanned, colored modules lets you see all your disks at the same time. For twenty-five 3.5" disks or sixty 5.25" disks. **3.5" Disk Box #0470, \$18.** **5.25" Disk Box #0420, \$19.**

C. These nylon disk wallets accommodate either six 3.5" or four 5.25" disks. Black or red with Velcro closure. **3.5" Disk Wallet #0425, \$14.** **5.25" Disk Wallet #0430, \$14.**

D. The perfect place to turn your mouse loose. In blue, black, red, or gray. **Mouse Pad #0220, \$9.95.**

E. Looks like a Macintosh. Acts like a mousepad. **Mac Mousepad #0165, \$9.**

F. This fuzzy gray creature is the only way to make your Macintosh even more user-friendly. He's a mousepiece. **Mouse Cover #0525, \$5.95.**



A. Apple cotton-blend sweat-shirt with embroidered six-color Apple logo. In red or royal blue. Available in kids' sizes, too. Adult Apple Sweatshirt (S-XL) #2200, \$15. Kids' Apple Sweatshirt (4T, 5-4) #2200, \$14.

B. Cotton T-shirts with Macintosh logo. Macintosh Adult T-shirt (S-XL) #5710, \$7.50. Macintosh Kids' T-shirt (4T, 5-4) #5720, \$6.50.

B. Macintosh cotton sweat-shirt with crew neck. Adult Macintosh Sweatshirt (S-XL) #3700, \$15. Kids' Macintosh Sweatshirt (4T, 5-4) #3600, \$14.

B. For people who run, or just want to look like they do, our rugged lined shorts are absolutely perfect. Two side pockets and a back snap pocket. Unisex sizes (S-XL) in navy, royal, yellow, or purple. Apple Shorts #6550, \$25.

C. Step up to the plate in Apple's cotton twill baseball cap with adjustable band and embroidered Apple logo. Twill Baseball Cap (navy or red) #7710, \$8.50.

D. Tennis anyone? The Apple sun visor is made of cotton twill, with adjustable band, terry lining and embroidered logo. Sun Visor (navy, white, or red) #7410, \$7.50.



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E. Delirium for mouse and computer lovers. Now you can even eat them. Because now you can get them in 100% milk chocolate. Chocolate Mouse (same size as real Macintosh mouse) #0254, \$5.95. Chocolate Macintosh #0252, \$1.95. Chocolate Apple IIe #0253, \$1.95. Available October through May—they melt during the summer months.

F. The Apple key ring garnished with the Apple logo is made of sculpted enamel. Apple Key Ring #0238, \$4.

G. Our enameled memo box holds a pad designed exclusively for the Apple Collection. Mesh Memo Box and Pad #0435, \$5.95. Apple Pad Refills #0440, \$2.50.

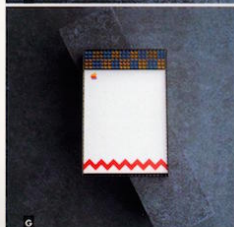
H. The Apple sculpted enamel tie tack comes complete with chain. Tie Tack #0240, \$3.50.

H. Apple IIc and Apple logo lapel pins show off in colorful sculpted enamel. Apple IIc Pin #0172, \$2.50. Apple Lappel Pin #0241, \$2.50.

H. Enameled lapel pin with Macintosh name and logo. Macintosh Pin #0170, \$2.50. Macintosh Plus Pin #0171, \$2.50.

I. Brass key ring features Macintosh design. Macintosh Key Ring #0168, \$7.

J. "Changing the world, one person at a time." Show them who's in front. Vinyl Bumper Sticker #0026, \$1.



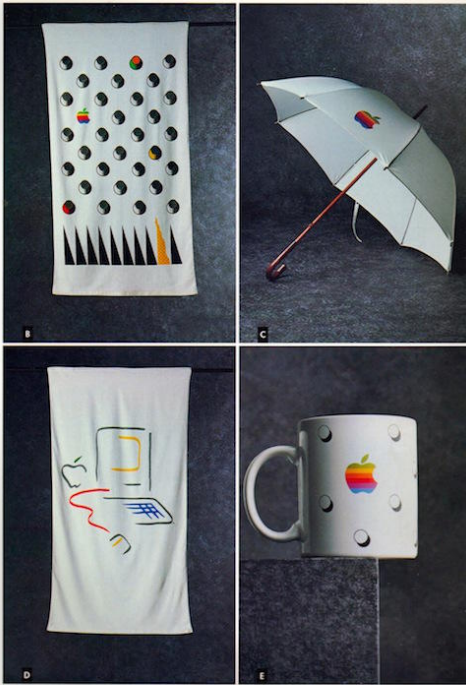
7

B. Our luxurious extra-thick, extra-large 36" x 70" velour-looped terry towel is by Fieldcrest. **Apple Towel #0772, \$23.**

C. "It never rains in California." Bolesey. It rains everywhere. When it does, have our sturdy cotton poplin umbrella at the ready. There's even room under it for a friend. Wood shaft and handle. **Umbrella #0289, \$28.**

D. Macintosh goes to the beach. Extra-thick, extra-large 36" x 70" velour-looped terry towel is also by Fieldcrest. **Macintosh Towel #0771, \$23.**

E. Our ceramic coffee mug is at home next to an Apple computer — that's where its design was born. **Apple Mug #0276, \$5.50.**

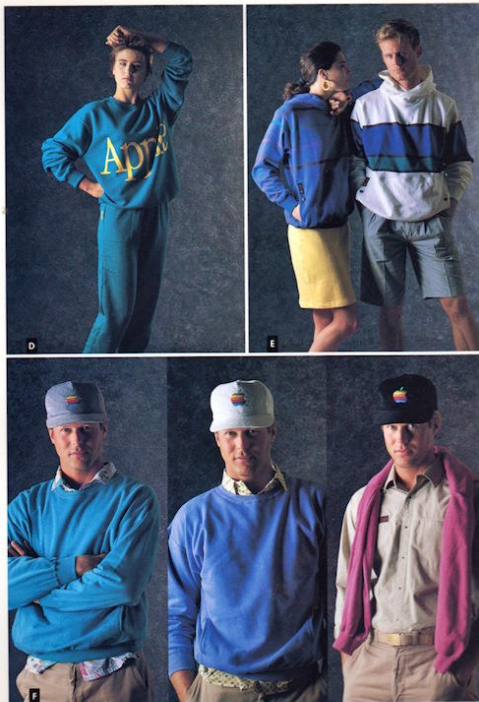


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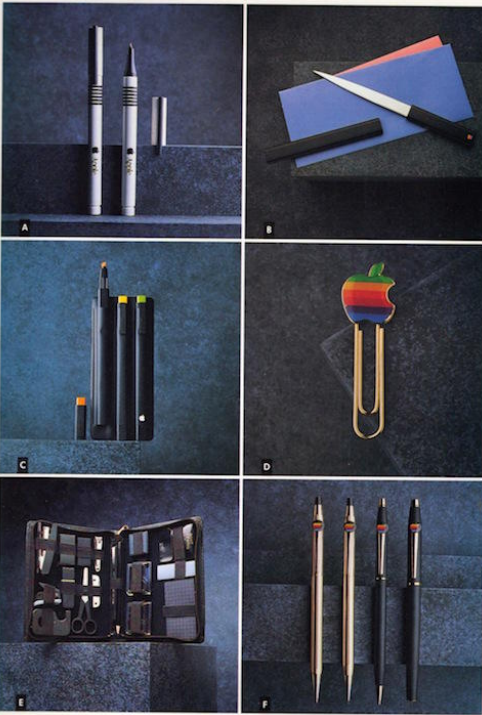
D. Apple cotton sweatpants work out well with our letter sweatshirts. Unisex sizes (S–XL) in black, white, and jade. **Sweatpants #4210, \$15.**

E. Only the heaviest women cotton goes into our hooded rugby shirt. Put it on and get rambunctious. With raglan long sleeves and snap front pockets, it's perfect for sailing or fun at the beach. White or purple, both with stripes. From Ruggedwear. Unisex sizes (S–XL). **Rugby Sweatshirt #6820, \$47.**

F. Show whose team you're on with our corduroy baseball cap with adjustable band and embroidered logo. **Corduroy Baseball Cap (black, white, or gray) #7210, \$9.50.**



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A. These beautiful writing instruments from Heidelberg, West Germany, are available in Feltliner felt tip or Inkwriter ballpoint. Lamy Feltliner Felt Tip Pen #0335, \$6. Lamy Inkwriter Ballpoint Pen #0336, \$6.

B. Keep this sleek brushed stainless-steel implement within reach before the mail comes. **Block Letter Opener** #0345, \$20.

C. Three colored highlighters come in a matte black holder and have adjustable points for wide or narrow strokes. **Lamy Highlighter Set** #0337, \$15.

D. Just the thing to keep those little phone message slips in one place. **Paper Clip** #0237, \$3.

E. On the road again. Everything you need fits somehow into this little 6" x 8 1/2" Boyt leather case: paper punch, pen, pencil and sharpener, scissors, ruler, eraser, tape measure, highlighter, rubber bands, paper clips, band aids, sewing kit, stapler and remover, tape dispenser, knife with can opener and screwdriver, and fingernail clipper. **Executive Companion** #0651, \$25.

F. Cross classic black matte ballpoint or Selectip, or 10K gold pen or pencil. **Cross Black Ballpoint** #0230, \$24. **Cross Black Selectip** #0231, \$29. **Cross Gold Pen** #0228, \$29. **Cross Gold Pencil** #0229, \$29.

G. This daypack is made by Caribou from tough 420-denier nylon packcloth. It measures 15" x 8" x 5" and has two front zipper pockets and adjustable shoulder straps. Choose plum, teal, or royal blue. **Nylon Daypack** #9400, \$26.

H. This plastic loose-leaf notebook by Cadic has a locking compartment inside the front cover to hold notes, letters, and all the things you want to have handy. With pencil compartment, four divider tabs, and 30 sheets of letter-quality writing paper. **Loose-leaf Notebook** #0505, \$12.50. 70-page **Loose-leaf Notebook Refills** #0506, \$2.95.

H. This may be the world's best-designed notebook. The cover serves two purposes: an envelope in back stores things like floppy disks, and a wraparound flap completely seals in the notebook. In three sizes, by Cadic. Please specify size. 8 1/2" x 11" **Writing Folder** #0507, \$10. 7" x 10" **Writing Folder** #0508, \$7.50. 3 1/2" x 6" **Writing Folder** #0509, \$3.50.

I. This bag is as great for carrying your sweats to the gym as it is for holding them in an overhead compartment on a flight to Aspen—or Cancun. In black, navy, or teal, with padded shoulder strap. **Nylon Duffel** #9430, \$32.

J. Nylon sport wallet with Velcro closure is available in black, red, or teal. **Sport Wallet** #0295, \$7.50.





A, B. Our snap shirt is made by Patagonia. European cut, with brass snaps instead of buttons. It's made of soft, 100% cotton that even looks great straight from your dryer. With embroidered logo on breast pocket. Her sizes (S-XL) in white or pale. **Women's Snap Shirt #1650, \$43.** His sizes (S-XL) in French blue or khaki. **Men's Snap Shirt #1670, \$43.**

C. Our 100% cotton web belts by Patagonia come in two widths. Men's are 1 1/2" wide, women's are 1" wide. The cinching adjusts to your exact size. With embroidered logo tag. Her sizes (Medium or Large) in green, purple, pink, and black. **Women's Belt #7530, \$5.** His sizes (Medium or Large) in black, teal, blue, and khaki. **Men's Belt #7520, \$5.**

D. North Face makes some of the toughest products in the world. And our lined poly/cotton vest is one of them. It has two double-entry zippered pockets to hold whatever you take out of the wild. Unisex (S-XL) in teal or yellow. **Vest #6950, \$70.** (Available after 9/1/86.)



F. This lovely Apple logo pendant and its 18-inch chain are wrought of 14k gold. Custom-designed exclusively for The Apple Collection. **Tiffany Pendant #0021, \$89.**

F. Custom-designed earrings are the perfect complement to the Apple Tiffany pendant. Fashioned from 14k gold for pierced ears. **Tiffany Earrings #0052, \$55.**

G. Put a piece of Tiffany in his pocket. Our sterling silver Tiffany money clip is engraved with the Apple logo. **Tiffany Money Clip #0029, \$35.**

H. This crystal apple has a hand-etched Apple logo on its side. **Tiffany Crystal Apple #0071, \$40.**

I. An Apple adorns the top of this sterling silver screwball key ring from Tiffany. **Tiffany Apple Key Ring #0025, \$29.**

J. Designed exclusively for Tiffany by world-famous designer Elsa Peretti, this solid sterling silver key ring features an engraved Apple logo. **Tiffany Elsa Peretti Key Ring #0026, \$72.**

K. Solid 14k gold lapel pin adds a dash of elegance to any lapel. **Apple Gold Lapel Pin #0243, \$89.**

L. Ridge Zinfandel Glen Ellen 1990 and Cabernet Sauvignon 1991 from Napa County, California, both come with an Apple gold seal. Toast a very fine year in Apple-design crystal wine glasses. **Set of Ridge Zinfandel and Cabernet #0280, \$25.** Set of two **Wine Glasses #0205, \$12.**

A. The sleek Rona briefcase will help you be as organized as it makes you look. Its patented design features a lambskin exterior, shearlock lining, hidden combination locks, secret compartment, and a debossed Apple logo. Hand made in Spain. **Rona Briefcase #0223, \$449.**

B. How much work do you take home with you? It really doesn't matter, because this Stuart Kern briefcase's gusseted pockets allow it to expand to hold as much as you can carry. Black clothkin with retractable handles and removable shoulder strap. **Leather Expandable Briefcase #0457, \$299.**

C. Three-piece set includes an upright holder with nickel-plated steel scissors and a magnifying glass. **Feather opener of pressed zinc. Standing Desk Set #0346, \$32.**



23



A. Traditional OldKash overalls with embroidered Apple logo on blue denim. **OldKash Overalls (toddler sizes 2T, 3T, 4T) #6650, \$18.**

A. Kids take to the slopes in this knit cap designed for us by Monrovia Sports USA. This 100% wool cap features a no-itch cotton inner liner. **Knit Cap #7600, \$12.**

B. Put all the colorful pieces of this hardwood puzzle together and what do you get? Perfect for children of all ages. Nontoxic finish. **Apple Puzzle #0251, \$12.**

C. Very hot lunch. High-tech lunch box of high-impact — virtually indestructible — plastic. Yellow with black shoulder strap. **Lunch Box #0385, \$9.50.**

D. Apple cotton-blend sweatshirt with embroidered six-color Apple logo. In red or royal blue. **Kids' Apple Sweatshirt (4T, 5-L) #2300, \$14.**

D. Macintosh cotton sweatshirt with crew neck. **Kids' Macintosh Sweatshirt (4T, 5-L) #3600, \$14.**



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G. Elegant organization of your very important projects begins in this black collagen three-ring binder from Stuart Kern. Inside you'll find two large flap pockets, a business card pocket, and a matching pen with its very own holder. **Leather Three-Ring Binder #0653, \$160.**

H. Italian designer Fausto Cavazza brings the award-winning Porcia telephone to the Apple Collection. Its modded design features black rubber keys, handset, and even a built-in shoulder rest. **Porcia Telephone #0429, \$400.**

I. The perfect place to put your thoughts—during a meeting, in a cab, or in flight—is in this executive portfolio. Made of the softest black glove leather by Stuart Kern, it has two inside flap pockets, room for business cards, and a matte black pen with holder. **Leather Portfolio #0654, \$160.**

J. This finely designed Braun calculator has an eight-digit display and four-key memory storage. Battery operated. It comes with a protective travel case. **Braun Calculator #0427, \$80.**

The Apple Tiffany Collection—where living legends meet. One hundred years of Tiffany quality and attention to fine detail unite with a contemporary classic: Apple. And the combination reflects beautifully on both—in gold, silver, and crystal.

All Apple Tiffany Collection selections are gift-wrapped in a Tiffany box with white satin ribbon.

A. Exquisitely designed, this gilded brass clock with quartz movement is at home on any well-appointed desk. It has an adjustable viewing angle and shows an engraved Apple logo on its base. **Tiffany Desk Clock #0053, \$325.**

B. Both pen and pencil are made with the finest gold plate and ruthenium, and each has an engraved Apple. **Tiffany Pen #0015, \$27. Tiffany Pencil #0016, \$27.**

C. Crystal captain's decanter has an Apple logo etched into the crystal stopper. Made in Romania. (Limited to stock on hand.) **Tiffany Decanter #0010, \$40.**

D. Swivel-top alarm clock made of black anodized brass is at home on your desk or in your suitcase. **Tiffany Travel Clock #0045, \$129.**

E. Sterling silver bookmark serves double duty as a paper clip. **Tiffany Bookmark #0070, \$22.**

All images courtesy [rickh3255/imgur](https://www.instagram.com/rickh3255/).

PUBLIC LAW 114-153—MAY 11, 2016

DEFEND TRADE SECRETS ACT OF 2016

Public Law 114–153
114th Congress

An Act

May 11, 2016
[S. 1890]

To amend chapter 90 of title 18, United States Code, to provide Federal jurisdiction for the theft of trade secrets, and for other purposes.

Defend Trade
Secrets Act of
2016.
18 USC 1 note.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Defend Trade Secrets Act of 2016”.

SEC. 2. FEDERAL JURISDICTION FOR THEFT OF TRADE SECRETS.

(a) IN GENERAL.—Section 1836 of title 18, United States Code, is amended by striking subsection (b) and inserting the following:

“(b) PRIVATE CIVIL ACTIONS.—

“(1) IN GENERAL.—An owner of a trade secret that is misappropriated may bring a civil action under this subsection if the trade secret is related to a product or service used in, or intended for use in, interstate or foreign commerce.

“(2) CIVIL SEIZURE.—

“(A) IN GENERAL.—

“(i) APPLICATION.—Based on an affidavit or verified complaint satisfying the requirements of this paragraph, the court may, upon ex parte application but only in extraordinary circumstances, issue an order providing for the seizure of property necessary to prevent the propagation or dissemination of the trade secret that is the subject of the action.

“(ii) REQUIREMENTS FOR ISSUING ORDER.—The court may not grant an application under clause (i) unless the court finds that it clearly appears from specific facts that—

“(I) an order issued pursuant to Rule 65 of the Federal Rules of Civil Procedure or another form of equitable relief would be inadequate to achieve the purpose of this paragraph because the party to which the order would be issued would evade, avoid, or otherwise not comply with such an order;

“(II) an immediate and irreparable injury will occur if such seizure is not ordered;

“(III) the harm to the applicant of denying the application outweighs the harm to the legitimate interests of the person against whom seizure would be ordered of granting the application and

substantially outweighs the harm to any third parties who may be harmed by such seizure;

“(IV) the applicant is likely to succeed in showing that—

“(aa) the information is a trade secret;

and

“(bb) the person against whom seizure would be ordered—

“(AA) misappropriated the trade secret of the applicant by improper means; or

“(BB) conspired to use improper means to misappropriate the trade secret of the applicant;

“(V) the person against whom seizure would be ordered has actual possession of—

“(aa) the trade secret; and

“(bb) any property to be seized;

“(VI) the application describes with reasonable particularity the matter to be seized and, to the extent reasonable under the circumstances, identifies the location where the matter is to be seized;

“(VII) the person against whom seizure would be ordered, or persons acting in concert with such person, would destroy, move, hide, or otherwise make such matter inaccessible to the court, if the applicant were to proceed on notice to such person; and

“(VIII) the applicant has not publicized the requested seizure.

“(B) ELEMENTS OF ORDER.—If an order is issued under subparagraph (A), it shall—

“(i) set forth findings of fact and conclusions of law required for the order;

“(ii) provide for the narrowest seizure of property necessary to achieve the purpose of this paragraph and direct that the seizure be conducted in a manner that minimizes any interruption of the business operations of third parties and, to the extent possible, does not interrupt the legitimate business operations of the person accused of misappropriating the trade secret;

“(iii)(I) be accompanied by an order protecting the seized property from disclosure by prohibiting access by the applicant or the person against whom the order is directed, and prohibiting any copies, in whole or in part, of the seized property, to prevent undue damage to the party against whom the order has issued or others, until such parties have an opportunity to be heard in court; and

“(II) provide that if access is granted by the court to the applicant or the person against whom the order is directed, the access shall be consistent with subparagraph (D);

“(iv) provide guidance to the law enforcement officials executing the seizure that clearly delineates the scope of the authority of the officials, including—

- “**(I)** the hours during which the seizure may be executed; and
- “**(II)** whether force may be used to access locked areas;
- Deadline.
Notification. “**(v)** set a date for a hearing described in subparagraph **(F)** at the earliest possible time, and not later than 7 days after the order has issued, unless the party against whom the order is directed and others harmed by the order consent to another date for the hearing, except that a party against whom the order has issued or any person harmed by the order may move the court at any time to dissolve or modify the order after giving notice to the applicant who obtained the order; and
- “**(vi)** require the person obtaining the order to provide the security determined adequate by the court for the payment of the damages that any person may be entitled to recover as a result of a wrongful or excessive seizure or wrongful or excessive attempted seizure under this paragraph.
- Courts. “**(C) PROTECTION FROM PUBLICITY.**—The court shall take appropriate action to protect the person against whom an order under this paragraph is directed from publicity, by or at the behest of the person obtaining the order, about such order and any seizure under such order.
- “**(D) MATERIALS IN CUSTODY OF COURT.**—
- “**(i) IN GENERAL.**—Any materials seized under this paragraph shall be taken into the custody of the court. The court shall secure the seized material from physical and electronic access during the seizure and while in the custody of the court.
- “**(ii) STORAGE MEDIUM.**—If the seized material includes a storage medium, or if the seized material is stored on a storage medium, the court shall prohibit the medium from being connected to a network or the Internet without the consent of both parties, until the hearing required under subparagraph **(B)(v)** and described in subparagraph **(F)**.
- “**(iii) PROTECTION OF CONFIDENTIALITY.**—The court shall take appropriate measures to protect the confidentiality of seized materials that are unrelated to the trade secret information ordered seized pursuant to this paragraph unless the person against whom the order is entered consents to disclosure of the material.
- “**(iv) APPOINTMENT OF SPECIAL MASTER.**—The court may appoint a special master to locate and isolate all misappropriated trade secret information and to facilitate the return of unrelated property and data to the person from whom the property was seized. The special master appointed by the court shall agree to be bound by a non-disclosure agreement approved by the court.
- “**(E) SERVICE OF ORDER.**—The court shall order that service of a copy of the order under this paragraph, and the submissions of the applicant to obtain the order, shall be made by a Federal law enforcement officer who, upon

making service, shall carry out the seizure under the order. The court may allow State or local law enforcement officials to participate, but may not permit the applicant or any agent of the applicant to participate in the seizure. At the request of law enforcement officials, the court may allow a technical expert who is unaffiliated with the applicant and who is bound by a court-approved non-disclosure agreement to participate in the seizure if the court determines that the participation of the expert will aid the efficient execution of and minimize the burden of the seizure.

Determination.

“(F) SEIZURE HEARING.—

“(i) DATE.—A court that issues a seizure order shall hold a hearing on the date set by the court under subparagraph (B)(v).

“(ii) BURDEN OF PROOF.—At a hearing held under this subparagraph, the party who obtained the order under subparagraph (A) shall have the burden to prove the facts supporting the findings of fact and conclusions of law necessary to support the order. If the party fails to meet that burden, the seizure order shall be dissolved or modified appropriately.

“(iii) DISSOLUTION OR MODIFICATION OF ORDER.—A party against whom the order has been issued or any person harmed by the order may move the court at any time to dissolve or modify the order after giving notice to the party who obtained the order.

“(iv) DISCOVERY TIME LIMITS.—The court may make such orders modifying the time limits for discovery under the Federal Rules of Civil Procedure as may be necessary to prevent the frustration of the purposes of a hearing under this subparagraph.

“(G) ACTION FOR DAMAGE CAUSED BY WRONGFUL SEIZURE.—A person who suffers damage by reason of a wrongful or excessive seizure under this paragraph has a cause of action against the applicant for the order under which such seizure was made, and shall be entitled to the same relief as is provided under section 34(d)(11) of the Trademark Act of 1946 (15 U.S.C. 1116(d)(11)). The security posted with the court under subparagraph (B)(vi) shall not limit the recovery of third parties for damages.

“(H) MOTION FOR ENCRYPTION.—A party or a person who claims to have an interest in the subject matter seized may make a motion at any time, which may be heard ex parte, to encrypt any material seized or to be seized under this paragraph that is stored on a storage medium. The motion shall include, when possible, the desired encryption method.

“(3) REMEDIES.—In a civil action brought under this subsection with respect to the misappropriation of a trade secret, a court may—

“(A) grant an injunction—

“(i) to prevent any actual or threatened misappropriation described in paragraph (1) on such terms as the court deems reasonable, provided the order does not—

“(I) prevent a person from entering into an employment relationship, and that conditions placed on such employment shall be based on evidence of threatened misappropriation and not merely on the information the person knows; or

“(II) otherwise conflict with an applicable State law prohibiting restraints on the practice of a lawful profession, trade, or business;

“(ii) if determined appropriate by the court, requiring affirmative actions to be taken to protect the trade secret; and

“(iii) in exceptional circumstances that render an injunction inequitable, that conditions future use of the trade secret upon payment of a reasonable royalty for no longer than the period of time for which such use could have been prohibited;

“(B) award—

“(i)(I) damages for actual loss caused by the misappropriation of the trade secret; and

“(II) damages for any unjust enrichment caused by the misappropriation of the trade secret that is not addressed in computing damages for actual loss; or

“(ii) in lieu of damages measured by any other methods, the damages caused by the misappropriation measured by imposition of liability for a reasonable royalty for the misappropriator’s unauthorized disclosure or use of the trade secret;

“(C) if the trade secret is willfully and maliciously misappropriated, award exemplary damages in an amount not more than 2 times the amount of the damages awarded under subparagraph (B); and

“(D) if a claim of the misappropriation is made in bad faith, which may be established by circumstantial evidence, a motion to terminate an injunction is made or opposed in bad faith, or the trade secret was willfully and maliciously misappropriated, award reasonable attorney’s fees to the prevailing party.

“(c) JURISDICTION.—The district courts of the United States shall have original jurisdiction of civil actions brought under this section.

“(d) PERIOD OF LIMITATIONS.—A civil action under subsection (b) may not be commenced later than 3 years after the date on which the misappropriation with respect to which the action would relate is discovered or by the exercise of reasonable diligence should have been discovered. For purposes of this subsection, a continuing misappropriation constitutes a single claim of misappropriation.”.

(b) DEFINITIONS.—Section 1839 of title 18, United States Code, is amended—

(1) in paragraph (3)—

(A) in subparagraph (B), by striking “the public” and inserting “another person who can obtain economic value from the disclosure or use of the information”; and

(B) by striking “and” at the end;

(2) in paragraph (4), by striking the period at the end and inserting a semicolon; and

(3) by adding at the end the following:

“(5) the term ‘misappropriation’ means—

“(A) acquisition of a trade secret of another by a person who knows or has reason to know that the trade secret was acquired by improper means; or

“(B) disclosure or use of a trade secret of another without express or implied consent by a person who—

“(i) used improper means to acquire knowledge of the trade secret;

“(ii) at the time of disclosure or use, knew or had reason to know that the knowledge of the trade secret was—

“(I) derived from or through a person who had used improper means to acquire the trade secret;

“(II) acquired under circumstances giving rise to a duty to maintain the secrecy of the trade secret or limit the use of the trade secret; or

“(III) derived from or through a person who owed a duty to the person seeking relief to maintain the secrecy of the trade secret or limit the use of the trade secret; or

“(iii) before a material change of the position of the person, knew or had reason to know that—

“(I) the trade secret was a trade secret; and

“(II) knowledge of the trade secret had been acquired by accident or mistake;

“(6) the term ‘improper means’—

“(A) includes theft, bribery, misrepresentation, breach or inducement of a breach of a duty to maintain secrecy, or espionage through electronic or other means; and

“(B) does not include reverse engineering, independent derivation, or any other lawful means of acquisition; and

“(7) the term ‘Trademark Act of 1946’ means the Act entitled ‘An Act to provide for the registration and protection of trademarks used in commerce, to carry out the provisions of certain international conventions, and for other purposes, approved July 5, 1946 (15 U.S.C. 1051 et seq.) (commonly referred to as the “Trademark Act of 1946” or the “Lanham Act”).”.

(c) EXCEPTIONS TO PROHIBITION.—Section 1833 of title 18, United States Code, is amended, in the matter preceding paragraph (1), by inserting “or create a private right of action for” after “prohibit”.

(d) CONFORMING AMENDMENTS.—

(1) The section heading for section 1836 of title 18, United States Code, is amended to read as follows:

“§ 1836. Civil proceedings”.

(2) The table of sections for chapter 90 of title 18, United States Code, is amended by striking the item relating to section 1836 and inserting the following:

18 USC 1831
prec.

“1836. Civil proceedings.”.

(e) EFFECTIVE DATE.—The amendments made by this section shall apply with respect to any misappropriation of a trade secret (as defined in section 1839 of title 18, United States Code, as

Applicability.
18 USC 1833
note.

amended by this section) for which any act occurs on or after the date of the enactment of this Act.

18 USC 1833
note.

(f) **RULE OF CONSTRUCTION.**—Nothing in the amendments made by this section shall be construed to modify the rule of construction under section 1838 of title 18, United States Code, or to preempt any other provision of law.

18 USC 1833
note.

(g) **APPLICABILITY TO OTHER LAWS.**—This section and the amendments made by this section shall not be construed to be a law pertaining to intellectual property for purposes of any other Act of Congress.

SEC. 3. TRADE SECRET THEFT ENFORCEMENT.

(a) **IN GENERAL.**—Chapter 90 of title 18, United States Code, is amended—

(1) in section 1832(b), by striking “\$5,000,000” and inserting “the greater of \$5,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided”; and

(2) in section 1835—

(A) by striking “In any prosecution” and inserting the following:

“(a) **IN GENERAL.**—In any prosecution”; and

(B) by adding at the end the following:

“(b) **RIGHTS OF TRADE SECRET OWNERS.**—The court may not authorize or direct the disclosure of any information the owner asserts to be a trade secret unless the court allows the owner the opportunity to file a submission under seal that describes the interest of the owner in keeping the information confidential. No submission under seal made under this subsection may be used in a prosecution under this chapter for any purpose other than those set forth in this section, or otherwise required by law. The provision of information relating to a trade secret to the United States or the court in connection with a prosecution under this chapter shall not constitute a waiver of trade secret protection, and the disclosure of information relating to a trade secret in connection with a prosecution under this chapter shall not constitute a waiver of trade secret protection unless the trade secret owner expressly consents to such waiver.”.

(b) **RICO PREDICATE OFFENSES.**—Section 1961(1) of title 18, United States Code, is amended by inserting “sections 1831 and 1832 (relating to economic espionage and theft of trade secrets),” before “section 1951”.

18 USC 1832
note.

SEC. 4. REPORT ON THEFT OF TRADE SECRETS OCCURRING ABROAD.

(a) **DEFINITIONS.**—In this section:

(1) **DIRECTOR.**—The term “Director” means the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

(2) **FOREIGN INSTRUMENTALITY, ETC.**—The terms “foreign instrumentality”, “foreign agent”, and “trade secret” have the meanings given those terms in section 1839 of title 18, United States Code.

(3) **STATE.**—The term “State” includes the District of Columbia and any commonwealth, territory, or possession of the United States.

(4) UNITED STATES COMPANY.—The term “United States company” means an organization organized under the laws of the United States or a State or political subdivision thereof.

(b) REPORTS.—Not later than 1 year after the date of enactment of this Act, and biannually thereafter, the Attorney General, in consultation with the Intellectual Property Enforcement Coordinator, the Director, and the heads of other appropriate agencies, shall submit to the Committees on the Judiciary of the House of Representatives and the Senate, and make publicly available on the Web site of the Department of Justice and disseminate to the public through such other means as the Attorney General may identify, a report on the following:

Consultation.
Public
information.
Web posting.

(1) The scope and breadth of the theft of the trade secrets of United States companies occurring outside of the United States.

(2) The extent to which theft of trade secrets occurring outside of the United States is sponsored by foreign governments, foreign instrumentalities, or foreign agents.

(3) The threat posed by theft of trade secrets occurring outside of the United States.

(4) The ability and limitations of trade secret owners to prevent the misappropriation of trade secrets outside of the United States, to enforce any judgment against foreign entities for theft of trade secrets, and to prevent imports based on theft of trade secrets overseas.

(5) A breakdown of the trade secret protections afforded United States companies by each country that is a trading partner of the United States and enforcement efforts available and undertaken in each such country, including a list identifying specific countries where trade secret theft, laws, or enforcement is a significant problem for United States companies.

(6) Instances of the Federal Government working with foreign countries to investigate, arrest, and prosecute entities and individuals involved in the theft of trade secrets outside of the United States.

(7) Specific progress made under trade agreements and treaties, including any new remedies enacted by foreign countries, to protect against theft of trade secrets of United States companies outside of the United States.

(8) Recommendations of legislative and executive branch actions that may be undertaken to—

Recommendations.

(A) reduce the threat of and economic impact caused by the theft of the trade secrets of United States companies occurring outside of the United States;

(B) educate United States companies regarding the threats to their trade secrets when taken outside of the United States;

(C) provide assistance to United States companies to reduce the risk of loss of their trade secrets when taken outside of the United States; and

(D) provide a mechanism for United States companies to confidentially or anonymously report the theft of trade secrets occurring outside of the United States.

SEC. 5. SENSE OF CONGRESS.

It is the sense of Congress that—

(1) trade secret theft occurs in the United States and around the world;

(2) trade secret theft, wherever it occurs, harms the companies that own the trade secrets and the employees of the companies;

(3) chapter 90 of title 18, United States Code (commonly known as the “Economic Espionage Act of 1996”), applies broadly to protect trade secrets from theft; and

(4) it is important when seizing information to balance the need to prevent or remedy misappropriation with the need to avoid interrupting the—

(A) business of third parties; and

(B) legitimate interests of the party accused of wrongdoing.

28 USC 620 note. **SEC. 6. BEST PRACTICES.**

Deadline.

(a) **IN GENERAL.**—Not later than 2 years after the date of enactment of this Act, the Federal Judicial Center, using existing resources, shall develop recommended best practices for—

(1) the seizure of information and media storing the information; and

(2) the securing of the information and media once seized.

(b) **UPDATES.**—The Federal Judicial Center shall update the recommended best practices developed under subsection (a) from time to time.

Records.

(c) **CONGRESSIONAL SUBMISSIONS.**—The Federal Judicial Center shall provide a copy of the recommendations developed under subsection (a), and any updates made under subsection (b), to the—

(1) Committee on the Judiciary of the Senate; and

(2) Committee on the Judiciary of the House of Representatives.

SEC. 7. IMMUNITY FROM LIABILITY FOR CONFIDENTIAL DISCLOSURE OF A TRADE SECRET TO THE GOVERNMENT OR IN A COURT FILING.

(a) **AMENDMENT.**—Section 1833 of title 18, United States Code, is amended—

(1) by striking “This chapter” and inserting “(a) **IN GENERAL.**—This chapter”;

(2) in subsection (a)(2), as designated by paragraph (1), by striking “the reporting of a suspected violation of law to any governmental entity of the United States, a State, or a political subdivision of a State, if such entity has lawful authority with respect to that violation” and inserting “the disclosure of a trade secret in accordance with subsection (b)”;

and

(3) by adding at the end the following:

“(b) **IMMUNITY FROM LIABILITY FOR CONFIDENTIAL DISCLOSURE OF A TRADE SECRET TO THE GOVERNMENT OR IN A COURT FILING.**—

“(1) **IMMUNITY.**—An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that—

“(A) is made—

“(i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney; and

“(ii) solely for the purpose of reporting or investigating a suspected violation of law; or

“(B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

“(2) USE OF TRADE SECRET INFORMATION IN ANTI-RETALIATION LAWSUIT.—An individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual—

“(A) files any document containing the trade secret under seal; and

“(B) does not disclose the trade secret, except pursuant to court order.

“(3) NOTICE.—

“(A) IN GENERAL.—An employer shall provide notice of the immunity set forth in this subsection in any contract or agreement with an employee that governs the use of a trade secret or other confidential information.

Contracts.

“(B) POLICY DOCUMENT.—An employer shall be considered to be in compliance with the notice requirement in subparagraph (A) if the employer provides a cross-reference to a policy document provided to the employee that sets forth the employer’s reporting policy for a suspected violation of law.

“(C) NON-COMPLIANCE.—If an employer does not comply with the notice requirement in subparagraph (A), the employer may not be awarded exemplary damages or attorney fees under subparagraph (C) or (D) of section 1836(b)(3) in an action against an employee to whom notice was not provided.

“(D) APPLICABILITY.—This paragraph shall apply to contracts and agreements that are entered into or updated after the date of enactment of this subsection.

Contracts.

“(4) EMPLOYEE DEFINED.—For purposes of this subsection, the term ‘employee’ includes any individual performing work as a contractor or consultant for an employer.

“(5) RULE OF CONSTRUCTION.—Except as expressly provided for under this subsection, nothing in this subsection shall be construed to authorize, or limit liability for, an act that is otherwise prohibited by law, such as the unlawful access of material by unauthorized means.”.

(b) TECHNICAL AND CONFORMING AMENDMENT.—Section 1838 of title 18, United States Code, is amended by striking “This

130 STAT. 386

PUBLIC LAW 114–153—MAY 11, 2016

chapter” and inserting “Except as provided in section 1833(b), this chapter”.

Approved May 11, 2016.

LEGISLATIVE HISTORY—S. 1890:

HOUSE REPORTS: No. 114–529 (Comm. on the Judiciary).

SENATE REPORTS: No. 114–220 (Comm. on the Judiciary).

CONGRESSIONAL RECORD, Vol. 162 (2016):

Apr. 4, considered and passed Senate.

Apr. 27, considered and passed House.

DAILY COMPILATION OF PRESIDENTIAL DOCUMENTS (2016):

May 11, Presidential remarks.



WEARABLE TECHNOLOGY

Patent Landscape Analysis



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Executive Summary

Wearable technology devices or simply wearables refer to electronic technologies or computing devices which are designed to be comfortably worn on the body. Wearable technology tends to provide sensory and scanning capability, such as bio-feedback and tracking of physiological function. Wearables also have communication capability which allows humans to access data in real-time using another connected device or medium. Rapidly evolving examples of wearable devices include smart watches, intelligent eyewear, bio-sensing contact lenses, e-clothing, and smart jewellery, such as rings, bracelets, and hearing aid-like devices that are designed to look like ear rings. In some cases, wearable devices may also be implanted into the human body.

Wearable technology devices form a major part of the Internet-of-Things (IoT), and are expected to have a far reaching influence on the fields of fitness, medicine, disabilities, education, transportation, gaming and entertainment. Pervasive connectivity, miniaturization of electronic devices and sensors, along with lowering of costs, have contributed to a rapid increase in the number of wearables being conceptualized and launched in recent times.

In subsequent sections of this report, we analyze the Intellectual Property (Patents) landscape of wearable technology. We discover that the majority of IP generation activity under this technology has occurred in healthcare and medical devices. Smart watches, smart eye wear, smart bands, and smart shoes are the most common application areas of wearable technology. The top three companies with the highest number of patents and patent applications are Microsoft, Philips, and Alphabet. Microsoft is at the top and holds around 757 patents/patent applications, out of which 437 patents are high quality. Geographically, the US has seen the maximum number of patent filings in the domain of wearable technology, followed by China, Japan and Korea.

Using LexInnova's proprietary patent analytics tool, LexScore™, we identify Alphabet (Google's parent company) as the leader in this technology domain, with a high quality patent portfolio, high patent filing activity, and a longer average remaining life of the patents/patent applications. Philips also has a large number of filings, but the company has relatively lower average quality, and lesser average life remaining of its patents/patent applications.

Introduction

Wearable technology comprises all products that can be worn on a user's body to integrate computing with their daily tasks and activities. The technology includes a wide range of devices and applications that help in collecting and displaying real-time health, motion and other sensory data. Though wearable technology is one of the most actively followed trends in the digital world today, the concept of wearables has certainly been around for decades.

One of the earliest pieces of wearable technology was the calculator watch, introduced in the 1980s. The eruption of portable computing in the early 1990s resulted in further experimentation in the technology with varying degrees of success. A head mounted display called the "Private Eye" was invented, which used a vibrating mirror to create a display directly in the wearer's field of vision. Gradually, the rapid trend towards miniaturization, and lower cost of electronic components, such as displays, sensors, storage, computing and connectivity, driven by smartphones, helped improve the functionality of wearables. It also lowered their cost of manufacture and made them feasible for consumer applications.



Figure 1: Private Eye¹

The 2000s saw a slew of wearables launched into the market, starting with a 2006 collaboration between the respective leaders in fitness apparel and personal computing, Nike and Apple to provide a data driven running and workout experience, the Nike + iPod Sports Kit. Following the trend, several technology companies started entering the fitness and healthcare market and expanding the range of wearable devices. The notion was that by recording and reporting information about physical activity, the devices could educate and motivate the users towards better outcomes, and eventually better health. Fitbit has been the most successful in the new era of wearable companies, having sold more than 22 million devices since 2011, giving it a market share of more than 34%. The company hit a valuation of over \$4 billion after its IPO earlier this year.

Wearable technology has emerged as one of the fastest growing segments in the high-tech market. A report by research firm IDC estimated that global wearable device shipments will reach 72.1 million units in 2015, up 173.3% from 2014. Increasing with a CAGR of 42.6%, the sales of wearable devices are expected to reach around 155.7 million units in 2019².

¹ Google Glass ancestors: 45 years of digital eyewear (photos) - Page 6 - CNET. Retrieved from <http://www.cnet.com/pictures/google-glass-ancestors-45-years-of-digital-eyewear-photos/6/>

² Worldwide Wearables Market Forecast to Grow 173.3% in 2015 with 72.1 Million Units to be Shipped, According to IDC. (2015, June 18). Retrieved from <http://www.idc.com/getdoc.jsp?containerId=prUS25696715>

Another market research by the marketing consultancy company, Markets and Markets, suggests that the “Wearable Electronics and Technology” market is estimated to grow at a CAGR of 17.80% to reach \$ 31.27 billion by 2020³.

The distribution of the actual and forecasted wearable device shipments across various categories such as wrist-wear, eyewear, clothing, ear wear, etc., has been shown in Figure 2. According to the data provided by IDC, wrist wear shipments are estimated to grow six-fold, followed by the emerging smart eye-wear category that includes products such as Microsoft HoloLens, and Google Glass.

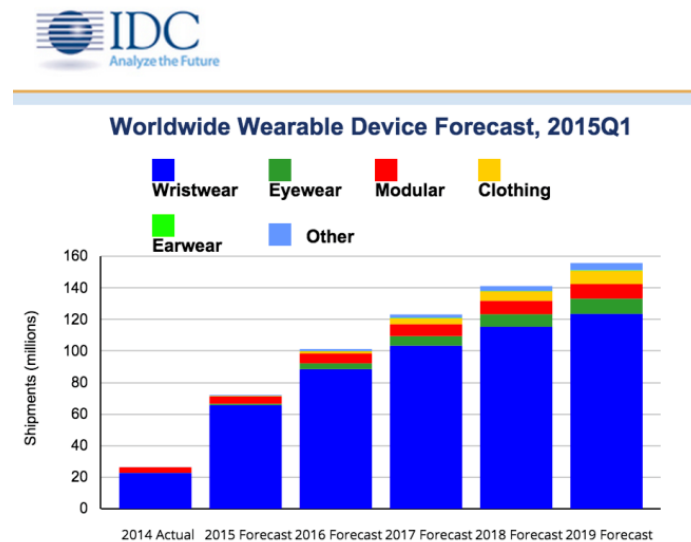


Figure 2: Worldwide wearable device shipment forecast (Source: IDC)

Up till Q2 2015, the worldwide wearable market has been dominated by three key players – Fitbit, Apple and Xiaomi with 24.3%, 19.9% and 17.1% of the market, respectively⁴. Apple shipped a total of 3.6 million units of wearable devices in the second quarter of 2015 (2Q15), just 0.8 million units behind Fitbit's 4.4 million units. Based on an estimate by Hexa Research, a market research and consulting organization, North America is estimated to be the dominant market for this technology, and is expected to contribute 43.2% to the market share in 2019 globally⁵. Asia-Pacific is positioned to be the fastest growing region.

³ Wearable Technology Market by Product (Wristwear, Eyewear, Footwear, Neckwear, Bodywear, and Others), Application (Consumer Electronics, Healthcare, Enterprise & Industrial, and Others), Type (Smart Textile, Non-Textile), & Geography - Global Forecast to. (2015, December 1). Retrieved from <http://www.marketsandmarkets.com/Market-Reports/wearable-electronics-market-983.html>

⁴ Apple Debuts at the Number Two Spot as the Worldwide Wearables Market Grows 223.2% in 2Q15, Says IDC. (2015, August 27). Retrieved from <http://www.idc.com/getdoc.jsp?containerId=prUS25872215>

⁵ Wearable Technology Market Will Witness Maximum Growth in North America Regional Market With Contribution of 43.2% From 2012 to 2020: Hexa Research. (2015, August 18). Retrieved from <http://www.marketwired.com/press-release/wearable-technology-market-will-witness-maximum-growth-north-america-regional-market-2048642.htm>

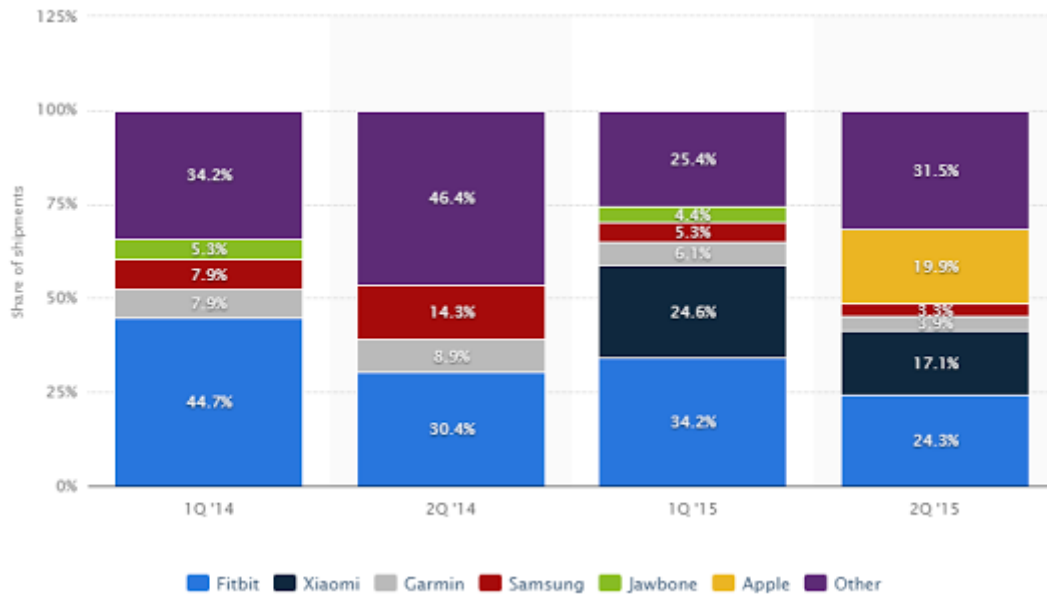


Figure 3: Company wise performance in global wearable market (Source: IDC)

The growth of the wearable market depends on its ability to match the aesthetics of existing consumer tastes and preferences through proper styling and by overcoming design hurdles. For example, smartwatch manufacturers face the challenge of matching the design sensibility of luxury watches, which are identified as a fashion statement first and foremost. Eyewear is even more visible, and has an even bigger design challenge. These devices also possess limited battery life, and need frequent recharge. Functional bugs and privacy issues, are some of the other major barriers that wearable device manufacturers must overcome.

Despite the various obstacles, several new companies have entered the fray, even in the less popular smart clothing category. Lesser known companies such as Heddoko and HexoSkin, along with iconic brand Ralph Lauren, have designed 'smart shirts' which use bio-sensing and moisture-wicking fibers to keep a track of biomechanics and calculate calories burned based on the intensity of a workout and muscle stress. Another category of products such as the Exmobaby by the company Exmoveire and the 'Mimo Baby Monitor' presents a new application of this technology, i.e. track sleep status, breathing, and body position of infants. These wearables sync data with mobile devices, such as smartphones, to process and present measured results often in addition to location monitoring.

The wearable technology space has also been affected by several high-profile mergers and acquisitions in the recent past. One of the recent acquisitions in the wearable technology domain was Misfit in November, 2015⁶ by Fossil Group. Intel has also accelerated its entry in wearable devices by acquiring Recon in June, 2015⁷. The acquisition helps Intel in expanding

⁶ Fossil acquires wearable maker Misfit for \$260 million. (2015, November 12). Retrieved from <http://www.theverge.com/2015/11/12/9725478/fossil-group-acquires-wearable-maker-misfit-260-million>

⁷ Intel Acquires Recon; Eyes Future of Wearables - Technology@Intel. (2015, June 17). Retrieved from <https://blogs.intel.com/technology/2015/06/intel-acquires-recon/>

the market for head mounted display products and technologies. Intel made another significant deal in 2014 by acquiring Basis⁸ which makes wristwatch health trackers.

Another big acquisition in the wearable tech space has been by Facebook in 2014, of an app called Moves⁹, through the purchase of Helsinki-based developer ProtoGeo Oy. At the same time, Microsoft considered acquiring Osterhout Design Group¹⁰ - a low-profile company that develops wearables for the military, but instead acquired most of its intellectual property. 6 issued and 75 in-prosecution patents for Augmented Reality glasses were picked up by Microsoft in the multi-million dollar deal. Healthcare products company Covidien, owned by medical giant Medtronic¹¹, picked up three firms, including Zephyr Technologies, which makes health-sensing wearables that are available both over-the-counter and on prescription.

In a financially lucrative and fast evolving market, safeguarding a company's competitive advantage and proprietary technologies using intellectual property is an important part of strategy for major players in this market. This also makes assessing the IP landscape an important exercise for current players and new entrants in this market. In the following sections of the report, we analyze the patent landscape of Wearable technology. First, a technological taxonomy is presented, followed by a detailed analysis of the patent portfolios of significant players in this market.

⁸Basis Goes To Intel For Around \$100M. (2014, March 1). Retrieved from <http://techcrunch.com/2014/03/03/basis-goes-to-intel-for-around-100m/>

⁹ Mergers and acquisitions: The biggest wearable tech deals of 2014. (2014, December 23). Retrieved from <http://www.wearable.com/wearable-tech/mergers-acquisitions-the-biggest-wearables-deals-of-2014>

¹⁰ ibid

¹¹ ibid

Taxonomy

Wearable technology is being targeted for application in products that are constantly improving wellness, along with providing comfort and ubiquitous computing to users. The world's largest electronics, software, services and medical companies are among the many giants clashing horns in the wearable market. Indeed the biggest opportunity is in the field of healthcare/fitness, where wearables are positioned to address some of the biggest challenges which currently exist.

In our study, we have classified patents/patent applications according to the broad technologies involved, such as connectivity, processing, network infrastructure, and also their applications in various industry segments.

Wearable technology patents for application in the fields of healthcare and medical devices have the highest number of patent filings, followed garments/body wear. For consumers, the interest in quantifying, monitoring and improving health metrics has translated into a huge demand for fitness trackers and smart watches. According to a recent market research report by PRNewswire, investors are expected to commit more than \$1 billion¹² to wearable technology start-up companies focused on healthcare and fitness by the end of 2015.

Connection Management, Traffic Management and Topology Management domains which fall under the ambit of Connectivity have the least number of patent filings with only 120, 142 and 160 patents/patent applications respectively.

¹² Startups Making A Name For Themselves In The \$1 Billion Wearables Market: (2015, September 23). Retrieved from <http://www.forbes.com/sites/unitystoakes/2015/09/23/wearables-are-revolutionizing-healthcare-not-just-fitness/>

Level 1	Level 2	Level 3	Patents/Patent Applications	
Connectivity	Specially adapted services/devices		877	
	Switching Systems		744	
	Communication Protocols		639	
	EMW/Radio Waves		1,058	
	Access/Authentication		421	
	Connection Management		355	
	Resource Management		2,084	
	Topology Management		160	
	Multiplexing Methods		618	
	Traffic Management		142	
	Light Guides		223	
Processing	Algorithm	Speech Processing	1,431	
		Character Recognition	834	
		Bioinformatics	1,073	
		Image Processing	669	
		Others	1,637	
	Encryption	Data Security	1,236	
		Error Correction	1,067	
		Data Encryption	566	
Memory Management	Information Retrieval	591		
Network Infrastructure	Control Systems		1,006	
	Power Management		1,720	
	Sensors		649	
	Waveguides/Aerials		380	
	GUI		905	
	Circuits	Accelerometer/Gyroscope		703
		Touch Screen		641
		Input/output Interfaces		2,543
		Acoustics		342
		Camera/Optics		538
		Communication Systems		270
		Display systems		3,130
	Others		3,149	
Miscellaneous Patents	Applications	Medical Devices	6,834	
		Heart rate	1,937	
		Temperature	486	
		Respiration	393	
		Movement	1,860	
		Garments/body wear	2,133	
		Eyewear	823	
		Hand/Travelling articles	266	
		E-Commerce	1,141	
		Alarm Systems	1,304	
		Entertainment	545	
	Measurement/Testing		1,517	
	Manufacturing/Fabrication		2,281	
	Others		3,028	

Figure 4: Taxonomy

Filing trend

The number of patents/patent application filings in the wearable technology domain has been continuously increasing for the last twenty years. The filing trend has seen a sharp rise after 2012, because of an exponential increase in the demand and sales of wearable devices in the recent past. The number of patents seems to decline after 2013, due to the fact that most of the patents from this period haven't been published yet.

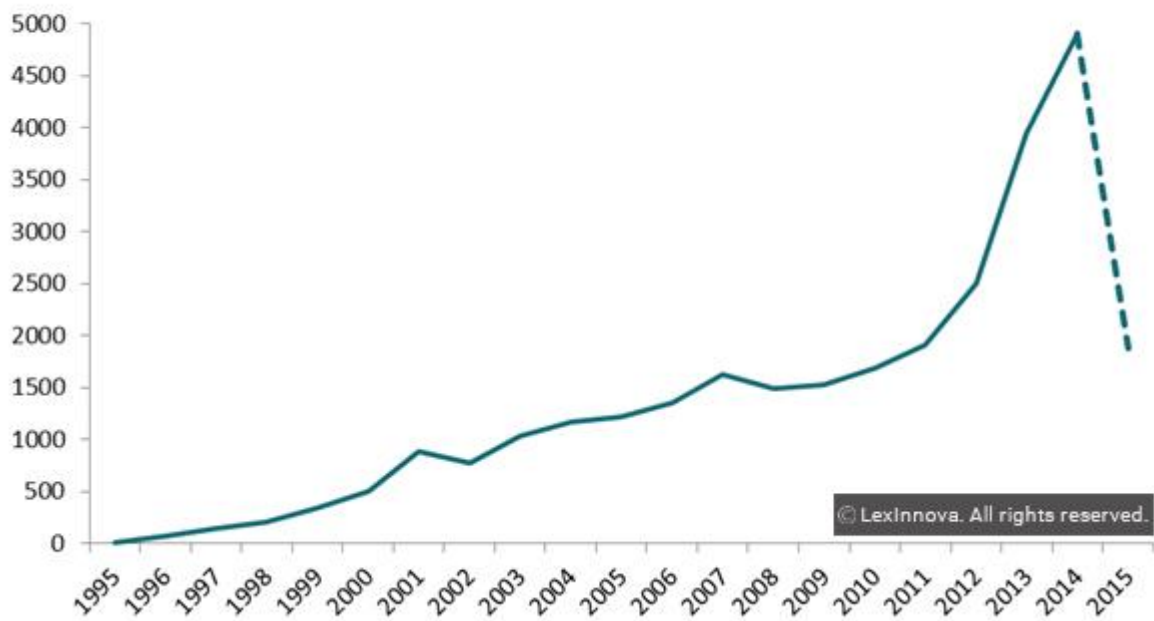


Figure 5: Filing trend in Wearable Technology

Top Assignees

The figure below shows assignees with the maximum number of patents/patent applications related to wearable technology. Based on our assessment, Microsoft, Philips and Alphabet have the most patent filings in wearable technology, with 757, 756 and 602 patents/patent applications respectively.

Samsung (498 patents/patent applications) has a strong portfolio in display systems and input/output interfaces while Qualcomm (415 patents/patent applications) is more focused on resource management, error correction and switching systems. Intellectual Ventures Management, which is a Non-Practicing Entity (NPE), has a diverse and well-balanced portfolio with 412 patents/patent applications. Apple, which gained a big chunk of the smart watch market this year with the Apple Watch, has only 197 patents/patent applications. A recent patent filing by Apple has revealed that it is also looking to develop a wearable designed to be worn on the finger, featuring a small screen¹³.

Panasonic (153 patents/patent applications) has focused on medical devices and display systems in the wearable market while Honeywell (152 patents/patent applications), which is at the bottom of top 20 assignees, seems to be focusing on processing (information retrieval) and alarm systems with 36 and 28 patents/patent applications respectively.

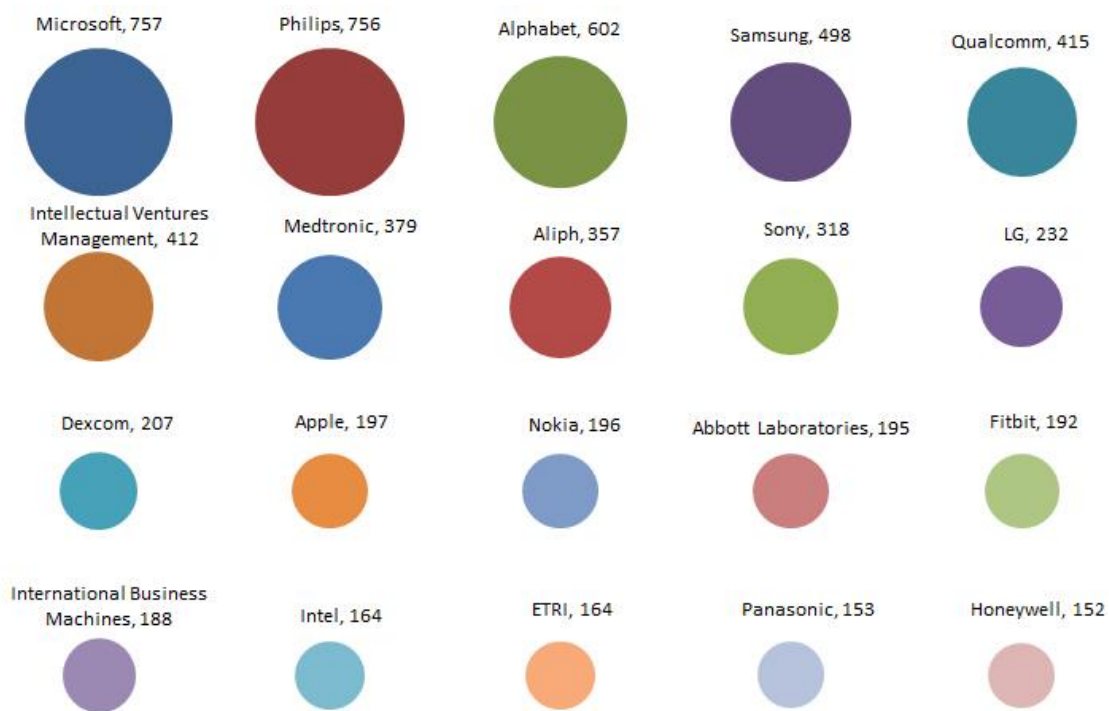


Figure 6: Top Assignees

Another NPE in the top assignees is ETRI (Electronics and Telecommunications Research Institute) with 164 patents/patent applications. This, coupled with the fact that companies

¹³ Apple filed patents around an 'iRing' wearable for your finger. (2015, October 1). Retrieved from <http://www.telegraph.co.uk/technology/apple/11904983/Apple-filed-patents-around-an-iRing-wearable-for-your-finger.html>

with largest wearable market share do not necessarily have the highest number of patents shows that in the near future, there is a high probability of licensing activity in this domain.

New companies like Fitbit (192 patents/patent applications) have recently started building their wearables portfolio, and have been quite successful in the wearables market. There is already an ongoing trade secret litigation between Fitbit and Aliph (357 patents/patent applications) which makes the Jawbone line devices. Fitbit has a significantly larger market share than Jawbone, but much lower intellectual property as measured by patent filing activity. Our analysis shows that Fitbit, however, has higher quality patents/patent applications. The Kickstarter phenomenon, Pebble, which is considered to be a major contender in the smart watch market, has only 10 patents/patent filings and does not make it to the list of top assignees.

Patent Strength

The patents in our report are ranked automatically by our proprietary tool that relies on an algorithm developed by Mark A. Lemley, Kimberly A. Moore, John R. Allison, and R. Derek Trunkey in their research paper, "Valuable Patents." Historical research has proven that 97% of the litigation-worthy patents in a portfolio are found in the top bracket of patents ranked by using this algorithm.

Microsoft (437) has the highest strength patents in its portfolio, and leads other companies in wearable technology by a significant margin. Medtronic, on the second spot, has 212 high strength patents, which is more in line with the number of patents held by other high strength patent holders. Fitbit, which is one of the newer companies in this sector has 69 patents/patent applications, and is also part of this list.

Non Practicing Entities (NPEs) such as Intellectual Ventures Management and Rpx Corporation are ranked three and nine respectively, with 208 and 80 patents/patent applications, which also puts them in the top bracket. It is noteworthy that some companies, such as Aliph (Jawbone) are not part of this list even though they have a comparatively large portfolio. This is because a large part of the patent portfolios of such companies are comprised of low strength patents.



Figure 7: Companies with maximum number of High-strength patents

The figure below shows a break-up of high strength patents/patent applications in wearable technology, under various technology heads. Again, wearables in healthcare and medical devices have the highest number of high strength patents filings, with 1,504 live patents/patent applications, but this number corresponds to only 22% of its total filings. Although they are ranked 6th and rank 10th respectively, Speed processing and E-Commerce have a relatively high share of high strength filings, with 34% and 31% of high strength patents/patent applications respectively falling within these categories. The number of high strength patents in the Garments/Bodywear section is relatively low with only 12% of high strength patents out of the total number of patents/patent applications in the domain.

Level 1	Level 2	Level 3	High strength Patents/Patent Applications	
Connectivity	Specially adapted services/devices		222	
	Switching Systems		229	
	Communication Protocols		144	
	EMW/Radio Waves		228	
	Access/Authentication		99	
	Connection Management		107	
	Resource Management		510	
	Topology Management		26	
	Multiplexing Methods		163	
	Traffic Management		67	
	Light Guides		70	
Processing	Algorithm	Speech Processing	492	
		Character Recognition	231	
		Bioinformatics	344	
		Image Processing	143	
		Others	526	
	Encryption	Data Security	309	
		Error Correction	284	
Data Encryption		104		
Memory Management	Information Retrieval	175		
NetworkInfrastructure	Control Systems		228	
	Power Management		312	
	Sensors		649	
	Waveguides/Aerials		52	
	GUI		242	
	Circuits	Accelerometer/Gyroscope		184
		Touch Screen		176
		Input/output Interfaces		450
		Acoustics		111
		Camera/Optics		66
		Communication Systems		83
		Display systems		667
	Others		585	
Miscellaneous Patents	Applications	Medical Devices	1,504	
		Heart rate	344	
		Temperature	93	
		Respiration	97	
		Movement	333	
		Garments/body wear	255	
		Eye wear	150	
		Hand/travelling articles	43	
		E-Commerce	356	
		Alarm Systems	270	
	Entertainment	118		
	Measurement/Testing		382	
	Manufacturing/Fabrication		289	
Others		559		

Figure 8: Break-up of high strength patents

LexScore™

We use LexInnova's proprietary LexScore™ framework to identify intellectual property portfolio strengths and weaknesses in wearable technology. The figure below depicts the competitive positioning of the top 20 assignees in the Wearable Technology domain. The assignees are compared on the basis of quality score, average lifetime and the number of patents in their portfolio. We use our proprietary algorithm (based on bibliographic information and claim characteristics of an invention) to calculate the quality of inventions. The diameter of the circles represents the number of filings of patents/patent applications of each company. The bigger circles that are present in the top right region represent the assignees with the best patent portfolios, which are exemplary in terms of the number of patents/patent applications, quality and the average remaining lifetime. Fitbit is lying in the top right region, but its circle diameter is relatively small as compared to that of the alphabet that has a more average life but slightly less patent strength.

Dexcom is leading in terms of average strength, but the average lifetime of its portfolio is very less. Philips also has a significant portfolio, but it is lagging behind in terms of patent strength as well as average lifetime. Microsoft is leading in terms of number of patents/patent applications assigned, but is lacking in terms of average lifetime. The life remaining for patents/patent applications in Samsung's portfolio is relatively high, but it is lacking in terms of quality.

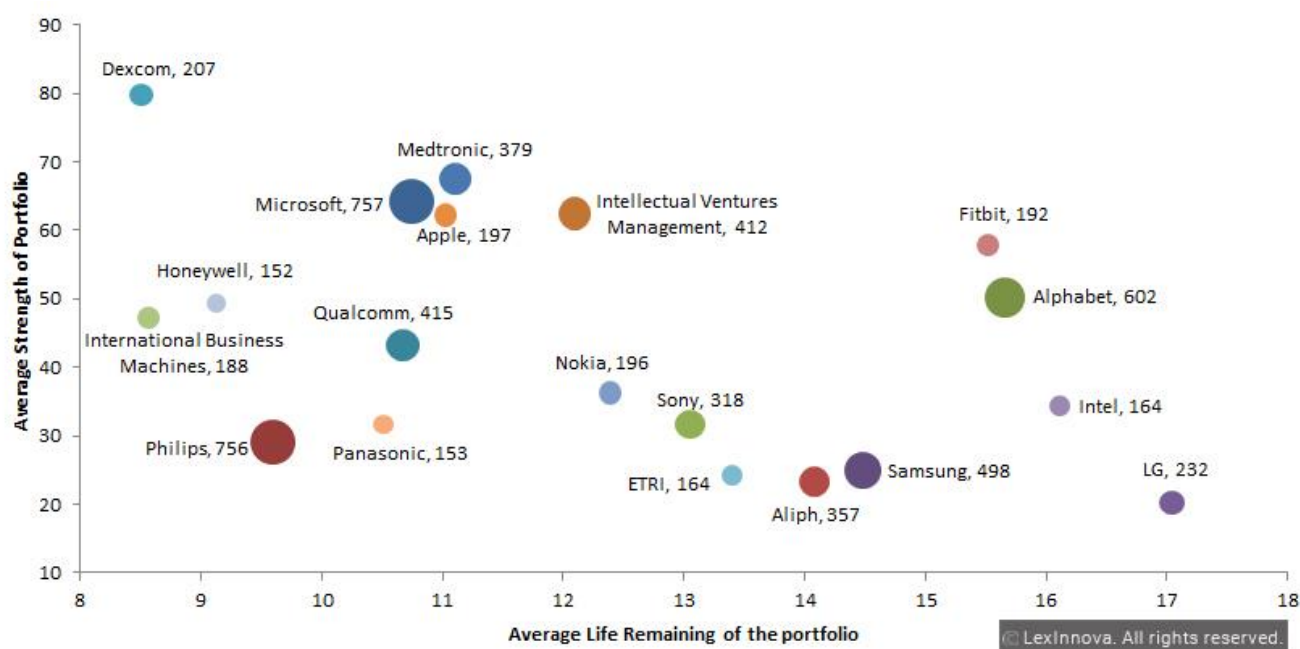


Figure 9: LexScore™

Licensing Heat Map

We use LexInnova's Licensing Heat Map (Figure 10) framework to identify sub-domains in the field of wearable technology where licensing activity is expected to be high. The size of the sections (representing different technology domains) in the Heat Map indicates the number of patents/patent applications filed in that domain. The size in other words represents the relative importance of each sub-domain, while the color represents the likelihood of future licensing activity in this domain. We study the patent holding patterns to color code the technology sub-domain for future licensing activity.

In this heat map, red (and shades thereof) signifies a high chance of licensing activity in a certain sub-domain, whereas green (and shades thereof) represents a low chance of licensing activity in the sub-domain. We follow 80-20 rule to decide the colors, where yellow is assigned to the domains that lie on the average median, i.e. 20% assignees having 80% of the patents/patent applications. The color drifts towards shades of red if 20% assignees possess less than 80% of the patents/patent applications, while it drifts towards shades of green in the opposite case.

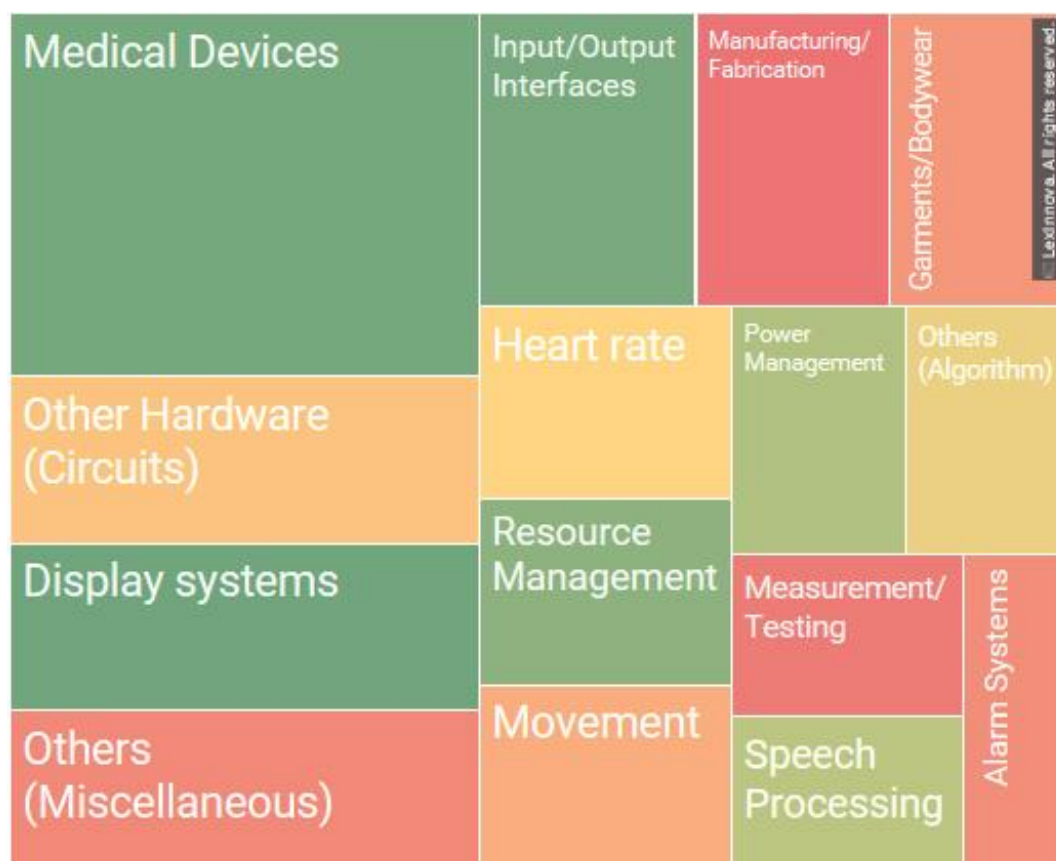


Figure 10: Licensing Heat Map

Manufacturing/Fabrication includes the patents/patent applications that disclose manufacturing of parts or elements used in wearable devices, and Measurement/Testing includes patents/ applications pertaining to measurement, testing, investigation, analysis, or

maintenance of wired and wireless networks. These are the sub domains which have the highest possibility of licensing activity and in which 18 out of the top 20 assignees have filed their patent applications.

Display Systems, Medical Devices and Input/Output Interfaces are the sub domains representing a relatively low chance of licensing. Medtronic, Philips and Dexcom are the top three companies having the highest number of patent applications under Medical Devices. The Display Systems domain is ruled by the three technology behemoths, Alphabet, Microsoft and Samsung. Microsoft and Samsung, along with LG, are also the top assignees of Input/Output Interfaces.

Geographical Coverage

The United States has witnessed maximum patent filings pertaining to Wearable Technology, while China is in second place. China is followed by Japan, Korea, Canada and Australia, while the remaining countries have less than 2,000 patents/patent applications.

North America is projected to be the biggest market for wearable devices, comprising more than 40% of the total global sales¹⁴. Also, most of the companies among the top assignees have their headquarters in the US, which is also why most of the filings in this domain are happening here.

Overall, the maximum numbers of patents filed in the US are by Microsoft, Alphabet, Intellectual Ventures Management and Medtronic with 611, 451, 362 and 320 filings respectively, whereas the maximum numbers of patent filings in China are by Philips, Lenovo and Xiaomi with 111, 90 and 66 patents/patent applications respectively.

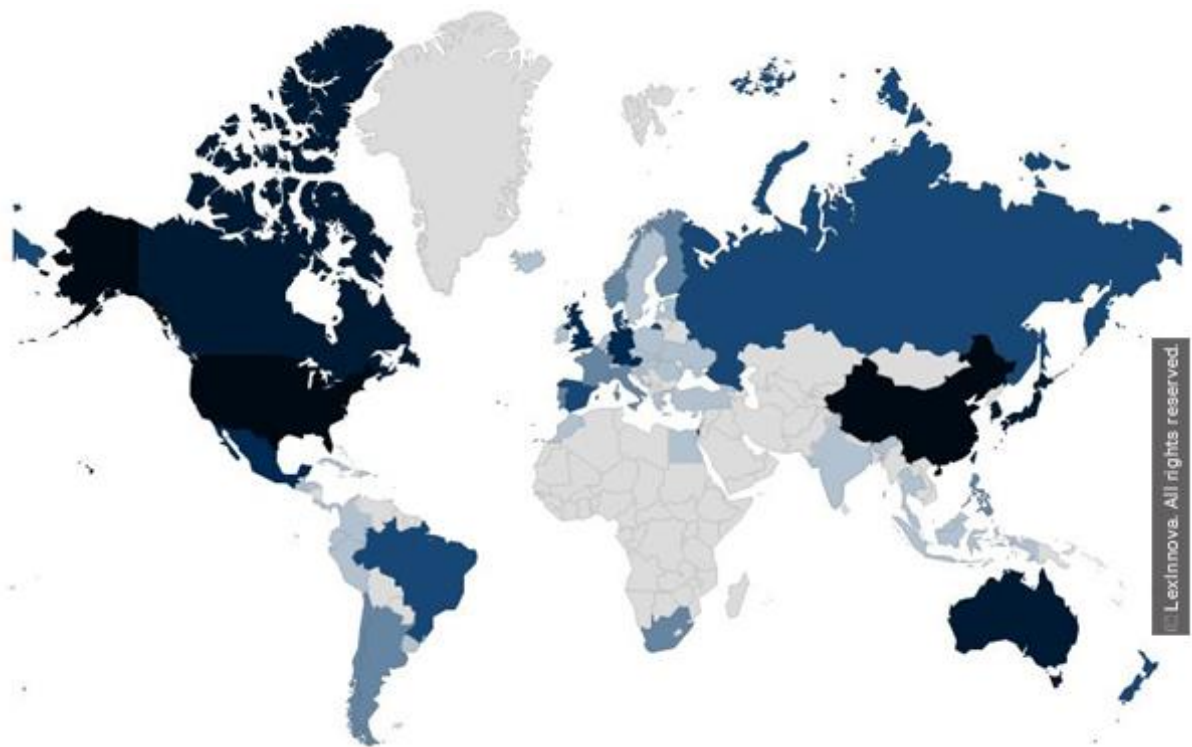


Figure 11: Geographical Coverage Heat Map

¹⁴ Wearable Technology Market Will Witness Maximum Growth in North America Regional Market With Contribution of 43.2% From 2012 to 2020: Hexa Research. (2015, August 18). Retrieved from <http://www.marketwired.com/press-release/wearable-technology-market-will-witness-maximum-growth-north-america-regional-market-2048642.htm>

Taxonomy Definitions

S.No.	Taxonomy Heads	Definition
1	Specially adapted services/devices	This head includes filings on supervisory, monitoring or testing arrangements, and the facilities specially adapted for wireless communication networks. This includes H04W, H04L and G01S as the major IPC classes.
2	Switching Systems	To enable the sharing of transmission facilities, stations are connected to and reached through switching system nodes that are part of most telecommunications networks. Switching systems act under built-in control to direct messages toward their ultimate destination or address. This subhead includes IPC classes H04L01254, H04L01264, and H04L01270 that pertain to store-and-forward switching, hybrid switching and packet switching systems that apply to wireless networks.
3	Communication Protocols	A communication protocol is a system of digital rules for data exchange within or between computers. Communication systems use well-defined formats (protocol) for exchanging messages. This subhead includes IPC class H04L029 that involves a transmission control procedure and H04N, H04W and G06Q that involves the selective transmission and distribution control procedure.
4	EMW/Radio Waves	Communication and relaying messages in a computer network via electromagnetic waves and radio waves. This can occur through RF modules that may comply with a defined protocol for RF communications. This subhead includes IPC classes H04B, G01S and H01S that describe technologies and devices relating to radio transmission systems, position-fixing by co-ordinating two or more directions or position-line determinations and transmission systems employing electromagnetic waves other than radio-waves, such as stimulated emission.
5	Access/Authentication	This method covers the different techniques and methods by which an authentication or access manager functions. This subhead covers the IPC classes H04W and H04L that describe devices specially adapted for wireless communication networks, access restriction, network selection, and access point selection.
6	Resource Management	This is the process of using wireless and wired network resources in the most efficient way possible.

		Few of the IPC family members include H04W, H04B and H04M that covers features like transmitters, optical channels, and receivers, locating users or terminals for network management purposes, e.g. mobility management.
7	Topology Management	Topology is usually a schematic description of the arrangement of a network, including its nodes and connecting lines. Topology management is the management of gating techniques and nodes. This subhead covers several IPC classes, e.g. H04W and H04L, which covers the management of transmission line and switching activities related to it, respectively.
8	Multiplexing Methods	Multiplexing (sometimes contracted to muxing) is a method by which multiple analog message signals or digital data streams are combined into one signal over a shared medium. The aim is to share an expensive resource. This subhead covers IPC class H04Q that includes Synchronous systems and using a combination of frequencies as well as H04L, H04W, H04J of IPC that includes scheduled random access and time division multiplex system.
9	Connection Management	The term handover or handoff refers to the process of transferring an ongoing call or data session from one channel connected to the core network to another channel. This subhead includes IPC Class H04W that includes features like Synchronization and Network switching.
10	Traffic Management	The process of measuring and controlling the communications (traffic, packets) on a network link, to avoid filling the link to capacity or overfilling the link, which would result in network congestion and poor performance of the network. This subhead involves IPC Class H04W which includes various features like Local resource management, network planning, etc.
11	Light Guides	Light Guides networks include physical structures such as optical fiber that guide electromagnetic waves in the optical spectrum of telecommunication. This subhead includes IPC classes such as G02B that pertains to optical elements, systems, or apparatuses.
12	Speech Processing	Speech processing includes speech analysis or synthesis, speech recognition, speech or audio coding or decoding. This subhead includes IPC classes such as G10L, G06F and G06G.
13	Character Recognition	Character Recognition is the electronic or mechanical conversion of images of typewritten or printed text

		into machine-encoded text using pattern recognition, pattern matching or image correlation techniques. The IPC class G06K 9/00 relates specifically to character recognition and includes methods/arrangements for reading or recognizing printed or written characters or for other recognition patterns.
14	Bioinformatics	Bioinformatics include investigating or analyzing materials, details of thermometers and measuring temperature by the use of electric or magnetic elements. Some of the IPC classes included are G01K, G01N, G01J, etc.
15	Image Processing	Image Processing refers to signal processing of an input image using digital computing or data processing methods to produce a set of characteristics or parameters related to that image as an output. The IPC class G06T and its subclasses give a detailed characterization of various general image processing techniques and arrangements.
16	Others (Algorithm)	Patents/Patent applications that describe computing algorithms and that does not fall under any of the above mentioned categories have been grouped together in this subhead. This subhead covers IPC classes like G06N, G06F and G10L that describe knowledge based algorithm, mathematical model algorithms and speech-recognition algorithms.
17	Data Security	Data Security refers to digital privacy measures applied on data such as networks and databases that offers protection against destructive forces and unauthorized access. The class G06F 21/00 and H04W 12/00 and their subclasses list different security arrangements for protecting computers and for fraud detection.
18	Error Correction	Error Correction involves techniques that enable reliable transmission of digital data over various communication channels. This covers the elimination of channel noise due to which errors might get introduced during transmission. IPC class H03M 13/00 covers this field and deals with coding, decoding or code conversion for error detection/correction, error probability evaluation methods and channel models.
19	Data Encryption	Data encryption is the act of transforming the electronic information into an unreadable state by using algorithms or ciphers. This includes methods/arrangements, for coding, decoding, compressing or decompressing digital video signals as explained under the IPC class H04N 7/00.

20	Information Retrieval	Information Retrieval includes methods/arrangements for sensing record carriers and processing data by operating upon the order or content of the data handled. This head includes the IPC such as G06F and G06K.
21	Control Systems	A control system is a device, or set of devices, that manages, commands, directs or regulates the behavior of other devices or systems.
22	Power Management	Power management is a computing device feature that allows users to control the amount of electrical power consumed by an underlying device, with minimal impact on performance. It enables the switching of devices in various power modes, each with different power usage characteristics related to device performance.
23	Sensors	A sensor is a device that detects and responds to some type of input from the physical environment. The specific input could be light, heat, motion, moisture, pressure, etc. The output is generally a signal that is converted to human-readable display at the sensor location or transmitted electronically over a network for reading or further processing.
24	Waveguides/Aerials	Waveguides/Aerials include physical structures that guide electromagnetic waves for telecommunication. This subhead covers the IPC classes H01Q and H01P that include primary active radiating elements such as aerials and secondary devices that change direction or polarization of waves radiated from the aerial. Secondary devices also cover waveguides and transmission lines such as resonators, delay lines and other devices with distributed inductance and capacitance.
25	GUI	GUI deals with input arrangements using manually operated switches, keyboards or dials. This subhead includes IPC such as G06F and G06K.
26	Accelerometer/Gyroscope	This subhead includes filings on detection of device orientation, free movement in the 3D space, measuring angular rate, etc. The IPC included are G01C, G01P and G06F.
27	Touch Screen	Touch Screen includes patents disclosing a touch-screen or digitizer i.e. taking input commands through traced gestures. This subhead includes IPC G06F.
28	Input/output Interfaces	This technology head includes filings on the input arrangements for transferring data to be processed into a form capable of being handled by the computer. This also includes output arrangements

		for transferring data from processing unit to output unit, e.g. interface arrangements. This head includes IPC such as G06F, G04G, G04C, etc.
29	Acoustics	Acoustics deals with the study of mechanical waves, and includes topics such as vibration, sound, ultrasound and infrasound. This includes methods and devices utilizing transduction such as Loudspeakers, Microphones, Gramophone-pickups and other acoustic electromechanical transducers and networks comprising electromechanical or electro-acoustic elements, covered in IPC classes H04R and H03H.
30	Camera/Optics	Camera/Optics deals with projectors or projection type viewers along with optical devices or arrangements using movable or deformable optical elements for controlling the intensity, color, phase, polarization or direction of light. The IPC included in this section are G03B, G02B, G03G, G11B, etc.
31	Communication Systems	Communication systems include transmission systems employing ultrasonic, sonic or infrasonic waves. This also includes beacons or beacon systems transmitting signals that are capable of being detected by non-directional receivers and defining directions. The IPC included are H04B, G01S, G08B, etc.
32	Display systems	It is the method of displaying using display panels, stereoscopic television systems, and simple and compound lenses. The IPC included in this section are G02B, G09B, H04N, H01L, etc.
33	Others (Circuits)	This includes a diverse range of IPC classifications that could not be properly categorized into any of the preceding technology heads under "Circuit". The patents listed with such classifications constitute the Circuits Others technology domain.
34	Medical Devices	It is the diagnosis, treatment, and prevention of physical and mental impairments in human beings. Health care is delivered by practitioners in allied health, dentistry, midwifery (obstetrics), medicine, nursing, optometry, pharmacy, and psychology. (A61K 31/00)
35	Heart rate	Heart rate includes measuring bioelectric signals of the body parts for diagnostic purposes, and means for generating electrical signals. This subhead mostly includes IPC A61B and A61H.
36	Temperature	Temperature includes details of thermometer not specifically adapted for a particular type of thermometer. Heating or cooling appliances for

		medical or therapeutic treatment of the human body are also covered in this section. The IPC included are A61F, G01K and G01J.
37	Respiration	Respiration discloses measuring rate of metabolism by using breath test i.e. measuring rate of oxygen consumption and component parts for respiratory or breathing apparatus. The IPC included are A61B, A61H and A62B.
38	Movement	This subhead includes vibrating and chiropractic devices along with the devices for passive exercising. Examples include devices that are used for body impacting and briefly extending or aligning unbroken bone. The IPC included are A61H, A63B, A61B, etc.
39	Garments/Body wear	This includes professional, industrial, sporting, and protective garments, i.e. garments providing protection against blows or punches, surgeons' gowns, and other forms of jewelry. The IPC included are A41D, A43B, A44C, etc.
40	Eyewear	This includes apparatus for testing the eyes, instruments for examining the eyes, optical elements other than lenses. The IPC included are G02B, G02C, A61F and A61B.
41	Hand/Travelling articles	This section includes travelling or camp articles, sacks or packs carried on the body, and accessories for packing articles. The IPC included are A45C and A45F.
42	E-Commerce	It is about trading in products or services using computer networks, such as the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. (G06Q 30/00)
43	Alarm Systems	An alarm device or system of alarm devices gives an audible, visual or other form of alarm signal about a problem or condition. Alarm devices are often outfitted with a siren. The IPC class G08B 17/00 deals with Fire alarms and alarms responsive to explosion.
44	Entertainment	This category describes infrastructure facilities that are used as a means of recreation and amusement. The basic class A63F0013 under this category deals with Video games which uses an electronically generated display having two or more dimensions.
45	Measurement/Testing	This subhead includes patents pertaining to measurement, testing, investigation, analysis, and maintenance of wired and wireless networks. It includes IPC classes H04L01224 and H04L01226.

46	Manufacturing/Fabrication	This subhead includes patents pertaining to manufacturing or fabrication of materials used in the circuits or other parts of wearable devices; devices for introducing or retaining media such as extrusion molding. The IPC included are B29C, B32B, B01D, C08K, and others.
47	Others	This head is created to include a multitude of diverse IPC classifications that could not be properly categorized into any of the preceding technology heads. The patents with such classifications constitute the Miscellaneous Others technology domain.



IS 607655



FS 614196

ABOUT US

LEXINNOVA TECHNOLOGIES LLC DRAWS ON A COMBINATION OF TECHNICAL AND LITIGATION EXPERTISE TO SOLVE THE CHALLENGES THAT ARISE AT THE INTERSECTION OF TECHNOLOGY AND THE LAW.

OUR CREDENTIALS:

ISO 27001:2013 CERTIFICATION DESIGNATION VALIDATES LEXINNOVA'S COMMITMENT TO INTERNATIONALLY RECOGNIZED SECURITY STANDARDS

ISO 9001:2008 CERTIFICATION DESIGNATION VALIDATES LEXINNOVA'S COMMITMENT TO INTERNATIONALLY RECOGNIZED QUALITY MANAGEMENT STANDARDS

DISCLAIMER

LEXINNOVA HAS PREPARED THIS RESEARCH INDEPENDENTLY BASED ON RELIABLE PUBLIC DATA AND REVIEWED THE RESULTS BASED ON ITS PROPRIETARY METHODOLOGY, WITH THE BELIEF THAT IT IS FAIR AND NOT MISLEADING. THE INFORMATION AND ANALYSIS IN THIS REPORT IS TECHNICAL IN NATURE, AND SHALL NOT BE CONSTRUED AS LEGAL ADVICE OR A LEGAL OPINION OF LEXINNOVA.

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Bose and Apple's Beats announce settlement of patent infringement lawsuit

By [AppleInsider Staff](#)

Friday, October 10, 2014, 12:13 pm PT (03:13 pm ET)

Premium audio company Bose and Apple-owned Beats Electronics disclosed on Friday that they have settled their patent infringement dispute out of court, preventing a potential trial between the two competitors.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BOSE CORPORATION,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 14-980-LPS-CJB
)	
BEATS ELECTRONICS, LLC and)	
BEATS ELECTRONICS INTERNATIONAL)	
LIMITED,)	
)	
Defendants.)	

STIPULATION AND [PROPOSED] ORDER OF DISMISSAL

On this day, Plaintiff BOSE CORPORATION and Defendants BEATS ELECTRONICS, LLC and BEATS ELECTRONICS INTERNATIONAL LTD. (together, "BEATS") announced to the Court that they have settled their respective claims for relief asserted in this cause. It is

Bose, who first filed the complaint in July, disclosed to a U.S. District Court in Delaware that it has dismissed its patent infringement accusations against rival Beats. The terms of the settlement were not disclosed.

Previously, Bose had [accused Beats](#) of infringing upon five noise-canceling patents used for its QuietComfort branded headphones. In the original complaint, Bose alleged that the Beats Studio and Studio Wireless headphones, featuring "adaptive noise cancelation," were infringing products.

The news comes the same day a [new rumor](#) claimed that Apple plans to remove all Bose audio products from its retail stores beginning next week. No reason was given for the alleged split between the two companies, but with Apple's \$3 billion purchase of Beats earlier this year, the two companies do compete in the premium-priced audio accessory space for both headphones and speakers.

The growing rivalry between Bose and Apple is also playing out in the National Football League, where players have been barred from wearing Beats headphones in postgame press conferences. Bose is the official audio partner of the NFL, and NFL rules dictate that players cannot promote unsponsored products when conducting interviews, including 90 minutes following the end of a game.

The issue took the spotlight this week when it was revealed that San Francisco 49ers quarterback Colin Kaepernick was [fined \\$10,000](#) for wearing a pair of pink breast cancer awareness-themed Beats headphones at a press conference last Sunday.

Wearing your Apple Watch

To make sure you have the best experience, here's some information about potential skin sensitivities and getting a good fit when you wear your Apple Watch.

What's in your Apple Watch

- Apple Watch Series 1: 7000 series aluminum case, Ion-X glass, and composite back
- Apple Watch Series 2 (Aluminum): 7000 series aluminum case, Ion-X glass, and ceramic back
- Apple Watch Series 2 (Stainless steel): 316L stainless steel case, sapphire crystal, and ceramic back
- Apple Watch Edition Series 2: Ceramic case, sapphire crystal, and ceramic back
- Apple Watch (1st generation): 316L stainless steel case, sapphire crystal, and ceramic back
- Apple Watch Sport (1st generation): 7000 series aluminum case, Ion-X glass, and composite back
- Apple Watch Edition (1st generation): 18-karat gold case, sapphire crystal, and ceramic back

What's in the bands

- Sport Band: Fluoroelastomer with stainless steel, ceramic, or 18-Karat gold
- Apple Watch Nike+ Band: Fluoroelastomer with stainless steel
- Hermès Bands: Leather with stainless steel
- Milanese Loop: Stainless steel
- Link Bracelet: Stainless steel
- Leather Loop: Leather with stainless steel
- Modern Buckle: Leather with stainless steel or 18-Karat gold
- Classic Buckle: Leather with stainless steel or 18-Karat gold
- Woven Nylon: Nylon with stainless steel

For people who are sensitive to certain materials

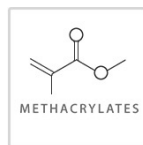
A great deal of care and research goes into choosing materials for all our devices. In addition to ensuring that all materials adhere to existing regulations, we developed our own specification for Apple Watch that goes beyond those requirements.* In fact, every material that touches your skin has gone through extensive evaluation in accordance with our specification. This includes:

- Thousands of material composition tests
- More than a thousand prototypes worn for trial studies
- Hundreds of toxicological assessments
- Consultations with board-certified dermatologists

A small number of people will experience reactions to certain materials. This can be due to allergies, environmental factors, extended exposure to irritants like soap or sweat, and other causes. If you know you have allergies or other sensitivities, be aware that Apple Watch and some of its bands contain the following materials:



Nickel. Apple Watch models with a stainless steel, space gray aluminum, or rose gold aluminum case; the stainless steel portions of some Apple Watch bands; the metallic portions of the Hermès bands; and the magnets in the watch and bands, each contain some nickel. However, they all fall below the strict nickel restrictions set by European REACH regulation. Therefore, while nickel exposure is unlikely to be a problem, you should be aware of the possibility in case you're susceptible to nickel-related reactions.



Methacrylates. The Apple Watch case, the Woven Nylon, the Milanese Loop, the Modern Buckle, and the Leather Loop contain trace amounts of methacrylates from adhesives. Methacrylates are found in many consumer products that come in contact with the skin, such as adhesive bandages. Some people may be sensitive to them, or may develop sensitivities over time. Apple Watch and its bands are designed so that parts containing methacrylates are not in direct contact with your skin.

Another potential cause of discomfort is wearing your Apple Watch too tightly or loosely. An overly tight band can cause skin irritation. A band that's too loose can cause rubbing. If you experience redness, swelling, itchiness, or any other irritation, you may want to consult your physician before you put your Apple Watch back on.

A better fit means better readings

For best results, the back of your Apple Watch needs skin contact for features like Wrist Detect, the Taptic Engine, and the heart rate sensor. Wearing your Apple Watch with the right fit — not too tight, not too loose, and with room for your skin to breathe — will keep you comfortable and let the sensors do their jobs. You may want to tighten your Apple Watch band for workouts, then loosen it when you're done. In addition, the sensors will work only if you wear your Apple Watch on the top of your wrist.

Too loose

If your Apple Watch doesn't stay in place, or the sensors aren't reading your heart rate, tighten the band a bit.



Just right

Your Apple Watch should be snug but comfortable.



Keeping your Apple Watch and bands — as well as your skin — clean and dry will maximize comfort and prevent long-term damage to the watch. This is especially important after workouts or exposure to liquids such as sweat, soap, sunscreen, and lotions that can cause skin irritations.

* Learn more about [Apple's restrictions on wearables](#).

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Restricted Chemicals for Wearables

An important goal at Apple is to make sure that anyone who assembles, uses, or recycles an Apple product can do so safely. We've led the industry in removing many harmful substances from our product designs, and we go to great lengths to continue doing so with every new product. We're constantly designing our products to be better for the environment, better for the people who use them, and better for the people who make them.

We pay special attention to the materials that will be in prolonged skin contact and apply rigorous controls for them. We require our suppliers of those materials to adhere to specifications that restrict the use of certain chemicals. We derive these restrictions from leading standards, recommendations from toxicologists and dermatologists, international laws and directives, and Apple policies. This document lists chemicals Apple tested for in materials in prolonged skin contact.

As part of our testing and evaluation process, both Apple and independent laboratories test materials for the concentration of restricted chemicals. Toxicologists review the test results to evaluate safety. Finally, we take the added step of using independent toxicologists to review the chemical formulation of each material that may come in prolonged contact with the skin.

Only materials that pass these reviews are acceptable for use in Apple products. By setting conservative restrictions, testing for chemicals of concern, and conducting toxicology evaluations, Apple helps to ensure the safety of our customers.

Restricted Chemicals

The following table lists chemicals that are subject to Apple restrictions and testing. The restrictions apply to materials used in wearable devices that will be in prolonged skin contact, including natural and synthetic fibers and polymers, coatings, ink, leather, plastics, adhesives, metals, and ceramics.

Acrylates	CASNumber
Acrylic acid	79-10-7
Methyl acrylate	96-33-3
Ethyl acrylate	140-88-5
Butyl acrylate	141-32-2
tert-Butyl acrylate	1663-39-4
2-Ethylhexyl acrylate	103-11-7
Isobornyl acrylate	5888-33-5
Alkylphenol Ethoxylates and Alkylphenols (APEO/AP)	CASNumber
n-Nonylphenol	2554-52-3
tert-Octylphenol	2793-28-8
Polyethylene glycol nonylphenyl	9016-45-9
Polyethylene glycol octylphenol ether	9002-93-1
Azo Dyes, Arylamines, Anilines	CASNumber
4-Aminoazobenzene	60-09-3
o-Aminoazotoluene	97-56-3
4-Aminodiphenyl	92-67-1
2-Amino-4-nitrotoluene	99-55-8
2-Anisidine	90-04-0
Benzidine	92-87-5
4-Chloroaniline	106-47-8
4-Chloro-2-toluidine	95-69-2
6-Methoxy-m-toluidine (p-Cresidine)	120-71-8
2,4-Diaminoanisole	615-05-4
4,4'-Diaminodiphenylmethane	101-77-9
2,4-Diaminotoluene	95-80-7
3,3'-Dichlorobenzidine	91-94-1
3,3'-Dimethoxybenzidine	119-90-4
3,3'-Dimethylbenzidine	119-93-7
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0
4,4'-Methylene-bis-(2-chloroaniline)	101-14-4
2-Naphthylamine	91-59-8
4,4'-Oxydianiline	101-80-4
4,4'-Thiodianiline	139-65-1
2-Toluidine	95-53-4
2,4,5-Trimethylaniline	137-17-7
2,4-Xylidine	95-68-1
2,6-Xylidine	87-62-7
Chlorinated Aromatic Hydrocarbons	CASNumber
Monochlorobenzene	108-90-7
Dichlorobenzenes, including isomers	Several
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
Trichlorobenzenes, including isomers	Several
1,2,3-Trichlorobenzene	87-61-6

Chlorinated Aromatic Hydrocarbons continued	CAS Number
1,2,4-Trichlorobenzene	120-82-1
1,3,5-Trichlorobenzene	108-70-3
Tetrachlorobenzenes, including isomers	Several
1,2,3,4-Tetrachlorobenzene	634-66-2
1,2,3,5-Tetrachlorobenzene	634-90-2
1,2,4,5-Tetrachlorobenzene	95-94-3
Pentachlorobenzene	608-93-5
Hexachlorobenzene	118-74-1
Monochlorotoluenes, including isomers	Several
2-Chlorotoluene	95-49-8
3-Chlorotoluene	108-41-8
4-Chlorotoluene	106-43-4
Dichlorotoluenes, including isomers	Several
2,4-Dichlorotoluene	95-73-8
2,6-Dichlorotoluene	118-69-4
3,4-Dichlorotoluene	95-75-0
Trichlorotoluenes, including isomers	Several
2,3,6-Trichlorotoluene	2077-46-5
a,a,a-Trichlorotoluene	98-07-7
Tetrachlorotoluenes, including isomers	Several
a,a,a,2-Tetrachlorotoluene	2136-89-2
a,a,a,4-Tetrachlorotoluene	5216-25-1
Pentachlorotoluene	877-11-2
Chlorinated Paraffins	CAS Number
Chlorinated Paraffins, C ₁₀ -C ₁₃	85535-84-8
Chlorinated Paraffins, C ₁₄ -C ₁₇	85535-85-9
Chlorinated Paraffins, C ₁₈ -C ₂₈	85535-86-0
Chlorinated Phenols	CAS Number
Trichlorophenol, including isomers	25167-82-2
Tetrachlorophenol, including isomers	25167-83-3
Pentachlorophenol	87-86-5
Colorants	CAS Number
Acid Red 26	3761-53-3
Basic Red 9	569-61-9
Basic Violet 14	632-99-5
Direct Black 38	1937-37-7
Direct Blue 6	2602-46-2
Direct Red 28	573-58-0
Direct Yellow 1	6472-91-9
Disperse Blue 1	2475-45-8
Disperse Orange 11	82-28-0
Disperse Yellow 3	2832-40-8
Pigment Yellow 34	1344-37-2
Pigment Red 104	12656-85-8
Disperse Blue 3	2475-46-9
Disperse Blue 7	3179-90-6
Disperse Blue 26	3860-63-7
Disperse Blue 35	12222-75-2
Disperse Blue 102	12222-97-8
Disperse Blue 106	12223-01-7
Disperse Blue 124	61951-51-7

Colorants continued	CAS Number
Disperse Brown 1	23355-64-8
Disperse Orange 1	2581-69-3
Disperse Orange 3	730-40-5
Disperse Orange 37/59/76	12223-33-5
Disperse Red 1	2872-52-8
Disperse Red 11	2872-48-2
Disperse Red 17	3179-89-3
Disperse Yellow 1	119-15-3
Disperse Yellow 9	6373-73-5
Disperse Yellow 39	12236-29-2
Disperse Yellow 49	54824-37-2
Pigment Black 25	68186-89-0
Pigment Yellow 157	68610-24-2
Solvent Yellow 14	842-07-9
Disperse Yellow 23	6250-23-3
Disperse Orange 149	8586-74-9
Navy Blue	18685-33-9
Acid Violet 49	1694-09-3
Basic Blue 26	2580-56-5
Malachit Green	10309-95-2
Basic Violet 1	8004-87-3
Basic Violet 3	548-62-9, 603-48-5, 14426-25-6
Solvent Blue 4	6786-83-0
Flame Retardants	CAS Number
Tris(2,3-dibromopropyl)phosphate (TRIS)	126-72-7
Triethylenephosphoramidate (TEPA)	545-55-1
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9
Pentabromodiphenyl ether (PentaBDE)	32534-81-9
Hexabromodiphenyl ether (HexaBDE)	36483-60-0
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3
Octabromodiphenyl ether (OctaBDE)	32536-52-0
Decabromodiphenyl ether (DecaBDE)	1163-19-5
Bis(2,3-dibromopropyl) phosphate	5412-25-9
Hexabromocyclododecanes (HBCDDs)	25637-99-4
Tetrabromobisphenol A	79-94-7
Tris(chloroethyl)phosphate	115-96-8
Halogenated Biphenyls, Terphenyls, and Naphthalenes	CAS Number
Polybrominated biphenyls (PBBs)	59536-65-1
Polychlorinated biphenyls (PCBs)	1336-36-3
Polychlorinated terphenyls (PCTs)	61788-33-8
Polybrominated terphenyls (PBTs)	Several
Polychlorinated naphthalenes (PCNs)	Several
Polybrominated naphthalenes (PBNs)	Several
Halogenated Diarylalkanes	CAS Number
Monomethyl-dibromo-diphenyl methane	99688-47-8
Monomethyl-dichloro-diphenyl methane	81161-70-8
Monomethyl-tetrachloro-diphenyl methane	76253-60-6
Halogens	CAS Number
Bromine, total	7726-95-6
Chlorine, total	7782-50-5

Isocyanates	CAS Number
Diphenylmethane-4,4-di-isocyanate (MDI)	101-68-8
Diphenylmethane-2,2-di-isocyanate (2,2-MDI)	2536-05-2
Diphenylmethane-2,4-di-isocyanate (2,4-MDI)	5873-54-1
MDI mixed isomers	26447-40-5
Technical grade MDI	9016-87-9
Hexamethylene diisocyanate (HMDI)	822-06-0
Isophorone diisocyanate (IPDI)	4098-71-9
Tetramethylxylene diisocyanate (TMXDI)	2778-42-9
Toluene-2,4-diisocyanate (2,4-TDI)	584-84-9
Toluene-2,6-diisocyanate (2,6-TDI)	91-08-7
2,4-/2,6-TDI mixture	26471-62-5
2,6-Diisopropylphenyl-isocyanate	28178-42-9
4,4-Methylenedicyclohexyl-di-isocyanate (4,4-MDI)	524-30-1
Napthylene-1,5-di-isocyanate (1,5-NDI)	3173-72-6
Phenylisocyanate	103-71-9
Metals	CAS Number
Antimony	7440-36-0
Arsenic	7440-38-2
Barium (soluble)	7440-39-3
Beryllium	7440-41-7
Cadmium	7440-43-9
Chromium VI (Cr6+)	18540-29-9
Chromium, extractable	7440-47-3
Cobalt	7440-48-4
Copper	7440-50-8
Lead	7439-92-1
Mercury	7439-97-6
Nickel	7440-02-0
Methacrylates	CAS Number
Methacrylic acid	79-41-4
Methyl methacrylate	80-62-6
Ethyl methacrylate	97-63-2
Butyl methacrylate	97-88-1
N-Nitrosamine	CAS Number
N-Nitrosodibutylamine	924-16-3
N-Nitrosodiethanolamine	116-54-7
N-Nitrosodiethylamine	55-18-5
N-Nitrosodiisopropylamine	601-77-4
N-Nitrosodimethylamine	62-75-9
N-Nitrosodipropylamine	621-64-7
N-Nitrosoethylphenylamine	612-64-6
N-Nitrosomethylethylamine	10595-95-6
N-Nitrosomethylphenylamine	614-00-6
N-Nitrosomorpholine	59-89-2
N-Nitrosopiperidine	100-75-4
N-Nitrosopyrrolidine	930-55-2

Organotin Compounds	CAS Number
Monobutyltin (MBT)	Several
Monooctyltin (MOT)	
Dibutyltin (DBT)	
Diocetyl tin (DOT)	
Tributyltin (TBT)	
Triphenyltin (TPhT)	
Tetrabutyltin (TeBT)	
Tetraoctyltin (TeOT)	
Tricyclohexyltin (TCyT)	
Perfluorinated Compounds	CAS Number
Perfluorooctanoic acid (PFOA)	335-67-1
Perfluorooctane sulfonates (PFOS)	1763-23-1
Pesticides	CAS Number
Aldrine	309-00-2
Azinphos methyl	86-50-0
Azinphos ethyl	2642-71-9
Bromophos-ethyl	4824-78-6
Captafol	2425-06-1
Carbaryl	63-25-2
Chlordane	54-74-9
Chlordecone	143-50-0
Chlordimeform	6164-98-3
Chlorfenvinphos	470-90-6
Coumaphos	56-72-4
Cyfluthrin	68359-37-5
Cyhalothrin—lambda	91465-08-6
Cypermethrin	52315-07-8
Deltamethrin	52918-63-5
Demeton	919-86-8
Diazinon	333-41-5
o,p'-Dichlorodiphenyldichloroethane (o,p'-DDD)	53-19-0
p,p'-Dichlorodiphenyldichloroethane (p,p'-DDD)	72-54-8
o,p'-Dichlorodiphenyldichloroethylene (o,p'- DDE)	3424-82-6
p,p'-Dichlorodiphenyldichloroethylene (p,p'- DDE)	72-55-9
o,p'-Dichlorodiphenyltrichloroethane (o,p'-DDT), including isomers	789-02-6
p,p'-Dichlorodiphenyltrichloroethane (p,p'-DDT), including isomers	50-29-3
2,4-Dichlorophenoxyacetic acid, its salts and compounds	94-75-7
Dichlorprop	120-36-5
Dicrotophos	141-66-2
Dieldrine	60-57-1
Dimethoate	60-51-5
Dinoseb and salts	88-85-7
Endosulfan, alpha	959-98-8
Endosulfan, beta	33213-65-9
Endrine	72-20-8
Esfenvalerate	66230-04-4
Fenvalerate	51630-58-1
Heptachlor	76-44-8
Heptachloroepoxide	1024-57-3
Hexachlorobenzene	118-74-1

Pesticides continued	CAS Number
Hexachlorocyclohexane (HCH), including isomers	608-73-1
Isodrin	465-73-6
Kelevane	4234-79-1
Lindane	58-89-9
Malathion	121-75-5
MCPA	94-74-6
MCPB	94-81-5
Mecoprop	93-65-2
Methamidophos	10265-92-6
Methoxychlor	72-43-5
Methyl parathion	298-00-0
Mevinophos	7786-34-7
Mirex	2385-85-5
Monocrotophos	6923-22-4
Ethyl parathion	56-38-2
Perthane	72-56-0
Profenophos	4198-08-7
Propetamphos	3028-83-4
Quinalphos	13593-03-8
Quintozene (pentachlorobenzene)	82-68-8
Strobane	8001-50-1
Telodrin	297-78-9
Toxaphene	8001-35-2
Tribufos (DEF)	78-48-8
2,4,5-Trichlorophenoxyacetic acid, salts and compounds	93-76-5
2-(2,4,5-Trichlorophenoxy)propionic acid, salts and compounds	93-72-1
Trifluralin	1582-09-8
Plasticizers	CAS Number
Butylbenzyl phthalate (BBP)	85-68-7
Dibutyl phthalate (DBP)	84-74-2
Diethyl phthalate (DEP)	84-66-2
Diethylhexyl phthalate (DEHP)	17-81-7
Diisobutyl phthalate (DIBP)	84-69-5
Di-isodecyl phthalate (DIDP)	6855-49-1 / 26761-40-0
Diisononyl phthalate (DINP)	28553-12-0 / 6855-48-0
Dimethyl phthalate (DMP)	131-11-3
Di-n-Octyl phthalate (DNOP)	17-84-0
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	6855-42-4
Di-n-hexyl phthalate (DnHP)	84-75-3
Bis-(2-methoxyethyl) phthalate (DMEP)	17-82-8
Di-iso-pentyl phthalate (DIPP)	605-50-5
Di-n-pentyl phthalate (DnPP)	131-18-0
n-Pentyl-isopentyl phthalate (nPIPP)	776297-69-9
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (DPP)	84777-06-0

Polycyclic Aromatic Hydrocarbons (PAHs)	CAS Number
Acenaphthylene	208-96-8
Acenaphthene	83-32-9
Anthracene	120-12-7
Benzo(a)anthracene	56-55-3
Chrysene	218-01-9
Benzo[a]pyrene	50-32-8
Benzo[b]fluoranthene	205-99-2
Benzo[e]pyrene	192-97-2
Benzo[g,h,i]perylene	191-24-2
Benzo[j]fluoranthene	205-82-3
Benzo[k]fluoranthene	207-08-9
Fluoranthene	206-44-0
Dibenzo[a,h]anthracene	53-70-3
Fluorene	86-73-7
Indeno[1,2,3-cd]pyrene	193-39-5
Naphthalene	91-20-3
Phenanthrene	85-01-8
Pyrene	129-00-0
Solvents	CAS Number
N,N-Dimethylformamide (DMF)	68-12-2
N-Methylpyrrolidone (NMP)	872-50-4
Toluene	108-88-3
2-Ethoxyethyl acetate	11-15-9
2-Ethoxyethanol	110-80-5
2-Methoxyethanol	109-86-4
Trichloroethylene	79-01-6
Miscellaneous	CAS Number
2-phenyl-2-propanol	617-94-7
Acrylamide	79-06-1
Bisphenol A	80-05-7
Dimethylfumarate (DMFu)	624-49-7
Diphenylamine	122-39-4
Diphenylthiourea	102-08-9
Ethylenediamine	107-15-3
Formaldehyde	50-00-0
Hexamethylenetetramine	100-97-0
Latex, natural rubber	Latex Proteins
2-Naphthylphenylamine	135-88-6
Mercaptobenzothiazole	149-30-4
p-Phenylenediamine	106-50-3
o-Phenylphenol	90-43-7
Polyvinylchloride (PVC)	9002-86-2
Selenium	7782-49-2
Thiourea	62-56-6

References

Apple Regulated Substances Specification, Apple Inc.

ASTM D6499: Standard Test Method for the Immunological Measurement of Antigenic Protein in Natural Rubber and Its Products.

bluesign® system substances list (BSSL): Consumer Safety Limits. bluesign technologies ag. www.bluesign.com.

California Prop 65: The Safe Drinking Water and Toxic Enforcement Act of 1986, California Health and Safety Code, Division 20, Chapter 6.5, sections 25249.5 through 25249.8. Websites: http://oehha.ca.gov/prop65/prop65_list/Newlist.html; www.oehha.org/prop65/getNSRLs.html.

CAS Number: Chemical Abstract Service registry numbers that identify unique substances.

CLP Regulation (Classification, Labelling and Packaging) Regulation (EC) No 1272: Complements REACH Directive and replaces the Dangerous Substances Directive (67/548/EEC) and the Dangerous Preparations Directive (1999/45/EC).

DIN CEN/TS 15968: Determination of extractable perfluorooctanesulfonate (PFOS) in coated and impregnated solid articles, liquids, and firefighting foams—Method for sampling, extraction, and analysis by LC-qMS or LC-tandem/MS.

DIN EN ISO 18254: Textiles—Method for the detection and determination of alkylphenolethoxylates (APEO).

DIN 54232: Textiles—Determination of the content of bonds based on chlorobenzene and chlorotoluene or Solvent Extraction // GC-MS.

DIN 54321: Testing of textiles—Determination of felting shrinkage for assessing the felting behavior of single and plied yarns made from wool or containing wool by a washing test. Used to identify colorants.

EHCA website for list of SVHC: <http://echa.europa.eu/candidate-list-table>.

EN 71-3: Safety of toys—Migration of certain elements.

EN 1122: Plastics—Determination of cadmium—Wet decomposition method.

prEN 16711-2: Textiles—Determination of metal content—Part 2: Determination of metals extracted by acidic artificial perspiration solution. (Use draft standard until finalized.)

EN 1811+AC:2012: Reference test method for release of nickel from all post assemblies which are articles intended to come into direct and prolonged contact with the skin. Replaces BS EN 1811:1998+A1:2008.

EN 12472: Method for the simulation of wear and corrosion for the detection of nickel release from coated items.

EN 12868: Methods for determining the release of N-nitrosamines and N-nitrosatable substances from elastomer rubber, 1999.

EN 13130-8: Determination of isocyanates in plastics, 2004.

EN 14362-1: Textiles—Methods for determination of certain aromatic amines derived from azo colorants—Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres.

EN 14362-3: Textiles—Methods for determination of certain aromatic amines derived from azo colorants. Detection of the use of certain azo colorants, which may release 4-aminoazobenzene.

EN 14582: Characterization of waste. Halogen and sulfur content. Oxygen combustion in closed systems and determination methods. British Standards Institute, 2007

EN ISO 17075: Leather—Chemical tests—Determination of Chromium(VI) content (ISO17075).

EPA 8081B: Organochlorine Pesticides by Gas Chromatography.

EPA 8151A: Chlorinated Herbicides Analysis by GC Using Methylation or Pentafluorobenzoylation Derivatization.

Commission Regulation (EU) No 757/2010 of 24 August 2010: Amending Regulation (EC) No 850/2004 of the European Parliament and of the Council on persistent organic pollutants (perfluorooctane sulfonates).

IEC 62321: Determination levels of six regulated substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, polybrominated diphenyl ethers).

ISO 3613: Metallic and other inorganic coatings—Chromate conversion coatings on zinc, cadmium, aluminum-zinc alloys, and zinc-aluminum alloys—Test methods.

ISO 13365: Leather—Chemical tests—Determination of the preservative (TCMTB, PCMC, OPP,OIT) content in leather by liquid chromatography.

ISO 14184-1: Textiles—Determination of formaldehyde content—Part 1: Free and hydrolyzed formaldehyde (water extraction method).

ISO 14362-1: Textiles—Methods for determination of certain aromatic amines derived from azo colorants—Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres.

ISO 14389: Textiles—Determination of the phthalate content—Tetrahydrofuran method.

ISO/TS 16179: Footwear—Critical substances potentially present in footwear and footwear components—Determination of organotin compounds in footwear materials.

ISO/TS 16186: Footwear—Critical substances potentially present in footwear and footwear components—Test method to quantitatively determine dimethyl fumarate (DMFu) in footwear materials.

ISO 17070: Leather—Chemical tests—Determination of pentachlorophenol content.

ISO 17072-1: Leather—Chemical determination of metal content—Part 1: Extractable metals.

ISO 17226-1: Leather—Chemical determination of formaldehyde content—Part 1: Method using high-performance liquid chromatography.

ISO 17234-1: Leather—Chemical tests for the determination of certain azo colorants in dyed leathers—Part 1: Determination of certain aromatic amines derived from azo colorants.

ISO 17234-2: Leather—Chemical tests for the determination of certain azo colorants in dyed leathers—Part 2: Determination of 4-aminoazobenzene.

ISO 17353: Water quality—Determination of selected organotin compounds—Gas chromatographic method.

ISO 18218-1: Leather—Determination of ethoxylated alkylphenols—direct method.

ISO 18218-2: Leather—Determination of ethoxylated alkylphenols—indirect method.

ISO 18219: Leather—Determination of chlorinated hydrocarbons in leather—Chromatographic method for short-chain chlorinated paraffins (SCCP).

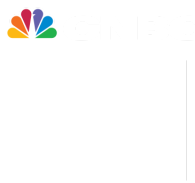
REACH: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH).

REACH Annex XVII: Annex XVII of Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH).

§ 64 LFGB—82.02-8: Textiles—Detection of chlorinated phenols.

ZEK 014-08: Testing and Validation of Polycyclic Aromatic Hydrocarbons (PAH) in the course of GS-Mark Certification.

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TECH

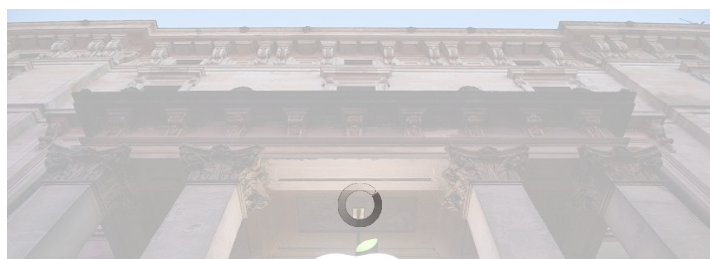
TECH | MOBILE | SOCIAL MEDIA | ENTERPRISE | CYBERSECURITY | TECH GUIDE

Apple has a secret team working on the holy grail for treating diabetes

- Apple has a secret group of biomedical engineers developing sensors to monitor blood sugar levels, sources tell CNBC
- The initiative was initially envisioned by Steve Jobs before his death
- If successful, the advance could help millions of diabetes patients and turn devices like the Apple Watch into a must-have

Christina Farr | @chrissyfarr

Wednesday, 12 Apr 2017 | 7:10 PM ET



Apple working on new diabetes treatment

Thursday, 13 Apr 2017 | 11:41 AM ET | 02:37

Apple has hired a small team of biomedical engineers to work at a nondescript office in Palo Alto, California, miles from corporate headquarters.

They are part of a super secret initiative, initially envisioned by the late Apple co-founder Steve Jobs, to develop sensors that can noninvasively and continuously monitor blood sugar levels to better treat diabetes, according to three people familiar with the matter.

Such a breakthrough would be a "holy grail" for life sciences. Many life sciences companies have tried and failed, as it's highly challenging to track glucose levels accurately without piercing the skin.

The initiative is far enough along that Apple has been conducting feasibility trials at clinical sites across the Bay Area and has hired consultants to help it figure out the regulatory pathways, the people said.

The efforts have been going on for at least five years, the people said. Jobs envisioned wearable devices, like smartwatches, being used to monitor important vitals, such as oxygen levels, heart rate and blood glucose. In 2010, Apple quietly acquired a company called Cor, after then-CEO Bob Messerschmidt reportedly [sent Jobs a cold email](#) on the

topic of sensor technologies for health and wellness. Messerschmidt later joined the Apple Watch team.



Apple has a secret team working on the 'holy grail' for treating diabetes

Thursday, 13 Apr 2017 | 9:07 AM ET | 00:40

The glucose team is said to report to Johnny Srouji, Apple's senior vice president of hardware technologies. According to one of the sources, it was previously led by Michael D. Hillman, who left Apple in late 2015 and later joined [Facebook's](#) Oculus as head of hardware. Hillman's [LinkedIn page](#) lists him as having had a "confidential role" in hardware technologies at Apple.

One person said about 30 people were working in this group as of a year ago. But speculation has [been flying](#) around since the company snapped up about a dozen biomedical experts from companies like Vital Connect, Masimo, Sano, Medtronic and C8 Medisensors. Some of these people joined the secretive team dedicated to glucose, sources said, while others are on Apple Watch team.

One of the people said that Apple is developing optical sensors, which involves shining a light through the skin to measure indications of glucose.

Accurately detecting glucose levels has been such a challenge that one of the top experts in the space, John L. Smith, described it as "the most difficult technical challenge I have encountered in my career." The space is littered with failures, as Smith points out, but that hasn't stopped companies from continuing to attempt to crack this elusive opportunity.

To succeed would cost a company "several hundred millions or even a billion dollars," DexCom Executive Chairman Terrance Gregg [previously told Reuters](#).

The breakthrough would be a boon for millions of people with diabetes, spur new medical research and open up a potential market for consumers to track their blood sugar for health and wellness insights. It could turn the Apple Watch into a "must have" rather than a "nice to have" for people who would benefit from an easier way to track their blood sugar.

Apple isn't the only technology company eyeing opportunities in the space. Verily, Google's life sciences team, is currently working on a "smart" contact lens to measure blood sugar via the eye, and it partnered up with DexCom in 2015 to [develop a glucose-sensing device no bigger than a bandage](#).

Apple declined to comment.

Electronic Health Records (EHR, EMR)

With Apple consulting Argonaut Project on health records, interoperability could get the push it needs

HL7 collaborative chief says aggregating records on the iPhone could lead consumers to help solve the interoperability problem themselves.

By **Mike Miliard** (/author/mike-miliard) | June 27, 2017 | 09:33 AM



Apple CEO Tim Cook

Apple is said to be working with the Argonaut Project to integrate more electronic health data with the iPhone, a move experts say could go a long way towards advancing medical record interoperability.

Participants in the Argonaut Project – an HL7-led initiative focused on expanding the use of open standards for health data exchange, notably HL7's FHIR specification – are some of the industry's most notable vendors and providers: Accenture, athenahealth, Cerner, Epic, McKesson, Meditech, Surescripts, The Advisory Board Company, Beth Israel Deaconess Medical Center, Boston Children's Hospital, Intermountain Healthcare, Mayo Clinic, Partners HealthCare.

[Also: Timeline: How Apple is piecing together its secret healthcare plan (/news/timeline-how-apple-piecing-together-its-secret-healthcare-plan)]

It's not a bad place, then, for Apple to get some ideas about better integrating its products into a complex and fragmented healthcare ecosystem.

Argonaut leader Micky Tripathi, president and CEO of Massachusetts eHealth Collaborative, would not comment on anything specific about Apple's discussions with the group, but he was glad to offer some thoughts on what iPhone-based health records could potentially mean for healthcare more generally.

In particular, Tripathi seemed excited that Apple could play a significant role in improving interoperability – especially with regard to consumer-mediated exchange.

"There has been more and more effort and attention being paid to empowering patients with the ability to aggregate their own data, and then do more with it than they otherwise would have," he said. "That's the idea, and the hope people have. There are many challenges to that, but we're making incremental progress on the way."

Tripathi said he could envision a world where a patient is able to aggregate all of their records on their device, and "use that as the vehicle for sharing."

For instance, a diabetic could use an iPhone-based diabetes app and populate it with his or her own health data. "They could say, 'Alright, app, go to the API at Beth Israel Deaconess Medical Center and get my diabetes-relevant information.' Maybe that's lab results related to diabetes, but it's not everything – those records could be voluminous, but the app is able to go out and get just that information that's important to me."

The big challenge, at the moment, is that healthcare is still largely lacking when it comes to a "trust ecosystem," said Tripathi. But that's another area where Apple, with its nearly unparalleled familiarity, could offer an answer.

Opportunities for trusted exchange

In addition to pushing for broader use of the FHIR standard, the Argonaut Project also champions the OAuth 2.0, an open profile for authorizing apps to access FHIR data.

"If I have a trusted relationship with an organization and they offer me credentials, OAuth is really good, from a technical perspective, at my being able to go to another organization, and, rather than having to have separate username, password, whatever credentials I need for that organization – if that other organization trusts the original organization who made the credentials, then they can just make an OAuth call back and say, 'Someone is presenting themselves as Micky Tripathi. Do you have a Micky Tripathi?' If the response is yes, they pass a technical security token and that enables me to be able to access that third-party thing."

It's an exciting technical concept: A patient has an app and can go to five different hospitals to get their data. The challenge, though, is that there's a sprawling healthcare ecosystem right now with no obvious answer to who could play that trusted role.

"Health insurers? Maybe. The problem with insurers is that they're really fragmented, they're all over the country, and people jump around from insurer to insurer," said Tripathi.

"Or could large providers play that role for each other? In Boston, Mass General may be willing to trust Beth Israel, and vice versa. But they're local organizations. And you have this n-squared problem: Does every pair have to trust each other in that way? Or does everyone trust Mass General, and is that weird because they're a competitor?"

Apple, on the other hand, could potentially offer that trust. "One could imagine Apple playing a role that very few other organizations can play," said Tripathi.

"Hospital A, Hospital B, Hospital C, rather than issue their own credentials, would be willing to say, 'Oh, if Apple trusts them, that's fine. We'll let the app in to do what it's going to do,'" he said. "That's one area, where I think it could lay a firm foundation for a consumer-driven ecosystem that would help with consumer enablement of being able to get their healthcare."

Beyond patient engagement

The concept of consumer-mediated exchange is just as intriguing.

"What if you were able to aggregate your records on your iPhone, and essentially solve the interoperability problem yourself?" said Tripathi.

The most "clunky" and basic way to do that, is to simply say, "Here doc, here's my iPhone, take a look at my record," he said.

"But perhaps a more mature approach could possibly be that you would have provider organizations subscribing to an Apple service, say, where they subscribe and, as an Apple patient, I have all my records there. They could go down a list – Beth Israel Deaconess, check; Harvard Vanguard, check – and access my data that way, almost like a health record bank."

The notion of a health record bank has been around for about 10 years, but hasn't gained much traction, thanks again to issues of fragmentation and trust. "No one organization is prominent enough nationally to be able to have everyone across the country say, 'Yes, sure, I could imagine trusting them,'" said Tripathi. "Obviously, Apple has that kind of visibility and that kind of place in consumer consciousness."

Apple could also ease many clinicians when it comes to patient-mediated data, he said.

"Providers have a degree of mistrust of information that has been handled by the patient. Not because they don't trust them, but you just don't know what happened in that circumstance. Did it get garbled, is some stuff being left out because they don't want me to know something?"

"Apple certainly has the technical smarts to be able to establish data provenance with those records, so if I got the record through some Apple service, through various existing security and non-repudiation kinds of mechanisms that exist today, I would be able to know that this record hasn't been screwed around with since it came from Beth Israel. It just happened to be in the patient's control, they haven't changed anything."

For his part, Tripathi feels that there's been something of a sea change with public perception: how they see their data, and how they see their smartphones.

"If you had asked five years ago, there would have been a different sense to this. It just feels to me, intuitively and anecdotally, like we've had some sort of a change in the way we think about privacy, and protection of privacy," he said

Earned or not, Tripathi thinks people have a much higher degree of comfort in trusting their data with companies such as Apple.

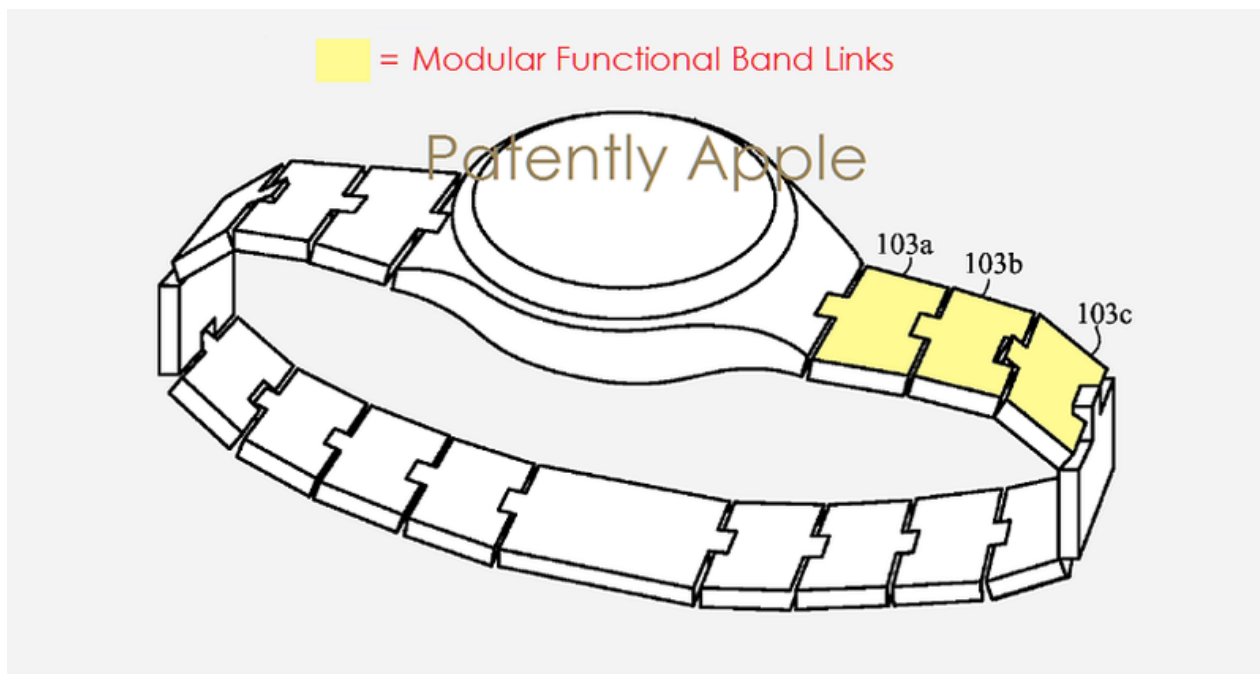
"People have much more of a sense of their phone being an extension of themselves," he said. "Your phone is much more a part of you and a reflection of you, and something you trust it to have personal information – sometimes deeply personal information."

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April 01, 2016

Apple Invents an Apple Watch Band with Individual Smart Links that Could Add New Functionality



Late yesterday Patently Apple posted a report titled "[New Motion Research for Apple Watch Reveals new Gestures may be supported in the Future.](#)" This was the key Apple Watch patent filing amongst a series of them published yesterday by the U.S. Patent and Trademark Office because it covered some of the fundamentals that carry through to today's Apple Watch report. Apple's Patent figure 5B presented in yesterday's report illustrated how individual Apple Watch band links could contain 'Light Sensors' that are capable of detecting minute movements in the user's tendons triggering an in-air motion gesture related to a function that the user assigned to a particular hand movement. Today's brief patent report covers this next generation Apple Watch Band with Smart Links.

Noted below in Apple's patent FIG. 1 we're able to see a future Apple Watch Band with Smart Links highlighted in yellow. Inside each link, as illustrated in FIG. 3C, is a special electronic component that could deliver a specific new function for Apple Watch.

CLICK ON IMAGE TO ENLARGE

FIG. 1

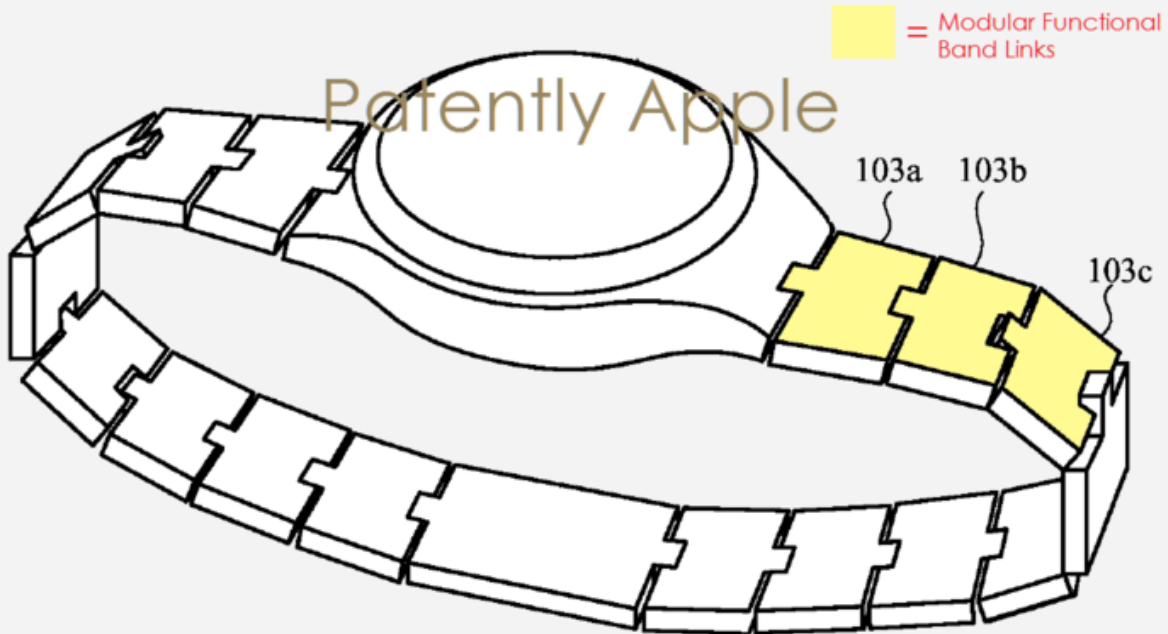


FIG. 3C

Inside
Modular Functional Band Links

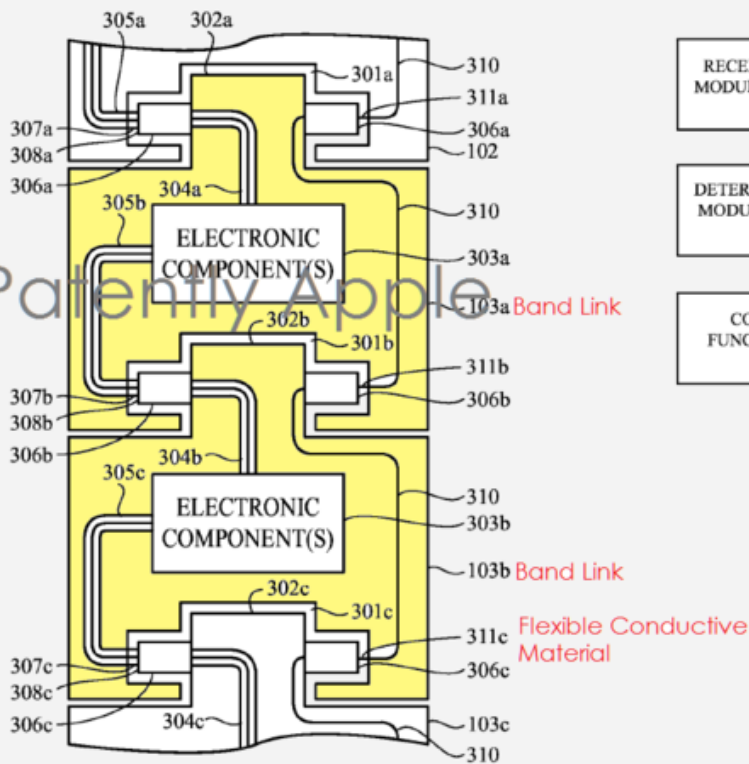
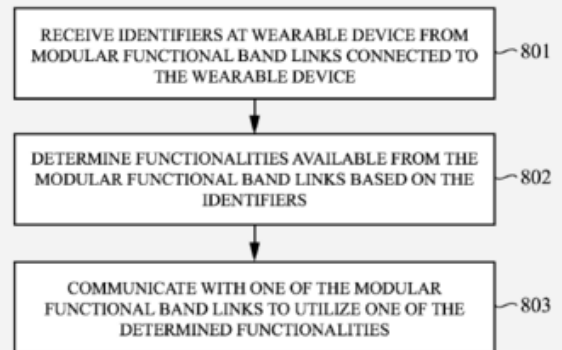


FIG. 8

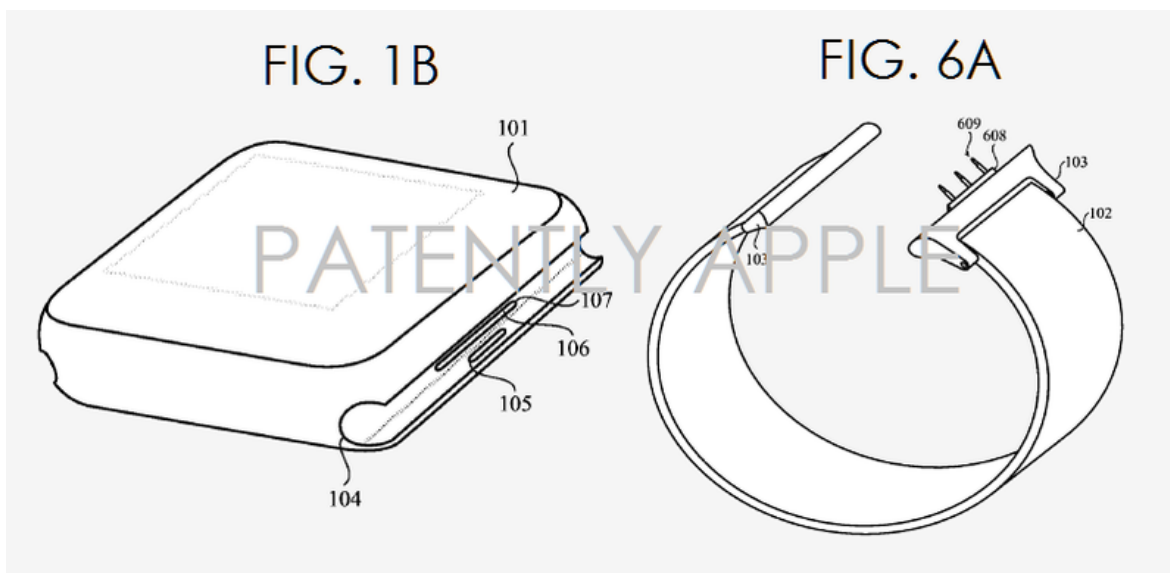


Apple notes in their patent application that "The electronic components included in the modular functional band links may be any kind of electronic component associated with any kind of functionality. Such electronic components may include adding one or more batteries, input devices, output devices, haptic devices, displays, sensors, actuators, processors, electricity generators, photovoltaic cells, cameras, photo sensors, indicators, accelerometers, speedometers, compasses, gyroscopes, global positioning systems, thermometers, hygrometers, blood pressure sensors, sweat sensors, magnetic field sensors, antennas (such as a WiFi antenna, a Bluetooth antenna, a cellular antenna, a near field communication antenna, and so on), vibrators, speakers, track wheels, track balls, touch sensors, buttons, sliders, force sensors, and/or any other electronic component."

So how will this new watch band send signals to the Apple Watch? The answer rests in-part with the band connecting electrically to the base of Apple Watch. In another patent application published yesterday, Apple illustrated the [hidden port](#) that we've known about for close to a year now. It's this connectivity that will power the components that could be set in each individual link as noted in our first patent graphic above.

For more details on the first Apple Watch invention noted above, see Apple's patent application 20160094259 [here](#). The secondary patent application could be found [here](#).

Considering that these are patent applications, the timing of such products to market is unknown at this time.



<http://www.patentlyapple.com/patently-apple/2016/04/apple-invents-an-apple-watch-band-with-individual-smart-links-that-could-add-new-functionality.html>



TECHNOLOGY AND MEDIA

A Russian court found the Apple Watch conventional wristwatch

May 17, 2016

The arbitration court of Moscow has rejected the statement of the Russian division of the American Corporation Apple — OOO “eppl Rus” to the Federal customs service (FCS) on Tuesday 17 may. This was reported by RIA Novosti.

In a statement, Apple asked to recognize the illegal three decisions of the Central customs administration of the FCS about the change in the customs classification of the Apple Watch. FCS classify the Apple Watch as wristwatch according to the Commodity nomenclature of foreign economic activity of the Eurasian economic Union (CN of FEA EAEU). The customs rate for the import of wrist watch reaches 10%, and the device for data transfer not subject to tax.

FCS classify the Apple Watch as a normal wristwatch, since one of the main components of the device “is a component of the countdown, however, he does not have to be in the form of the clock mechanism”, explained in court the representative of the customs service. According to representatives Apple, the device is multifunctional, and to highlight its main component is impossible. According to the company, rather it should apply to microprocessors. The ratio of the decision of the court of first instance will be known after the publication of the full text of the judicial act. The decision will come into force in a month, if not Apple will appeal it.

At the request of RBC, the representative of Apple at the time of publication of the material did not answer.

That “Apple Rus has filed several lawsuits against the FCS, it became known in February 2016. The company filed two lawsuits in the Moscow Arbitration court in relation to the Central customs administration of the FCS. Also “daughter” Apple has submitted to Arbitration court of the Moscow region statement “on recognition of decisions and actions (inaction) unlawful.”

According to the Electronic justice system”, one of the participants in this case is Sheremetyevo customs.

When Apple started to import “smart” watch Apple Watch, it classified them as a wireless device for receiving and transmitting data. But at the end of the 2015 FCS equated them with ordinary wristwatches, which are subject to a fee of 10%, reported the newspaper “Kommersant”. As a result, in the retail sale value of Apple Watch in Russia has increased by about 15%.

<http://sevendaynews.com/2016/05/17/a-russian-court-found-the-apple-watch-conventional-wristwatch/>

HQ H260060

July 14, 2015

CLA-2 OT:RR:CTF:TCM H260060 LWF

CATEGORY: Classification

TARIFF NO.: 8517.62.00

David P. Sanders
Cassidy Levy Kent (USA) LLP
2000 Pennsylvania Avenue, N.W., Suite 3000
Washington, D.C. 20006

RE: Tariff classification of the Apple “Apple Watch” wearable electronic device

Dear Mr. Sanders:

This is in reply to your letter of December 8, 2014, to U.S. Customs and Border Protection (CBP), on behalf of Apple, Inc. (“Apple”), seeking a prospective ruling under the Harmonized Tariff Schedule of the United States (HTSUS) on the tariff classification of the “Apple Watch” wearable electronic device.

FACTS:

The Apple Watch is a battery-operated, wearable electronic device in the form of a wrist-watch, incorporating a touch-sensitive, active-matrix organic light-emitting diode (AMOLED) display, a central processing unit (CPU), random access memory (512MB RAM), a 8GB internal flash memory hard drive, microphone, speaker, vibration motor, accelerometer, gyroscope, heart rate sensor, and a radio transceiver (NFC, Bluetooth® 4.0, and Wi-Fi).

The Apple Watch’s radio transceiver utilizes an open wireless technology standards (Bluetooth® 4.0 and Wi-Fi), which enables the Apple Watch to communicate wirelessly (“pair”) with other Apple Internet-connected mobile devices, such as the Apple iPhone 5 and later models. A user interacts with the Apple Watch by touching and swiping “finger gestures” on the surface of the display, and when the Apple Watch is “paired” with a compatible Apple mobile device, the user can also speak voice commands to the Apple Watch.

The Apple Watch runs a pre-installed version of Apple’s “watchOS”, a mobile operating system that enables the Apple Watch to execute processing programs known as “apps” created through Apple’s “WatchKit” developer tool. WatchKit apps have two parts: a WatchKit extension that runs on iPhone and a set of user interface resources that are installed on the Apple Watch. When an app is launched on the Apple Watch,

the WatchKit extension on the iPhone runs in the background to update the user interface and respond to user interactions on the Apple Watch. See “Create iPhone apps for Apple Watch,” <https://developer.apple.com/watchkit/> (last visited June 17, 2015). User can select which apps to install on the Apple Watch by downloading apps from Apple’s digital distribution platform, Apple Store.

When the Apple Watch is “paired” with an iPhone, the wearer is able to use apps on the Apple Watch to display, manipulate, and store data on the Apple Watch itself, or on the connected iPhone. The Apple Watch apps communicate wirelessly with the WatchKit extension on the iPhone and are capable of performing a variety of functions, including: receiving and responding to electronic communications, tracking fitness, displaying location-based information and directions, accessing Internet data, sending and receiving audio messages, paying for purchases using Apple Pay™ via NFC wireless connections, displaying airplane boarding passes, and controlling an Apple TV®. See “Apple Unveils Apple Watch—Apple’s Most Personal Device Ever,” www.apple.com/pr/library/2014/09/09Apple-Unveils-Apple-Watch-Apples-Most-Personal-Device-Ever.html (last visited June 17, 2015).

Although the Apple Watch must be paired with an iPhone to perform most functions, the Apple Watch is capable of performing several functions without being connected to an iPhone. “Unpaired” functions of the Apple Watch include: playing music stored locally on the Apple Watch; using watch, alarm, timers, and time functions; keeping track of physical activities and exercise; displaying photos stored locally on the Apple Watch; and using Apple Pay™ to make purchases via NFC wireless connections. See “Use Apple Watch without its paired iPhone,” https://support.apple.com/kb/PH20767?viewlocale=en_US&locale=en_US (last visited June 17, 2015).

ISSUE:

Whether the Apple Watch is classified, by application of General Rule of Interpretation (GRI) 1, in heading 9102, HTSUS, as a wrist watch, pocket watch, including stop watches, other than those of heading 9101, HTSUS, or by application of GRI 3(b), as a composite good made up of different components, classified as if it consisted of the material or component which gives the Apple Watch its essential character.

LAW AND ANALYSIS:

Classification under the Harmonized Tariff Schedule of the United States (HTSUS) is made in accordance with the General Rules of Interpretation (GRIs). GRI 1 provides that the classification of goods shall be determined according to the terms of the headings of the tariff schedule and any relative Section or Chapter Notes. In the event that the goods cannot be classified solely on the basis of GRI 1, and if the headings and legal notes do not otherwise require, the remaining GRIs may then be applied in their appropriate order.

GRI 3 provides, in pertinent part, as follows:

When, by application of rule 2(b) or for any other reason, goods are, *prima facie*, classifiable under two or more headings, classification shall be effected as follows:

- (b) Mixtures, composite goods consisting of different materials or made up of different components, and goods put up in sets for retail sale, which cannot be classified by reference to 3(a), shall be classified as if they consisted of the material or component which gives them their essential character, insofar as this criterion is applicable.

* * * * *

The HTSUS headings under consideration are the following:

- 8517 Telephone sets, including telephones for cellular networks or for other wireless networks; other apparatus for the transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network), other than transmission or reception apparatus of heading 8443, 8525, 8527 or 8528; parts thereof:
- 8519 Sound recording or reproducing apparatus:
- 8521 Video recording or reproducing apparatus, whether or not incorporating a video tuner:
- 9029 Revolution counters, production counters, taximeters, odometers, pedometers and the like; speedometers and tachometers, other than those of heading 9014 or 9015;
- 9031 Measuring or checking instruments, appliances and machines, not specified or included elsewhere in this chapter; profile projectors; parts and accessories thereof:
- 9102 Wrist watches, pocket watches and other watches, including stop watches, other than those of heading 9101:

* * * * *

Note 1(n) to Section XVI, HTSUS, provides, in relevant part:

1. This section does not cover:

...

- (n) Clocks, watches or other articles of chapter 91;

* * * * *

The Harmonized Commodity Description and Coding System Explanatory Notes (ENs) constitute the official interpretation of the Harmonized System at the international level. While not legally binding, the ENs provide a commentary on the scope of each heading of the HS and are thus useful in ascertaining the proper classification of merchandise. It is CBP's practice to follow, whenever possible, the terms of the ENs

when interpreting the HTSUS. See T.D. 89-90, 54 Fed. Reg. 35127, 35128 (August 23, 1989).

The ENs to GRI 3(b) provide, in pertinent part, that:

- (VII) In all these cases the goods are to be classified as if they consisted of the material or component **which gives them their essential character**, insofar as this criterion is applicable.
- (VIII) The factor which determines essential character will vary as between different kinds of goods. It may, for example, be determined by the nature of the material or component, its bulk, quantity, weight or value, or by the role of a constituent material in relation to the use of the goods.

* * * * *

Upon initial consideration of the physical characteristics and functions of the Apple Watch, CBP finds that the commercial identity of the Apple Watch *prima facie* differs from wrist watches and other watches described by heading 9102, HTSUS. Specifically, the Apple Watch features several electronic components—including an AMOLED display, CPU with installed OS, 512MB RAM, 4GB internal flash memory hard drive, radio transceiver, accelerometer, gyro sensor, heart rate monitor, speaker, and microphone—that are uncommon to articles of heading 9102, HTSUS. Moreover, although the Apple Watch is capable of displaying basic timekeeping information while both “paired” and “unpaired” with an iPhone, the Apple Watch is primarily designed to display, manipulate, and store data via the use of executable watchOS apps that communicate wirelessly with WatchKit extensions on an Internet-connected Apple iPhone. The fact that the Apple Watch is worn like conventional wrist watches of Chapter 91 merely indicates a different physical configuration of an article that is, *prima facie*, designed to extend the functionality of a “paired” mobile device for the convenience of the user. Accordingly, CBP finds that the Apple Watch substantially differs from the articles described by heading 9102, HTSUS, and cannot be classified under the heading by application of GRI 1.

In determining the correct classification of the Apple Watch, CBP observes that the device is constructed of several component articles that are, *prima facie*, classifiable under two or more headings. Specifically, upon review of the Apple Watch’s various component articles, there is no dispute that heading 8517, HTSUS, describes the radio transceiver; 8519, HTSUS, describes the sound recording and reproducing capabilities; heading 8521, HTSUS, describes the video display function of the AMOLED display; heading 9029, HTSUS, describes the heart rate monitor; and heading 9031, HTSUS, describes the accelerometer and gyro sensors. Consequently, because the Apple Watch is, *prima facie*, classifiable under two or more headings, classification shall be effected by application of GRI 3—specifically GRI 3(b), which directs that composite goods made up of different components shall be classified as if they consisted of the material or component that gives them their essential character.

GRI 3(b) covers mixtures, composite goods, and goods put up in sets for retail sale. For purposes of this rule, Explanatory Note IX to GRI 3(b) provides that, “composite goods made up of different components shall be taken to mean not only those in which the component are attached to each other to form a practically inseparable whole but also those with separable components, **provided** these components are adapted one to the other and are mutually complementary and that together they form a whole which would not normally be offered for sale in separate parts.” (Emphasis original). As such, the Apple Watch is properly described as a composite good because it consists of electrical components of independent, individual function that are attached to each other to form an inseparable whole.

Under GRI 3(b), composite goods must be classified according to the material or component that imparts the article with its essential character. The “essential character” of an article is “that which is indispensable to the structure, core or condition of the article, i.e., what it is.” *Structural Industries v. United States*, 360 F. Supp. 2d 1330, 1336 (Ct. Int’l Trade 2005). EN VIII to GRI 3(b) explains that “[t]he factor which determines essential character will vary as between different kinds of goods. It may, for example, be determined by the nature of the material or component, its bulk, quantity, weight or value, or by the role of the constituent material in relation to the use of the goods.” Recent court decisions on the essential character for GRI 3(b) purposes have looked primarily to the role of the constituent material in relation to the use of the goods. See *Estee Lauder, Inc. v. United States*, 815 F. Supp. 2d 1287, 1296 (Ct. Int’l Trade 2012); *Structural Industries*, 360 F. Supp. 2d 1330; *Conair Corp. v. United States*, 29 C.I.T. 888 (2005); *Home Depot USA, Inc. v. United States*, 427 F. Supp. 2d 1278 (Ct. Int’l Trade 2006), *aff’d* 491 F.3d 1334 (Fed. Cir. 2007).

In accord with the meaning of “essential character” under GRI 3(b), CBP finds that the Apple Watch is primarily used to execute watchOS apps that display, manipulate, and store data via wireless communications with a paired, Internet-connect Apple iPhone mobile device. Apple Watch apps, and their associated WatchKit extensions on a paired iPhone, allow the wearer to perform various functions, including: receiving and responding to electronic communications, tracking fitness, displaying location-based information and directions, accessing Internet data, sending and receiving audio messages, paying for purchases using Apple Pay™ via NFC wireless connections, displaying airplane boarding passes, and controlling an Apple TV®. See “Apple Unveils Apple Watch—Apple’s Most Personal Device Ever,” www.apple.com/pr/library/2014/09/09Apple-Unveils-Apple-Watch-Apples-Most-Personal-Device-Ever.html.

By contrast, when the Apple Watch is “unpaired”, *i.e.* without wireless connection to a “paired” Internet-connected Apple iPhone, the Apple Watch operates with substantial functional limitations that render it unable to perform many of the tasks for which the Apple Watch is marketed. Compare “Apple Unveils Apple Watch—Apple’s Most Personal Device Ever,” www.apple.com/pr/library/2014/09/09Apple-Unveils-Apple-Watch-Apples-Most-Personal-Device-Ever.html, with “Use Apple Watch without its paired iPhone,” https://support.apple.com/kb/PH20767?viewlocale=en_US&locale=en_US. Consequently, although each of the Apple Watch’s component articles (e.g., the microphone, speaker, AMOLED display, heart rate monitor, accelerometer, and gyro

sensor) enable important functionality in the operation of the Apple Watch, it is the radio transceiver that is indispensable to the core, essential condition of the device, because the radio transceiver facilitates the display, manipulation, and storage of data between the Apple Watch and a paired iPhone.

The radio transceiver enables the Apple Watch to communicate wirelessly with a paired, Internet-connected Apple iPhone to display, manipulate, and store data via the execution of watchOS apps and their associated WatchKit extensions. Upon consideration of the role of each of the Apple Watch's component articles in relation to the use of the Apple Watch, CBP therefore finds that the essential character of the Apple Watch is imparted by the radio transceiver. Radio transceivers are classified in heading 8517, HTSUS, which provides, in pertinent part, for "Other apparatus for the transmission or reception of voice, images, or other data[...] including apparatus for communication in a wired or wireless network[...]". Accordingly, the Apple Watch is classified in heading 8517, HTSUS, specifically in subheading 8517.62.

HOLDING:

By application of GRI 3(b), the Apple Watch wearable electronic device is classified in heading 8517, HTSUS. Specifically, it is classified in subheading 8517.62.00, HTSUS, which provides for, "Telephone sets, including telephones for cellular networks or for other wireless networks; other apparatus for the transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network), other than transmission or reception apparatus of heading 8443, 8525, 8527 or 8528; parts thereof: Other apparatus for transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network): Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus." The 2015 column one, general rate of duty for merchandise of subheading 8517.62.00, HTSUS, is *free*.

Duty rates are subject to change. The text of the most recent HTSUS and the accompanying duty rates are provided on the World Wide Web at <http://www.usitc.gov/>.

A copy of this ruling letter should be attached to the entry documents filed at the time the goods are entered. If the documents have been filed without a copy, this ruling should be brought to the attention of the CBP officer handling the transaction.

Sincerely,

Ieva K. O'Rourke, Chief
Tariff Classification and Marking Branch

HQ **H270725** November 7, 2016

CLA-2 OT:RR:CTF:TCM **H270725** PTM

CATEGORY: CLASSIFICATION

TARIFF NO: 9113.90.80

David Sanders Cassidy Levy Kent (USA) LLP 2000 Pennsylvania Ave. NW, Suite 3000 Washington, D.C. 20006

RE: Internal Advice Request, Tariff Classification of Apple Watch Bands

Dear Mr. Sanders,

We are writing in response to your request to U.S. Customs and Border Protection (“CBP”) dated October 15, 2015 in which you request internal advice on behalf of Apple, Inc. (“Apple”), concerning the tariff classification of wrist bands for the Apple Watch under the Harmonized Tariff Schedule of the United States (“HTSUS”). In reaching our determination, we also considered the substance of our meeting on September 22, 2016 and your additional submission dated September 29, 2016. Our response follows.

FACTS:

The product at issue are bands for the Apple Watch. The Apple Watch is a “smart watch” that pairs with a user’s iPhone via a Bluetooth® connection to perform various functions. In Headquarters Ruling (“HQ”) **H260060** we described the Apple Watch as follows:

The Apple Watch is a battery-operated, wearable electronic device in the form of a wrist-watch, incorporating a touch-sensitive, active-matrix organic light-emitting diode (AMOLED) display, a central processing unit (CPU), random access memory (512MB RAM), a 8GB internal flash memory hard drive, microphone, speaker, vibration motor, accelerometer, gyroscope, heart rate sensor, and a radio transceiver (NFC, Bluetooth® 4.0, and Wi-Fi).

* * *

When the Apple Watch is “paired” with an iPhone, the wearer is able to use apps on the Apple Watch to display, manipulate, and store data on the Apple Watch itself, or on the connected iPhone. The Apple Watch apps communicate wirelessly with the WatchKit extension on the iPhone and are capable of performing a variety of functions, including: receiving and responding to electronic communications, tracking fitness, displaying location-based information and directions, accessing Internet data, sending and receiving audio messages, paying for purchases using Apple Pay™ via NFC wireless connections, displaying airplane boarding passes, and controlling an Apple TV®. See “Apple Unveils Apple Watch—Apple’s Most Personal Device Ever,” www.apple.com/pr/library/2014/09/09Apple-Unveils-Apple-Watch-Apples-Most-Personal-Device-Ever.html (last visited June 17, 2015).

Although the Apple Watch must be paired with an iPhone to perform most functions, the Apple Watch is capable of performing several functions without being connected to an iPhone. “Unpaired” functions of the Apple Watch include: playing music stored locally on the Apple Watch; using watch, alarm, timers, and time functions; keeping track of physical activities and exercise; displaying photos stored locally on the Apple Watch; and using Apple Pay™ to make purchases via NFC wireless connections. See “Use Apple Watch without its paired iPhone,”

The Apple Watch bands secure the Apple Watch to the user’s wrist. The bands attach to the Apple Watch with specially designed lugs, and are secured on the user’s wrist via a buckle mechanism. There are various buckle designs. The bands have two size variables: lengths and lug size. You state that the lug and groove contained on the strap do not fit other wearable devices. The bands are available in three materials: Fluroelastomer, Stainless Steel, and Bovine Leather and are available in various colors. The Apple Watch is similar in size to conventional wrist-watches. Further, it is worn by the user in the same manner as a conventional wrist-watch. The Apple Watch Bands perform the same function as the watch band or strap of a conventional wrist watch: it attaches the watch to the user’s wrist.

The Apple Watch has various functions that require that the watch be affixed to the user’s wrist. The watch

has activity tracking functionality that measures the user's activity levels. It can measure how many calories a user burns and the user's heartrate. The "taptic" functionality provides the user with notifications by "tapping" the user's wrist. The watch will not go into standby mode so long as it is affixed to the user's wrist. Otherwise, the user must input a security code in order to unlock it. Functions such as "Apple Pay" will not work while the watch is in standby mode. The watch has a power-saving function that powers the watch off when it is not oriented towards the user's view. Other functions do not require the Apple Watch to be on the user's wrist. These include displaying the time and date, playing music, connecting to the internet and displaying photos.

You state that the lugs are specially designed for the Apple Watch and that it is not possible to secure a strap or band to the Apple Watch without the specially designed and patented lugs. However, the lugs are available to third parties to permit them to create their own Apple Watch straps and bands. The following are images of Apple Watch Bands:

ISSUE:

What is the tariff classification of the Apple Watch bands?

LAW AND ANALYSIS:

Classification under the HTSUS is made in accordance with the General Rules of Interpretation (GRIs). GRI 1 provides that the classification of goods shall be determined according to the terms of the headings of the tariff schedule and any relative section or chapter notes. In the event that the goods cannot be classified solely on the basis of GRI 1, and if the headings and legal notes do not otherwise require, GRIs 2 through 6 may then be applied in order.

The Harmonized Commodity Description and Coding System Explanatory Notes (ENs) constitute the official interpretation of the Harmonized System at the international level. While not legally binding, and therefore not dispositive, the ENs provide a commentary on the scope of each heading of the Harmonized System and are thus useful in ascertaining the classification of merchandise under the System. See T.D. 89-80, 54 Fed. Reg. 35127 (Aug. 23, 1989).

The HTSUS provisions under consideration are as follows:

8517 Telephone sets, including telephones for cellular networks or for other wireless networks; other apparatus for the transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network), other than transmission or reception apparatus of heading 8443, 8525, 8527 or 8528; parts thereof:

8517.70 Parts

* * *

9113 Watch straps, watch bands and watch bracelets, and parts thereof:

Note 1(n) to Section XVI, HTSUS, which includes heading 8517 states:

1. This section does not cover:

(n) Clocks, watches or other articles of chapter 91;

Thus, if the Apple Watch Bands are classifiable in Chapter 91, then they are excluded from classification in heading 8517 by virtue of Note 1(n) to Section XVI.

Note 1(g) to Chapter 91, HTSUS, provides:

1. This chapter does not cover:

(g) Articles of chapter 85, not yet assembled together or with other components into watch or clock movements or into articles suitable for use solely or principally as parts of such movements (chapter 85).

With respect to Note 1(g) to Chapter 91, Chapter 85, HTSUS, the Apple Watch Bands at issue here are simple bands designed to hold the Apple Watch on the user's wrist and therefore cannot be characterized as electrical machinery and equipment or parts thereof that are assembled together into a watch or clock movements, or into articles suitable for use solely or principally as parts of such movements. Thus, the Apple Watch Bands are not excluded from classification in Chapter 91 HTSUS by virtue of Note 1(g).

In HQ **H260060**, CBP classified the Apple Watch in subheading 8517.62.00, HTSUS, which provides for, "Telephone sets, including telephones for cellular networks or for other wireless networks; other apparatus for the transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network), other than transmission or reception apparatus of heading 8443, 8525, 8527 or 8528; parts thereof: Other apparatus for transmission or reception of voice, images or other data, including apparatus for communication in a wired or wireless network (such as a local or wide area network): Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus." In reaching this classification, CBP applied GRI 3(b) because the Apple Watch was found to be a composite good consisting of several components that were prima facie classifiable in different headings. CBP found that the essential character of the Apple Watch is imparted by the radio transceiver because it enables the Apple Watch to be paired with the Apple iPhone and run various applications. Consequently, it is your position that the Bands are appropriately classified as parts of the Apple Watch in heading 8517 HTSUS, rather than in heading 9113 HTSUS, which provides eo nomine for watch bands and straps.

In support of your position, you state that the Bands are specifically designed for use with the Apple Watch, and that the Apple Watch cannot properly function without the Bands. In order for the Apple Watch to measure activity levels, it must be affixed to the wrist of the user to measure heart rate. The taptic functionality of the Apple Watch also requires that the Watch be affixed to the wrist. The Apple Watch will not go into standby mode when it is attached to the user's wrist.

However, the Apple Watch does function as a watch and comes "in the form of a wrist-watch." See HQ **H260060**, supra. Furthermore, the Apple Watch will still perform numerous functions while not affixed to the user's wrist. The Watch can still display the time, play music, surf the internet, respond to text messages and emails, perform as a clock-alarm on Night Stand Mode and run various other applications. The Bands themselves do not perform any of these functions. Rather, they serve solely to keep the Apple Watch affixed to the user's wrist in the same manner that watch bands affix traditional watches to users' wrists.

Furthermore, as stated in HQ **H260060**, CBP determined that the radio transceiver imparted the essential character of the device. The Apple Watch Bands do not assist the transceiver in the Apple Watch in any way from pairing with the user's iPhone. Therefore, they cannot be said to be an indispensable part of the transceiver and an essential part of the Apple Watch.

By contrast, CBP has previously classified smart-watch bands in heading 9113. In New York Ruling ("NY") **N263082**, dated April 17, 2015, CBP classified watch bands designed for use with smart-watches in heading 9113. Notably, the ruling classified several bands intended for use with the Apple Watch in various subheadings of heading 9113 depending on the component material. You state that this ruling is not applicable to the instant watch bands because CBP had not at that time issued its ruling concerning the tariff classification of the Apple Watch itself in HQ **H260060**. We disagree. The sole function of the Apple Watch Band is to fasten the Apple Watch to the wrist of the user, and in this respect is no different from any other watch band. Consequently, we find that the Apple Watch bands are classifiable in heading 9113, HTSUS.

You cite several rulings that classify straps in headings other than 9113. In NY **E88650** (Oct. 26, 1999), legacy Customs Service classified a strap used to hold a bar code reader in heading subheading 8473.30 HTSUS, which provides for parts and accessories of a machine in heading 8471 HTSUS. However, the bar code reader has no resemblance either in form or function to any sort of watch. In HQ **H244547** (Mar. 28, 2014), CBP classified a wrist mount for a mobile computer in subheading 8473.30. The wrist mount contained a plastic mounting bracket was attached to the user's arm using two hook and loop straps. Here again, the product at issue has no resemblance in form or function to any sort of watch. Due to the dissimilarity between these products and the merchandise at issue here, we find that these rulings are

inapplicable.

The EN to heading 91.13 adds further support for classifying the Bands in heading 9113. It states:

91.13 Watch straps, watch bands and watch bracelets, and parts thereof.

This heading covers all kinds of watch straps, watch bands and watch bracelets, i.e., all devices for fastening watches to the wrist.

Watch straps, watch bands and watch bracelets may be of any material, for example, base metal, precious metal, leather, plastics or textile material. They may also be clearly decorative in character without this affecting their classification.

The heading also includes parts of watch straps, watch bands and watch bracelets, identifiable as such, of any material.

(Emphasis added).

Thus, the EN to heading 91.13 clarifies that the heading covers watch straps, watch bands and watch bracelets and all devices for fastening watches to the wrist. Furthermore, they may be of any material and may provide decorative character. The heading also includes parts of watch straps, bands and bracelets. The Apple Watch Bands are described by the EN to heading 91.13 because they are bands that fasten the Apple Watch to the user's wrist, are composed of various materials and can provide decorative character.

Based on the foregoing, we find that the Apple Watch Bands are classifiable in heading 9113 HTSUS. Consequently, they are excluded from classification in heading 8517 by virtue of Note 1(n) to Section XVI, HTSUS.

HOLDING:

By application of GRI 1, the Apple Watch Bands are classified in heading 9113 HTSUS. Specifically, the Watch Bands of fluoroelastomer and bovine leather are classified in subheading 9113.90.80, which provides for "Watch straps, watch bands and watch bracelets, and parts thereof: Other: Other." The column one, general rate of duty is 1.8% ad valorem. The Watch Bands of stainless steel are classified in subheading 9113.20, which provides for "Watch straps, watch bands and watch bracelets, and parts thereof: Of base metal, whether or not gold- or silver-plated." The column one, general rate of duty is 11.2% ad valorem. Duty rates are subject to change. The text of the most recent HTSUS and the accompanying duty rates are provided on the World Wide Web at www.usitc.gov.

You are to mail this decision to the importer of record no later than 60 days from the date of the decision. At that time, the Office of Trade, Regulations and Rulings, will make the decision available to CBP personnel, and to the public on the CBP Home Page on the World Wide Web at www.cbp.gov, by means of the Freedom of Information Act, and other methods of public distribution.

Sincerely,

Myl...[more information - please download the word document to see the complete ruling]



Patent lawsuit says Apple Watch designers illegally downloaded white papers

Lawsuit says Apple's downloads of public white papers was a breach of contract.

[JOE MULLIN](#) - 1/5/2016, 11:53 AM

Wearable technology company Valencell has sued both Apple and Fitbit, saying the two companies' devices infringe on various Valencell patents.

In the [Apple complaint \(PDF\)](#), Valencell says that the Apple Watch infringes its patents, and the company also adds some unusual breach of contract claims. Valencell lawyers say that Apple employees downloaded white papers from the Valencell website. The white papers are publicly available, but they require a user to enter contact information before receiving the papers. Valencell says that "Apple breached this contract by not providing the organization, name, and email address of the recipient."

Valencell was able to capture several IP addresses from visitors who got the white papers and link them to Apple. The breach of contract claims say that white papers were downloaded to Apple IP addresses in March 2013, March 2014, and April of 2015. The paper allegedly downloaded in 2013 was called "PerformTek Precision Biometrics: Engaging the Burgeoning Mobile Health and Fitness Market."

The lawsuit also says Valencell demonstrated a prototype PerformTek watch to about 15 Apple employees in 2013. "The back of the watch included a heart-rate monitor that was substantially similar to the Apple watch," says the complaint. "One or more of the Apple employees in attendance was involved in the design and/or implementation of the Apple Watch."

Valencell's complaints accuse Apple and Fitbit of infringing the same four related patents, numbered [8,923,941](#), [8,886,269](#), [8,929,965](#), and [8,989,830](#). The '941 patent describes "methods and apparatus for generating data output containing physiological and motion-related information," while two others describe "wearable light-guiding bands for physiological monitoring."

In the [Fitbit lawsuit \(PDF\)](#), Valencell lawyers describe how at the 2014 CES show, "the booths for Valencell and Fitbit were in close proximity." Fitbit's Chief Revenue Officer Woody Scal "expressed great interest in the application of Valencell's patented technology, including its wrist sensor modules," write Valencell lawyers. "After CES, Mr. Scal did not respond to Valencell's follow-up requests."

Valencell again contacted Fitbit "about a partnership opportunity" in February 2015 but received no response. It isn't clear how the fact that Fitbit was apparently ignoring Valencell bolsters the company's infringement case.

Unlike the Apple complaint, the case against Fitbit includes just the patent infringement claims; it says the Fitbit Surge and Charge HR both infringe the four patents listed above.

"Rather than manufacture its own wearables, Valencell has repeatedly chosen to partner with existing consumer electronics companies and manufacturers while continuing to focus our R&D on creating the future in biometric wearables," said Valencell President Steven LeBoeuf in the company's [statement on the lawsuits](#). "As more and more wearable products powered by Valencell's award-winning PerformTek® sensor technology are now available in the marketplace, and the market has begun to value the importance of highly accurate biometric wearables, we've seen some companies choose to use our patented inventions without pursuing a patent license."

Apple and Fitbit aren't accused of actually using Valencell's touted PerformTek. They're being sued for selling devices that use light and biometric sensors in a way that's similar to what's described in Valencell's four patents, which is all that is required under patent law. Apple and Fitbit may have just chosen different partners to work with or kept certain aspects of their research and development in-house, but that won't matter in a patent case where patent owners are not required to prove copying, and [independent invention is not a defense](#).

"Fitbit has independently developed and delivered innovative product offerings to empower its customers to lead healthier, more active lives," a Fitbit spokesperson told Ars. "Since its inception, Fitbit has more than 200 issued patents and patent applications in this area. Fitbit plans to vigorously defend itself against these allegations."

Ars also reached out to Apple for comment, and we'll update this post if we get a response.

<http://arstechnica.com/tech-policy/2016/01/wearable-tech-company-sues-apple-watch-and-fitbit-over-patents/>

Apple Is Getting Sued Over the Name iWatch, Even Though That's Not What Its Product Is Called

[Daniele Lepido](#)

July 14, 2015 — 7:35 AM PDT

Type “iWatch” into Google’s search engine, and the top result is likely to be an ad for the Apple Watch. Apple pays Google for the advertisements so it doesn’t miss out on potential customers who entered the wrong product name. But a small Dublin-based company, which owns the iWatch trademark in Europe, is hoping the ads will cost Apple a lot more.

Probendi, an Irish software development studio, filed an urgent procedure on June 26 with a court in Milan protesting Apple’s use of the term in its ads, according to the tribunal filing obtained by Bloomberg. “Apple has systematically used iWatch wording on Google search engine in order to direct customers to its own website, advertising Apple Watch,” the document says.

Over the years, many companies, including American Airlines, Geico, and Rosetta Stone, have tried to take on Google or its advertisers in court over trademark issues, often unsuccessfully. Google’s policy for its ad service says it evaluates trademark complaints on a case-by-case basis and “may enforce certain restrictions.” Giacomo Bonelli, a lawyer for Probendi, says, “Apple never replied to our requests and objections, while Google said they are not responsible for links.” Apple and Google declined to comment on the case.

Probendi co-founder Daniele Di Salvo told Bloomberg last year that the company had [warned Apple](#) against using the term. He also said the company was working on a smartwatch of its own that would undercut the Apple Watch in price, run Google’s Android software, and carry the name iWatch. Di Salvo now says the project is “in standby.”

An audit commissioned by Probendi and conducted by Barzano & Zanardo, which specializes in copyright disputes, valued the iWatch trademark at €87 million (\$97 million), according to two people with knowledge of the matter who requested not to be named because the review was confidential. In 2012, [Apple paid \\$60 million](#) to settle a trademark dispute in China over rights to use the name iPad. A hearing for the iWatch case is scheduled for Nov. 11.

<http://www.bloomberg.com/news/articles/2015-07-14/apple-is-getting-sued-over-the-name-iwatch-even-though-that-s-not-what-its-product-is-called>



Apple Watch Lands FCC Approval ahead of April Launch

By Jeff Gamet
March 18, 2015

Apple's webpage for the soon to ship Apple Watch has dropped wording about requiring FCC approval, which means the company is good to go for April 10 pre-orders and April 24 in-store sales.

Apple Watch is Apple's first product for the smartwatch market. It tracks daily health and fitness activities, and serves as a wrist top interface for your iPhone. Apple Watch will show alerts from incoming calls and messages, lets you answer calls, displays turn-by-turn directions, supports third-party apps, and more.

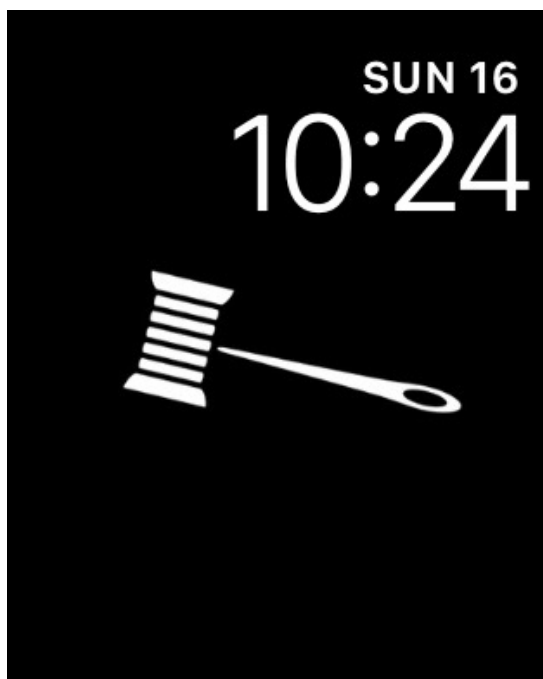
Since the watch comes in two different sizes and three body materials in a variety of colors, Apple's retail stores will let shoppers try them on before buying. You'll be able to visit your local Apple Store in Australia, Canada, China, France, Germany, Hong Kong, Japan, the UK, and the US starting on April 10.

Previously, Apple's website stated, "This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained."

Considering that wording is now gone from the Apple Watch page, it doesn't look like there'll be any last-minute surprises that potentially delay Apple's rollout schedule.



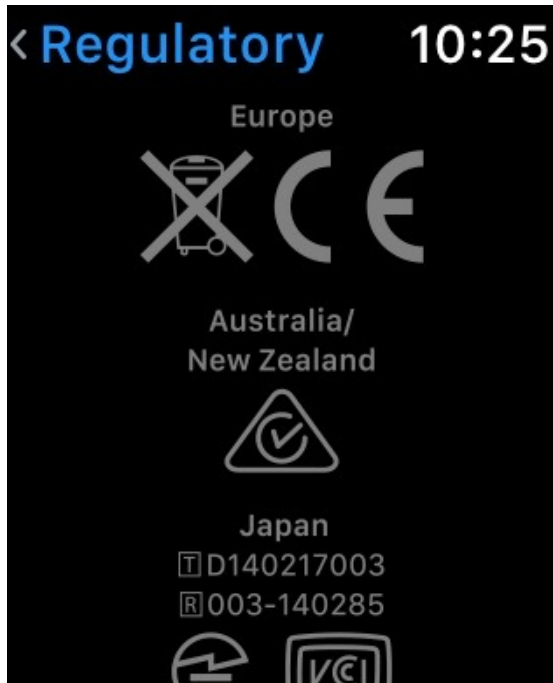
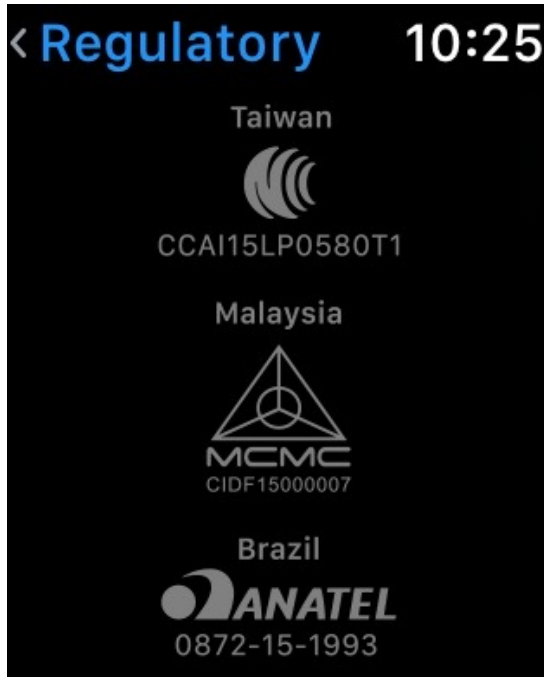
Settings > General > Regulatory
Apple Watch
Screenshots of Watchface and Required eLabels



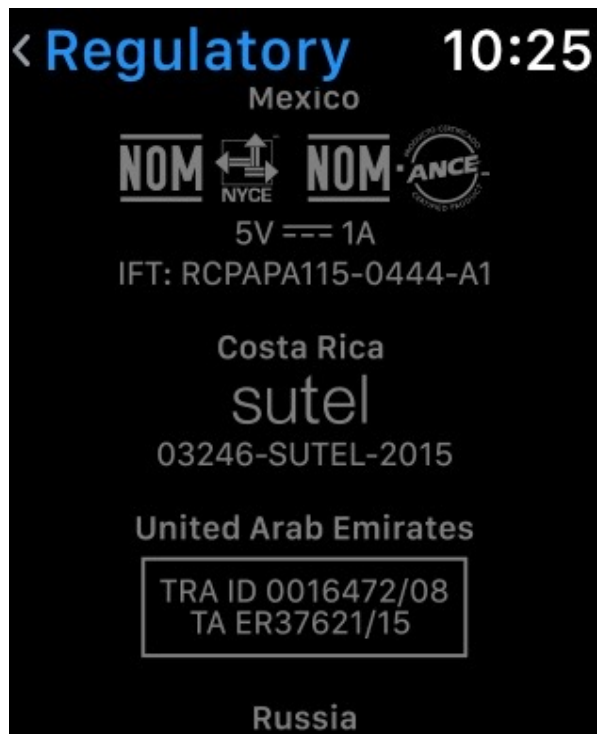
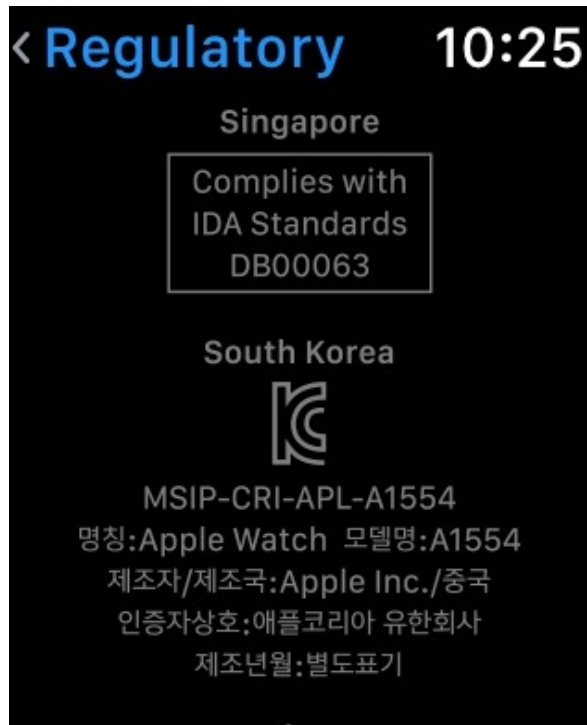
Apple Watch face customized by Jeff Trexler,
Associate Director, Fashion Law Institute.



Settings > General > Regulatory
Apple Watch
Screenshots of Watchface and Required eLabels



Settings > General > Regulatory
 Apple Watch
 Screenshots of Watchface and Required eLabels



Settings > General > Regulatory
Apple Watch
Screenshots of Watchface and Required eLabels





EU Declaration of Conformity

Manufacturer: Name: Apple Inc.
Address: 1 Infinite Loop, Mail Stop 91-1EMC
 Cupertino, CA 95014, USA

Equipment:
Model Number: A1757 / A1816
Software: iOS
Supplied Accessories: Magnetic Charging Cable

We, Apple Inc, declare under our sole responsibility that the above referenced product complies with the following:

Directives: 2014/53/EU
 2009/125/EC
 2011/65/EU

Assessment procedure:

The conformity assessment procedure as detailed in Annex II has been applied.

The following standards have been applied:

Article 3.1a: **Safety and Health**
 EN 60950-1:2006+A1:2010+A11:2009+A12:2011+A2:2013
 EN 50566:2013/AC:2014

Article 3.1b: **EMC**
 EN 301 489-1 V2.2.0
 EN 301 489-3 V2.1.1
 EN 301 489-17 V3.2.0

Article 3.2:	Frequency:	Power:	RF Spectrum Efficiency
2.400 - 2.4835 GHz		< 100mW	EN 300 328 V2.1.1
13.56MHz		< 100mW	EN 300 330 V2.1.1
		Rx Only	EN 300 440 V2.1.1

Additional Compliance:

RoHS: EN50581:2012
Energy: Regulation 1275/2008, Regulation 278/2009

Signed for and on behalf of: Apple Inc

Place: London **Date:** 12 June 2017

Name: **Function:** **Signature:**

Stuart Thomas EMEA Engineering Manager

St Thomas

TCB**GRANT OF EQUIPMENT
AUTHORIZATION****TCB****Certification****Issued Under the Authority of the
Federal Communications Commission****By:****UL Verification Services Inc. (formerly UL
CCS)
47173 Benicia Street
Fremont, CA 94538****Date of Grant: 03/09/2015****Application Dated: 03/07/2015****Apple Inc.
1 Infinite Loop
Cupertino, CA 95014-2084****Attention: Marc Douat , EMC Engineer****NOT TRANSFERABLE**

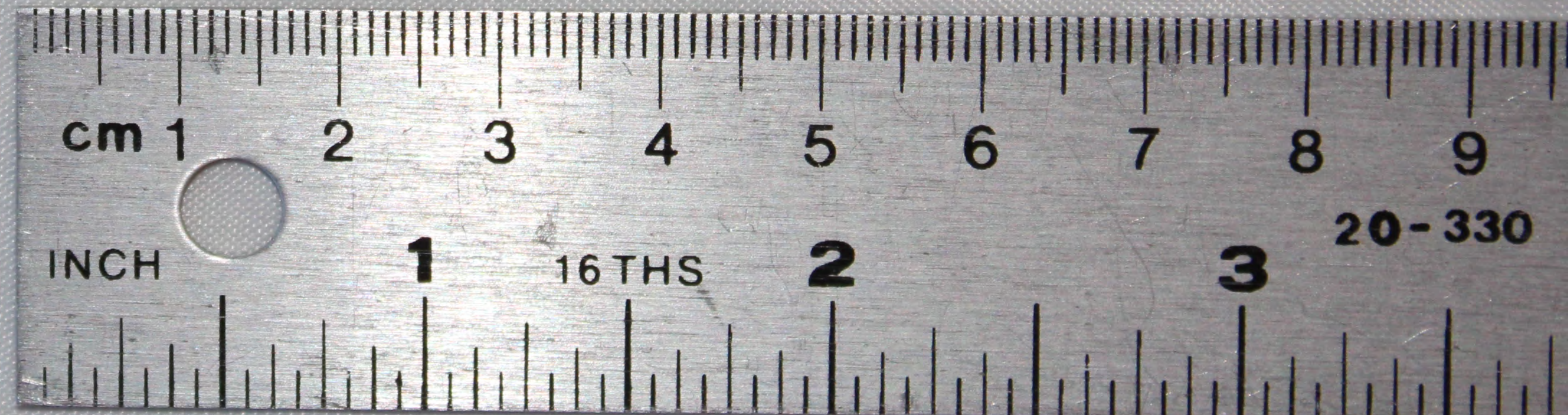
EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is
VALID ONLY for the equipment identified hereon for use under the Commission's Rules
and Regulations listed below.

FCC IDENTIFIER: BCG-E2871**Name of Grantee: Apple Inc.****Equipment Class: Part 15 Low Power Communication Device Transmitter****Notes: Apple Watch**

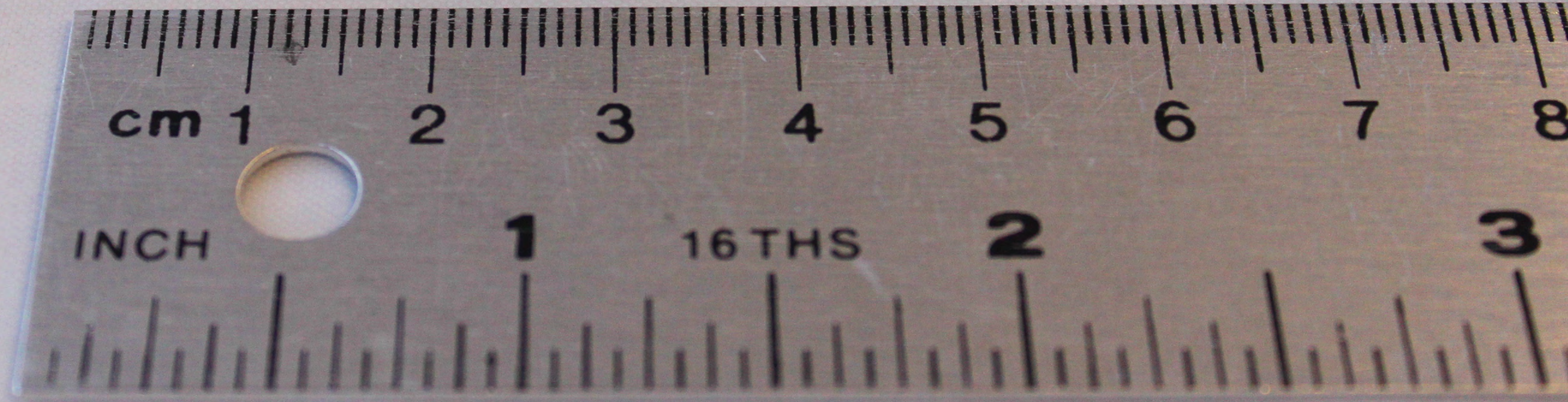
<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
CC	15C	13.56 - 13.56			

CC: This device is certified pursuant to two different Part 15 rules sections.

Front - Touch panel, display



Right Side - Digital Crown button, Side button



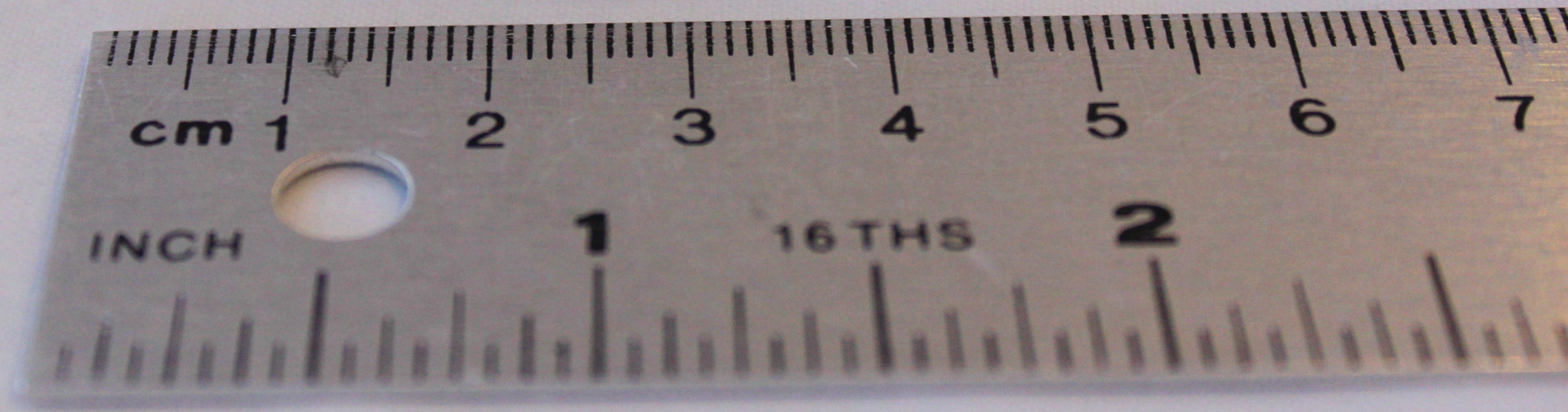
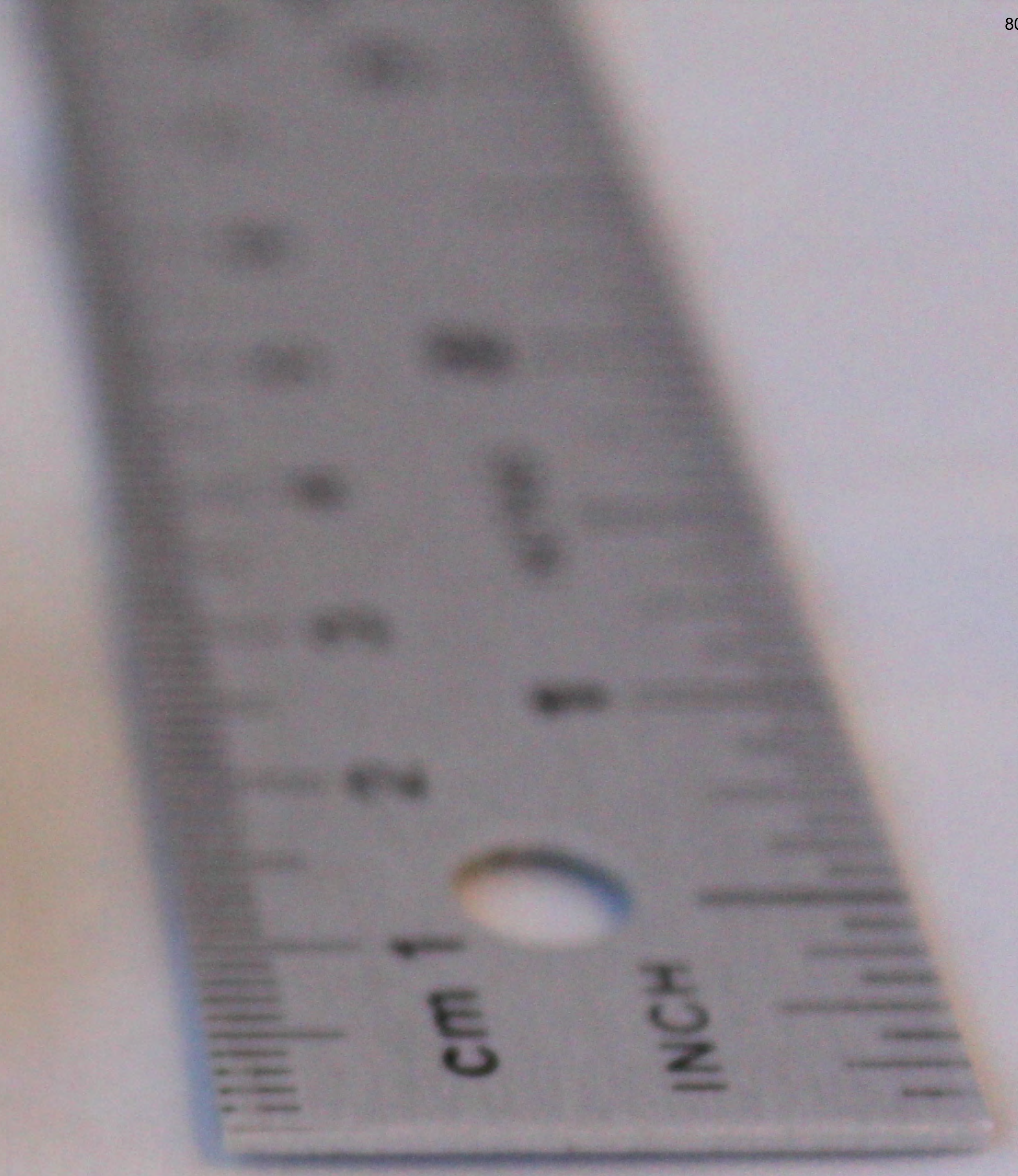
Top Side - Band slot, Band release button



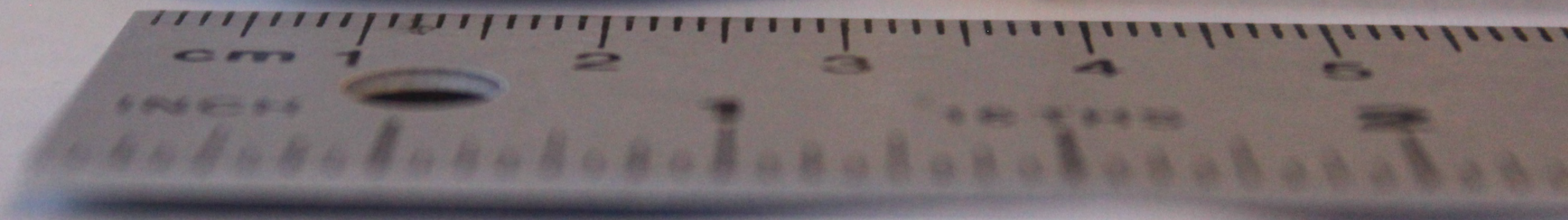
Left Side - Speaker, microphone



Bottom Side - Band slot, Band release button



Top Side



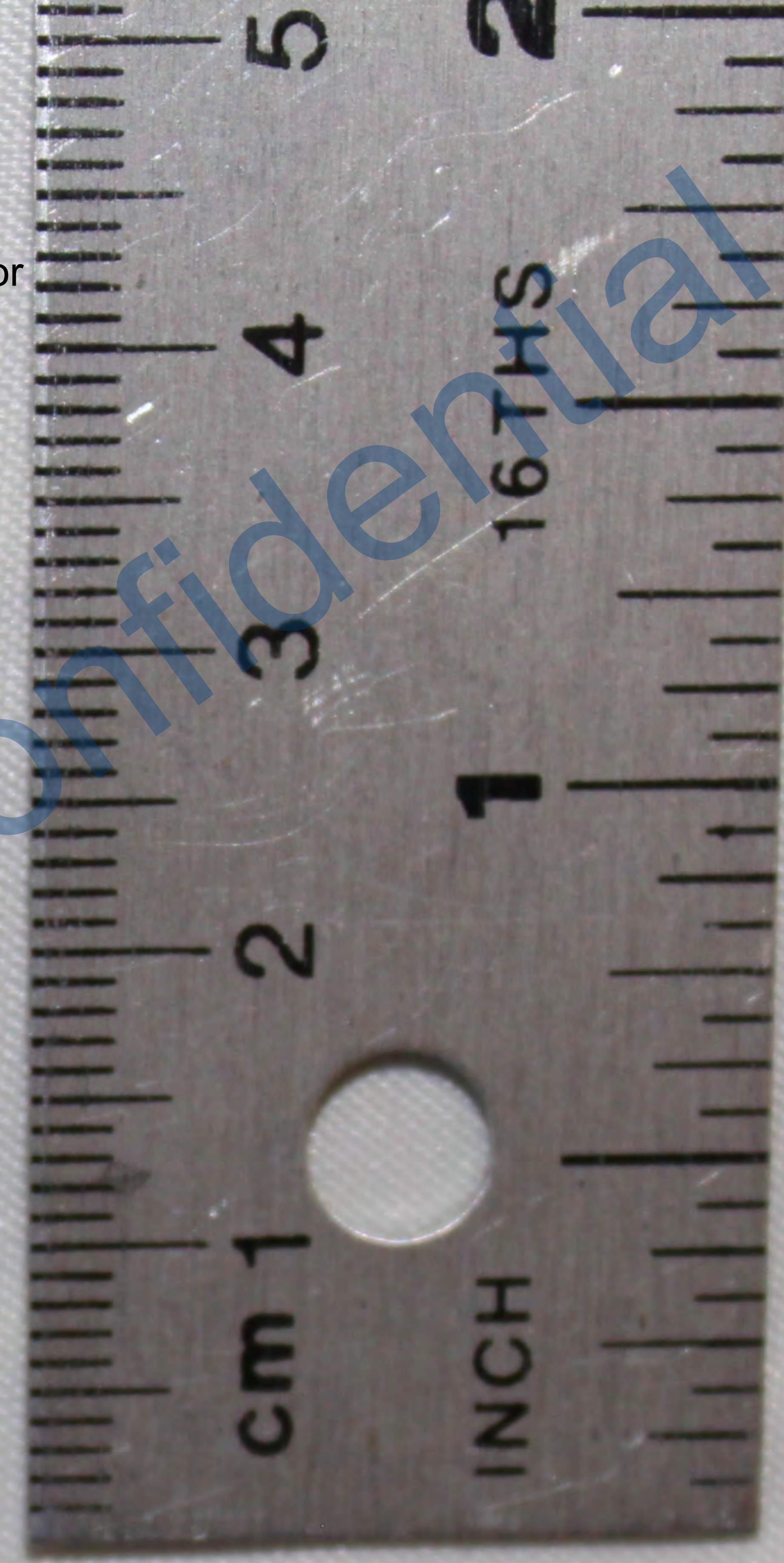
Battery removed

WLAN/BT antenna structure

Vibrations generator

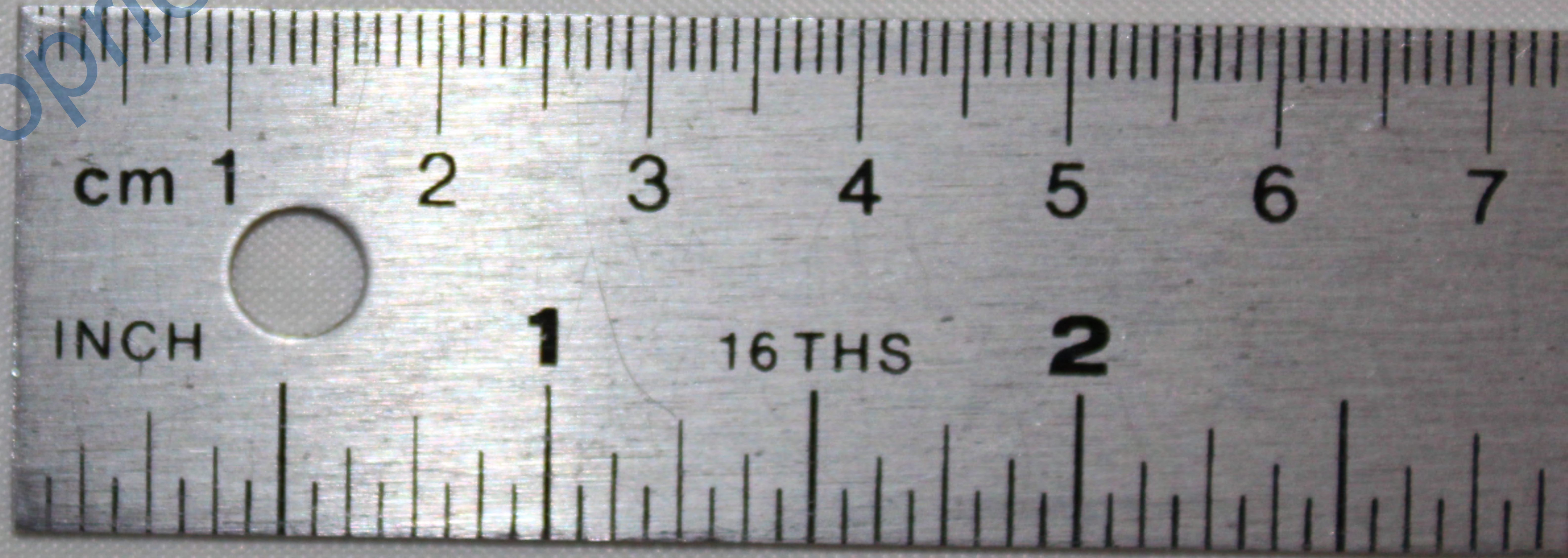
Speaker structure

MLB

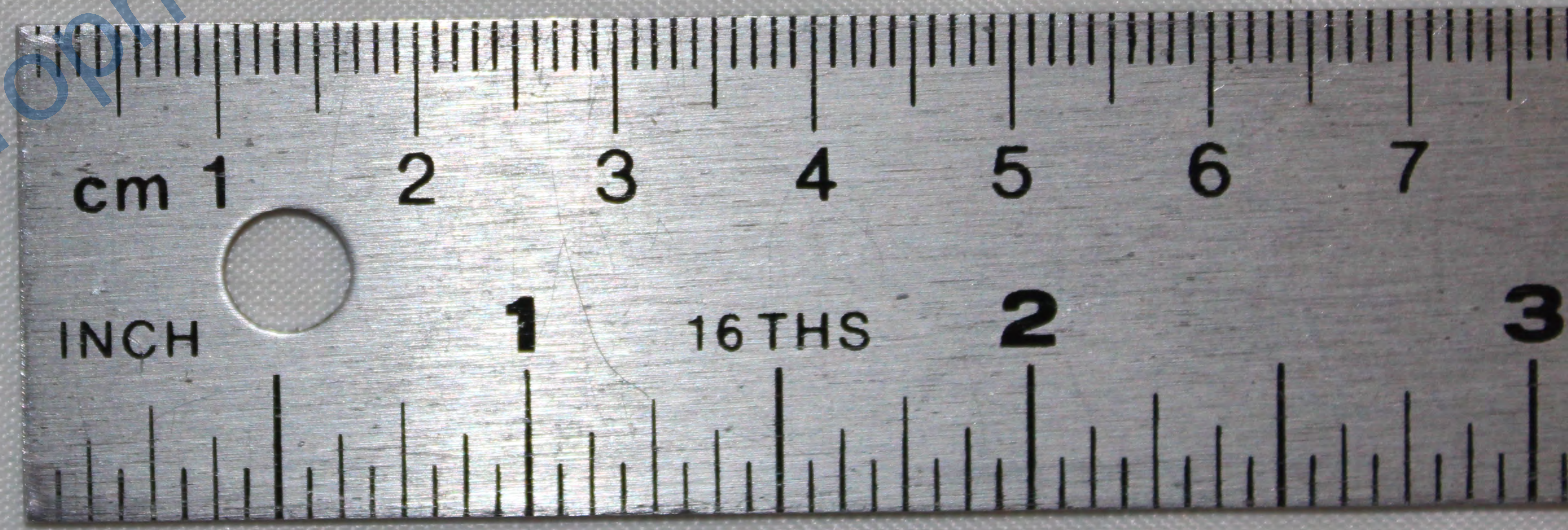
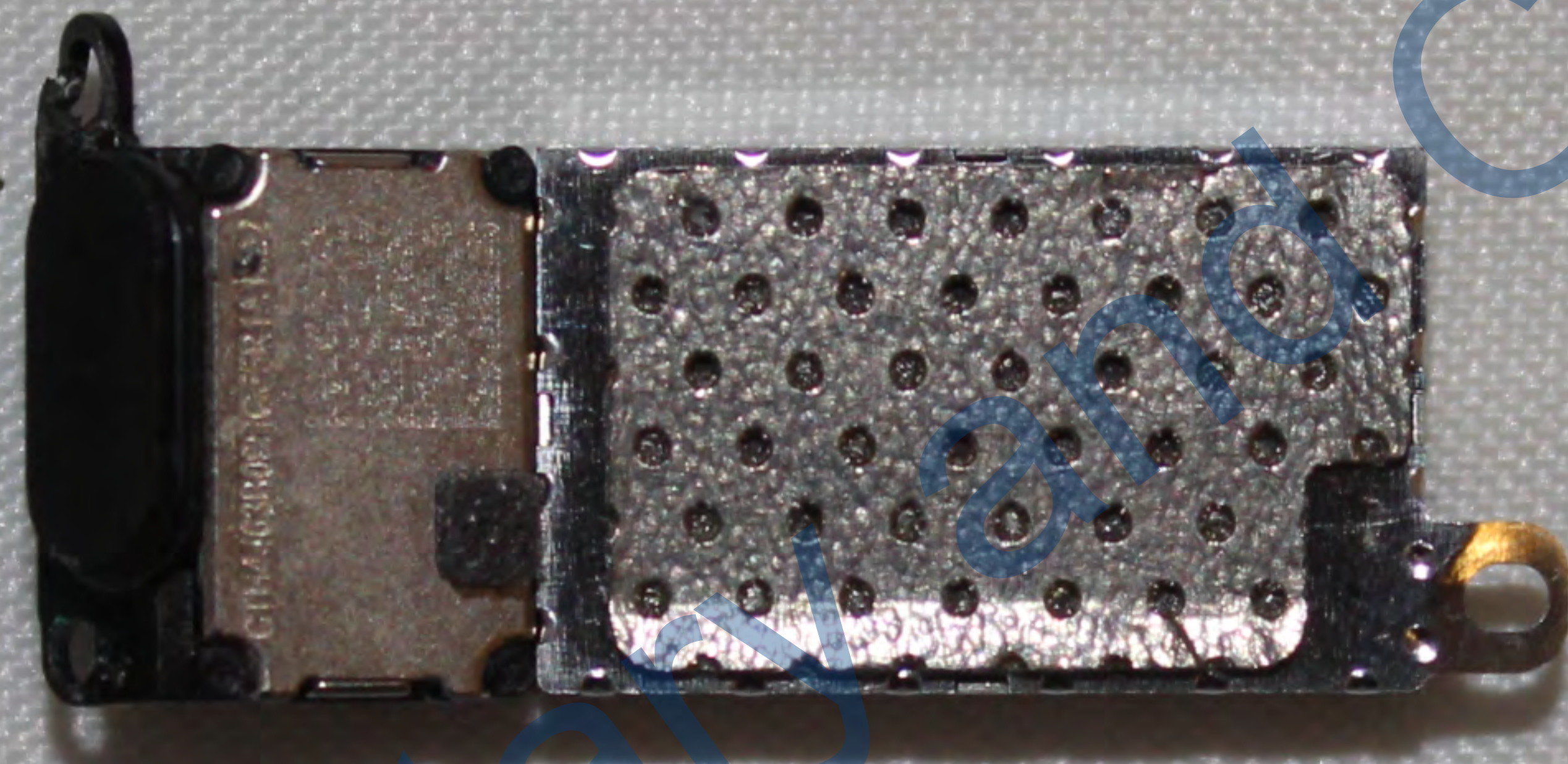


Apple Proprietary and Confidential

Speaker structure, vibrations generator - Front



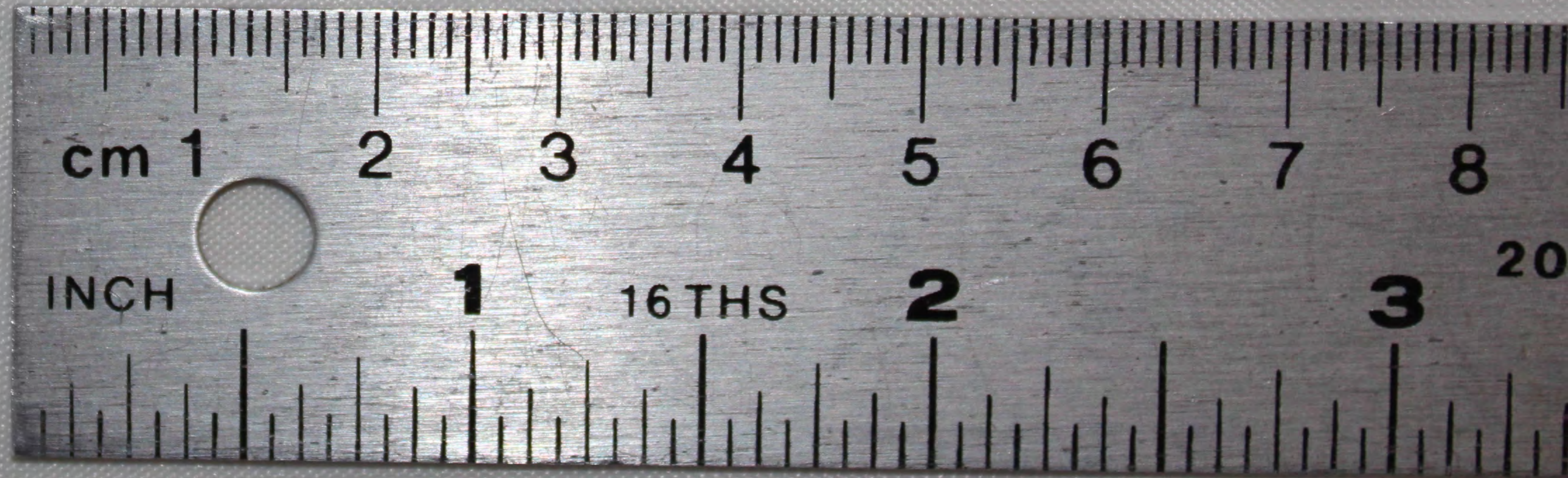
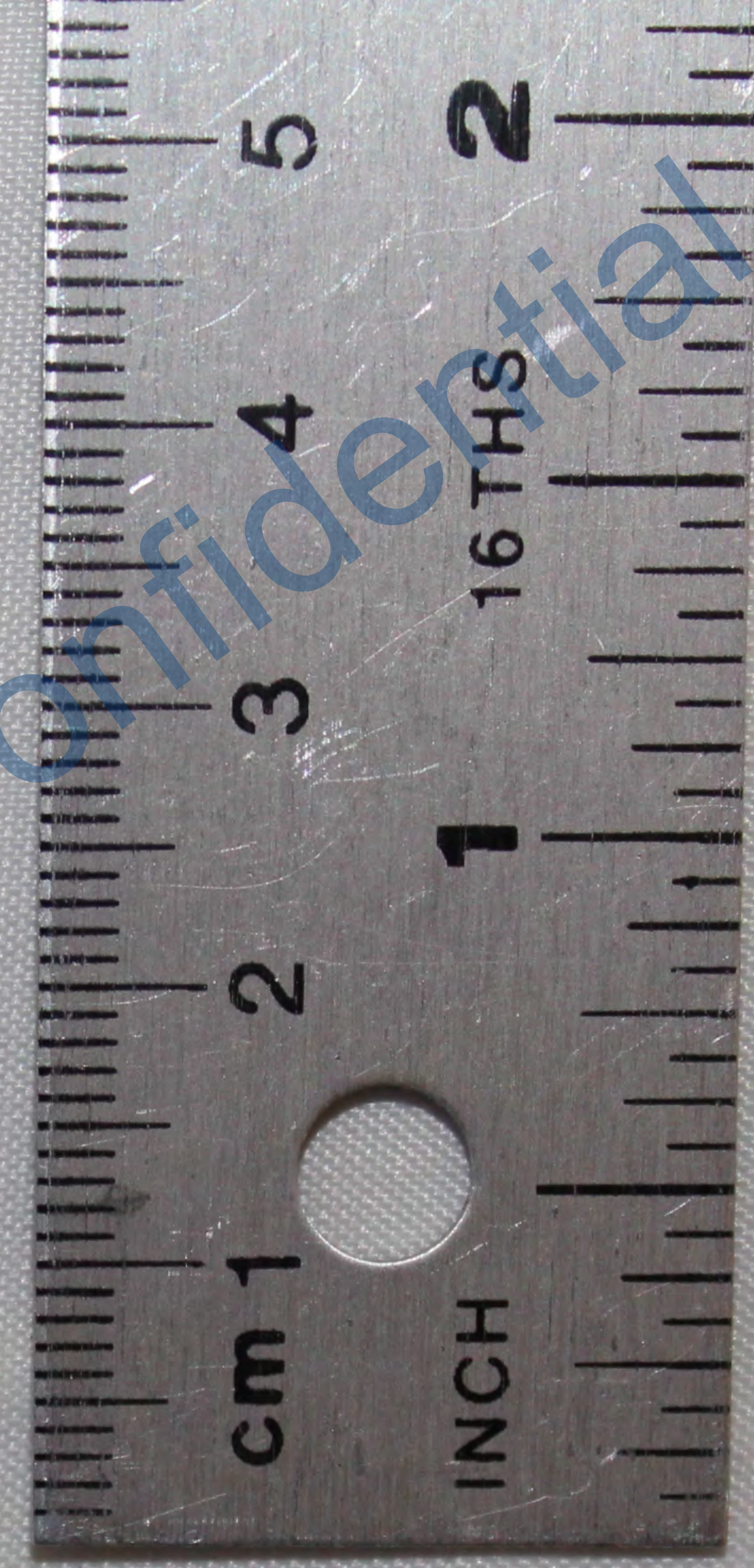
Apple Proprietary and Confidential



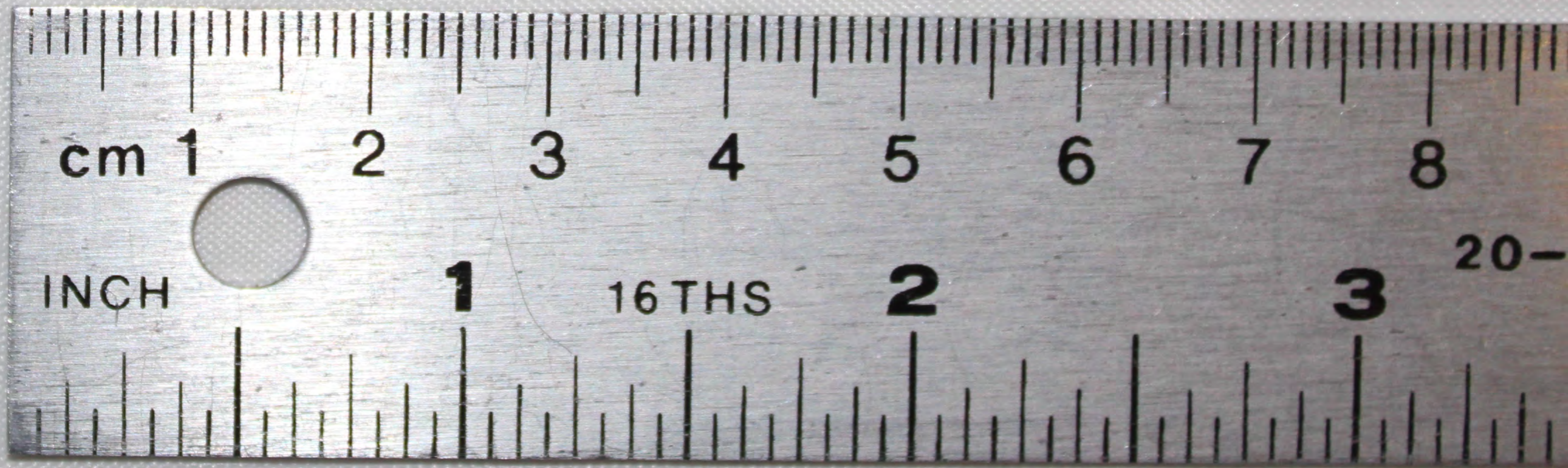
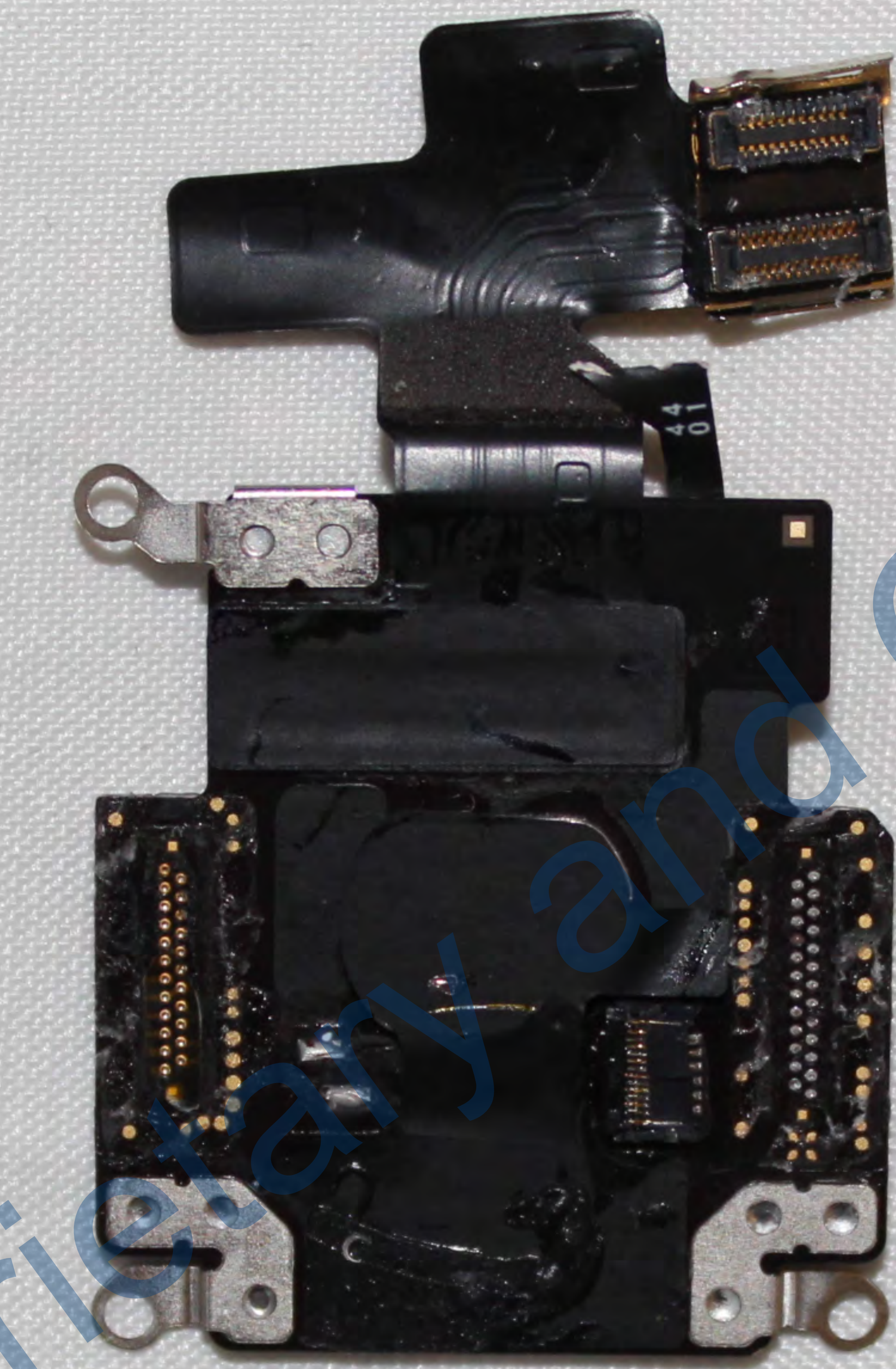
Apple Proprietary & Confidential

Sealed MLB assembly and flexes - Front

Apple Proprietary and Confidential



Apple Proprietary and Confidential





Electronic Labeling – Apple Watch
FCC ID: BCG-E2871, Models: A1554, A1638

Following the KDB 784748 D02 Electronic Labeling Guidance, the information related to Electronic Labeling implementation for the Apple Watch, FCC ID: BCG-E2871, Models A1554 and A1638, is presented below:

Information	On E-Label	On Product Packaging	In Online User Guide	In Printed Info Guide
FCC ID Number	X	X		
DoC Logo	X	X		
15.19 Statement: <i>“This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.”</i>			X	X
DoC Compliance Information Statements			X	
Caution to the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment			X	



Snapshot of the E-Label presented in the devices is shown below:



Users can access the E-Label screen on Apple Watch by going to Settings > General > Regulatory

These steps are shown in the Regulatory section of the printed “Apple Watch Info Guide”, included in the packaging box with the product.

Extract of the Regulatory section from the Apple Watch Info Guide is shown below:

Regulatory Regulatory information, certification, and compliance marks specific to Apple Watch are available on Apple Watch. Go to Settings > General > Regulatory. Additional regulatory information is in “Safety, Handling, and Support” in the Apple Watch User Guide.

The Regulatory information is programmed in a secured manner. End-users or third parties cannot modify the Regulatory information page on the devices.



Product Packaging Label is shown below:

This product is packaged individually.



FCC ID: BCG-E2871
IC ID: 579C-E2871

**SAR EVALUATION REPORT**

**FCC 47 CFR § 2.1093
IEEE Std 1528-2013**

For
Apple Watch

**FCC ID: BCG-E3105
Model Name: A1758, A1817**

**Report Number: 16U23782-S1V2
Issue Date: 8/26/2016**

Prepared for
**APPLE, INC.
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CUPERTINO, CA 95014, U.S.A.**

Prepared by
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NVLAP LAB CODE 200065-0

Revision History


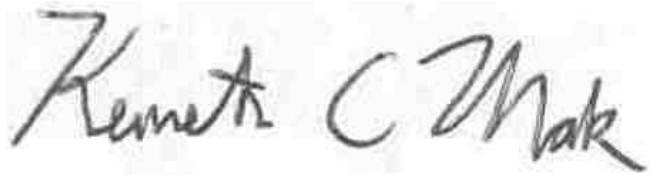
Rev.	Date	Revisions	Revised By
V1	8/24/2016	Initial Issue	--
V2	8/26/2016	Report revised based on Reviewer's comments: 1. Sec. 6.1.: Updated device information. 2. Appendix A: Updated	Kenneth Mak

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1. Attestation of Test Results

Applicant Name	APPLE INC.			
FCC ID	BCG-E3105			
Model Name	A1758, A1817			
Applicable Standards	FCC 47 CFR § 2.1093 Published RF exposure KDB procedures IEEE Std 1528-2013			
Exposure Category	SAR Limits (W/Kg)			
	Peak spatial-average(1g of tissue)		Extremities (hands, wrists, ankles, etc.) (10g of tissue)	
General population / Uncontrolled exposure	1.6		4	
RF Exposure Conditions	Equipment Class - Highest Reported SAR (W/kg)			
	PCE	DTS	NII	DSS
Extremity	N/A	0.054	N/A	0.031
Next-to-Mouth	N/A	0.182	N/A	0.088
Date Tested	8/8/2016 to 8/20/2016			
Test Results	Pass			
<p>UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.</p> <p>Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government (NIST Handbook 150, Annex A). This report is written to support regulatory compliance of the applicable standards stated above.</p>				
Approved & Released By:		Prepared By:		
				
Bobby Bayani Senior Engineer UL Verification Services Inc.		Kenneth C. Mak Laboratory Engineer UL Verification Services Inc.		

2. Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE STD 1528-2013, the following FCC Published RF exposure [KDB](#) procedures:

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D01 General RF Exposure Guidance v06
- 447498 D03 Supplement C Cross-Reference v01
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02

3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at

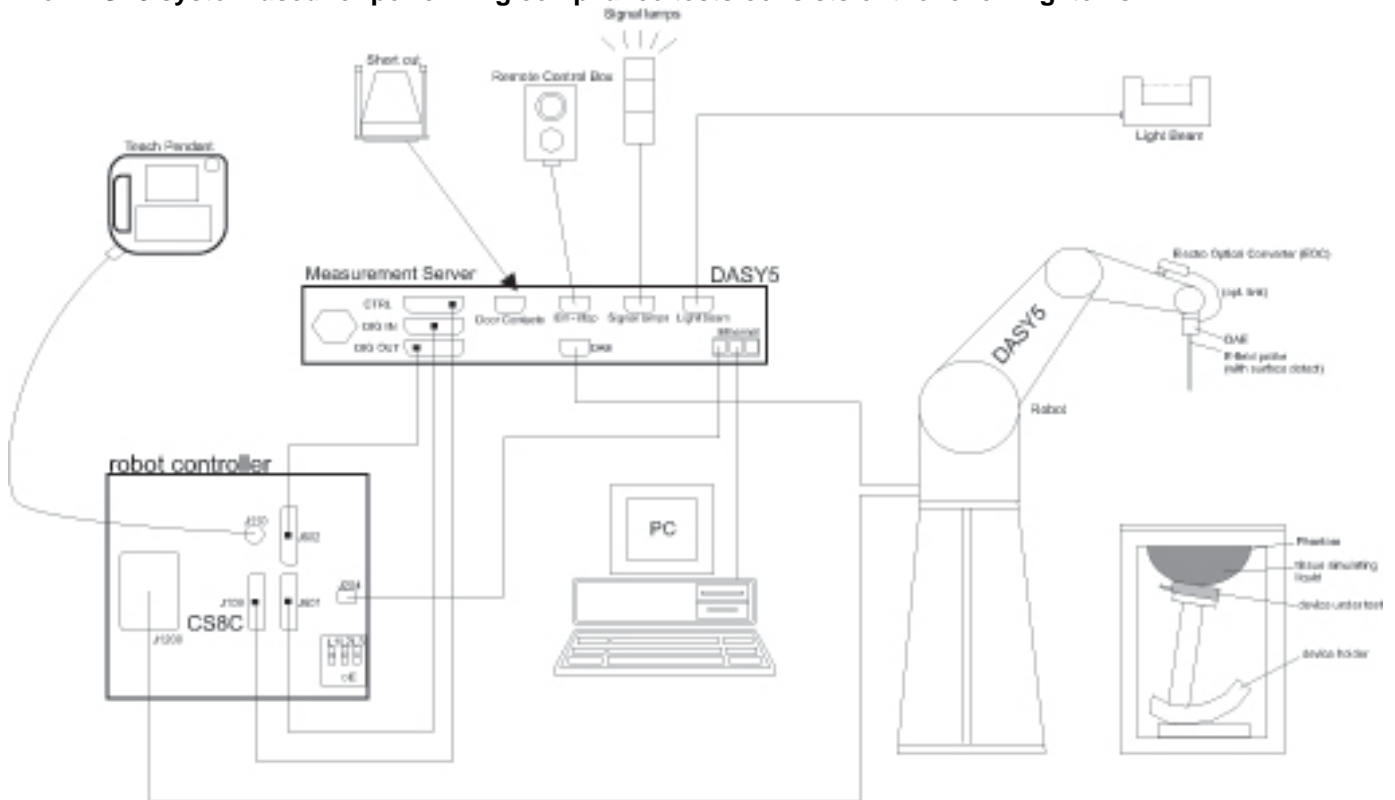
47173 Benicia Street	47266 Benicia Street
SAR Lab A	SAR Lab 1
SAR Lab B	SAR Lab 2
SAR Lab C	SAR Lab 3
SAR Lab D	SAR Lab 4
SAR Lab E	SAR Lab 5
SAR Lab F	
SAR Lab G	
SAR Lab H	

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

The DASY5 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

4.2. SAR Scan Procedures

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 2.1 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be \leq the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Step 3: Zoom Scan

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The Zoom Scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1 g and 10 g and displays these values next to the job's label.

Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

		≤ 3 GHz	> 3 GHz	
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}, \Delta y_{Zoom}$		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm	
	graded grid	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm	
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

Step 4: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

Step 5: Z-Scan (FCC only)

The Z Scan measures points along a vertical straight line. The line runs along the Z-axis of a one-dimensional grid. In order to get a reasonable extrapolation the extrapolated distance should not be larger than the step size in Z-direction.

4.3. Test Equipment

The measuring equipment used to perform the tests documented in this report has been calibrated in accordance with the manufacturers' recommendations, and is traceable to recognized national standards.

Dielectric Property Measurements

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Network Analyzer	Agilent	8753ES	MY40000980	4/27/2017
Dielectric Probe kit	SPEAG	DAK-3.5	1082	9/15/2016
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Thermometer	Traceable Calibration Control Co.	4242	140562250	8/24/2016

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Synthesized Signal Generator	Agilent	N5181A	MY50140610	5/9/2017
Power Meter	Agilent	N1912A	MY50001018	10/19/2016
Power Sensor	Agilent	E9323A	MY53070007	2/27/2017
Power Sensor	Agilent	E9323A	MY53070002	3/22/2017
Amplifier	MITEQ	AMF-4D-00400600-50-30P	1795093	N/A
Directional coupler	Werlatone	C8060-102	2149	N/A
DC Power Supply	AMETEK	XT 15-4	1319A02778	N/A
E-Field Probe (SAR Lab F)	SPEAG	EX3DV4	3749	1/26/2017
E-Field Probe (SAR Lab H)	SPEAG	EX3DV4	3989	2/23/2017
Data Acquisition Electronics (SAR Lab F)	SPEAG	DAE4	1352	11/11/2016
Data Acquisition Electronics (SAR Lab H)	SPEAG	DAE4	1357	2/19/2017
System Validation Dipole	SPEAG	D2450V2	748	2/22/2017

Other

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Power Meter	Agilent	N1912A	MY55196004	7/1/2017
Power Sensor	Agilent	N1921A	MY52270022	12/17/2016
Power Sensor	Agilent	N1921A	MY52270009	12/17/2016

5. Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

6. Device Under Test (DUT) Information

6.1. DUT Description

Model A1758 and A1817 have 3 types of enclosure (stainless steel, aluminum, and ceramic) and various kinds of metallic and non-metallic wristbands. There are 2 types of metallic bands: Metal Links and Metal Mesh. SAR testing was performed to determine worst case enclosure for both non-metallic and metallic wristbands.

Intended Use	Wrist-worn
Device Dimension	<p>Model A1758: Overall (Length x Width): 42.5 mm x 38.4 mm (excluding strap) Display Diagonal: 38.86 mm</p> <p>Model A1817: Overall (Length x Width): 42.6 mm x 38.7 mm (excluding strap) Display Diagonal: 38.86 mm</p>
Accessory	Removable wristbands: metallic and non-metallic

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode	Duty Cycle used for SAR testing
Wi-Fi	2.4 GHz	802.11b 802.11g 802.11n (HT20)	100%
Bluetooth	2.4 GHz	Version 4.2 LE	77.5% (DH5)

6.3. Maximum Output Power from Tune-up Procedure

KDB 447498 sec.4.1.(3) at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit

Band (GHz)	Mode	Ch #	Freq. (MHz)	Maximum Output Power (dBm)	SAR Test (Yes/No)
2.4	802.11b	1	2412	19.5	Yes
		2	2417	20.5	
		6	2437	20.5	
		11	2462	20.5	
		12	2467	20.5	
		13	2472	19.0	
	802.11g	1	2412	19.0	No
		2	2417	20.5	
		6	2437	20.5	
		10	2457	20.5	
		11	2462	19.0	
		12	2467	16.5	
	802.11n	1	2412	19.0	No
		2	2417	20.5	
		6	2437	20.5	
		10	2457	20.5	
		11	2462	19.0	
		12	2467	16.5	
13	2472	6.0			
RF Air interface	Mode	Maximum Output Power (dBm)			
Bluetooth (high power)	BDR (GFSK)	17.5			
	EDR ($\pi/4$ DQPSK / 8DPSK)	14.5			
	LE	17.5			
Bluetooth (low power)	BDR (GFSK)	11.5			
	EDR ($\pi/4$ DQPSK / 8DPSK)	8.5			
	LE	10.0			

7. RF Exposure Conditions (Test Configurations)

Refer to "Antenna distance document" submission for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

Wireless technologies	RF Exposure Conditions	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
WLAN	Extremity (Hand/Wrist/Ankle)	0 mm	Rear	N/A	Yes	
	Next to Mouth	10 mm	Front	N/A	Yes	

8. Dielectric Property Measurements & System Check

8.1. Dielectric Property Measurements

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

For SAR measurement systems that have implemented the SAR error compensation algorithms documented in IEEE Std 1528-2013, to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, the tolerance for ϵ_r and σ may be relaxed to $\pm 10\%$. This is limited to frequencies ≤ 3 GHz.

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

Target Frequency (MHz)	Head		Body	
	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5000	36.2	4.45	49.3	5.07
5100	36.1	4.55	49.1	5.18
5200	36.0	4.66	49.0	5.30
5300	35.9	4.76	48.9	5.42
5400	35.8	4.86	48.7	5.53
5500	35.6	4.96	48.6	5.65
5600	35.5	5.07	48.5	5.77
5700	35.4	5.17	48.3	5.88
5800	35.3	5.27	48.2	6.00

IEEE Std 1528-2013

Refer to Table 3 within the IEEE Std 1528-2013

Dielectric Property Measurements Results:

SAR Room	Date	Band (MHz)	Tissue Type	Frequency (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)		
					Measured	Target	Delta $\pm 5\%$	Measured	Target	Delta $\pm 5\%$
F	8/8/2016	2450	Head	2450	37.96	39.20	-3.16	1.79	1.80	-0.56
				2400	38.13	39.30	-2.97	1.73	1.75	-1.46
				2480	37.83	39.16	-3.40	1.82	1.83	-0.84
F	8/8/2016	2450	Body	2450	51.15	52.70	-2.94	1.98	1.95	1.49
				2400	51.29	52.77	-2.81	1.90	1.90	0.31
				2480	51.02	52.66	-3.12	2.02	1.99	1.15
F	8/11/2016	2450	Head	2450	37.74	39.20	-3.72	1.75	1.80	-2.83
				2400	37.91	39.30	-3.53	1.69	1.75	-3.41
				2480	37.64	39.16	-3.89	1.78	1.83	-2.75
F	8/11/2016	2450	Body	2450	53.47	52.70	1.46	2.03	1.95	4.21
				2400	53.63	52.77	1.62	1.96	1.90	3.42
				2480	53.32	52.66	1.25	2.08	1.99	4.26
F	8/15/2016	2450	Head	2450	38.13	39.20	-2.73	1.78	1.80	-1.22
				2400	38.34	39.30	-2.43	1.72	1.75	-1.64
				2480	38.00	39.16	-2.97	1.81	1.83	-1.33
F	8/15/2016	2450	Body	2450	51.12	52.70	-3.00	1.87	1.95	-4.05
				2400	51.34	52.77	-2.71	1.81	1.90	-4.85
				2480	51.01	52.66	-3.14	1.91	1.99	-4.38
F	8/18/2016	2450	Head	2450	37.46	39.20	-4.44	1.86	1.80	3.56
				2400	37.64	39.30	-4.22	1.81	1.75	3.05
				2480	37.33	39.16	-4.68	1.89	1.83	3.36
F	8/18/2016	2450	Body	2450	50.64	52.70	-3.91	2.03	1.95	4.15
				2400	50.81	52.77	-3.72	1.96	1.90	3.27
				2480	50.51	52.66	-4.09	2.07	1.99	3.81
H	8/8/2016	2450	Head	2450	38.05	39.20	-2.93	1.88	1.80	4.22
				2400	38.19	39.30	-2.82	1.81	1.75	3.33
				2480	37.93	39.16	-3.15	1.90	1.83	3.74
H	8/11/2016	2450	Head	2450	38.15	39.20	-2.68	1.79	1.80	-0.56
				2400	38.30	39.30	-2.54	1.74	1.75	-0.84
				2480	38.06	39.16	-2.81	1.82	1.83	-0.57
H	8/15/2016	2450	Head	2450	38.69	39.20	-1.30	1.76	1.80	-2.44
				2400	38.86	39.30	-1.11	1.71	1.75	-2.55
				2480	38.56	39.16	-1.54	1.78	1.83	-2.64
H	8/18/2016	2450	Head	2450	39.95	39.20	1.91	1.83	1.80	1.50
				2400	40.10	39.30	2.04	1.77	1.75	1.05
				2480	39.84	39.16	1.73	1.85	1.83	1.12

8.2. System Check

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are re-measured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

System Performance Check Measurement Conditions:

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 ±0.2 mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 cm for measurements > 3 GHz.
- The DASY system with an E-Field Probe was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.
For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- Distance between probe sensors and phantom surface was set to 3 mm.
For 5 GHz band - Distance between probe sensors and phantom surface was set to 2.5 mm
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

System Check Results

The 1-g and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within 10% of the manufacturer calibrated dipole SAR target.

SAR Room	Date	Tissue Type	Dipole Type _Serial #	Dipole Cal. Due Date	Measured Results for 1g SAR				Measured Results for 10g SAR				Plot No.
					Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	Zoom Scan to 100 mW	Normalize to 1 W	Target (Ref. Value)	Delta ±10 %	
F	8/8/2016	Head	D2450V2 SN:748	2/22/2017	5.440	54.40	50.90	6.88	2.430	24.30	23.70	2.53	1,2
F	8/8/2016	Body	D2450V2 SN:748	2/22/2017	5.020	50.20	49.80	0.80	2.280	22.80	23.20	-1.72	
F	8/11/2016	Head	D2450V2 SN:748	2/22/2017	5.370	53.70	50.90	5.50	2.410	24.10	23.70	1.69	
F	8/11/2016	Body	D2450V2 SN:748	2/22/2017	5.200	52.00	49.80	4.42	2.350	23.50	23.20	1.29	
F	8/15/2016	Head	D2450V2 SN:748	2/22/2017	5.240	52.40	50.90	2.95	2.340	23.40	23.70	-1.27	
F	8/15/2016	Body	D2450V2 SN:748	2/22/2017	4.860	48.60	49.80	-2.41	2.200	22.00	23.20	-5.17	
F	8/18/2016	Head	D2450V2 SN:748	2/22/2017	5.240	52.40	50.90	2.95	2.360	23.60	23.70	-0.42	
F	8/18/2016	Body	D2450V2 SN:748	2/22/2017	5.280	52.80	49.80	6.02	2.410	24.10	23.20	3.88	
H	8/8/2016	Head	D2450V2 SN:748	2/22/2017	5.410	54.10	50.90	6.29	2.440	24.40	23.70	2.95	3,4
H	8/11/2016	Head	D2450V2 SN:748	2/22/2017	5.080	50.80	50.90	-0.20	2.290	22.90	23.70	-3.38	
H	8/15/2016	Head	D2450V2 SN:748	2/22/2017	5.030	50.30	50.90	-1.18	2.260	22.60	23.70	-4.64	
H	8/18/2016	Head	D2450V2 SN:748	2/22/2017	5.020	50.20	50.90	-1.38	2.280	22.80	23.70	-3.80	

9. Conducted Output Power Measurements

9.1. Wi-Fi 2.4GHz (DTS Band)

Measured Results

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Avg Pwr (dBm)
2.4	802.11b	1 Mbps	1	2412	19.5
			2	2417	20.5
			6	2437	20.5
			11	2462	20.5
			12	2467	20.5
			13	2472	19.0

Note(s):

- Output Power and SAR are not required for 802.11g/n HT20 channels when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
- Additionally, SAR is not required for Channels 12 and 13 because the tune-up limit and the measured output power for these two channels are no greater than those for the default test channels.

9.2. Bluetooth

Band (GHz)	Mode	Ch #	Freq. (MHz)	Avg Pwr (dBm)
2.4	BDR (GFSK)	0	2402	17.5
		39	2441	17.5
		78	2480	17.5
	EDR ($\pi/4$ DQPSK / 8DPSK)	0	2402	14.0
		39	2441	14.0
		78	2480	14.0
	LE	0	2402	17.5
		19	2440	17.5
		39	2480	17.5

Note(s):

- Only High Power for BT was evaluated for power measurement and SAR testing. Further evaluation for Low Power is not required.

10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

KDB 447498 D01 General RF Exposure Guidance:

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

KDB 248227 D01 SAR meas for 802.11:

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; these are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the initial test position(s) by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The initial test position(s) is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the reported SAR for the initial test position is:

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions are tested.
 - For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
 - When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test channels are considered.
 - The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.
- When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.
- When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

To determine the initial test position, Area Scans were performed to determine the position with the *Maximum Value of SAR (measured)*. The position that produced the highest *Maximum Value of SAR* is considered the worst case position; thus used as the initial test position.

10.1. Wi-Fi (DTS Band)

10.1.1. Non-Metallic Wristbands

Frequency Band	Mode	Housing Type	Wristband	RF Exposure Condition	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
2.4 GHz	802.11b 1 Mbps	Stainless Steel	None	Extremity	Rear	0	6	2437	20.5	20.5			0.023	0.023	
		Aluminum					6	2437	20.5	20.5			0.054	0.054	1
		Ceramic					6	2437	20.5	20.5			0.046	0.046	
		Stainless Steel	Nylon	Next-to-Mouth	Front	10	6	2437	20.5	20.5	0.163	0.163			
		Aluminum					6	2437	20.5	20.5	0.182	0.182			2
		Ceramic					6	2437	20.5	20.5	0.125	0.125			

Note(s):

SAR Testing was performed on all Housing Types for both RF Exposure Conditions.

10.1.2. Metallic Wristbands

Frequency Band	Mode	Housing Type	Wristband	RF Exposure Condition	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
2.4 GHz	802.11b 1 Mbps	Aluminum	Mesh	Extremity	Rear	0	6	2437	20.5	20.5			0.029	0.029	
			Links				6	2437	20.5	20.5			0.037	0.037	3
			Stainless Steel				6	2437	20.5	20.5			0.018	0.018	
			Ceramic				6	2437	20.5	20.5			0.023	0.023	
		Aluminum	Mesh	Next-to-Mouth	Front	10	6	2437	20.5	20.5	0.150	0.150			4
			Links				6	2437	20.5	20.5	0.143	0.143			
			Stainless Steel				6	2437	20.5	20.5	0.128	0.128			
			Ceramic				6	2437	20.5	20.5	0.080	0.080			

Note(s):

SAR Testing for both Wristbands was performed based on the worst case SAR for each RF Exposure Condition from Sec. 10.1.1.

10.2. Bluetooth

10.2.1. Non-Metallic Wristbands

Frequency Band	Mode	Housing Type	Wristband	RF Exposure Condition	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
2.4 GHz	GFSK	Aluminum	None	Extremity	Rear	0	39	2441	17.5	17.5			0.031	0.031	5
		Aluminum	Nylon	Next-to-Mouth	Front	10	39	2441	17.5	17.5	0.088	0.088			6

10.2.2. Metallic Wristbands

Frequency Band	Mode	Housing Type	Wristband	RF Exposure Condition	Test Position	Dist. (mm)	Ch #.	Freq. (MHz)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.
									Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled	
2.4 GHz	GFSK	Aluminum	Links	Extremity	Rear	0	39	2441	17.5	17.5			0.017	0.017	
		Aluminum	Mesh	Next-to-Mouth	Front	10	39	2441	17.5	17.5	0.076	0.076			

Note(s):

Test Justification: Due to similar frequency, BT testing was performed based on the Wi-Fi (DTS Band) worst case SAR result.

11. SAR Measurement Variability

In accordance with published RF Exposure KDB 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

- 1) Repeated measurement is not required when the original highest measured SAR is <0.8 or 2 W/kg (1-g or 10-g respectively); steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.8 or 2 W/kg (1-g or 10-g respectively), repeat that measurement once.
- 3) Perform a second repeated measurement only if the **ratio of largest to smallest SAR** for the original and first repeated measurements is > 1.20 or 3 (1-g or 10-g respectively) or when the original or repeated measurement is ≥ 1.45 or 3.6 W/kg (~ 10% from the 1-g or 10-g respective SAR limit).
- 4) Perform a third repeated measurement only if the original, first, or second repeated measurement is ≥ 1.5 or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 or 3 (1-g or 10-g respectively).

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	First Repeated		Second Repeated		Third Repeated
						Measured SAR (W/kg)	Largest to Smallest SAR Ratio	Measured SAR (W/kg)	Largest to Smallest SAR Ratio	Measured SAR (W/kg)
2400	Wi-Fi 802.11b/g/n	Next to Mouth	Front	No	0.182	N/A	N/A	N/A	N/A	N/A
	BT	Next to Mouth	Front	No	0.088	N/A	N/A	N/A	N/A	N/A

Note(s):

Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20 or 3 (1-g or 10-g respectively).

12. Simultaneous Transmission SAR Analysis

KDB 447498 D01 General RF Exposure Guidance introduces a new formula for calculating the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR = (SAR_1 + SAR_2)^{1.5} / Ri$$

Where:

SAR₁ is the highest measured or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR₂ is the highest measured or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

Ri is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$

In order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / Ri \leq 0.04$$

Simultaneous Transmission Condition

N/A

Wi-Fi 2.4GHz Radio cannot transmit simultaneously with Bluetooth Radio.

Appendixes

Refer to separated files for the following appendixes.

16U23782-S1V2 SAR_App A Setup Photos

16U23782-S1V1 SAR_App B System Check Plots

16U23782-S1V1 SAR_App C Highest Test Plots

16U23782-S1V1 SAR_App D Tissue Ingredients

16U23782-S1V1 SAR_App E Probe Cal. Certificates

16U23782-S1V1 SAR_App F Dipole Cal. Certificates

END OF REPORT

FCC FACT SHEET*
Updating the Equipment Authorization Program
First Report and Order - ET Docket 15-170

Background: The Commission's Equipment Authorization (EA) program ensures that radiofrequency (RF) devices, everything from smartphones and tablets to cellular base stations to car door openers and anti-theft tags, comply with our technical requirements before they are imported, marketed or operated within the United States. This First Report and Order would reduce the burden associated with certain equipment authorization rules, provide flexibility to use electronic labelling, and eliminate the requirement to file a form with U.S. Customs and Border Protection (CBP) for RF devices imported into the United States.

What the First Report and Order Would Do:

- *Streamline the Self-Approval Process.* The Commission currently requires manufacturers to self-approve certain devices under one of two processes. The Order would combine those processes into one, called the Supplier's Declaration of Conformity. This will both simplify and reduce burdens associated with the equipment authorization process.
- *Allow Electronic Labeling.* The Commission would provide for the use of electronic labeling for the information required under our rules to be displayed on products or otherwise provided with products, such as the FCC identification number and compliance statement. Doing so codifies many of the Commission's existing practices and satisfies specific legislative requirements. The use of electronic labelling rather than permanent physical labels reduces costs for manufacturers.
- *Ease Burdensome Importation Requirements.* The Order would eliminate the requirement to file the import declaration for RF devices brought into the United States with CBP. This requirement has become increasingly outdated and burdensome in light of current importation and marketing practices, the information otherwise collected by CBP itself, and the wealth of information available online. The Order would also modify Commission rules to clarify the compliance requirements related to imported devices and to provide additional flexibility in certain cases.
- *Update Measurement Procedures and Clarify Standards.* The Order would revise Commission measurement procedures to streamline and consolidate requirements for devices used in different services. This will increase our agility to respond to changes in technology and in industry standards, and enhance the general understanding of Commission measurement requirements.

* This document is being released as part of a "permit-but-disclose" proceeding. Any presentations or views on the subject expressed to the Commission or its staff, including by email, must be filed in ET Docket No. 15-170, which may be accessed via the Electronic Comment Filing System (<https://www.fcc.gov/ecfs/>). Before filing, participants should familiarize themselves with the Commission's *ex parte* rules, including the general prohibition on presentations (written and oral) on matters listed on the Sunshine Agenda, which is typically released a week prior to the Commission's meeting. See 47 CFR § 1.200 *et seq.*

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Amendment of Parts 0, 1, 2, 15 and 18 of the) ET Docket No. 15-170
Commission's Rules regarding Authorization of)
Radiofrequency Equipment)

FIRST REPORT AND ORDER*

Adopted: []

Released: []

By the Commission:

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* This document has been circulated for tentative consideration by the Commission at its July open meeting. The issues referenced in this document and the Commission's ultimate resolution of those issues remain under consideration and subject to change. This document does not constitute any official action by the Commission. However, the Chairman has determined that, in the interest of promoting the public's ability to understand the nature and scope of issues under consideration by the Commission, the public interest would be served by making this document publicly available. The FCC's ex parte rules apply and presentations are subject to "permit-but-disclose" ex parte rules. See, e.g., 47 C.F.R. §§ 1.1206, 1.1200(a). Participants in this proceeding should familiarize themselves with the Commission's ex parte rules.

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APPENDIX A – Final Rules

APPENDIX B – Final Regulatory Flexibility Analysis

I. INTRODUCTION

1. A wide variety of radiofrequency (RF) devices are subject to FCC technical and equipment authorization requirements in order to minimize the risk of harmful interference to radio services and to meet other statutory and policy objectives. In 2015, we issued a *Notice of Proposed Rulemaking (NPRM)* that included a comprehensive set of proposals to update our equipment authorization processes.¹ With this First Report and Order, we are generally adopting our proposals related to combining the two existing self-approval procedures and simplifying the authorization protocol for many of the devices authorized under these rules, and we are codifying and expanding existing guidance permitting electronic labeling to virtually eliminate the requirement for permanent physical labeling of any FCC-authorized equipment that has display capability except in rare cases. We are also modifying certain of our importation requirements to readily ascertain parties responsible for the compliance of imported devices and to permit additional importations prior to authorization in certain cases, and discontinuing the requirement to file the import declaration FCC Form 740. Finally, we are revising our measurement procedures to streamline and consolidate requirements for devices used in different services, to increase our agility to respond to changes in technology and in industry standards, and to enhance understanding generally of our measurement requirements. The actions we take and the implementing rules we adopt herein will better align our equipment authorization processes with the current state of RF device technology and the global marketplace, permit more efficient labeling practices, and streamline our importation procedures. We will address at a later time other proposals from the NPRM.²

¹ *Amendment of Parts 0, 1, 2, and 15 of the Commission’s Rules regarding Authorization of Radiofrequency Equipment, Notice of Proposed Rulemaking*, ET Docket No. 15-170, 30 FCC Rcd 7725 (2015) (NPRM).

² Issues yet to be addressed include proposals to update the certification requirements for devices assembled from modular components, to specify the requirements that apply to parties that are “responsible” for different types of certified equipment, to add provisions to prevent the unauthorized modification of the software and firmware that ensure that and RF device complies with FCC rules that prevent harmful interference, and to address the number of devices that can be imported for personal use.

(continued....)

II. BACKGROUND

2. Section 302 of the Communications Act of 1934, as amended (the Act), authorizes the Commission to make reasonable regulations governing the interference potential of devices that emit RF energy and can cause harmful interference to radio communications.³ The Commission generally implements this authority by establishing technical rules for RF devices.⁴ One of the primary ways in which the Commission ensures compliance with the technical rules is through the equipment authorization program for RF devices, which is codified in Part 2 of our rules.⁵ Pursuant to this program, RF devices must comply with the Commission's technical and equipment authorization requirements before they can be imported to or marketed in the United States.⁶ The Office of Engineering and Technology (OET) administers the day-to-day operation of the equipment authorization program.⁷ As part of its administration of the equipment authorization rules, OET has developed a substantial body of supplemental guidance that is available via public notices and in our online Knowledge Database (KDB).⁸

III. DISCUSSION

A. Unifying self-approval procedures

3. Currently, there are two different procedures for effecting equipment authorization by what amounts to self-approval by the responsible party. "Verification" is the process used for RF equipment that has a well understood testing methodology, poses a low interference risk, and has a high compliance rate.⁹ The party responsible for verification must take the necessary steps (testing or analysis) to ensure that the equipment complies with the appropriate technical standards.¹⁰ Declaration of Conformity (DoC) was later instituted primarily for personal computer equipment at a time when test procedures were not fully established, testing required heightened technical expertise, and the equipment could pose an elevated risk of causing harmful interference if it was not tested properly.¹¹ Accordingly, DoC has added requirements to have compliance testing performed by an accredited testing laboratory,¹² as well as inclusion of a written compliance statement from the manufacturer, (i.e., a "Declaration of

³ 47 U.S.C. § 302a(a).

⁴ For example, Part 15 of the Commission's rules sets forth the technical requirements for unlicensed devices; Parts 22, 24, and 27 set forth the technical requirements for transmitters used in various commercial mobile radio services; and Part 90 specifies the technical requirements for transmitters used in the private land mobile radio services. *See* 47 CFR Parts 15, 22, 24, 27 and 90, respectively.

⁵ *See* 47 CFR Part 2 Subpart J.

⁶ *See* 47 CFR § 2.803; *see also* 47 U.S.C. § 302a(b) (stating that "[n]o person shall manufacture, import, sell, offer for sale, or ship devices or home electronic equipment and systems, or use devices, which fail to comply with regulations promulgated under pursuant to this section").

⁷ *See* 47 CFR § 0.241(b) (delegating such authority to OET).

⁸ Links to all of these can be found at the OET Laboratory Division's Equipment Authorization Page, <https://www.fcc.gov/engineering-technology/laboratory-division/general/equipment-authorization>; and the Knowledge Database webpage: <http://www.fcc.gov/labhelp>.

⁹ Examples of devices subject to verification include non-consumer ISM equipment, TV and FM receivers, and business computer equipment.

¹⁰ 47 CFR § 2.902

¹¹ *See Amendment of Parts 2, 15, 18 and Other Parts of the Commission's Rules to Simplify and Streamline the Equipment Authorization Process for Radio Frequency Equipment*, ET Docket No. 97-94, Report and Order, 13 FCC Rcd 11415 at 11420, para. 12 (1998).

¹² *See* 47 CFR §§ 2.902 and 2.948(e).

(continued....)

Conformity”) with the literature furnished to the user¹³ and use of a specific FCC logo on the equipment identification label that signifies that the equipment meets the Commission’s regulations.¹⁴ These self-approval processes are distinguished from the more rigorous certification process, our third type of equipment authorization procedure, which generally is used for equipment that employs new technologies, involves complex testing procedures, or has a high risk of causing harmful interference.¹⁵

4. We adopt our proposal to replace the two existing self-approval procedures (DoC and verification) with a single process – “Supplier’s Declaration of Conformity” (SDoC). We observe that the test procedures for personal computer equipment and other devices currently subject to the DoC procedure have long been finalized and are well understood, such that there is no longer a need to require accreditation of test laboratories. Without the requirement for laboratory accreditation, the DoC and verification procedures are quite similar. Replacing these two processes with one will provide a unified process for the authorization of those RF devices that are well-suited for self-approval – i.e., equipment that has a strong record of compliance and for which there is minimal risk of harmful interference.¹⁶ In this action, we will reduce the burden of self-approval authorizations by applying the less rigorous verification testing requirements to all devices under the SDoC. We will also eliminate the requirement for displaying the FCC logo for *all* equipment approved under SDoC, currently imposed only on DoC devices. We will maintain the requirement for displaying a compliance statement and the identity of the responsible party and apply it to all self-approved devices, but permit it to be included with other information provided to the user instead of being displayed on the device itself. This compliance statement will represent a new requirement for verified devices, but should not increase burden as it replaces the requirement for a verified device to display a label on the device itself as testament to the device’s compliance, discussed below. These changes represent not only a reduction in burden warranted by current circumstances, but also provide a welcome simplification of our rules.

1. Supplier’s Declaration of Conformity

5. In the *NPRM*, we noted that significant changes in the design of RF devices had occurred since the adoption of the current DoC and verification processes, including since we last considered combining the DoC and verification procedures in 1998.¹⁷ In particular, we noted that the development of highly integrated circuits to implement functions which were previously performed by discrete components has resulted in lower typical RF emissions from such devices.¹⁸ Even as this development has reduced the potential for such devices to cause harmful interference, a wider variety and a larger

¹³ See 47 CFR §§ 2.1077(a), (c).

¹⁴ See 47 CFR § 15.19(b) and 18.209. DoC applies only to specific Part 15 and 18 equipment. Section 15.19(a) requires that devices subject to verification and certification bear a particular statement as to the device’s compliance with Part 15 and its condition of operation. 47 CFR § 15.19(a). The DoC and verification rules also contain minor differences in the wording of essentially similar provisions regarding records retention and compliance responsibility which are reconciled in the new rules. Compare, e.g., 47 CFR §§ 2.955 (a)(3)(vii) with 47 CFR §§ 2.1077 (a)(3)(vii) (requiring “drawings or photographs” versus “photographs”).

¹⁵ For example, verification and DoC do not require that the equipment testing be evaluated and approved by a Commission-recognized accredited independent certification body, known as a Telecommunication Certification Body (TCB), and do not require an explicit grant of certification. Also, unlike a certified device, self-approved equipment does not have an FCC ID and is not listed in an FCC database. *NPRM*, 30 FCC Rcd at 7728, paras 6 & 8.

¹⁶ *NPRM*, 30 FCC Rcd at 7733, para. 24.

¹⁷ *Id.*, 30 FCC Rcd at 7734, para. 25.

¹⁸ *Id.*

(continued....)

number of devices are falling under the DoC process as time progresses.¹⁹ In addition, significant developments in test standards over the years now provide greater confidence in the test procedures and results.²⁰ We questioned whether the additional effort and expense associated with the more onerous DoC process is now warranted for all self-certified devices, and tentatively concluded that a single self-approval process would simplify the equipment authorization requirements and reduce confusion as to which process may apply to any given device, while continuing to adequately ensure compliance with our rules.²¹ We proposed a Supplier's Declaration of Conformity to be the single process for use in cases where the self-approval process is warranted – that is, when the type of equipment has a strong record of compliance and the associated risk of harmful interference is minimal.

6. We proposed to draw on the general structural elements of an existing SDoC process codified in Part 68 of the rules that we use for Telephone Network Terminal Equipment, and also pointed to the process used in the European Union (EU) where a responsible party must prepare a European Commission SDoC when introducing an RF product to that market.²² Accordingly, we proposed that the responsible party for equipment would test equipment for compliance to specified standards or requirements and certify to the public by way of a statement supplied with the product that the equipment complies with our rules.²³ As with current practice, the responsible party would not have to secure an independent third-party review or approval of compliance.²⁴ We also sought comment on whether use of the term “Supplier's Declaration of Conformity” and “SDoC” as short reference would be appropriate to describe the procedure in our rules.²⁵

7. Our proposal to consolidate our RF equipment self-approval procedures and reduce the overall burden (particularly with respect to DoC devices) was generally supported by those filing comments,²⁶ although many commenters suggested that we modify specific aspects, which we discuss in greater detail, below.²⁷ However, several commenters were against the proposal outright. ARRL, the National Association for Amateur Radio (ARRL) considers the proposal to be an unwarranted loosening of requirements and, instead, advocates “tighten[ing] the procedural controls over the testing and affirmative conformations of compliance by manufacturers.”²⁸ It claims “very few” harmful interference reports are associated with devices authorized under a DoC, but that it has “received and investigated

¹⁹ *Id.* For instance, there has been an evolution in the design of personal computers from desktop computers to the introduction of much smaller laptop, notebook and tablet computers. Also, there has been an increase in the number of devices with USB connectors, e.g. USB memory sticks, watches, cameras, and similar devices (requiring testing by an accredited laboratory as computer peripherals) even though they have very little capability to cause interference.

²⁰ *Id.*, 30 FCC Rcd at 7734, fn. 49.

²¹ *See id.*, 30 FCC Rcd at 7734, para. 25..

²² *Id.*, 30 FCC Rcd at 7734-35, para. 27.

²³ *Id.*, 30 FCC Rcd at 7735, para. 27. Unlike our Part 68 SDoC rules, we did not propose to require that the RF devices be registered in any database. *Id.* We did propose that certain information would be required to be included in the equipment's accompanying literature.

²⁴ *Id.*

²⁵ *Id.*, 30 FCC Rcd at 7735, para. 28.

²⁶ *See generally* Boeing Comments, Consumer Electronics Association Comments, Google Comments, and Garmin Comments.

²⁷ *See, e.g.*, Alcatel-Lucent Comments at 2-3; Cisco Systems, Inc. Comments at 4-6; TCB Council Comments at 2-3.

²⁸ ARRL Comments at 4.

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numerous reports of interference from devices that are required to be verified.”²⁹ The American Council of Independent Laboratories (ACIL) claims that because modern and valid test procedures are not currently available for devices that operate under our Part 18 rules, we should continue to use the existing DoC procedures to ensure that these products are tested correctly and that the risk of harmful interference is minimized.³⁰ Finally, Sporton International, Inc. (Sporton) believes that our proposed single self-approval process would weaken both the laboratory accreditation and Mutual Recognition Agreement programs³¹ by allowing unscrupulous unaccredited laboratories to perform a wider range of testing services with little or no oversight.³²

8. None of the arguments against merging the current DoC and verification diminish our overall confidence in the proposed self-approval process or our belief in the benefits of streamlining the procedures by eliminating selected elements without appreciably raising the risk of harmful interference from devices so approved. The paucity of noncompliance over the years, and significant improvements in and standardization of test standards and procedures (and the equipment used) argue persuasively for expanding the utilization of the less onerous verification rules to all self-declarations. We note that ARRL does not provide in the record any specific instances where a failure to comply with the current verification rules directly resulted in harmful interference from the operation of a non-compliant device.³³ Likewise, we do not agree with ACIL’s assertion that the current DoC process should remain in effect for those Part 18 devices currently subject to DoC. While industry has not yet established a definitive set of test procedures for these devices, the agency has provided guidance in the form of the existing OET MP-5 test procedure, which is and will continue to apply to all Part 18 devices. To ensure that our adoption at this time of the proposed SDoC approach does not increase the risk that improper testing of products will cause harmful interference, we are directing OET to provide additional guidance as may become necessary to explain and supplement its existing test procedure document, as warranted by evolving technology and in response to applicants’ questions. Moreover, as ACIL has noted, efforts are underway to develop and publish a specific set of test standards that builds on the existing OET MP-5 test procedure.³⁴ Finally, we do not agree that our proposal would weaken the laboratory accreditation or MRA programs, as Sporton suggests. The use of accredited testing laboratories has recently become a vital component of the equipment authorization process in the arena where it is most warranted – the

²⁹ *Id.*

³⁰ ACIL Comments at 1-2; *see also* Echostar and Hughes Comments at 4 (raising similar concerns while still supporting other elements of our proposals).

³¹ Mutual Recognition Agreements (MRAs) are government-to-government trade facilitating measures aimed at a global approach to conformity assessment. In these agreements, the regulatory authorities in the participating countries mutually agree to accept the test results and/or product approvals performed by recognized Conformity Assessment Bodies (CABs) located in the other country.

³² Sporton International, Inc. Comments at 2-3; *see also* Alcatel-Lucent Comments at 2 (asserting that allowing laboratories to perform tests without accreditation and an MRA in place places US accredited test laboratories at a disadvantage to other laboratories that have not shown the necessary expertise to test such equipment).

³³ We are aware that ARRL has made complaints to staff regarding individual RF lighting installations that seem to cause interference to its members’ radios, but does not substantiate its contention that these are improperly authorized devices. Staff has been reviewing these complaints to determine whether the offending devices are in fact authorized or are being illegally sold in the U.S without authorization. Sales of devices without authorization, or at variance from their authorization, while illegal, would not implicate the rule changes considered in this docket.

³⁴ The ASC-C63 standards committee has started work on ANSI C63.31, *American National Standard for compliance testing of Industrial, Scientific and Medical (ISM) Equipment*. *See* http://www.c63.org/documents/misc/matrix/c63_standards.htm.

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testing of those devices subject to certification.³⁵ Moreover, even though the use of accredited laboratories will not be required for self-certification under SDoC (as discussed below), our rules impose strict responsibilities for ensuring that RF devices comply with our technical requirements, and we can demand for review the testing upon which self-certification relies.³⁶ Furthermore, because the SDoC rules will now specify that any party responsible for compliance (whether the manufacturer, importer, or import broker) must have a U.S. presence, we will have a clear and ready means to investigate complaints and the ability to take necessary actions, including imposing sanctions when appropriate.³⁷ Thus, manufacturers and any other responsible parties will have a strong incentive to ensure the continued use of demonstrably capable laboratories or take similar measures to give them confidence that self-certified products meet our requirements in order to maintain access to U.S. markets..

9. As proposed, we will refer to this new procedure as “Supplier’s Declaration of Conformity.”³⁸ As noted by Cradlepoint, Inc., this term is consistent with other global approval schemes.³⁹ Also, the use of the new term allows for a clear demarcation between the new and old procedures and would indicate which requirements were relied upon when determining a device’s compliance with our rules. The Consumer Electronics Association (CEA),⁴⁰ expresses concern that this usage would lead to confusion with the term used by the EU or in Part 68 of the Commission’s rules.⁴¹ We do not believe that this is likely to happen in practice, given that our guidance and rules will provide a clear contextual reference to the Commission’s equipment authorization program as defined in Part 2, Subpart J of our rules.

2. Process Elements

10. *Testing and laboratory accreditation.* In the *NPRM*, we outlined SDoC as a streamlined procedure through which we proposed to eliminate elements of the current DoC rules that increase compliance costs and provide benefits of marginal utility.⁴² As such, we proposed to not require that an accredited testing laboratory be used for performing the testing for any device that is subject to SDoC.⁴³

³⁵ *Amendment of Parts 0, 1, 2, and 15 of the Commission’s Rules regarding Authorization of Radiofrequency Equipment, Notice of Proposed Rulemaking, Report and Order*, ET Docket No. 13-44, RM-11652, 29 FCC Rcd 16335 (2014); *Amendment of Parts 0, 1, 2, and 15 of the Commission’s Rules regarding Authorization of Radiofrequency Equipment, Notice of Proposed Rulemaking Memorandum Opinion and Order and Order on Reconsideration*, ET Docket No. 13-44, RM-11652, 31 FCC Rcd 9 (2016).

³⁶ See 47 CFR § 2.938(c) in Appendix A.

³⁷ See para. 57 below.

³⁸ Accordingly, we will make the necessary conforming edits to the Commission Rule sections that currently refer to “Declaration of Conformity.” See *NPRM*, 30 FCC Rcd at 7769-70, para. 126.

³⁹ Cradlepoint, Inc. Comments at 2.

⁴⁰ In November 2016, CEA announced its name change to the Consumer Technology Association (CTA). We use “CEA” in this document for consistency with the record in this proceeding.

⁴¹ CEA Comments at 9. Garmin International, Inc. (Garmin) also supports use of the current “DoC” term, but provides no reason beyond noting that it is its “preference” to do so. Garmin Comments at 2.

⁴² *NPRM*, 30 FCC Rcd at 7734, para 26.

⁴³ *Id.*

(continued....)

This proposal was the subject of numerous comments, both those in favor⁴⁴ and opposed.⁴⁵ Commenters supporting not requiring use of accredited testing laboratories generally cite cost savings and gains in overall efficiency in the design process,⁴⁶ while many opposing commenters believe that the lack of accreditation will adversely affect the compliance of RF devices and result in more noncompliant devices and increased interference.⁴⁷ Additionally, Cisco points to the recent Commission decision to require accredited laboratories for certification testing and suggests that the requirement should be retained in the self-approval context, particularly in light of the increased number of RF devices that are manufactured and tested overseas,⁴⁸ and the American Association for Laboratory Accreditation (A2LA) notes that the EU has recognized the importance of accreditation.⁴⁹

11. We adopt our proposal to permit testing under the SDoC process to be performed by laboratories that have not obtained accreditation. Adopting an accreditation requirement for our new self-approval process would result in new and substantial burdens for many manufacturers since the existing verification process does not require the use of an accredited laboratory.⁵⁰ As stated elsewhere herein, testing of equipment that falls into the self-approval category, including DoC devices, has become increasingly routine and our experience with the compliance of verification devices suggests that there is negligible risk in relieving current DoC devices of this burden. Neither the record here nor our experience would justify the continuation of the burden for DoC devices nor the imposition of such a burden for verification devices. In contrast, we observe that there is not the kind of objective data in this record or elsewhere that would support the opposite assertion that accreditation is necessary for testing equipment subject to self-certification in order to prevent the proliferation of devices that will cause harmful interference. Should we later determine that there are particular types of RF devices authorized via SDoC that are more likely to cause harmful interference due to difficulties in the design, manufacturing, or testing processes, we retain the option to remove such devices from our self-approval procedure and place them within our more stringent equipment authorization process—certification—which continues to require, among other provisions, the use of accredited laboratories.

12. Our current verification and DoC rules permit responsible parties to “take other necessary steps” instead of testing in order to ensure compliance,⁵¹ which we proposed to eliminate in the NPRM.⁵² Several commenters urge us to leave the language in its current form or modify the adopted rules to

⁴⁴ See, e.g., Boeing Comments at 2-3; CEA Comments at 10; Google Comments at 2-3; Hewlett-Packard Comments at 2-3.

⁴⁵ See e.g., TCB Council Comments at 2; Alcatel-Lucent Comments at 2-3; Echostar and Hughes Comments at 4; Telecommunications Industry Association (TIA) Comments at 7.

⁴⁶ CEA Comments at 10; Garmin Comments at 2.

⁴⁷ See, e.g., TIA Comments at 7; Evan Chen Comments at 1; Alcatel-Lucent Comments at 2-3; TCB Council Comments at 2; see also ANSI C63 Comments at 6-7 (contending that the accreditation requirement has made cases of harmful interference “rare” and suggests that the Commission clearly require that testing laboratories comply with ANSI standards for testing unlicensed transmitters).

⁴⁸ Cisco Comments at 4-5; see also Sporton International Comments at 2-3.

⁴⁹ A2LA Comments at 2.

⁵⁰ The verification process applies to devices regulated under Parts 15, 18, 73, 74, 80 and 101, among others. See, e.g., 47 CFR §§ 15.101, 18.203, 73.53, 74.550, 80.203, 101.39.

⁵¹ See 47 CFR § 2.906 (a); accord *id.* § 2.902(a) (stating that the manufacturer may “make[] measurements or take[] the necessary steps to insure that the equipment complies with the appropriate technical standards”).

⁵² NPRM, 30 FCC Rcd at 7734, para. 26.

(continued....)

clearly indicate that numerical modeling is permitted as a means to demonstrate compliance.⁵³ CEA asserts that removing the language contradicts our underlying intent to streamline our rules and procedures.⁵⁴

13. We will adopt a modification of our proposal. In order to resolve commenter's concerns, we will continue to set forth specific acceptable testing procedures that draw upon the types of standardized procedures and voluntary standards that we have incorporated by reference and endorsed in our guidance documents and to specify in our rules that other "measures" would be acceptable to validate the compliance of a device. This approach provides the flexibility that commenters appear to associate with the "take necessary steps" language, but allows for a more consistent and predictable way to keep our procedures up to date.

14. *Compliance information and logo.* We proposed to require that all equipment include a compliance statement with the product literature that assures consumers that equipment has been determined to be compliant for use in the United States according to FCC regulations and identifies for consumers (and enforcement authorities) who is responsible for the device's compliance with the Commission's technical regulations.⁵⁵ Furthermore, we proposed not to require a specific logo be placed on the device (an element of the existing DoC requirements), but instead to expand use of the compliance statement required by Section 15.19(a) of our rules to include its use as part of the new procedure.⁵⁶ In this context, we sought comment addressing the impact that removal of the logo requirement would have on buyers, consumers, and other parties and whether the absence of the logo would make it more difficult to identify unauthorized devices.⁵⁷ We also asked whether we should allow the use of such a mark on a voluntary basis and, if so, whether there should be particular guidelines in our rules.⁵⁸

15. As an initial matter, we adopt our proposal to require for *all* SDoC devices that a compliance statement be included with the product literature that identifies for consumers who is responsible for the device's compliance with the Commission's technical regulations, and that the party must be located in the United States. Such a statement will allow the FCC to associate the equipment with the party responsible for compliance, and, as the TCB Council notes, will meet the public's need for information about manufacturers and origins of products.⁵⁹ No parties opposed this proposal, which draws on a requirement already in place under the DoC.

16. Commenters provided few specific suggestions regarding what constitutes "compliance information." Two filers, HP and ITIC, ask that we do not require a contact phone number with the compliance information. HP indicates that the phone number is not usually used for information related to FCC issues, but is often used for service calls and other general inquiries.⁶⁰ ITIC echoes HP's concerns and further points out that the phone contact requirement was left out of the proposed rule for Part 18

⁵³ Information Technology Industry Council (ITIC) Comments at 3, CEA Comments at 10, and Intel Corporation Comments at 2.

⁵⁴ CEA Comments at 10.

⁵⁵ *NPRM*, 30 FCC Rcd at 7736, para. 30. Section 15.19(a) sets forth language with which devices subject to certification or verification must be labelled. 47 CFR § 15.19(a).

⁵⁶ *NPRM*, 30 FCC Rcd at 7736, para. 31.

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ TCB Council Comments at 2. *See also* IBM Comments at 4 (encouraging the use of a manufacturer's representative located in the United States as the responsible party for equipment subject to SDoC that is imported).

⁶⁰ HP Comments at 2-3.

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devices.⁶¹ We believe that providing users with a means to contact knowledgeable personnel is useful for addressing possible non-compliant device operation. At the same time, we appreciate the frustration for consumers and disruption as well as frustration for businesses at the misdirected usage of a phone contact number for calls that have nothing to do with our equipment authorization requirements, cited by commenters. Given the widespread and effective use of direct internet contact for dialogue between consumers and businesses, we therefore will allow responsible parties the option of providing an internet-based means of contact in lieu of a telephone contact number.⁶² Any such website to which consumers are directed must be a URL that takes them directly to the page on which this information is included. In addition to requiring an internet contact or telephone number to be contained within the compliance statement, we will also allow the compliance statement to include other information as required by the particular rule part under which the device operates, including the non-interference statement required by Section 15.19(a) of our rules. Additionally, we see no reason for there to be a different practice for Part 18 devices, and adopt a requirement that applies uniformly to all devices.

17. Numerous commenters suggested that we allow the option of using the FCC logo in lieu of the compliance statement that is currently required to be included on a device label.⁶³ The FCC logo and compliance statement are two separate requirements.⁶⁴ While we proposed to provide additional flexibility with respect to placement of the compliance statement information (e.g., allowing it to be in the product literature instead of on the device),⁶⁵ we did not propose to allow the FCC logo to substitute for the compliance statement. Because the compliance statement conveys specific information about a product that a consumer cannot independently ascertain from the FCC logo, we do not believe it is appropriate to view the FCC logo as a substitute for the compliance statement. Accordingly, we are not adopting the commenters' suggestion.

18. Because the compliance statement will provide more relevant information than the FCC logo, we find that continuing to *require* the FCC logo would create an unnecessary burden on device manufacturers.⁶⁶ Nevertheless, commenters persuasively argue why we should allow the FCC logo to continue to be placed on devices voluntarily, as related above. These include assertions that its status as a symbol of compliance is recognized worldwide and its presence can assist customs officers, entities in foreign countries, and others who may want to know whether a device complies with our rules.⁶⁷ While these considerations are not sufficient reasons to continue to mandate a logo requirement as part of our rules, they provide good reason for us to allow use of the FCC logo on a voluntary basis. Accordingly, we adopt a rule that allows for the use of the FCC logo consistent with those currently specified in Sections 15.19 and 18.209 to be physically placed on a device, at the discretion of the responsible party. A device manufacturer is permitted to use such a logo only if its device complies with the applicable equipment authorization rules. We emphasize that, while the use of such a logo may be intended as an easily identifiable indicator that the device complies with our SDoC rules, its presence would not obviate

⁶¹ ITIC Comments at 3.

⁶² As with any contact information, we would expect that inquiries initiated through such internet-based means be responded to in a reasonable timeframe.

⁶³ See, e.g., Google Comments at 3; Sony Comments at 1; HP Reply Comments at 1.

⁶⁴ 47 CFR § 15.19(a), (b).

⁶⁵ *NPRM*, 30 FCC Rcd at 7736, para. 31.

⁶⁶ Because we will no longer require use of the FCC logo, several comments that pertain to its placement are now moot. See, e.g., ITIC Comments at 4-5 (suggesting that we permit the FCC logo to be placed in the instruction manual for Part 15 devices that are too small to display the logo).

⁶⁷ See, TCB Council Comments at 2.

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the need to provide required compliance information or maintain pertinent records related to device testing.

19. *Other requirements.* We proposed to consolidate the rules pertaining to responsible parties and records retention into single rules that apply to the SDoC and certification procedures.⁶⁸ We expressed our intention to retain the other DoC rules that will apply to the new approval procedure in their current location.⁶⁹ No commenters argued against or provided revisions to these proposals, and we believe that maintaining longstanding rule section numbers where possible and combining similar (and somewhat redundant) sections in a logical manner will help ease that the transition to the new SDoC process.⁷⁰ Accordingly, we adopt the rules as shown in Appendix A.⁷¹

20. We also inquired whether it would be useful to require a statement to include additional information when equipment has been modified, but is nevertheless still subject to the self-approval process.⁷² We proposed no specific rule and no commenters addressed the question. We will not adopt such a requirement. When considered as a whole, our rules will require the responsible party to provide up-to-date compliance information with each device. This information should be sufficient and we see no need to require that the modification history of the device be also provided.

21. We note that Cisco suggested that, when adopting the single SDoC process, we retain the distinctions between and the unique requirements for Class A (commercial/industrial) and Class B (residential/home) digital devices.⁷³ Beyond the new SDoC process - which will include both classes of devices - the *NPRM* did not include any proposal to modify the definitions or requirements for these devices nor did we receive any such proposals. The existing technical standards pertaining to Class A and Class B devices will remain otherwise unchanged.

3. Scope

22. We proposed to apply the new SDoC process to all equipment currently subject to our DoC and verification procedures and asked if we should re-visit which equipment authorization process is

⁶⁸ *NPRM*, 30 FCC Rcd at 7735, para. 29.

⁶⁹ *NPRM*, 30 FCC Rcd at 7735-36, para. 30.

⁷⁰ In this context, the *NPRM* proposed to modify the existing rule that addresses the responsible parties requirements for certification, 47 C.F.R § 2.909, into a unified rule addressing the requirements that apply to responsible parties for both the certification and SDoC processes. *Id.* at 7735, para. 29. We are not acting on our specific certification process proposals at this time. *See* para. 1, *supra*. Accordingly, new rule 2.909 will retain the existing requirements that apply to parties responsible for certification. We intend to revisit and further revise this rule when we act on the certification-related proposals.

⁷¹ The rules largely track those proposed in the *NPRM*, although we have made modifications when necessary to conform to our decisions herein, correct errors in the proposed rules as published, or provide additional clarity. *See, e.g.*, new rule section 2.925(b)(2) (adding a cross-reference to existing Part 68 requirements).

⁷² *NPRM*, 30 FCC Rcd at 7736, para 30.

⁷³ Cisco Comments at 5. Class A digital devices are marketed for use in a commercial, industrial or business environment, exclusive of a device which is marketed for use by the general public or is intended to be used in the home. *See* 47 CFR § 15.3(h). Class B digital devices are marketed for use in a residential environment notwithstanding use in commercial, business and industrial environments. 47 CFR § 15.3(i). Examples of such devices include, but are not limited to, personal computers, calculators, and similar electronic devices that are marketed for use by the general public. *See* 47 CFR § 15.3(i). Both Class A and Class B (other than personal computers and peripherals) digital devices are currently required to be authorized under the verification process. *See* 47 CFR § 15.101(a).

(continued....)

most appropriate for certain specific categories of devices.⁷⁴ No party objected to the proposal to apply the new SDoC procedure to all devices that are currently subject to the verification and DoC procedure and we continue to see no reason for changes; we modify our rules accordingly.

23. We also noted that, under Parts 15 and 18 of our rules, a responsible party can choose to use the certification process in lieu of DoC for the approval of certain unintentional radiators and asked whether we should maintain this option.⁷⁵ Cisco expressed support for eliminating the certification option for certain unintentional radiators subject to SDoC, while it suggested maintaining the option for certain types of receivers.⁷⁶ Cisco did not suggest the potential benefits in eliminating this option and no other commenter made a similar suggestion. In contrast, there are certain reasons that justify retaining the option. For example, FCC certification can facilitate the importation and marketing of equipment in other countries by allowing compliance officers in other countries to reference the publicly-available FCC equipment authorization information. Moreover, retaining this regulatory option places no burdens on a responsible party, as it is only an option; if, in the party's assessment, the cost of invoking the option outweighs its benefits, that party simply follows the SDoC procedures. Accordingly, we explicitly provide in our consolidated SDoC rules that parties may opt to undergo the more rigorous certification process for the equipment authorization for any device.

24. Two commenters suggested ways we could expand the scope of devices that are eligible for self-approval. Cisco suggests that the process would be more flexible if there is a default preference for allowing all devices to be authorized under SDoC, with testing performed by accredited laboratories, unless later specifically identified in a KDB publication to require certification.⁷⁷ TIA similarly asks us to permit OET to specify the types of equipment that may use the SDoC process via KDB guidance, which would make it easier to extend the SDoC approach to "additional classes of trusted equipment on a recurring basis as classes of equipment develop established records of compliance with Commission rules."⁷⁸ While we understand the desire to further streamline our processes, we are hesitant to establish a presumption that all devices should qualify for self-certification or promote a method that too readily invokes the self-approval process. Before it can qualify for the SDoC process, a device (or category of devices) must have demonstrated a strong record of compliance and minimal risk of harmful interference. The decision on the appropriate authorization process is rightfully made by the Commission as part of the service rules and all the considerations that go into it. To allow otherwise would risk imperiling the integrity of our equipment authorization procedures. Therefore, although we stand ready to initiate the appropriate processes to modify our service rules or take other appropriate action, we will only do so after giving full and fair consideration to such changes.⁷⁹

⁷⁴ *NPRM*, 30 FCC Rcd at 7736, para. 32.

⁷⁵ *Id.* (identifying 47 CFR §§ 15.101 and 18.203).

⁷⁶ Cisco Comments at 6.

⁷⁷ *Id.*

⁷⁸ TIA Comments at 7-8.

⁷⁹ Similarly, Intel and the Mobile Manufacturers Forum filed ex parte comments suggesting (among other proposals) that low power "internet of things" devices be processed under the new SDoC process in lieu of certification. Mobile Manufacturers Forum ex parte dated December 7, 2016; Intel ex parte Comments filed March 6, 2017 at 2. Neither comment provides sufficient justification to warrant such a broad change in our authorization processes. Both simply rely on a general assumption that all low-power devices have less risk interference and noncompliance with our RF exposure requirements. This ignores consideration of the environments in which such devices might operate. Further, neither provides specific equipment types beyond those related to the "internet of things," which is a generic term without specific definition within our rules, and we decline to define such a regulatory classification at this point in this proceeding.

(continued....)

4. Transition Period

25. In the *NPRM*, we acknowledged that the adoption of our SDoC proposal could cause some manufacturers to reassess their design and production processes.⁸⁰ Accordingly, while we proposed to make all of the rule changes proposed in the *NPRM* effective immediately upon their publication in the Federal Register (unless subject to approval by the Office of Management and Budget), we further proposed to permit manufacturers to continue to self-approve products using the existing DoC or verification procedures for up to one year from the effective date of the rules if they so choose.⁸¹ We received no comment on this and for the reasons originally stated will adopt our transition proposal for new equipment authorizations.

26. Several commenters suggest that we allow existing equipment to be “grandfathered” under the older procedures until the end of its useful life.⁸² Equipment authorizations have generally been valid until the end of the life of the equipment unless specifically required otherwise by changes in our technical rules, and we did not propose otherwise here. There is no reason that changes in our classifications or testing rules would reduce the reliability of authorized equipment in continuing to comply with our rules. To remove any uncertainty, we clarify here that we will consider any equipment authorized under either the verification or DoC procedures prior to the end of the transition period to remain a valid authorization without any further action, provided that such equipment is not modified in a manner that would have required a new authorization under those rules.⁸³

B. Labeling

27. In furtherance of the Enhance Labeling, Accessing, and Branding of Electronic Licenses Act (E-LABEL Act),⁸⁴ we proposed to add a new section to our rules that would codify our electronic labeling procedures.⁸⁵ The E-LABEL Act, which applies to all radiofrequency devices authorized by the Commission that have the “capability to digitally display labeling and regulatory information,”⁸⁶ directs us “to promulgate regulations or take other appropriate action, as necessary, to allow manufacturers of radiofrequency devices with display the option to use electronic labeling for the equipment in place of affixing physical labels to the equipment.”⁸⁷ We sought comment on our proposed electronic labeling rule and associated tentative conclusions.⁸⁸ In addition, we sought comment on proposed amendments to

⁸⁰ *NPRM*, 30 FCC Rcd at 7770, para. 127.

⁸¹ *Id.*

⁸² Intel Comments at 2, ITIC Comments at 6, CEA Comments at 9, and Sony Comments at 1.

⁸³ In the *NPRM*, the Commission acknowledged that adopting SDoC would necessitate revisions to several parts of our rules. *NPRM*, 30 FCC Rcd at 7769-70, para. 126. Such rules, along with numerous unrelated rule corrections that were related to equipment authorization in general, were included in Appendix B of the *NPRM*. While the final rules we adopt include those listed in Appendix B of the *NPRM* that specifically relate to the adoption of the SDoC procedure, we plan to address the other rules listed in Appendix B in a subsequent order.

⁸⁴ Enhance Labeling, Accessing, and Branding of Electronic Licenses Act of 2014, Pub. L. No. 113-197, 128 Stat. 2055 (codified at 47 U.S.C. § 622) (E-LABEL Act).

⁸⁵ *NPRM*, 30 FCC Rcd at 7757, para. 97.

⁸⁶ 47 U.S.C. § 622(a)(2)(B).

⁸⁷ *Id.* § 622(b).

⁸⁸ *NPRM*, 30 FCC Rcd at 7760, para. 101.

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our labeling regulations to address devices that are too small to be legibly labeled with an FCC ID.⁸⁹

28. The rules we proposed generally would allow a radiofrequency device to electronically display any labels required by our rules, including the FCC ID required for certified devices, as well as any warning statements or other information that our rules require to be placed on a physical label on the device.⁹⁰ Our proposal was designed to build on existing rules and guidance that have allowed the electronic labeling of devices in certain circumstances.⁹¹ We stated that our proposed rule was designed to meet the requirements of the E-LABEL Act and that it would provide flexibility to manufacturers while enabling consumers to continue to receive the information required by our rules.⁹² Commenters supported the general premise of our electronic labeling proposal.⁹³

29. In adopting a final rule that provides for the electronic labeling of RF devices,⁹⁴ we address the characteristics necessary for a device to be capable of displaying information under the terms of the E-LABEL Act. We then describe when a device manufacturer would be able to use an electronic label, including situations where temporary external labels would need to accompany the use of electronic labeling. Lastly, we discuss the particular situation where a device is too small to legibly display its associated FCC ID and the device does not have a display for electronic labeling. Because the E-LABEL Act does not require us to mandate the use of electronic labels, we did not propose to do so, and no commenter advocated such an approach. Accordingly, we do not impose any such requirement. We emphasize that our electronic labeling rules are permissive; parties may continue to employ physical labeling techniques consistent with existing rules and guidance if they so desire.

1. Capability of a device to digitally display information

30. In this section, we discuss *how* a device would be capable of displaying required labels electronically pursuant to the E-LABEL Act. The E-LABEL Act applies to “radiofrequency device[s] with display,” which are defined as equipment or devices that require Commission authorization prior to marketing and sale, and that “ha[ve] the capability to digitally display” required information.⁹⁵ In the *NPRM*, we stated that if a device cannot display the labeling and regulatory information to the intended recipient “in a manner that effects its purpose,” we did not believe that the device can be considered to be capable of digitally displaying the required information as required by the E-LABEL Act.⁹⁶ Thus, our proposed rule included provisions designed to ensure that devices satisfy the “capability” element of the E-LABEL Act.⁹⁷ Although no commenters disagreed with our overall approach, several parties addressed particular aspects of our proposed rule. Those comments are addressed below, as we describe the specific provisions that we conclude are necessary to ensure that the required labeling and regulatory

⁸⁹ *Id.* at 7758, 7761, paras. 93, 104. The FCC ID, which is assigned to all devices subject to certification, consists of two elements: a grantee code and an equipment product code.

⁹⁰ *Id.* at 7759, para. 97.

⁹¹ *Id.* at 7758-59, paras. 95-96.

⁹² *Id.* at 7760, para. 101. We believe that codification of the electronic labeling procedures would further the FCC process reform goals identified in GN Docket 14-25 – specifically, Recommendation 5.41 (“Update Labeling and Identification of Approved Products”). Report on FCC Process Reform, GN Docket 14-25, 29 FCC Rcd 1341, 1418 (2014).

⁹³ *See, e.g.*, HP Comments at 7, Garmin Comments at 4-5, and Cisco Comments at 20.

⁹⁴ *See* 47 CFR § 2.935 in Appendix A.

⁹⁵ E-LABEL Act, 47 U.S.C. § 622(a).

⁹⁶ *NPRM*, 30 FCC Rcd at 7759-60, para. 98.

⁹⁷ *Id.* at 7760, para 99. *See also* proposed rule 2.935(e).

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information is provided in an effective manner to the intended recipient.

a. “Three step” access

31. We proposed to require that labeling and regulatory information, when digitally displayed, should be accessible in no more than three steps.⁹⁸ This proposal is consonant with the suggestion of an industry group,⁹⁹ is similar to other international regulations,¹⁰⁰ and mirrors staff guidance currently provided in our KDB.¹⁰¹ ITIC suggests that instead we require the product instructions to state “clearly defined steps” for accessing the required information.¹⁰² It calls our proposal “constraining” and states that it is unclear because it does not specify where to start counting the three steps.¹⁰³ We adopt the proposed “three step” access requirement, clarifying that step one would be a user accessing the device settings menu. As an example of one characteristic sequence, accessing a submenu of legal information would represent step two and accessing a further submenu of FCC compliance information would represent step three. ITIC’s suggestion that there be no limit on the number of steps is problematic in that it would leave open the possibility that compliance information could be difficult to find if it is accessed only through numerous sequential menus. We do recognize that our adopted rule will apply to a wide variety of equipment and we direct OET to provide guidance in response to any specific questions on how to determine a particular device’s compliance with this requirement via the KDB inquiry process.

b. Access instructions

32. We proposed to require that the user be provided with prominent instructions on how to access the required labeling and regulatory information that is being made available electronically.¹⁰⁴ These instructions would be available in either the packaging material or another easily accessible format at the time of purchase, and be available on the product-related website, if one exists.¹⁰⁵ CTIA suggests that in order to reduce the size and weight of packaging materials, the access instructions should not be required both in the package materials and on the product website and that it should be the manufacturer’s option to provide the instructions in either manner.¹⁰⁶ We find merit in this comment. Given the relative ease of accessing website information – *e.g.* through a smartphone or other mobile device – we can adopt a rule that is less burdensome on manufacturers than our initial proposal with confidence that users will be able to readily determine how to access required labeling information. Accordingly, the rule we adopt requires that specific instructions on how to access the information be included with the device (packaging material, operating instruction booklet, etc.) *or* on a product-related website so long as the packaging material includes a statement that information on accessing this information is available on the Internet, along with effective instructions on how to access the direct website containing the required

⁹⁸ *NPRM*, 30 FCC Rcd at 7760, para. 98.

⁹⁹ Specifically, the Telecommunications Industry Association. See *NPRM*, 30 FCC Rcd at 7760 & n. 160.

¹⁰⁰ See, *e.g.*, The Guidance of the Certification and Engineering Bureau of Innovation, Science and Economic Development Canada, Notice 2014-DRS1003 (Nov. 13, 2014) <https://www.ic.gc.ca/eic/site/ceb-bhst.nsf/eng/tt00099.html>.

¹⁰¹ See KDB 784748 at II.B.1.

¹⁰² ITIC Comments at 11-12.

¹⁰³ *Id.* at 11.

¹⁰⁴ *NPRM*, 30 FCC Rcd at 7759-60, para. 98.

¹⁰⁵ *Id.*

¹⁰⁶ CTIA Comments at 10-11.

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information.¹⁰⁷ Recognizing ITIC’s concerns that devices often appear on multiple webpages, including those for retailers and resellers, and it would be “unnecessarily burdensome” to require the information on every site,¹⁰⁸ we specify that the responsible party must ensure that the website access instructions provided with the packaging material does not lead to a dead link or otherwise fail to provide information necessary for access to the required labeling and regulatory information online. In the event that the party responsible for the marketing of the device changes over time, maintaining this information shall become the responsibility of the party that most recently packaged the specific version of the device and made it available for sale.¹⁰⁹

33. Finally, Boeing suggests that the online information requirement be expanded to include the label information, asserting that consumers often expect to find such information online.¹¹⁰ We find that this is beyond the scope of our E-LABEL Act inquiry. For the same reason, we also will not consider Boeing’s proposal that a specific standardized format for materials be provided online.¹¹¹

c. Codes, permissions, and accessories

34. We also proposed that accessing the labeling and regulatory information not require any special codes or permissions.¹¹² We specifically proposed to prohibit other forms of electronic labeling such as Radio Frequency Identification (RFID) tags or Quick Response (QR) codes to substitute for the on-screen information display, or otherwise permit displays that require the use of special accessories, supplemental software, or similar plug-ins.¹¹³

35. ITIC was the only commenter that directly addressed the basic requirement, asking that we clarify that “passwords, PINs, or other mechanisms configured by a user to secure access to a device (e.g., a smartphone) do not qualify as ‘special codes’ or ‘permissions.’”¹¹⁴ We agree. Such mechanisms are integral to securing personal access to a device and its information, and are broad in application, and they do not inappropriately restrict access to labeling-related information. We therefore specify that the prohibition on special codes does not prevent the use of screen locks, passcodes, or similar security protections that are designed to control overall device access and use and implemented by the owner(s)/user(s) of a device. Instead, we are prohibiting features that are specifically designed to control access to FCC-related information, such as requiring a special key to activate access to the required regulatory information display.¹¹⁵

36. Several commenters ask us to allow the use of QR codes or RFID tags as electronic

¹⁰⁷ This is similar to existing guidance. *See* KDB 784748 D02 II.B.3.

¹⁰⁸ ITIC Comments at 10-11.

¹⁰⁹ This substantially addresses the concerns expressed by Jacob Lemmons about the availability and longevity of any on-line resources. *See* Comments of Jacob Lemmons. While we cannot, as a practical matter, effect any requirements that would cover situations where the responsible party ceases to exist and there is no direct successor-in-interest, we are confident that third-party resources – such as users’ groups, search engine caches, and online Internet archives – will serve as useful resources in such situations.

¹¹⁰ Boeing Reply Comments at 5.

¹¹¹ *See* Boeing Comments at 4-5.

¹¹² *NPRM*, 30 FCC Rcd at 7760, para. 98.

¹¹³ *Id.* at 7760, para. 100.

¹¹⁴ ITIC Comments at 11.

¹¹⁵ *See* 47 CFR § 2.935(b).

(continued....)

labeling, asserting ubiquity and an ability to convey more information,¹¹⁶ and noting their acceptance and usefulness in other governmental contexts.¹¹⁷ We will not allow the use of QR codes or RFID tags in lieu of on-screen display of information of such features because doing so would be inconsistent with the objectives of the labeling information requirement. To read a QR code on a device, one would have to use a second device with the appropriate software downloaded on it, which may or may not be available at the time that it is important for the information to be accessed. Thus, it is potentially unlikely and generally more burdensome than directly viewing FCC-required information on the subject device, and would run counter to our underlying goal of assuring that our essential regulatory and safety information is provided in a readily accessible – and timely - manner.¹¹⁸ The examples of QR codes and RFID tags in use by other agencies cited by ITIC and Intel are not apposite. FDA’s UDI program, cited by ITIC requires labeling “in *both* easily readable plain-text and Automatic Identification and Data Capture technology – usually a bar code.”¹¹⁹ Moreover, the bar code is not intended to provide users with visual information but instead is designed to facilitate the uploading of device identification information into an electronic patient record or other computer system via an automated process.¹²⁰ While RFID tags, advanced by Intel, might be appropriate for CBP use, they are not sufficient in other contexts, for the reasons discussed above.

d. Devices that require connection to a second device to function.

37. We proposed to retain our existing requirement that devices that rely on a wireless or remote connection and have no display must have a physical label, but we also asked whether devices that are controlled through software applications running on a smartphone, a web interface, or via network connection should be allowed to use an electronic label.¹²¹ Several commenters asked us to permit the electronic labeling of devices that do not have an integrated screen if they could only be used in conjunction with a device that does have a screen.¹²² In addition, Google notes that Canadian equipment authorization procedures permit such use.¹²³ Sony asserts that such use would be permitted under the E-LABEL Act and would be consistent with the Commission’s rules on video accessibility.¹²⁴

38. We find merit in these suggestions, and will allow electronic labeling for devices that do not include an integrated screen but that can only operate in conjunction with a device that has a screen. Because such devices only operate when associated with a device with an electronic display, we believe

¹¹⁶ IBM Comments at 6.

¹¹⁷ ITIC Comments at 12-13 (citing the Food and Drug Administration’s (FDA) Unique Device Identification (UDI) program); Intel Comments at 5 (discussing how codes could help Customs and Border Protection agents during the importation process).

¹¹⁸ See *NPRM*, 30 FCC Rcd at 7760, para. 100.

¹¹⁹ See FDA, Unique Device Identification System: Small Entity Compliance Guide (Aug. 13, 2014) at 5-6 (emphasis added), <http://www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/UCM409401.pdf>.

¹²⁰ *Id.*

¹²¹ *NPRM*, 30 FCC Rcd at 7761, para. 102. Examples include wireless DVD players, game controllers, and keyboards.

¹²² CEA Comments at 6; Google Comments at 18-20; Intel Comments at 5; TCB Council at 9; Garmin Comments at 4; TIA Comments at 25-26.

¹²³ Google Comments at 18-20.

¹²⁴ Sony Comments at 3.

(continued....)

that they should be considered to be capable of digitally displaying required information and therefore are analogous to the E-LABEL Act's definition of a "radiofrequency device with display."¹²⁵ We emphasize that this provision only applies to devices that have no operation or functionality as a radiofrequency device unless connected to an electronic display; merely being capable of such an association would not qualify a display-free device to use electronic labeling if the device retains any utility in a stand-alone configuration. Such devices will be subject to the same requirements as any other RF device that is eligible to use our electronic labeling rules.¹²⁶

e. Electronic labeling legibility and permanence.

39. In the *NPRM*, we proposed to require that electronic labeling information be electronically displayed in a manner that is "clearly legible without the aid of magnification."¹²⁷ No commenter addressed this proposal. We conclude that it is essential to include a legibility requirement in our final rules. Regardless of the method of display – electronic or physical – if the required information is not displayed in a legible manner, then the basic purpose of having a labeling requirement is undermined.¹²⁸ In a similar vein, a display that is too dim or displayed for too short a duration to be easily read would fail to be clearly legible under the rules we adopt. In the *NPRM*, we also proposed that electronic labeling information be secured to prevent its modification by third parties.¹²⁹ No party directly addressed this issue. We find that not having an assurance that a label will remain available to convey its information to the device user would undermine the basic purpose of the labeling requirement. Thus, just as physical labels must be "permanently affixed" under our rules, we conclude that electronic labels must not be easily removed or replaced if they are to be effective. Accordingly, we will require that if a manufacturer chooses to display required labeling information electronically, then it must ensure that the information may not be removed or modified by anyone other than the responsible party.

2. When electronic labels may be used

40. In this section, we discuss *when* e-labels can be used, consistent with our implementation of the E-LABEL Act.¹³⁰ In the *NPRM*, we discussed Section 2.925 of our rules, which requires each device subject to certification to have a label permanently affixed to the equipment, and readily visible to the purchaser at the time of purchase, that displays the FCC ID number and any other statements or labeling required by the rules governing the operation of the specific class of equipment.¹³¹ We also noted

¹²⁵ See 47 U.S.C. § 622(a).

¹²⁶ For example, connecting the device to an associated device should not be considered as one of the three steps required to access the e-labeled information. Additionally, any information that is routinely entered in order to initiate operation of the device or unlock any personal security protections will not be considered as special permission or access codes. We expect OET, as part of its routine administration of the equipment authorization program, to address any remaining process-related questions – including those raised in the record by Google (suggesting an application for certification would include a screenshot of the electronic label).

¹²⁷ *NPRM*, 30 FCC Rcd at 7760, para. 98.

¹²⁸ As a practical matter, many devices with an electronic display provide the user with the capability to reduce or enlarge views as desired in order to suit the individual's preference. In such instances, a minimum type size requirement would not be relevant. However, for devices that do not permit the FCC-required information to be manipulated in this manner, we direct our OET to extend its guidance for physically attached FCC ID and compliance labels, which specifies 4-point type as the minimum reasonable expected to be clearly legible. This appropriately extends our guidance for physically attached FCC ID and compliance labels. See KDB 784748.

¹²⁹ *NPRM*, 30 FCC Rcd at 7759, para. 97.

¹³⁰ 47 U.S.C. § 622(b).

¹³¹ *NPRM*, 30 FCC Rcd at 7758, para. 94 (citing 47 CFR § 2.925).

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that Part 15 devices are subject to additional labeling requirements related to the equipment authorization process.¹³² We further acknowledged that several other rules require warning labels or other information to be attached to particular types of devices.¹³³ We asked which of these sections should be eligible for compliance via electronic labeling.¹³⁴ The *NPRM* asked questions related to labeling rules that are intended to ensure that important safety-of-life information or warnings about illegal use of equipment are made prominently available to users of equipment.¹³⁵ Specifically, it asked for comment on whether electronic displays could effectively deliver these types of warning statements and whether it would be appropriate to apply our adopted e-labeling procedures in such circumstances.¹³⁶ Further, if e-labeling were found to be ineffective for such requirements, it sought comment on whether the E-LABEL Act permits us to continue to require physical labels for these warnings, and which labeling requirements would be affected.¹³⁷ Commenters did not dwell on specific rules, but instead broadly supported the concept of electronic labeling for all labeling/warning requirements, and identified situations where e-labels should be permitted.¹³⁸

41. As a general matter, we find that the terms of the E-LABEL Act can be widely applied to our rules and requirements. In defining “electronic labeling,” the statute does not limit itself to just the basic equipment labels that the Commission requires (e.g., FCC IDs), but references “labeling and regulatory information” generally to cover any labeling that the Commission may require, without regard to the subject matter.¹³⁹ If the Commission imposes (under current or future regulations) a requirement that a device physically bear a label with regulatory information, and if the device “has the capability to digitally display required labeling and regulatory information,”¹⁴⁰ then our general rule provides for the labeling requirement to be satisfied by presenting the labeling information on the device’s electronic display, subject to the specific e-labeling requirements we adopt. We note that where a rule has a variety

¹³² *Id.* (citing 47 CFR § 15.19).

¹³³ *Id.*, 30 FCC Rcd at 7768 & n. 169. These sections include 47 CFR § 15.19 (intentional, unintentional, or incidental radiator operation without individual licenses), 47 CFR § 15.121 (scanning receivers), 47 CFR § 15.212 (modular transmitters), 47 CFR § 15.214 (cordless telephones), 47 CFR § 18.209(b) (industrial, scientific, and medical (ISM) equipment), 47 CFR § 20.18 (911-only handsets), 47 CFR § 20.21(f) (consumer and industrial signal boosters), 47 CFR § 80.231(b) (automatic identification system (AIS) equipment), 47 CFR § 80.271 (portable survival craft radios), 47 CFR § 80.1061(f) (406-406.1 MHz emergency position indicating radiobeacon (EPIRB) stations), 47 CFR § 80.1103 (global maritime distress and safety systems (GMDSS)), 47 CFR §§ 87.147(b), 87.199(f) (emergency locator transmitters), 47 CFR § 90.219 (private land mobile radio service signal boosters), 47 CFR § 95.1017 (low power radio service (LPRS) transmitting device), 47 CFR § 95.1217 (MedRadio devices), and 47 CFR § 95.1402(f) (personal locator beacons).

¹³⁴ *NPRM*, 30 FCC Rcd at 7758, para. 94.

¹³⁵ *Id.* at 7761, para. 103. For example, labels with safety and registration advisories are prescribed to ensure the effectiveness of emergency locator beacons in sections 87.147 and 95.1402 of our rules. 47 CFR §§ 87.147 and 95.1402. Additionally, Section 15.121 of our rules requires a label for scanning receivers warning that modification of those receivers is illegal. *Id.* § 15.121.

¹³⁶ *NPRM*, 30 FCC Rcd at 7761, para. 103.

¹³⁷ *Id.*

¹³⁸ *See, e.g.*, CEA Comments at 5-6 and Google Comments at 18-20 (requesting that e-labeling be allowed for the warning labels required for prototype and test devices); TIA Comments at 27 (suggesting that the E-LABEL Act does not preclude the use of e-labeling to provide safety-of-life related warnings).

¹³⁹ 47 U.S.C. § 622(a)(1) (stating that “the term ‘electronic labeling’ means displaying required labeling and regulatory information electronically”).

¹⁴⁰ 47 U.S.C. § 622(a)(2)(B).

(continued....)

of information disclosure requirements (e.g., where information must be placed in the instruction manual, on product packaging, and on the device), only those elements that relate to labeling the device itself will be eligible for electronic labeling.¹⁴¹

42. E-labeling is premised on the capability of a device to display information, which must be available when needed.¹⁴² Thus, we conclude that there are limited situations where the use of an electronic label would undermine the reason for requiring the information in the first place. For example, when a message provides vital information about the use or deployment of RF equipment that a user would need to know before activating the device to look at a screen and it is not practical to expect the user to have ready access to the instruction manual or product website, then an electronic label will not be appropriate. Therefore, while we agree with TIA that the E-LABEL Act does not preclude us from allowing the electronic labeling of “safety-of-life” warnings as a general matter,¹⁴³ we nevertheless find that some warnings, given the context of their purpose, cannot be effectively conveyed electronically in a timely manner. In these types of situations, the use of physical labels will still be necessary. Consequently, we have identified three places in the recently revised Part 95 Personal Radio Service rules for which the electronic labeling option is not appropriate and will not be available: 95.2993 (mandatory labeling requirements and warnings for 406 MHz personal locator beacons), 95.2393 (notice of prior coordination requirement for wireless medical telemetry devices), and 95.2593 (non-interference warnings and serial number identification for MedRadio equipment), as well as rule sections 80.1061 (labeling requirements for Emergency Position Indicating Radiobeacons) and 87.199 (labeling requirements for Emergency Locator Transmitters).¹⁴⁴ In addition, in instances where documents incorporated by reference in our rules contain a physical labeling requirement, parties should continue to follow the standard set forth in those documents unless the Commission has adopted a specific exception to the labeling provision. All other device labeling requirements are presumptively eligible to be met through electronic labeling.¹⁴⁵

43. Accordingly, the rule we are adopting permits, with limited exceptions, e-labeling for “any . . . information that the Commission’s rules would otherwise require to be shown on a physical label attached to the device,” as proposed in the NPRM.¹⁴⁶ We intend this rule to have broad applicability, encompassing, for example, the rules for prototype and test device labels,¹⁴⁷ as noted in the CEA and Google comments.¹⁴⁸ Only in those limited cases where an electronic label would be incapable of conveying the information in a timely manner, such that it would undermine the purpose of providing

¹⁴¹ See, e.g., 47 CFR § 20.21(f)(1) (requiring, for signal boosters, the advisories be provided in on-line, point of sale marketing materials, in print or on-line owner’s manual and installation instructions, on the outside packaging of the device, and on a label affixed to the device).

¹⁴² NPRM, 30 FCC Rcd at 7759, para. 98.

¹⁴³ TIA Comments at 27.

¹⁴⁴ We realize that because equipment designed to operate under these rules may not even able to display information electronically (for example, lacking a display screen), these exclusions may be superfluous at present and have no practical effect on the design and deployment of devices for these services.

¹⁴⁵ As we review and update our service rules, we will endeavor to broaden the individual rule language to explicitly account for the electronic labeling option.

¹⁴⁶ NPRM, 30 FCC Rcd at 7780 (proposed § 2.935); see also *id.* at 7760, para. 99.

¹⁴⁷ See 47 CFR § 2.803(b)(2).

¹⁴⁸ See CEA Comments at 7; Google Comments at 20.

(continued....)

that information in the first place, will we still require the use of physical labels.¹⁴⁹

44. Finally, several commenters make suggestions that are beyond the scope of the actions we contemplated in this proceeding. ARRL suggests new labelling requirements for certain Part 15 and Part 18 devices, particularly for RF lighting devices intended for use in residential areas.¹⁵⁰ Lariat proposes that Part 15 devices should include operating frequencies on their labels.¹⁵¹ In the *NPRM* we did not specifically focus on the applicability of e-labeling to our existing rules, and it was not our intention to initiate any new information display requirements, and we are not persuaded to include these issues now.¹⁵² Similarly, numerous commenters suggested that we expand the scope of e-labeling to include Commission requirements for material to be included with, but not labeled on, various devices.¹⁵³ We continue to believe, as we tentatively concluded in the *NPRM*,¹⁵⁴ that rules requiring the placement of warning statements or other information on device packaging or in user manuals or make information available at the point of sale are outside the scope of the E-LABEL Act. Any potential modification to such requirements is more appropriately considered in the context of specific service rule proposals where we would be able to fully consider the issues associated with fulfilling each requirement by electronically-based methods.

3. Temporary external labels

45. The *NPRM* noted that labels required by our various rules provide consumers with important information about RF devices and inform government officials, including, for example, those with Customs and Border Protection (CBP), and our own Enforcement Bureau, that the devices meet the technical requirements of our rules.¹⁵⁵ Based on concerns that these abilities are limited when access to the electronic display is precluded, we proposed that devices that use an electronic label instead of a permanent physical label must also include the pertinent regulatory information on the product packaging or on a physical label placed on the device at the time of importation, marketing, and sales.¹⁵⁶ Few commenters addressed this proposal. While TIA supports “the use of physical labels . . . to sufficiently implement device labeling requirements,”¹⁵⁷ CEA and Google assert that requiring the removable labels would reduce many of the benefits of e-labeling and that such a requirement was not part of Congress’ direction in the E-LABEL Act.¹⁵⁸

46. We recognize that there is potential tension between the benefits that device manufacturers can realize though implementation of the E-LABEL Act and the burdens associated with our proposal. Nevertheless, we believe that temporary labels or packaging markings are significantly less burdensome than permanent labels, which are much more expensive to implement and which occupy

¹⁴⁹ In the event that a responsible party is unsure whether its device and/or display methodology satisfies our e-labeling rule, it may submit a KDB inquiry to the OET Lab or seek guidance from the Bureau responsible for the rule in question. KDB inquiries are routinely answered within two business days.

¹⁵⁰ ARRL Comments at 8-11.

¹⁵¹ LARIAT Comments at 3, 5.

¹⁵² *NPRM*, 30 FCC Rcd at 7760, para. 100.

¹⁵³ See, e.g., Cisco Comments at 20; CTIA Comments at 10; Samsung Comments at 3.

¹⁵⁴ *NPRM*, 30 FCC Rcd at 7760, para. 100.

¹⁵⁵ *Id.*, 30 FCC Rcd at 7760, para. 99.

¹⁵⁶ *Id.* This would effectively require the temporary label to remain in place until receipt by a U.S. consumer.

¹⁵⁷ TIA Comments at 26.

¹⁵⁸ CEA Comments at 7; CEA Reply Comments at 3-4; Google Comments at 20.

(continued....)

space permanently on the exterior of a device.¹⁵⁹ Electronic label information cannot reasonably be expected to be viewable when devices are packaged and encased in shipping materials and are uncharged or powered down.¹⁶⁰ A temporary physical label will support ongoing oversight and importantly provides everyone in the supply chain, including wholesalers, distributors, and retailers, as well as initial purchasers, an obvious assertion that a device comports with our technical requirements and is legal to import/sell/purchase in the U.S. Moreover, on frequent occasions at the time of importation, particularly with the elimination of the specific importation reporting requirement of FCC Form 740,¹⁶¹ this is a useful tool to readily determine whether the device has been certified as required. Without this provision, a Customs agent would need to open the packaging, turn on the device—assuming the battery is installed and charged—and sift through the menus to find the compliance information—both a burden and potentially a deterrent for effective customs interdiction of unauthorized devices. For these reasons, we adopt a limited version of our proposal. Specifically, we will require that a device or its packaging be labeled such that the device can be identified as complying with the FCC’s equipment authorization requirements, whether with a stick-on label or printing on the packaging or other similar means. In many cases, this might simply be the FCC ID.¹⁶² However, it can also be sufficient to identify the device by model or name if the webpage with the relevant regulatory information is readily identifiable.

47. Our requirement affords parties with considerably more flexibility than our existing rules—many of which require external labeling to be readily visible¹⁶³—as well as the existing KDB guidance.¹⁶⁴ It also significantly reduces the potential burdens with our proposed rule that parties had identified. Moreover, we disagree with the contention that this requirement is not part of the “direction” of the E-LABEL Act. While the E-LABEL Act did not specifically prescribe the use of temporary external labels, it did not directly proscribe them either. Notably the Act’s legislative history discussed the benefits of replacing *permanent* labels with electronic information, spoke of the challenges of the FCC’s “etching requirements,” and stated that the purpose of the bill was “to promote the *non-exclusive* use of electronic labeling for certain [RF] devices.”¹⁶⁵ Moreover, while the statutory language generically refers to physical labels, the legislative history makes it clear that Congress did not intend to frustrate or disrupt the underlying purpose of the equipment authorization program.¹⁶⁶ Because temporary labels are necessary for the program to work as intended, we will continue to require their use. The physical

¹⁵⁹ “[P]ermanently affixed means that the required nameplate data is etched, engraved, stamped, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment enclosure. Alternatively, the required information may be permanently marked on a nameplate of metal, plastic, or other material fastened to the equipment enclosure by welding, riveting, etc., or with a permanent adhesive. Such a nameplate must be able to last the expected lifetime of the equipment in the environment in which the equipment will be operated and must not be readily detachable.” 47 CFR § 2.925(d)(1).

¹⁶⁰ In other words, they lack “the capability to digitally display required labeling and regulatory information.” 47 U.S.C. § 622(a)(2)(B); *NPRM*, 30 FCC Rcd at 7760, para. 99.

¹⁶¹ See Paras. 50-54, *infra*.

¹⁶² See CTIA Comments at 11-12 and ITIC Comments at 13 (asking us to clarify that the external label requirement only applies to the FCC ID information required by Section 2.925).

¹⁶³ See 47 CFR § 2.925(d); see also 47 CFR § 15.19; 47 CFR § 15.233.

¹⁶⁴ See KDB 784748 D02 II.C.

¹⁶⁵ S. Rep. No. 113-280 (2014) (emphasis added) The report further stated that, absent the law “there may still be uncertainty about the circumstances where it is appropriate for a manufacturer to use electronic labeling in place of a *permanent* label on the surface of a device”) *Id.* (emphasis added).

¹⁶⁶ See H. Rep. No. 113-575 at 1 (2014) (acknowledging that “[o]ne of the FCC’s duties is the certification and labeling of radiofrequency devices, verifying compliance with the Commission’s interference rules.”)

(continued....)

labeling information we are requiring here is much less extensive and demanding, and the requirement can be met several different ways. As such, it provides a reasonable means for us to meet our objectives in maintaining the ready identification of devices while supporting the overall streamlining and cost-saving objectives embodied in the E-LABEL Act.

4. Labeling for small devices

48. While our current rules require that the identifying information on the label of a certified device be large enough to be readily legible, they do not specify what the manufacturer should do if the device is too small to display a legible label,¹⁶⁷ and the OET lab frequently receives inquiries in this regard. In the *NPRM* we sought comment on a proposal addressing how the identifying information may be communicated for small devices, proposing that if the device is so small that it is impractical to label it with the required information in a font that is four-point or larger, and the device does not have a display for electronic labeling, then the required information would be permitted to be placed in the user manual.¹⁶⁸ We also proposed to require in such instances that the information be placed either on the device packaging or on a removable label attached to the device.¹⁶⁹ CEA supported the proposal and no negative comments were received in this regard.¹⁷⁰ Accordingly, supported by comments, we here specify in our rules, as proposed, that a device's identifying information may be placed in its user manual if it cannot be displayed on the device in four-point type or larger and the device does not have a capability for electronic display.

C. Importation rules

49. Our rules set out specific conditions under which RF devices that are capable of causing harmful interference to radio communications may be imported into the United States.¹⁷¹ In the *NPRM*, we examined certain aspects of these rules and asked whether they continued to represent the most appropriate way to ensure that RF devices brought into the United States comply with the Commission's technical standards.¹⁷² Accordingly, we are here eliminating the FCC-specific customs declarations requirement (effected by FCC Form 740) and modifying our rules specifying responsibility for the compliance of imported RF products pursuant to the elimination of the existing declaration

¹⁶⁷ 47 CFR § 2.925(g). However, Section 2.925(f) provides that if "a permanently affixed nameplate is not desirable or is not feasible, an alternative method of positively identifying the equipment may be used if approved by the Commission"). The OET Lab previously provided guidance to help determine when a device is too small for the FCC ID to be readable. See KDB Publication 784748 (stating that the FCC ID may be placed in the user manual if the device is too small for the FCC ID to be readable (i.e., smaller than 4-6 point font).

¹⁶⁸ *NPRM*, 30 FCC Rcd at 7761, para. 104. We also sought comment on how the rules governing modular transmitters would affect our labeling requirements. *NPRM*, 30 FCC Rcd at 7762, para. 106. This proposal will not be discussed further at this time. It will be considered in the context of other modular transmitter-related certification process proposals that will be addressed in a subsequent order in this proceeding. See para. 4, *supra*

¹⁶⁹ *Id.*

¹⁷⁰ See CEA Comments at 8. See also Intel Comments at 5 (suggesting an expansion of the proposal to include unauthorized devices).

¹⁷¹ See Part 2, subpart K of our rules. 47 CFR §§ 2.1201-1207.

¹⁷² *NPRM*, 30 FCC Rcd at 7765-67, 7768-69, paras. 116-21, 122-25. We also asked whether we should eliminate the rule that permits the use of customs bonded warehouses (47 CFR § 2.1201(c)) for imported equipment that has not yet been authorized. *NPRM*, 30 FCC Rcd at 7767-68, para. 122. As it is related to other issues not resolved herein, we do not address it here.

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requirement.¹⁷³

1. Importation declaration / FCC Form 740

50. Section 2.1203 of our rules states that “[n]o [RF] device may be imported . . . unless the importer or ultimate consignee, or their designated customs broker, declares that the device meets one of the conditions of entry” set forth in our importation rules subpart.¹⁷⁴ To effectuate this, our rules require that, at ports of entry where electronic filing with U.S. Customs and Border Protection (CBP) is available, an electronic FCC declaration (essentially FCC Form 740) must be submitted to CBP, in addition to the electronic entry summary required by CBP.¹⁷⁵

51. In the *NPRM*, we proposed to eliminate FCC Form 740 and its associated rule provisions.¹⁷⁶ We recognized that this requirement has traditionally been intended to aid the FCC and CBP in preventing improperly authorized RF devices from being marketed to the public (where the devices might cause harmful interference to authorized communications), but also noted the significant changes that have taken place since the Form was adopted in the 1970s.¹⁷⁷ These include the proliferation of consumer devices with RF components that has driven the volume of FCC Form 740 filings from less than 1200 to approximately 2 million records annually; the emergence of the Internet as a source for equipment supplier information; and the overlap of information required on FCC Form 740 with what is currently included in the CBP’s routine information collection for all imported goods.¹⁷⁸ Accordingly, we questioned whether the large amount of data generated by the Form 740-related submissions remains useful and usable; asked whether there are any benefits to continuing to collect the Form 740 information in the current or modified form; and sought comment on whether the elimination of the data collection requirement might adversely affect any of the underlying objectives of our equipment authorization program.¹⁷⁹ Subsequent to the *NPRM*, CBP instituted enhancements to its new electronic filing system, the Automated Commercial Environment (ACE), that have eliminated the capability for importers to submit the FCC-required Form 740 information electronically.¹⁸⁰ In light of these developments, we temporarily suspended collection of the Form 740 information, pending the outcome of this proceeding.¹⁸¹

¹⁷³ We also adopt herewith non-substantive edits to Section 2.1204 that reflect the shifting of grants of certification from the Commission to Telecommunications Certification Bodies (TCBs).

¹⁷⁴ 47 CFR § 2.1203(a), “General requirements for entry into the U.S.A.” Section 2.1204 lists the particular conditions of import 47 CFR § 2.1204. The vast majority of devices require an equipment authorization; exceptions are provided, for example: for equipment used for demonstration at industry trade shows, imported solely for export, used by the U.S. federal government, imported for personal use in limited quantities for certain purposes, imported for repair and not to be offered for sale or marketed, and used as an implanted medical device. *Id.* 2.1204(a).

¹⁷⁵ *See* 47 CFR § 2.1205(b). While nearly all this information is filed electronically, at ports of entry where electronic filing with CBP is not available, the party must complete a paper copy of FCC Form 740 and attach it to the CBP-required entry papers. 47 CFR § 2.1205(a). A copy of FCC Form 740 may be found at <http://transition.fcc.gov/Forms/Form740/740.pdf>.

¹⁷⁶ *NPRM*, 30 FCC Rcd at 7767, para. 120.

¹⁷⁷ *Id.*, 30 FCC Rcd at 7766-67, paras. 118-19.

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*, 30 FCC Rcd at 7767, para. 119.

¹⁸⁰ The ability to file FCC-related importation filings electronically via the previous CBP processing system, the Automated Commercial System (ACS), ceased July 1, 2016. CPB, ACE Mandatory Use Dates (Feb. 7, 2017), <http://www.cbp.gov/trade/automated/ace-mandatory-use-dates>.

¹⁸¹ *Amendment of Parts 0, 1, 2, 15 and 18 of the Commission’s Rules Regarding Authorization of Radiofrequency Equipment*, ET Docket No. 15-170, Order, 30 FCC Rcd 11827, 11829, para. 7 (2015) (waiving the requirements of (continued....))

52. All commenters that addressed this issue supported eliminating the requirement to file FCC Form 740 when importing RF devices into the United States.¹⁸² Many parties also discussed the current practice in which the FCC and CBP have individual information collection roles. For example, Boeing asserts that, in the event that CBP would cease its (then-current) data collection, it would be important to ensure that a Federal agency assumes the responsibility to collect it.¹⁸³ One area of apparent confusion involved the statement in the *NPRM* that CBP collects much of the information found on FCC Form 740. Thus, some commenters suggest that the Commission should clarify the specific elements to be collected by CBP.¹⁸⁴ Similarly, several commenters assert that the CBP does not independently ask for things like the device model number, FCC ID, or description of the equipment, and they request that we not require CBP to collect this data once the Form 740 is discontinued.¹⁸⁵ Along these lines, other filers suggest that we work with CBP to further reduce and streamline the information collection requirements.¹⁸⁶ Finally, some commenters suggest that we adopt procedures similar to specific CBP filing practices and provisions such as programs that are related to the importation of low value items¹⁸⁷ and self-assessment or “trusted trader programs.”¹⁸⁸

53. No party refuted our observation that modifying our importation rules and procedures to eliminate the Form 740 filing requirements will serve the public by substantially reducing administrative burdens without diminishing our ability to access the information we need to enforce our importation rules. Moreover, there is nothing in the record to indicate that the existing Form 740 filing process provides a substantial deterrent to illegal importation of RF devices. We conclude that we can discontinue use of FCC Form 740 and adopt our proposal to eliminate Section 2.1205 and delete Section 2.1203(b), thus removing the Form 740 filing requirements.¹⁸⁹

54. We emphasize that by discontinuing FCC Form 740, we are not seeking to alter or expand CBP’s information collection requirements. Our proposal was not premised upon CBP collection data having a one-to-one correspondence with that included in our current filing requirement.¹⁹⁰

Sections 2.1203 and 2.1205 from July 1, 2016, through December 31, 2016). The waiver was subsequently extended through June 30, 2017, and again until September 30, 2017. *Amendment of Parts 0, 1, 2, 15 and 18 of the Commission’s Rules Regarding Authorization of Radiofrequency Equipment*, ET Docket No. 15-170, Order, 31 FCC Rcd 12916, 12917, para. 5 (OET 2016) (*Waiver Extension Order*); and *Amendment of Parts 0, 1, 2, 15 and 18 of the Commission’s Rules regarding Authorization of Radiofrequency Equipment*, ET Docket No. 15-170, Order, DA 17-541, (OET June 2, 2017) (*Waiver Further Extension Order*).

¹⁸² See, e.g. Hewlett-Packard Comments at 3; Garmin Comments at 5-6; CTIA Comments at 12.

¹⁸³ Boeing Comments at 2-3.

¹⁸⁴ CompTIA Comments at 1-3; ITIC Comments at 16; TIA Comments at 29-32.

¹⁸⁵ Echostar/Hughes Comments at 6; Express Association of America Comments at 1.

¹⁸⁶ CEA Comments at 17; CompTIA Comments at 1-3; Google Comments at 20-21.

¹⁸⁷ Wi-Fi Alliance Comments at 11-12; Intel Comments at 7-8.

¹⁸⁸ Intel Reply Comments at 2-3.

¹⁸⁹ As noted above, we have temporarily suspended the collection of Form 740 data. See Para. 51, *supra*. This temporary suspension ends on September 30, 2017. See *Waiver Further Extension Order*. In the event that the actions taken herein to permanently eliminate this collection requirement will not be effective by September 30, 2017, we will extend the temporary waiver of 47 C.F.R §§ 2.1205 and 2.1203(b) until the deletion of these rules is effective.

¹⁹⁰ “Additionally, *much* of the information that was required on FCC Form 740 is currently collected by CBP in its routine information collection for all imported goods.” *NPRM*, 30 FCC Rcd at 7766-67, para. 119 (emphasis added). “Since compliance with our importation rules is implicitly addressed by the information already required by

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Likewise we did not mean to suggest that it was our intention to ask CBP to modify its filing requirements to “make up” for the cessation of our data collection. CBP requires parties responsible for importation of goods to file entry documentation which includes identifying information about the ultimate consignee, importer of record, description of merchandise and manufacturer number among other information.¹⁹¹ The only additional information collected on the Form 740 is the declaration related to the device’s FCC ID or that the device complies with our authorization requirements. This additional information is now readily available elsewhere, and the filing burden for manufacturers, for importers, for FCC staff, and for CBPs by the Form 740 is no longer warranted. For these reasons as well as those discussed below and under the conditions set forth below, we continue to believe that the data currently collected by CBP, when considered along with other publicly available material, will satisfy our compliance objectives and continue to support appropriate enforcement actions.¹⁹² Regardless, should future experience indicate that changes in CBP data collection would aid—or hinder—our ongoing compliance activities, we would raise the issue with CBP in an appropriate manner or take other action to address those contingencies at that time. Finally, commenters should pursue any CBP filing process issues directly with that agency.

2. Compliance Responsibilities

55. To reconcile our rules with the elimination of FCC Form 740, we are revising Section 2.1203 “General requirement for entry into the U.S.A.,” to remove existing subsection (b), which requires a declaration of compliance for each imported device. Eliminating the FCC Form 740 requirement removes the requirement to report each unique device shipment. Doing so is also consistent with objectives identified by commenters. For example, TIA, which suggests moving away from transactional reporting requirements by collecting information from industry only upon Commission request, states that removing the requirement to report the import condition of each RF device would substantially reduce the administrative burdens associated with the rule.¹⁹³ Intel identifies ways to minimize the reporting requirement, such as only requiring submission of the device model number and the manufacturer name.¹⁹⁴

56. While we are eliminating this extensive paperwork requirement, we are not eliminating the requirement that there is an entity that assumes responsibility for the compliance of the device. Section 2.1203 requires a responsible party to attest to imported devices’ compliance with our importation regulations¹⁹⁵ and provides explicit administrative, civil, and criminal remedies¹⁹⁶ for importation of non-compliant equipment. This rule also calls for the submission of supporting documentation of compliance upon request by the Commission.¹⁹⁷ Some commenters have suggested the elimination of Section 2.1203

CBP, we propose to eliminate the explicit importation declaration requirement from our rules.” See *NPRM*, 30 FCC Rcd at 7767, para. 120.

¹⁹¹ 47 CFR §§ 142.3, 142.16, 142.22 and 142.24

¹⁹² CBP has agreed to provide the Commission, upon request, information about products (e.g., quantity, model numbers, and origin) that are subject to our rules. example, there is nothing in the record to indicate that the existing Form 740 filing process provides a substantial deterrent to illegal importation of RF device.

¹⁹³ TIA Comments at 30-31.

¹⁹⁴ Intel Comments at 7.

¹⁹⁵ 47 CFR § 2.1203(a).

¹⁹⁶ 47 CFR § 2.1203(c).

¹⁹⁷ 47 CFR § 2.1203(d).

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in its entirety.¹⁹⁸ We decline to do so. Section 2.1203 provides assurance that a party involved in the importation process has considered whether an RF device meets the qualifications for entry and that it can document how it made that determination upon request by the Commission. CompTIA's assertion that the Section 2.1203 requirements place a significant burden on imported products that is not similarly borne by products that are manufactured domestically,¹⁹⁹ are mistaken. Our decision eliminates the existing reporting burden for importers for which there is no equivalent for domestic manufacturers. The remaining rules providing for the identification of responsible parties and requiring the retention of documentation supporting the determination of device compliance are similar to the requirements for domestically-produced devices.²⁰⁰

57. To ensure that some party has affirmatively assessed the compliance of an imported device prior to importation and that we can hold such party responsible for that compliance after the elimination of the FCC Form 740, we adopt our proposal to replace the requirement in Section 2.1203(a) - that the importer or ultimate consignee, or their designated customs broker "declares" compliance with our import conditions - which will disappear with the elimination of that rule - with a requirement that one of the parties "determines" this compliance prior to importation. Comments from the customs brokerage and shipping communities assert that this modification imposes new compliance responsibilities on the customs broker.²⁰¹ For example, the National Customs Brokers and Forwarders Association of America (NCBFAA) expresses concern that the rule does not clearly place the responsibility for compliance on a single entity, and asserts that the customs brokers are simply information filers that lack the necessary knowledge of a products design or manufacture to determine whether the product meets FCC requirements.²⁰² This concern is not persuasive. For SDoC devices, our rules now require a U.S. contact,²⁰³ which will be the party responsible for compliance. For certified devices, the importer or the consignee can assume this responsibility for the devices they wish to import. While customs brokers may not have the expertise to determine the compliance of devices with FCC technical compliance rules, they can decline to broker shipments for which no other party will take responsibility, and they can take measures to ensure that their clients follow our rules for shipments they do broker by, for example, requiring a compliance statement by their client, relying on their business relationship with their client, by specific indemnification agreement, or with bonding measures to protect themselves from loss.²⁰⁴ We note that such measures will not shield any party from the liability it assumes for the compliance with the Communications Act and our rules for devices for which it takes on the responsibility of compliance in making the subject declaration. We further note that this provision does not relieve from liability any other party within our jurisdiction who is liable for a violation of our rules.

¹⁹⁸ CompTIA Comments at 1-2; *see also* TIA Comments at 29 (suggesting the rule be deleted, but offering alternative options as discussed in the preceding paragraph).

¹⁹⁹ CompTIA Comments at 1-2.

²⁰⁰ *See, e.g.*, §§ 2.909, 2.931 and 2.938.

²⁰¹ UPS Supply Chain Solutions Comments at 1-2; Express Association of America Comments at 2-3; National Customs Brokers & Forwarders Association of America, Inc. Comments at 2-3.

²⁰² NCBFAA Comments at 2-3; *see also* TIA Comments at 29-32, ITIC Comments at 16, and Intel Comments at 6-7 (suggesting that the importer is not always the appropriate party to hold responsible).

²⁰³ *See* 47 CFR § 2.1077(a)(3), Appendix A.

²⁰⁴ Because Customs Bonds (a type of surety bond) are required by CBP in many importation situations and because the broker/importer relationship is already contractual, customs brokers should have the wherewithal to identify and take appropriate measures to protect their interests.

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58. In light of the concerns raised by the customs brokers, we will also continue to publish information that they can use to help evaluate whether a particular shipment is likely to implicate our Section 2.1203 requirements. The Commission has been identifying particular Harmonized Tariff Schedule (HTS) Numbers²⁰⁵ to flag the likelihood that it will be necessary to submit FCC Form 740-related importation information.²⁰⁶ Going forward, OET will continue to provide this information as a nonbinding guidance document listing HTS Numbers that are likely to be associated with RF devices. With this information, customs brokers can continue existing practices by which they consult the list of HTS Numbers to identify goods that may contain RF devices that are likely to be subject to FCC regulations. They will then be able to take whatever steps that they feel are necessary to ensure that there is a responsible party who has complied with our Section 2.1203 requirements.²⁰⁷ Finally, we note that the issue of whether and how to require a U.S. presence in conjunction with certified devices remains subject to resolution in the rulemaking and we can revisit the issue of broker responsibility in conjunction with that determination.²⁰⁸

3. Increasing the number of trade show devices

59. In the *NPRM*, we proposed to modify Section 2.1204(a)(4), which allows for the importation of RF devices for demonstration purposes at a trade show, provided that those devices will not be sold or marketed, to permit the importation of up to 400 devices of any type.²⁰⁹ The current rule allows for 200 units for devices used in licensed services (including the “licensed by rule” services) and 10 units for all other products, but also allows for the importation of a greater number of devices upon written approval from OET.²¹⁰ We observed that modern trade shows and conventions typically generate requests to bring in 200-300 devices for demonstration and evaluation purposes (which, in our experience, have not resulted in reports of harmful interference).²¹¹ We anticipated that codifying a revised limit that better reflected current practices would reduce the administrative burden on both manufacturers and importers by eliminating requests for written approval to exceed the import limits in virtually all instances, and that eliminating the distinction by device type would be appropriate because many devices now incorporate a mix of licensed and unlicensed transmitters.²¹² We further noted that,

²⁰⁵ The HTS provides the applicable tariff rates and statistical categories for all merchandise imported into the United States. <https://www.usitc.gov/tata/hts/index.htm>.

²⁰⁶ See KDB guidance document 997198 D01 Guide Form 740 v01. It should be noted that, as electronic technology is incorporated in a variety of products (including those associated with the Internet of Things), the guidance may not identify all the products that may be subject to the Commission rules.

²⁰⁷ Because the OET publication will be best-effort guidance and some RF devices could be associated with HTS Numbers that are not listed, brokers will still have to obtain sufficient information from their clients to ensure that they receive goods that are compliant with our rules. Reliance on the OET publication, by itself, would not guarantee that an importer or ultimate consignee, or their designated customs broker, is in compliance with the Section 2.1203 requirements and would not preclude potential enforcement action from the Commission, if such action is warranted.

²⁰⁸ *NPRM*, 30 FCC Rcd at 7747-53, paras. 58-76.

²⁰⁹ *Id.*, 30 FCC Rcd at 7768, para. 123.

²¹⁰ 47 CFR § 2.1204(a)(4)(i)-(iii).

²¹¹ *NPRM*, 30 FCC Rcd at 7768, para. 123.

²¹² *Id.* We also noted that the change would be similar to recent rule modifications that increased the number of devices that can be imported for testing and evaluation purposes prior to equipment authorization from 2000 to 4000 for devices operating in licensed services and from 200 to 4000 for devices operating in unlicensed bands. *Id.* (citing *Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission’s Rules and Streamlining Other Related Rules and 2006 Biennial Review of Telecommunications Regulations – Part 2*

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given the use restrictions and prohibitions on sales and marketing of the trade show devices, it was unlikely that codifying the increased limit would result in an appreciable risk of these devices causing harm.²¹³

60. All commenters addressing this proposal supported increasing the number of devices that could be imported for trade shows or other demonstration purposes.²¹⁴ In order to reduce the administrative burden on importers, CompTIA, TIA, and Wi-Fi Alliance agreed with our proposal to adopt a single limit for both licensed and unlicensed devices.²¹⁵ Still other commenters, in addition to combining the licensed and unlicensed rule provisions, suggested that we increase the permitted total to 800.²¹⁶

61. We adopt the rule as proposed in the *NPRM* and will permit importation of up to 400 devices of any type for demonstration purposes at trade shows.²¹⁷ This increased number will reduce the administrative burdens associated with the existing rule, and is appropriate, based on our experiences with trade shows in which parties have imported and demonstrated more devices than are permitted under the existing limits. Moreover, it appears that this number will accommodate virtually all needs²¹⁸ while maintaining a check on the potential that too many imported trade show devices could lead to interference concerns. The option to seek written approval to import more than 400 devices will remain available under new Section 2.1204(a)(4)(ii) for any such cases that might occur.

4. Excluded devices

62. Section 2.1202(a) of our rules excludes certain unintentional radiators “which utilize low level battery power and which do not contain provisions for operation while connected to AC power lines” from complying with our Subpart K importation conditions, listing several examples.²¹⁹ The *NPRM* proposed to remove this exclusion because many of the listed devices – which include cameras, musical greeting cards, clocks and watches, and hand-held calculators and video games – have become significantly more sophisticated since the rule was adopted in 1991.²²⁰ CEA disagrees with the proposal, indicating that they found the exclusion list “helpful,” and noting that it is unaware of interference being

Administered by the Office of Engineering and Technology (OET), ET Docket Nos. 10-236 and 06-155, Report and Order, 28 FCC Rcd 758 (2013) (Experimental Licensing Order).

²¹³ *NPRM*, 30 FCC Rcd at 7768, para. 123.

²¹⁴ *See, e.g.*, HP Comments at 3; IBM comments at 7; CTIA Comments at 13.

²¹⁵ CTIA Comments at 13; TIA Comments at 33-34; Wi-Fi Alliance Comments at 13-14.

²¹⁶ *See, e.g.*, CompTIA Comments at 4; Intel Comments at 11; CEA Comments at 18-19.

²¹⁷ Several commenters pointed out a discrepancy between the proposed rule, Section 2.1204(a)(4)(i), and the proposal as discussed in the text of the *NPRM*. *NPRM*, 30 FCC Rcd at 7768, para. 123. Specifically, the proposed rule provided for 400 “licensed” devices. *NPRM*, 30 FCC Rcd at 7794. However, the Proposed Rules Appendix did not include any edits to Section 2.1204(a)(4)(ii). That section limits “all other devices” to 20. Thus, on its face, the adopted rule change would keep separate limits for licensed and unlicensed devices. Section 2.1204 as adopted will reflect the single limit discussed above.

²¹⁸ In the last three years, we have received several requests for waivers of the import limitation, none of which exceeded 400 units.

²¹⁹ 47 CFR § 2.1202(a).

²²⁰ *NPRM*, 30 FCC Rcd at 7769, para. 124.

(continued....)

caused by such devices.²²¹

63. As a practical matter, the removal of the importation declaration requirement (FCC Form 740) relieves a significant burden, leaving this exemption with little additional benefit for importers. Still, in response to CEA's comments, we will retain the rule, but we will eliminate the list of examples from the rules. The list of examples is no longer accurately illustrative and may lead to both undue restrictions and to inappropriate exclusions. While we agree that effectively innocuous devices should be readily imported, we note that the RF device ecosystem continues to become more complex and interconnected, and today's "camera" or "watch" bears little resemblance to its simple and likely single-purpose 1991 counterpart, often including components with an interference potential greater than that which the rule anticipated when written. For example, a device that is connected to a computer, such as a "connected watch"²²² or camera with Bluetooth connectivity²²³—atypical then but commonplace today—qualifies as a computer peripheral or intentional radiator, respectively, and is not exempt.²²⁴ In addition, battery technology has advanced to potentially provide much more power in the small batteries used in such devices. At the same time, we realize that importers would like to continue to import basic varieties of musical greeting cards, quartz watches, calculators, and similar devices with very low, battery-only power as easily as they have under the existing rule. Accordingly, the rule will continue to specify that the exemption applies to unintentional radiators that operate only on low level battery power. However, we will eliminate the illustrative list, as it is obsolete and potentially misleading. Inappropriate examples potentially lead to the inadvertent importation of unauthorized devices that should have equipment authorization and the unnecessary authorization of equipment for which it was not necessary. We will continue to describe the characteristics of such devices, and for guidance the OET laboratory will retain a public illustrative list of device types as non-categorical examples.²²⁵

5. Devices imported for personal use

64. Section 2.1204(a)(7) permits an individual to import up to three radio receivers, computers, or other RF devices defined in Part 15 as unintentional radiators, provided that the devices are intended for personal use only.²²⁶ In the *NPRM*, we proposed to expand the scope of this rule to include all devices, whether or not used in conjunction with licensed service.²²⁷ Commenters generally supported expanding the personal use exception and suggested that the scope of use covered by the exception be expanded to apply to devices imported for business or professional use by individuals or on

²²¹ CEA Comments at 19. *But see* TIA Comments at 33 (while not directly asserting its support, suggesting a rule identical to the one proposed by the Commission in the *NPRM*).

²²² LVMH, TAG Heuer Connected Watch, the first luxury connected watch (Nov. 10, 2015), <https://www.lvmh.com/news-documents/news/tag-heuer-connected-watch-the-first-luxury-connected-watch>.

²²³ Best Buy, <http://www.bestbuy.com/site/nikon-d3400-dslr-camera-with-af-p-dx-18-55mm-g-vr-and-70-300mm-g-ed-lenses-red/5580130.p?skuId=5580130&ref=199&loc=zhehdLHc0f8&acampID=1&siteID=zhehdLHc0f8-KjqXucr91PHEU6sfFxa5cQ> (last visited May 24, 2017).

²²⁴ 47 CFR § 2.1202(e).

²²⁵ Because, under this revised rule, importers will need to consider a device's RF characteristics and potential to cause interference instead of simply assuming it is categorically exempt, we direct the OET Lab to issue further guidance, as necessary, through the KDB.

²²⁶ 47 CFR § 2.1204(a)(7).

²²⁷ *NPRM*, 30 FCC Rcd at 7769, para. 125. The *NPRM* also asked if the three-device limit would still be appropriate. *Id.* We are not addressing this proposal within this decision.

(continued....)

behalf of a corporation and not intended for transfer or sale.²²⁸

65. We revise Section 2.1204(a)(7) to allow an individual to import up to three devices, including those covered under the current exemption as well as intentional RF transmitters identified under our rules as client or subscriber devices,²²⁹ for the individual's own²³⁰ use. By limiting the expansion of the rule to encompass client or subscriber devices, we can account for modern use scenarios while still ensuring that our importation rules continue to offer adequate protection against the types of devices that are likely to lead to cases of harmful interference.²³¹

66. We emphasize that although we are relaxing our import conditions associated with such devices, parties still bear the responsibility to ensure that subject devices are designed to, and do, operate in a manner generally consistent with our rules and that they do not cause harmful interference to other users.

D. Measurement procedures

67. We here adopt several rule modifications proposed in the NPRM that will make it easier for the Commission to keep up with changes in technology and in industry measurement standards by increasing the visibility of our Knowledge Database (KDB) which provides current guidance on accepted practice by direct reference on our rules, that will respond to the recent adoption of certain measurement procedures by ANSI ASC C63, that will streamline test procedures for manufacturers to show compliance with our technical requirements, and that will move the rules regarding measurements for composite systems from Part 15 to Part 2 of our rules to better indicate their more general applicability. Collectively, these modifications will make it easier to ensure that the devices subject to our rules are tested properly and address the evolution of how new technologies are adopted in the latest generation of devices.

²²⁸ See, e.g., CompTIA Comments at 4; see also CEA Comments at 18; ITIC Comments at 18; Intel Comments at 11; Wi-Fi Alliance Comments at 13-14; Boeing Reply Comments at 6-7.

²²⁹ For devices subject to our Part 15 rules, client devices are defined in Section 15.202 as those devices "operating in a mode in which the transmissions of the device are under control of the master." 47 CFR § 15.202. Further "a device in client mode is not able to initiate a network." *Id.* For devices operating under our rules for licensed or licensed-by-rule devices, the subscriber devices would be operating under the authority of an operator who manages the network to which such a device would connect. The OET laboratory may, from time to time as required by circumstances, identify types of devices specifically included in or excluded from this exemption.

²³⁰ This use of "'own' use" is intentional. The Commission has previously characterized this exemption as applying to "the importer's or consignee's own use, personal or not" of devices. *Amendment of Part 2 of the Rules Concerning the Importation of Radio Frequency Devices Capable of Causing Harmful Interference*, GN Docket No. 89-349, Notice of Proposed Rulemaking, 4 FCC Rcd 6146, 6149, para. 33 (1989). Given this clear intention, we are not inclined to begin distinguishing "personal" from "professional" use. Additionally, this rule is not to be construed to permit businesses to import or have their employees import for them unauthorized devices that would otherwise be excluded from import. *Amendment of Part 2 of the Rules Concerning the Importation of Radio Frequency Devices Capable of Causing Harmful Interference*, GN Docket No. 89-349, Report and Order, 6 FCC Rcd 3296, 3298, para. 17 (1989). To the extent that manufacturers or other businesses wish to import devices for testing or developmental purposes, Section 2.1204(a)(4) already provides an exemption and waivers can be granted where warranted. Commenters have not suggested situations, compelling or otherwise, that would warrant consideration of any other rules related to business use of unapproved devices.

²³¹ Master devices which connect and control client/subscriber devices typically operate at much higher power levels with a consequent greater potential to cause harmful interference, whereas client/subscriber devices are low-powered devices intended to operate only over very short distances.

(continued....)

1. Streamlining and consolidating references

a. KDB guidance

68. *Section 2.947.* As we have noted, the supplemental guidance that OET has compiled with the KDB plays an important role in fostering compliance with our equipment authorization processes.²³² In order to further utilize this guidance and increase our ability to keep up with the latest measurement procedures and techniques, the *NPRM* included several proposals to modify our rules to include more direct references to the KDB.²³³ Section 2.947 of our rules sets forth the standards or measurement procedures that the Commission considers acceptable for use when compiling required compliance data.²³⁴ In the *NPRM*, we proposed to modify Section 2.947(a)(3), which currently refers to “any measurement procedure acceptable to the Commission,” to specifically include a reference to the advisory information that is available in the Commission’s online KDB publications.²³⁵ We also noted that devices are often required to comply with service-specific procedures described in other parts of our rules and we asked whether we should further modify Section 2.947 to acknowledge that other rule parts may specify additional measurement procedures.²³⁶

69. ASC C63 “enthusiastically supports” a specific reference to the KDB in Section 2.947 and further suggests that we provide specific KDB numbers in the rules or at “a special location on the Commission’s web site that identifies KDBs related to ASC C63 standards.”²³⁷ Although it did not specifically cite the proposal to amend Section 2.947, Cisco supports utilizing the KDB for procedures wherever possible.²³⁸ In the context of this proposal, while not directly mentioning KDB usage, Wi-Fi Alliance and TIA both assert that industry standards should be referenced wherever possible.²³⁹ While it was not against the proposal, ITIC states “that modifying Section 2.947 to state that other rule parts may specify additional measurement procedures is not necessary but would not cause any harm.”²⁴⁰ The TCB Council supports the reference to KDB guidance and proposed that Section 2.947 be modified to require that test reports include adequate test data to demonstrate compliance or justification acceptable to the Commission as to why test data is not required to show compliance.²⁴¹

70. We are amending Section 2.947 of the rules to include references to the advisory information in the Commission’s Knowledge Database. Doing so will assist manufacturers and the public by providing a clear reference to an existing resource that provides technical guidance. We are

²³² See *supra* note 8 and accompanying text. The staff guidance provided in the KDB is intended to assist the public in following Commission requirements. The guidance is not binding on the Commission and will not preclude the Commission from making a different decision in any matter that comes to its attention for resolution.

²³³ See *NPRM*, 30 FCC Rcd at 7762-63, paras. 107-110.

²³⁴ Section 2.947 provides for the acceptance of data measured in accordance with standards or measurement procedures, specifically: 1) those in bulletins or reports issued by OET; 2) those acceptable to the Commission and published by national engineering societies; or 3) any measurement procedure acceptable to the Commission. 47 CFR § 2.947(a).

²³⁵ *NPRM*, 30 FCC Rcd at 7762, para. 107.

²³⁶ *Id.*

²³⁷ ASC C63 Comments at 2-3.

²³⁸ Cisco Comments at 2-4.

²³⁹ Wi-Fi Alliance Comments at 14-15 and TIA Comments at 27.

²⁴⁰ ITIC Comments at 14-15.

²⁴¹ TCB Council Comments at 4.

(continued....)

also adding a new provision (subsection (g)) at the suggestion of Nokia that requires test reports to contain adequate test data or sufficient justification as to why test data was not required.²⁴² We agree that this provision will help ensure consistency among submissions, particularly when a party is not submitting all possible testing data that could be performed.

71. *Parts 15 and 18.* In the *NPRM*, we also proposed to revise the sections that set forth measurement procedures for RF devices operating under the Part 15 rules²⁴³ and Industrial, Scientific, and Medical (ISM) Equipment operating under the Part 18 rules²⁴⁴ to reference advisory procedures that will be published by OET as KDB Publications, to aid parties seeking to obtain equipment authorizations employ a process they can demonstrate is suitable for the tested device.²⁴⁵ We expressed our belief that this change would allow us to clarify such procedures that may not be adequately addressed in referenced measurement standards but do not need to be specifically detailed in our rules.²⁴⁶ We sought comment on the proposal and asked whether further consolidating these rules to simply cross-reference Section 2.947 would be appropriate.²⁴⁷

72. No commenters directly addressed our proposals to substitute KDB references for the specific measurement procedures set forth in our Part 15 and Part 18 rules. We continue to believe that modifying our rules in this manner will help provide clarity about the application of measurement standards in order to enable parties to successfully demonstrate compliance with our rules and will make it easier for staff to provide advisory guidance when appropriate situations arise. Further, as we have discussed above, commenters have been generally supportive of using the rules to direct increased attention to the guidance that the KDB can provide.²⁴⁸ Accordingly, we are modifying section 15.32 and section 18.311 as discussed in the *NPRM* proposal.

b. References to Industry standards

73. We also proposed to revise the specific measurement procedures in Sections 15.31-15.35 in order to remove any redundancy with the ANSI C63.4-2014 and ANSI C63.10-2013 procedures that are specified by reference in Sections 15.31(a)(3) and (a)(4).²⁴⁹ Additionally, we sought comment on whether compliance testing for devices subject to the Part 15 requirements would still be adequately addressed in the rules given these revisions and asked whether there are other ways we can further clarify and streamline the measurement procedures in our rules.

74. There was general support for our overall proposal to modify various measurement related rules found in Sections 15.31 through 15.35.²⁵⁰ However, many commenters stated that Section 15.33(a), which specifies the frequency range over which radiated emissions measurement are to be

²⁴² Nokia Comments at 4.

²⁴³ See 47 CFR § 15.32 Test procedures for CPU boards and computer power supplies.

²⁴⁴ See 47 CFR §§ 18.309-311. In particular, Section 18.311 provides that FCC Measurement Procedure, MP-5, “Methods of Measurement of Radio Noise Emissions from ISM Equipment,” sets forth the measurement techniques the FCC uses to determine compliance with the Part 18 technical requirements.

²⁴⁵ *NPRM*, 30 FCC Rcd at 7763, para. 108.

²⁴⁶ *Id.*

²⁴⁷ *Id.*, 30 FCC Rcd at 7762-63, para.108.

²⁴⁸ See para. 70, *supra*.

²⁴⁹ *NPRM*, 30 FCC Rcd at 7763, para. 109. See 47 CFR § 15.31 Measurement standards, § 15.33 Frequency range of radiated measurements, and § 15.35 Measurement detector functions and bandwidth.

²⁵⁰ See Cisco Comments at 17, TIA Comments at 27, and Wi-Fi Alliance Comments at 14.

(continued....)

performed, should not be amended.²⁵¹ These commenters are specifically concerned that removing the specified frequency range for measurements from the rules in favor of a reference to ANSI C63.10-2013 would create ambiguity, particularly in instances where someone is relying on, as is allowed by the rules, an alternate measurement procedure or in the event that a future revision of ANSI C63.10-2013 does not include the frequency range.²⁵²

75. Persuaded by commenters, we also amend section 15.35(a) to reference ANSI C63.4-2014, clause 4, for specifications on measuring instrumentation using a CISPR-quasi peak detector function and related measurement bandwidths.²⁵³ We will not make the changes to sections 2.1057 and 15.33(a) to remove the frequency range of measurement that was proposed in the *NPRM*, so that clear requirements on the specified range for frequency measurements will remain in the rules instead of relying on references in ANSI C63.10-2013.

c. Composite systems

76. Many products now include devices that operate under multiple rules sections that have distinct authorization requirements.²⁵⁴ The measurement procedures for the certification of these so-called “composite systems” are included in Sections 15.31(h) and 15.31(k) of the rules.²⁵⁵ In the *NPRM* we proposed to move the provisions for composite systems to Part 2, except to retain certain specific requirements for Part 15 devices in Sections 15.31(h) and 15.31(k).²⁵⁶ In the absence of comments, we continue to believe that shifting the provisions for composite devices to the Part 2 rules that apply to all types of devices, not just to Part 15 unlicensed devices, is appropriate, and we are modifying our rules accordingly.²⁵⁷

2. ANSI C63.26 (Compliance Testing for Licensed Radio Services)

77. In the *NPRM*, the Commission acknowledged the then-pending ANSI C63.26 standard, “American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services” and asked parties to “take the ANSI C63.26 standards development into account when drafting their comments” related to our measurement procedure proposals.²⁵⁸ In particular, we observed that

²⁵¹ TIA Comments at 27-28; Cisco Comments at 17; and ANSI ASC63 Comments at 3-4.

²⁵² *See id.*

²⁵³ ITIC asked us to re-visit a previous decision in which the Commission decided not to incorporate references to CISPR 22 or CISPR 32 into our rules. *See* ITIC Comments at 15. This suggestion is beyond the scope of this proceeding and, as acknowledged by ITI, the Commission previously rejected it in a prior, now-closed, proceeding *See* Amendment of Parts 0, 1, 2, and 15 of the Commission’s Rules regarding Authorization of Radiofrequency Equipment and Amendment of Part 68 regarding Approval of Terminal Equipment by Telecommunications Certification Bodies, *Report and Order*, ET Docket No. 13-44, 29 FCC Rcd 16335 at 16366 (2014).

²⁵⁴ *NPRM*, 30 FCC Rcd at 7763, para. 110.

²⁵⁵ 47 CFR § 15.31(h).

²⁵⁶ *NPRM*, 30 FCC Rcd at 7763, para. 110.

²⁵⁷ 47 CFR §§ 2.947(f), 15.31(h).

²⁵⁸ *NPRM*, 30 FCC Rcd at 7763-64, para. 111. ANSI ASC C63 is a standards development organization that includes participants from wireless industry, test laboratories and regulators. *See* C63, C63® Main Committee Roster (May 20, 2017), http://www.c63.org/documents/rosters_public/c63_members.htm. ANSI C63.26 was developed by ANSI ASC C63 to provide manufacturers and test laboratories with the reliable and consistent measurement procedures necessary to demonstrate that transmitters used in licensed radio services comply with the Commission’s technical requirements. It is intended to cover the procedures for testing a wide variety of licensed transmitters; including but not limited to transmitters operating under Parts 22, 24, 25, 27, 90, 95 and 101 of the FCC Rules, transmitters subject to the general procedures in Part 2 of the FCC Rules and procedures for transmitters

(continued....)

references to the applicable measurement procedures in ANSI C63.26 could replace measurement procedures set forth in both the Part 2 equipment authorization rules and many of the specific licensed service rule parts.²⁵⁹ Further, we noted that many products now incorporate both licensed and unlicensed transmitters and there could be value in providing for the same test method to be used for a device that is subject to technical requirements in different rule parts.²⁶⁰

78. Subsequent to the *NPRM*, OET released a Public Notice acknowledging the publication of the finally-approved standard (“ANSI C63.26-2015”) and seeking comment on modifying Section 2.910 of our rules (47 C.F.R. § 2.910) to incorporate ANSI C63.26 by reference.²⁶¹ In addition, the Public Notice asked commenters to address how the Commission would incorporate the standard into our existing rules, as discussed in the *NPRM*.²⁶² For example, what specific Part 2 measurement procedures would ANSI C63.26 replace, and which specific licensed service rules should be replaced with cross-references to Part 2 (and, by extension, ANSI C63.26).²⁶³ In sum, the *NPRM* and Public Notice sought comment on whether there are alternatives to our proposed rules for measurement procedures that would better promote clarity and accommodate future technological developments.

79. All commenters supported incorporating ANSI C63.26 in our rules for measurements made on transmitters used in licensed services.²⁶⁴ However, while supportive, these commenters pointed out that the current version of the standard does not cover all licensed services. Specifically, as Cisco points out, “the current version is geared to the mobile and broadband radios used in Part 22, 24, 25, 27, 90, and 95. TV broadcast systems under Part 74, high power analog land mobile services under Part 90 and other similar technologies are not addressed in the first version of the standard.”²⁶⁵ Accordingly, commenters suggest that it would be premature to remove the measurement procedures in Part 2 and

not covered in the FCC Rules. The standard also addresses specific topics; e.g., ERP/EIRP, average power measurements and instrumentation requirements. *See generally* See IEEE Standards Association, <https://standards.ieee.org/findstds/standard/C63.26-2015.html> (last visited May 24, 2017); C63, Status of C63® Standards (May 23, 2017), http://www.c63.org/documents/misc/matrix/c63_standards.htm#C63_26.

²⁵⁹ *NPRM*, 30 FCC Rcd at 7763-64, para. 111. We specifically noted that references to the applicable measurement procedures in ANSI C63.26 could potentially replace measurement procedures in Part 2 for RF power output, modulation characteristics, occupied bandwidth, spurious emissions at antenna terminals, field strength of spurious radiation, frequency stability, and frequency spectrum. *See id.* (citing 47 CFR §§ 2.1041, 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, and 2.1057. Similarly, we also suggested that references to Part 2 (and, by extension, ANSI C63.26) could replace the specific measurement procedures and details that are presently contained in many of the individual service rules. *Id.*

²⁶⁰ *Id.*

²⁶¹ *Comments Sought on Newly Published ANSI C63.26-2015 Standard in Conjunction With Ongoing Equipment Authorization Rulemaking Proceeding*, DA 16-348, Public Notice, 31 FCC Rcd 2314, 81 FR 23267 (OET 2016) (*ANSI C63.26-2015 Public Notice*). ANSI C63.26 was recently published and is now an “active standard” – that is, the standards association considers it to be valid, current, and approved. *See* IEEE Standards Association, <https://standards.ieee.org/findstds/standard/C63.26-2015.html> (last visited May 24, 2017).

²⁶² *ANSI C63.26-2015 Public Notice*. If the Commission were to adopt ANSI C63.26, it would replace many of the current Knowledge Database (KDB) publications that have addressed numerous device measurement issues in more of a case-by-case fashion.

²⁶³ *Id.*

²⁶⁴ TCB Council Public Notice Comments at 2-3; Nokia Public Notice Comments at 2; Cisco Public Notice Comments at 3-4; Wi-Fi Alliance Comments at 1-2; ANSI ASC C-63 Comments at 5.

²⁶⁵ Cisco Public Notice Comments at 3-4. *See also* TCB Council Public Notice Comments at 3-2 and Nokia Public Notice Comments at 3-6.

(continued....)

elsewhere before these other services are addressed by the standard.²⁶⁶ Additionally ANSI ASC C63 suggests that we implement an 18-month transition period for the new standard in order to allow test labs to incorporate the standard into the scope of their accreditation.²⁶⁷ Finally, Cohen Dippel and Everist expressed concerns about the availability of the standard and whether the Commission would be relying on a standard that is not in the public domain and available only at a cost to the user.²⁶⁸

80. We will amend section 2.910(c) and section 2.1041 to include ANSI C63.26-2015 as an acceptable measurement procedure for equipment that operates in authorized radio services covered by the measurement standard, where measurements are required in sections 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, and 2.1057.²⁶⁹ This standard is in the public domain; although available at a cost, use of ANSI standards is long-standing Commission practice. We observe that Section 2.947 provides a number of options that can be considered in selecting a measurement procedure to be used for demonstrating compliance. We agree with the comments that the ANSI standard does not cover all of the license services and will retain the additional procedures in the current rules as well. While Cisco proposed an 18-month transition period to permit test laboratories to expand the scope of their accreditation,²⁷⁰ we have consistently used a two-year transition for expanding scope for accredited testing laboratories pursuant to new rules, as this parallels the reexamination cycle of the accrediting bodies.²⁷¹ We provide here that accredited laboratories may test to the ANSI C63.26 standards for up to two years from the date of adoption of this Order without an explicit expansion of their scope by an accrediting body.²⁷²

IV. PROCEDURAL MATTERS

A. Final Regulatory Flexibility Analysis

81. As required by section 604 of the Regulatory Flexibility Act of 1980 (RFA), 5 U.S.C. 604, the Commission has prepared a Final Regulatory Flexibility Analysis of the possible economic impact on small entities of the policies and rules adopted in this Report and Order. This Final Regulatory Flexibility Analysis is set forth in Appendix B.

B. Paperwork Reduction Act

82. This Report and Order contains new information collections subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. The Commission will publish a separate notice in the Federal Register inviting comment on the new information collection requirements adopted herein. The requirements will not go into effect until OMB has approved it and the Commission has published a notice announcing the effective date of the information collection requirements.

83. In this present document, we have assessed the effects of our existing equipment authorization procedures (certification, verification, and Declaration of Conformity (DoC)). The

²⁶⁶ See, e.g., Cisco Public Notice Comments at 3-4, Apple Reply Comments at 4.

²⁶⁷ ANSI ASC C63 Comments at 6.

²⁶⁸ Cohen, Dippel and Everist Comments at 2-3.

²⁶⁹ We will, of course, continue to accept measurement procedures identified in the KDB.

²⁷⁰ Cisco Comments at 18.

²⁷¹ 47 CFR § 2.947(a).

²⁷² While Nokia and the TCB Council suggested revisions to multiple rule parts, the modifications adopted here effectively accommodate their concerns by revising sections 2.910 and 2.1041.

Commission establishes a new device approval process, Supplier's Declaration of Conformity (SDoC). SDoC combines elements of verification and DoC into a single approval process that can be used for equipment that has a strong record of compliance and for which there is minimal risk of causing harmful interference. We recognize our increased comfort with the approval procedures for such devices by streamlining these procedures. In doing so, we eliminate elements of our rules that serve to increase compliance costs and that provide benefits that are of only marginal utility. Finally, we find that, our actions will minimize the compliance costs borne by small entities by, for example, eliminating the mandate to use accredited laboratories that is currently associated with the DoC rules and removing the requirement to display the FCC logo on the equipment identification label. By not requiring parties to engage in such practices, we will not unnecessarily burden small entities that no longer wish to retain such practices. However, we will continue to permit parties to continue to engage if these practices if they find it useful to do so.

C. Congressional Review Act

84. The Commission will send a copy of the *Equipment Authorization First R&O*, to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(A).

V. ORDERING CLAUSES

85. IT IS ORDERED that pursuant to Sections 1, 4(i), 7(a), 301, 303(f), 303(g), 303(r), 307(e), 332, and 720 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 157(a), 301, 303(f), 303(g), 303(r), 307(e), 332, 622, and Sections 0.31(g), 0.31(i), and 0.31(j) of the Commission's rules, 47 C.F.R. §§ 0.31(g), 0.31(i), 0.31(j), this Report and Order IS ADOPTED.

86. IT IS FURTHER ORDERED that the rules and requirements adopted herein WILL BECOME EFFECTIVE upon publication in the Federal Register with the exception of those rules that contain new or modified information collection requirements that require review by the OMB under the PRA, which WILL BECOME EFFECTIVE after OMB review and approval, on the effective date specified in a notice that the Commission will publish in the Federal Register announcing such approval and effective date.

87. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this First Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Final Rules

Parts 2, 15, 18, 73, 74, 78, 80, 87, 90, and 101 of Title 47 of the Code of Federal Regulations are amended as follows:

PART 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for Part 2 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Section 2.803 is revised by amending paragraph (b)(2) to read as follows:

§ 2.803 Marketing of radio frequency devices prior to equipment authorization.

* * *

(b)(2) For devices subject to authorization under Supplier's Declaration of Conformity in accordance with the rules in subpart J of this chapter, the device complies with all applicable technical, labeling, identification and administrative requirements; or

* * *

3. Section 2.901 is revised to read as follows:

§ 2.901 Basis and purpose.

(a) In order to carry out its responsibilities under the Communications Act and the various treaties and international regulations, and in order to promote efficient use of the radio spectrum, the Commission has developed technical standards for radio frequency equipment and parts or components thereof. The technical standards applicable to individual types of equipment are found in that part of the rules governing the service wherein the equipment is to be operated. In addition to the technical standards provided, the rules governing the service may require that such equipment be authorized under Supplier's Declaration of Conformity or receive a grant of certification from a Telecommunication Certification Body.

(b) Sections 2.906 through 2.1077 describe the procedure for a Supplier's Declaration of Conformity and the procedures to be followed in obtaining certification and the conditions attendant to such a grant.

4. Section 2.902 is removed.

§ 2.902 Verification.

[Removed.]

5. Section 2.906 is revised to read as follows:

§ 2.906 Supplier's Declaration of Conformity.

(a) Supplier's Declaration of Conformity (SDoC) is a procedure where the responsible party, as defined in

§ 2.909, makes measurements or completes other procedures found acceptable to the Commission to ensure that the equipment complies with the appropriate technical standards. Submittal to the Commission of a sample unit or representative data demonstrating compliance is not required unless specifically requested pursuant to § 2.945.

(b) Supplier's Declaration of Conformity is applicable to all items subsequently marketed by the manufacturer, importer, or the responsible party that are identical, as defined in § 2.908, to the sample tested and found acceptable by the manufacturer.

(c) The responsible party may, if it desires, apply for Certification of a device subject to the Supplier's Declaration of Conformity. In such cases, all rules governing certification will apply to that device.

6. Section 2.909 is revised to read as follows:

§ 2.909 Responsible Party.

(a) In the case of equipment that requires the issuance of a grant of certification, the party to whom that grant of certification is issued is responsible for the compliance of the equipment with the applicable standards. If the radio frequency equipment is modified by any party other than the grantee and that party is not working under the authorization of the grantee pursuant to § 2.929(b), the party performing the modification is responsible for compliance of the product with the applicable administrative and technical provisions in this chapter.

(b) For equipment subject to Supplier's Declaration of Conformity the party responsible for the compliance of the equipment with the applicable standards, who must be located in the United States (see § 2.1077), is set forth as follows:

(1) The manufacturer or, if the equipment is assembled from individual component parts and the resulting system is subject to authorization under Supplier's Declaration of Conformity, the assembler.

(2) If the equipment by itself, or, a system is assembled from individual parts and the resulting system is subject to Supplier's Declaration of Conformity and that equipment or system is imported, the importer.

(3) Retailers or original equipment manufacturers may enter into an agreement with the responsible party designated in paragraph (b)(1) or (b)(2) of this section to assume the responsibilities to ensure compliance of equipment and become the new responsible party.

(4) If the radio frequency equipment is modified by any party not working under the authority of the responsible party, the party performing the modifications, if located within the U.S., or the importer, if the equipment is imported subsequent to the modifications, becomes the new responsible party.

(c) If the end product or equipment is subject to both certification and Supplier's Declaration of Conformity (*i.e.*, composite system), all the requirements of paragraphs (a) and (b) apply.

(d) If, because of modifications performed subsequent to authorization, a new party becomes responsible for ensuring that a product complies with the technical standards and the new party does not obtain a new equipment authorization, the equipment shall be labeled, following the specifications in § 2.925(d), with the following: "This product has been modified by [insert name, address and telephone number or internet contact information of the party performing the modifications]."

7. Section 2.910 is amended by revising paragraphs (c) to read as follows:

§ 2.910 Incorporation by reference.

* * * * *

(c) Institute of Electrical and Electronic Engineers (IEEE), 3916 Ranchero Drive, Ann Arbor, MI 48108, 1-800-699-9277, <http://www.techstreet.com/ieee>; (IEEE publications can also be purchased from the American National Standards Institute (ANSI) through its NSSN operation (www.nssn.org), at Customer Service, American National Standards Institute, 25 West 43rd Street, New York, NY 10036, telephone (212) 642-4900.)

(1) ANSI C63.4-2014: “American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz,” ANSI approved June 13, 2014, IBR approved for § 2.950(h) and:

(i) Sections 5.4.4 through 5.5, IBR approved for §§ 2.948(d) and 2.950(f); and

(ii) [Reserved.]

(2) ANSI C63.10-2013, “American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices,” ANSI approved June 27, 2013, IBR approved for § 2.950(g).

(3) ANSI C63.26-2015, “American National Standard of Procedures for Compliance Testing of Transmitters Used in Licensed Radio Services”, ANSI approved December 11, 2015, IBR approved for § 2.1041.

8. Section 2.925 is revised by amending paragraphs (a) , (b), (f) and deleting paragraph (g) to read as follows:

§ 2.925 Identification of equipment.

(a) Each equipment covered in an application for equipment authorization shall bear a label listing the following:

* * *

(3) The information required may be provided electronically pursuant to § 2.935

(b) Any device subject to more than one equipment authorization procedure may be assigned a single FCC Identifier. However, a single FCC Identifier is required to be assigned to any device consisting of two or more sections assembled in a common enclosure, on a common chassis or circuit board, and with common frequency controlling circuits. Devices to which a single FCC Identifier has been assigned shall be identified pursuant to paragraph (a) of this section.

(1) Separate FCC Identifiers may be assigned to a device consisting of two or more sections assembled in a common enclosure, but constructed on separate sub-units or circuit boards with independent frequency controlling circuits. The FCC Identifier assigned to any transmitter section shall be preceded by the term *TX FCC ID*, the FCC Identifier assigned to any receiver section shall be preceded by the term *RX FCC ID* and the identifier assigned to any remaining section(s) shall be preceded by the term *FCC ID*.

(2) Where terminal equipment subject to part 68 of this chapter, and a radiofrequency device subject to equipment authorization requirements are assembled in a common enclosure, the device shall be labeled in accordance with the Hearing Aid Compatibility-related requirements in part 68 of this chapter and the

requirements published by the Administrative Council for Terminal Attachments, and shall also display the FCC Identifier in the format specified in paragraph (a) of this section.

(3) For a transceiver, the receiver portion of which is subject to Supplier's Declaration of Conformity pursuant to § 15.101 of this chapter, and the transmitter portion is subject to certification, the FCC Identifier required for the transmitter portion shall be preceded by the term FCC ID.

* * *

(f) The FCC Identifier including the term "*FCC ID*" shall be in a size of type large enough to be readily legible, consistent with the dimensions of the equipment and its label. However, the type size for the FCC Identifier is not required to be larger than eight-point. If a device is so small that it is impractical to label it with the FCC Identifier in a font that is four-point or larger, and the device does not have a display that can show electronic labeling, then the FCC Identifier shall be placed in the user manual and must also either be placed on the device packaging or on a removable label attached to the device.

(g) [Removed.]

9. Section 2.926 is amended by revising paragraph (e) to read as follows:

§ 2.926 FCC identifier

* * * * *

(e) No FCC Identifier may be used on equipment to be marketed unless that specific identifier has been validated by a grant of equipment certification. This shall not prohibit placement of an FCC identifier on a transceiver which includes a receiver subject to Suppliers Declaration of Conformity pursuant to § 15.101 of this chapter, provided that the transmitter portion of such transceiver is covered by a valid grant of certification. The FCC Identifier is uniquely assigned to the grantee and may not be placed on the equipment without authorization by the grantee. See § 2.803 for conditions applicable to the display at trade shows of equipment which has not been granted equipment authorization where such grant is required prior to marketing. Labeling of such equipment may include model or type numbers, but shall not include a purported FCC Identifier.

10. The heading preceding Section 2.927 is removed:

Conditions Attendant to an Equipment Certification

[Removed.]

11. Section 2.927 is amended by revising paragraph (a) to read as follows:

§ 2.927 Limitations on grants.

(a) A grant of certification is valid only when the device is labeled in accordance with § 2.925 of this subpart and remains effective until set aside, revoked or withdrawn, rescinded, surrendered, or a termination date is otherwise established by the Commission.

* * * * *

12. Section 2.931 is revised to read as follows:

§ 2.931 Responsibilities.

(a) The responsible party warrants that each unit of equipment marketed under its grant of certification and bearing the identification specified in the grant will conform to the unit that was measured and that the data (design and rated operational characteristics) filed with the application for certification continues to be representative of the equipment being produced under such grant within the variation that can be expected due to quantity production and testing on a statistical basis.

(b) [Reserved.]

(c) [Reserved.]

(d) In determining compliance for devices subject to Supplier's Declaration of Conformity, the responsible party warrants that each unit of equipment marketed under Supplier's Declaration of Conformity will be identical to the unit tested and found acceptable with the standards and that the records maintained by the responsible party continue to reflect the equipment being produced under such Supplier's Declaration of Conformity within the variation that can be expected due to quantity production and testing on a statistical basis.

(e) For equipment subject to Supplier's Declaration of Conformity, the responsible party must reevaluate the equipment if any modification or change adversely affects the emanation characteristics of the modified equipment. The responsible party bears responsibility for continued compliance of subsequently produced equipment.

13. A new Section 2.935 is added as follows:

§ 2.935 Electronic labeling of radiofrequency devices.

(a) Any radiofrequency device equipped with an integrated electronic display screen, or a radiofrequency device without an integrated screen that can only operate in conjunction with a device that has an electronic display screen, may display on the electronic display the FCC Identifier, any warning statements, or other information that the Commission's rules would otherwise require to be shown on a physical label attached to the device.

(b) Devices displaying their FCC Identifier, warning statements, or other information electronically must make this information readily accessible on the electronic display. Users must be provided with prominent instructions on how to access the information in the operating instructions, inserts in packaging material, or other easily accessible format at the time of purchase. The access instructions may also be provided via the product-related website, the packaging material provides specific instructions on how to locate the information, and a copy of these instructions must be included in the application for equipment certification.

(c) Devices displaying their FCC Identifier, warning statements, or other information electronically must permit access to the information without requiring special codes, accessories or permissions and the access to this information must not require more than three steps from the device setting menu. The number of steps does not include those steps for use of screen locks, passcodes or similar security protection designed to control overall device access.

(d) The electronically displayed FCC Identifier, warning statements, or other information must be

displayed electronically in a manner that is clearly legible without the aid of magnification;

(e) The necessary label information must be programmed by the responsible party and must be secured in such a manner that third-parties cannot modify it.

(f) Devices displaying their FCC Identifier, warning statements, or other information electronically must also be labeled, either on the device or its packaging, with the FCC Identifier or other information (such as a model number and identification of a webpage that hosts the relevant regulatory information) that permits the devices to be identified at the time of importation, marketing, and sales as complying with the FCC's equipment authorization requirements. Devices can be labeled with a stick-on label, printing on the packaging, a label on a protective bag, or by similar means. Any removable label shall be of a type intended to survive normal shipping and handling and must only be removed by the customer after purchase.

14. Section 2.938 is revised to read as follows:

§ 2.938 Retention of records.

(a) For equipment subject to the equipment authorization procedures in this part, the responsible party shall maintain the records listed as follows:

(1) A record of the original design drawings and specifications and all changes that have been made that may affect compliance with the standards and the requirements of § 2.931.

(2) A record of the procedures used for production inspection and testing to ensure conformance with the standards and the requirements of § 2.931.

(3) A record of the test results that demonstrate compliance with the appropriate regulations in this chapter.

(b) For equipment subject to Supplier's Declaration of Conformity, the responsible party shall, in addition to the requirements in paragraph (a), maintain a record of the measurements made on an appropriate test site that demonstrates compliance with the applicable regulations in this chapter. The record shall:

(1) Indicate the actual date all testing was performed;

(2) State the name of the test laboratory, company, or individual performing the testing. The Commission may request additional information regarding the test site, the test equipment or the qualifications of the company or individual performing the tests;

(3) Contain a description of how the device was actually tested, identifying the measurement procedure and test equipment that was used;

(4) Contain a description of the equipment under test (EUT) and support equipment connected to, or installed within, the EUT;

(5) Identify the EUT and support equipment by trade name and model number and, if appropriate, by FCC Identifier and serial number;

(6) Indicate the types and lengths of connecting cables used and how they were arranged or moved during testing;

(7) Contain at least two drawings or photographs showing the test set-up for the highest line conducted emission and showing the test set-up for the highest radiated emission. These drawings or photographs must show enough detail to confirm other information contained in the test report. Any photographs used must clearly show the test configuration used;

(8) List all modifications, if any, made to the EUT by the testing company or individual to achieve compliance with the regulations in this chapter;

(9) Include all of the data required to show compliance with the appropriate regulations in this chapter;

(10) Contain, on the test report, the signature of the individual responsible for testing the product along with the name and signature of an official of the responsible party, as designated in § 2.909; and

(11) A copy of the compliance information, as described in § 2.1077, required to be provided with the equipment.

(c) The provisions of paragraph (a) of this section shall also apply to a manufacturer of equipment produced under an agreement with the original responsible party. The retention of the records by the manufacturer under these circumstances shall satisfy the grantee's responsibility under paragraph (a) of this section.

(d) For equipment subject to more than one equipment authorization procedure, the responsible party must retain the records required under all applicable provisions of this section.

(e) For equipment subject to rules that include a transition period, the records must indicate the particular transition provisions that were in effect when the equipment was determined to be compliant.

(f) For equipment subject to certification, records shall be retained for a one year period after the marketing of the associated equipment has been permanently discontinued, or until the conclusion of an investigation or a proceeding if the responsible party (or, under paragraph (c) of this section, the manufacturer) is officially notified that an investigation or any other administrative proceeding involving its equipment has been instituted. For all other records kept pursuant to this section, a two-year period shall apply.

(g) If radio frequency equipment is modified by any party other than the original responsible party, and that party is not working under the authorization of the original responsible party, the party performing the modifications is not required to obtain the original design drawings specified in paragraph (a)(1) of this section. However, the party performing the modifications must maintain records showing the changes made to the equipment along with the records required in paragraphs (a)(3) of this section. A new equipment authorization may also be required.

15. Section 2.945 is revised by amending paragraphs (b)(1) and (c) to read as follows:

§ 2.945 Submission of equipment for testing and equipment records.

* * *

(b) *Subsequent to equipment authorization.* (1) The Commission may request that the responsible party or any other party marketing equipment subject to this chapter submit a sample of the equipment, or provide a voucher for the equipment to be obtained from the marketplace, to determine the extent to which production of such equipment continues to comply with the data filed by the applicant or on file with the

responsible party for equipment subject to Supplier's Declaration of Conformity. The Commission may request that a sample or voucher to obtain a product from the marketplace be submitted to the Commission, or in the case of equipment subject to certification, to the TCB that certified the equipment.

* * * *

(c) *Submission of records.* Upon request by the Commission, each responsible party shall submit copies of the records required by §2.938 to the Commission. Failure of a responsible party or other party marketing equipment subject to this chapter to comply with a request from the Commission for records within 21 days may be cause for forfeiture, pursuant to §1.80 of this chapter. The Commission may consider extensions of time upon submission of a showing of good cause.

* * * * *

16. Section 2.947 is amended to read as follows:

§ 2.947 Measurement procedure.

(a) * * *

(3) Any measurement procedure acceptable to the Commission may be used to prepare data demonstrating compliance with the requirements of this chapter. Advisory information regarding measurement procedures can be found in the Commission's Knowledge Database, which is available at www.fcc.gov/labhelp.

* * * * *

(c) In the case of equipment requiring measurement procedures not specified in the references set forth in paragraphs (a) (1), (2) and (3) of this section, the applicant shall submit a detailed description of the measurement procedures actually used.

* * * * *

(f) A composite system is a system that incorporates different devices contained either in a single enclosure or in separate enclosures connected by wire or cable. If the individual devices in a composite system are subject to different technical standards, each such device must comply with its specific standards. In no event may the measured emissions of the composite system exceed the highest level permitted for an individual component. Testing for compliance with the different standards shall be performed with all of the devices in the system functioning. If the composite system incorporates more than one antenna or other radiating source and these radiating sources are designed to emit at the same time, measurements of conducted and radiated emissions shall be performed with all radiating sources that are to be employed emitting.

(g) For each technical requirement in this Chapter, the test report shall provide adequate test data to demonstrate compliance for the requirement, or in absence of test data, justification acceptable to the Commission as to why test data is not required.

17. Section 2.948 is revised by amending paragraphs (a), (b) and (e) to read as follows:

§ 2.948 Measurement facilities.

(a) Equipment authorized under the certification procedure shall be tested at a laboratory that is accredited in accordance with paragraph (e) of this section.

(b) A laboratory that makes measurements of equipment subject to an equipment authorization under the certification procedure Supplier's Declaration of Conformity shall compile a description of the measurement facilities employed.

* * *

(3) The description of the measurement facilities shall be retained by the party responsible for authorization of the equipment and provided to the Commission upon request.

(i) The party responsible for authorization of the equipment may rely upon the description of the measurement facilities retained by an independent laboratory that performed the tests. In this situation, the party responsible for authorization of the equipment is not required to retain a duplicate copy of the description of the measurement facilities.

(ii) No specific site calibration data is required for equipment that is authorized for compliance based on measurements performed at the installation site of the equipment. The description of the measurement facilities may be retained at the site at which the measurements were performed.

* * * * *

(e) A laboratory that has been accredited with a scope covering the measurements required for the types of equipment that it will test shall be deemed competent to test and submit test data for equipment subject to certification. Such a laboratory shall be accredited by a Commission recognized accreditation organization based on the International Organization for Standardization/International Electrotechnical Commission International Standard ISO/IEC 17025, (incorporated by reference, see § 2.910). The organization accrediting the laboratory must be recognized by the Commission's Office of Engineering and Technology, as indicated in § 0.241 of this chapter, to perform such accreditation based on International Standard ISO/IEC 17011 (incorporated by reference, see § 2.910). The frequency for reassessment of the test facility and the information that is required to be filed or retained by the testing party shall comply with the requirements established by the accrediting organization, but shall occur on an interval not to exceed two years.

* * * * *

18. Section 2.950 is amended by adding paragraphs (i) and (j) as follows

§ 2.950 Transition Periods

* * * * *

(i) Radio frequency devices that would have been considered eligible for authorization under either the verification or Declaration of Conformity procedures that were in effect prior to [effective date of order] may continue to be authorized until [one year from the effective date of the order] under the appropriate procedure in accordance with the requirements that were in effect immediately prior to [effective date of order].

(j) All radio frequency devices that were authorized under the verification or Declaration of Conformity

procedures prior to [effective date of order] must continue to meet all requirements associated with the applicable procedure that were in effect immediately prior to [effective date of order]. If any changes are made to such devices after [one year from effective date of order], the requirements associated with the Supplier's Declaration of Conformity will apply.

19. The heading preceding Section 2.951 is removed.

Verification

[Removed.]

20. Section 2.951 is removed.

§ 2.951 Cross reference.

[Removed.]

21. Section 2.952 is removed.

§ 2.952 Limitation on verification.

[Removed.]

22. Section 2.953 is removed.

§ 2.953 Responsibility for compliance.

[Removed.]

23. Section 2.954 is removed.

§ 2.954 Identification.

[Removed.]

24. Section 2.955 is removed.

§ 2.955 Retention of records.

[Removed.]

25. Section 2.1041 is amended to read as follows:

§ 2.1041 Measurement procedure.

(a) For equipment operating under parts 15 and 18, the measurement procedures are specified in the rules governing the particular device for which certification is requested.

(b) For equipment operating in the authorized radio services, measurements are required as specified in §§ 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057. The measurement procedures in ANSI C63.26-2015 (incorporated by reference, see § 2.910) are acceptable for performing compliance measurements for equipment types covered by the measurement standard. See also § 2.947 for acceptable measurement procedures.

26. The heading preceding Section 2.1071 is revised to read as follows:

Supplier's Declaration of Conformity

27. Section 2.1071 is revised to read as follows:

§ 2.1071 Cross reference.

The general provisions of this subpart shall apply to equipment subject to Supplier's Declaration of Conformity.

28. Section 2.1072 is revised to read as follows:

§ 2.1072 Limitation on Supplier's Declaration of Conformity.

(a) Supplier's Declaration of Conformity signifies that the responsible party, as defined in § 2.909, has determined that the equipment has been shown to comply with the applicable technical standards if no unauthorized change is made in the equipment and if the equipment is properly maintained and operated. Compliance with these standards shall not be construed to be a finding by the responsible party with respect to matters not encompassed by the Commission's rules.

(b) Supplier's Declaration of Conformity by responsible party, as defined in § 2.909, is effective until a termination date is otherwise established by the Commission.

(c) No person shall, in any advertising matter, brochure, etc., use or make reference to Supplier's Declaration of Conformity in a deceptive or misleading manner or convey the impression that such Supplier's Declaration of Conformity reflects more than a determination by the manufacturer, importer, integrator, or responsible party, as defined in § 2.909, that the device or product has been shown to be capable of complying with the applicable technical standards of the Commission's rules.

29. Section 2.1073 is removed

§ 2.1073 Responsibilities.

[Removed.]

30. Section 2.1074 is revised to read as follows:

§ 2.1074 Identification.

(a) Devices subject only to Supplier's Declaration of Conformity shall be uniquely identified by the party responsible for marketing or importing the equipment within the United States. However, the identification shall not be of a format which could be confused with the FCC Identifier required on certified equipment. The responsible party shall maintain adequate identification records to facilitate positive identification for each device.

(b) Devices subject to authorization under Supplier's Declaration of Conformity may be labeled with the following logo on a voluntary basis as a visual indication that the product complies with the applicable FCC requirements. The use of the logo on the device does not alleviate the requirement to provide the compliance information required by § 2.1077 of this subpart.



31. Section 2.1075 is removed.

§ 2.1075 Retention of records.

[Removed.]

32. Section 2.1077 is revised to read as follows:

§ 2.1077 Compliance information.

(a) If a product must be tested and authorized under Supplier's Declaration of Conformity, a compliance information statement shall be supplied with the product at the time of marketing or importation, containing the following information:

- (1) Identification of the product, *e.g.*, name and model number;
- (2) A compliance statement as applicable, *e.g.*, for devices subject to part 15 of this chapter as specified in § 15.19(a)(3), that the product complies with the rules; and
- (3) The identification, by name, address and telephone number or internet contact information, of the responsible party, as defined in § 2.909. The responsible party for Supplier's Declaration of Conformity must be located within the United States.

(b) If a product is assembled from modular components (*e.g.*, enclosures, power supplies and CPU boards) that, by themselves, are authorized under a Supplier's Declaration of Conformity and/or a grant of certification, and the assembled product is also subject to authorization under Supplier's Declaration of Conformity but, in accordance with the applicable regulations, does not require additional testing, the product shall be supplied, at the time of marketing or importation, with a compliance information statement containing the following information:

- (1) Identification of the assembled product, *e.g.*, name and model number.
- (2) Identification of the modular components used in the assembly. A modular component authorized under Supplier's Declaration of Conformity shall be identified as specified in paragraph (a)(1) of this section. A modular component authorized under a grant of certification shall be identified by name and model number (if applicable) along with the FCC Identifier number.
- (3) A statement that the product complies with part 15 of this chapter.
- (4) The identification, by name, address and telephone number or internet contact information, of the responsible party who assembled the product from modular components, as defined in § 2.909. The responsible party for Supplier's Declaration of Conformity must be located within the United States.
- (5) Copies of the compliance information statements for each modular component used in the system that is authorized under Supplier's Declaration of Conformity.

(c) The compliance information statement shall be included in the user's manual or as a separate sheet. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form. The information may be provided electronically as permitted in § 2.935.

33. Section 2.1201 is amended by revising paragraph (b) to read as follows:

§ 2.1201 Purpose.

* * * * *

(b) The rules in this subpart set out the conditions under which radio frequency devices as defined in § 2.801 that are capable of causing harmful interference to radio communications may be imported into the U.S.A.

* * * * *

34. Section 2.1202 is revised to read as follows:

§ 2.1202 Exclusions.

The provisions of this subpart do not apply to the importation of:

(a) Unintentional radiators that are exempted from technical standards and other requirements as specified in § 15.103 of this chapter or utilize low level battery power and that do not contain provisions for operation while connected to AC power lines.

(b) Radio frequency devices manufactured and assembled in the U.S.A. that meet applicable FCC technical standards and that have not been modified or received further assembly.

(c) Radio frequency devices previously properly imported that have been exported for repair and re-imported for use.

(d) Subassemblies, parts, or components of radio frequency devices unless they constitute an essentially completed device which requires only the addition of cabinets, knobs, speakers, or similar minor attachments before marketing or use. This exclusion does not apply to computer circuit boards that are actually peripheral devices as defined in § 15.3(r) of this chapter and all devices that, by themselves, are subject to FCC marketing rules.

35. Section 2.1203 is revised to read as follows:

§ 2.1203 General requirement for entry into the U.S.A.

(a) No radio frequency device may be imported into the Customs territory of the United States unless the importer or ultimate consignee, or their designated customs broker, determines that the device meets one of the conditions for entry set out in this section.

(b) Failure to satisfy at least one of the entry conditions for importation of radio frequency devices may result in refused entry, refused withdrawal for consumption, required redelivery to the Customs port, and other administrative, civil and criminal remedies provided by law.

(c) Whoever makes a determination pursuant to § 2.1203(a) must provide, upon request made within one year of the date of entry, documentation on how an imported radio frequency device was determined to be in compliance with Commission requirements.

36. Section 2.1204 is amended by revising paragraph (a)(4) and (a)(7) to read as follows:

§ 2.1204 Import conditions.

(a) * * *

* * * * *

(4) * * *

(i) 400 or fewer devices.

(ii) Prior to importation of a greater number of units than shown above, written approval must be obtained from the Chief, Office of Engineering and Technology, FCC.

(iii) Distinctly different models of a product and separate generations of a particular model under development are considered to be separate devices.

* * * * *

(7) Three or fewer radio frequency devices are being imported for the individual's personal use and are not intended for sale. Unless exempted otherwise in this chapter, the permitted devices must be from one or more of the following categories:

(i) Unintentional radiator as defined in part 15 which may include radio receivers, computers or other Class B digital devices in part 15.

(ii) Consumer ISM equipment as defined in part 18.

(iii) Intentional radiators subject to part 15 rules only if they can be used in client modes as specified in § 15.202.

(iv) Transmitters operating under rules which require a station license as subscribers permitted under § 1.903 and operated under the authority of an operator license issued by the Commission.

* * * * *

37. Section 2.1205 is removed.

§ 2.1205 Filing of required declaration.

[Removed.]

PART 15—RADIO FREQUENCY DEVICES

38. The authority citation for Part 15 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, 304, 307, 336, 544a, and 549.

39. Section 15.1 is amended by revising paragraph (c) to read as follows:

§ 15.1 Scope of this part.

* * * * *

(c) Unless specifically exempted, the operation or marketing of an intentional or unintentional radiator that is not in compliance with the administrative and technical provisions in this part, including prior equipment authorization, as appropriate, is prohibited under section 302 of the Communications Act of 1934, as amended, and subpart I of part 2 of this chapter. The equipment authorization procedures are detailed in subpart J of part 2 of this chapter.

40. Section 15.19 is amended by revising paragraphs (a) and (b) to read as follows:

§ 15.19 Labeling requirements.

(a) In addition to the requirements in part 2 of this chapter, a device subject to certification, or Supplier's Declaration of Conformity shall be labeled as follows:

(1) Receivers associated with the operation of a licensed radio service, *e.g.*, FM broadcast under part 73 of this chapter, land mobile operation under part 90, etc., shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

(2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules for use with cable television service.

(3) All other devices shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.

(5) When the device is so small or for such use that it is impracticable to label it with the statement specified under paragraph (a) of this section in a font that is four-point or larger, and the device does not have a display that can show electronic labeling, then the information required by this paragraph shall be placed in the user manual and must also either be placed on the device packaging or on a removable label attached to the device.

(b) [Reserved.]

41. Section 15.25 is amended by revising paragraphs (b) and (c) to read as follows:

§ 15.25 Kits.

* * * * *

(b) At least two units of the kit shall be assembled in exact accordance with the instructions supplied with the product to be marketed. If all components required to fully complete the kit (other than those specified in paragraph (a) of this section that are needed for compliance with the technical provisions and must be included with the kit) are not normally furnished with the kit, assembly shall be made using the recommended components. The assembled units shall be certified or authorized under Supplier's Declaration of Conformity, as appropriate, pursuant to the requirements of this part.

(1) The measurement data required for a TV interface device subject to certification shall be obtained for each of the two units and submitted with an application for certification pursuant to subpart J of part 2 of this chapter.

(2) The measurement data required for a TV interface device subject to Supplier's Declaration of Conformity shall be obtained for the units tested and retained on file pursuant to the provisions of subpart J of part 2 of this chapter.

(c) A copy of the exact instructions that will be provided for assembly of the device shall be submitted with an application for certification. Those parts that are not normally furnished shall be detailed in the application for certification.

* * * *

42. Section 15.27 is amended by revising paragraph (a) to read as follows:

§ 15.27 Special accessories.

(a) Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors, are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, *i.e.*, shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge, at the time of purchase. Information detailing any alternative method used to supply the special accessories shall be included in the application for a grant of equipment authorization or retained in the Supplier's Declaration of Conformity records, as appropriate. The party responsible for the equipment, as detailed in §2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of the text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

* * * * *

43. Section 15.29 (d) is amended as follows:

§ 15.29 Inspection by the Commission.

(d) The Commission, from time to time, may request the party responsible for compliance, including an importer, to submit to the FCC Laboratory in Columbia, Maryland, various equipment to determine that the equipment continues to comply with the applicable standards. Shipping costs to the Commission's Laboratory and return shall be borne by the responsible party. Testing by the Commission will be performed using the measurement procedure(s) that was in effect at the time the equipment was authorized.

44. Section 15.31 is amended by adding a note to paragraph (a)(4) and revising paragraphs (b), (d), (f)(4), (h), and (k) to read as follows:

§ 15.31 Measurement standards.

* * * * *

(a) * * *

(4) * * *

NOTE TO PARAGRAPH (a)(4): Digital devices tested to show compliance with the provisions of § 15.109(g) must be tested following the ANSI C63.4-2014 procedure described in paragraph (a)(4) of this section.

(b) All parties making compliance measurements on equipment subject to the requirements of this part are urged to use these measurement procedures. Any party using other procedures should ensure that such other procedures can be relied on to produce measurement results compatible with the FCC measurement procedures. The description of the measurement procedure used in testing the equipment for compliance and a list of the test equipment actually employed shall be made part of an application for certification or included with the data required to be retained by the party responsible for devices authorized pursuant to Supplier's Declaration of Conformity.

* * * * *

(d) Field strength measurements shall be made, to the extent possible, on an open area test site. Test sites other than open area test sites may be employed if they are properly calibrated so that the measurement results correspond to what would be obtained from an open area test site. In the case of equipment for which measurements can be performed only at the installation site, such as perimeter protection systems, carrier current systems, and systems employing a "leaky" coaxial cable as an antenna, measurements for Supplier's Declaration of Conformity or for obtaining a grant of equipment authorization shall be performed at a minimum of three installations that can be demonstrated to be representative of typical installation sites.

* * * * *

(f) * * *

(4) The applicant for a grant of certification shall specify the extrapolation method used in the application filed with the Commission. For equipment subject to Supplier's Declaration of Conformity, this information shall be retained with the measurement data.

* * * * *

(h) A composite system, as defined in § 2.947(f) of this chapter, that incorporates a carrier current system shall be tested as if the carrier current system were incorporated in a separate device; that is, the device shall be tested for compliance with whatever rules would apply to the device were the carrier current system not incorporated, and the carrier current system shall be tested for compliance with the rules applicable to carrier current systems.

* * * * *

(k) Composite systems (*i.e.*, systems that incorporate different devices contained in a single enclosure or in separate enclosures connected by wire or cable) shall be measured for compliance with the technical standards of this part in accordance with the procedures in § 2.947(f) of this chapter. For digital devices that consist of a combination of Class A and Class B devices, the total combination of which results in a Class A digital device, it is only necessary to demonstrate that the equipment combination complies with the limits for a Class A device. This equipment combination may not be employed for obtaining a grant of equipment authorization or declaring compliance of a Class B digital device. However, if the digital device combination consists of a Class B central control unit, *e.g.*, a personal computer, and a Class A internal peripheral(s), it must be demonstrated that the Class B central control unit continues to comply with the limits for a Class B digital device with the Class A internal peripheral(s) installed but not active.

* * * * *

45. Section 15.32 is amended to read as follows:

§ 15.32 Test Procedures for CPU boards and computer power supplies.

Power supplies and CPU boards used with personal computers and for which separate authorizations are required to be obtained shall be tested in accordance with the specific procedures published or otherwise authorized by the Commission.

46. Section 15.35 is amended to read as follows:

§ 15.35 Measurement detector functions and bandwidths.

The conducted and radiated emission limits shown in this part are based on the following, unless otherwise specified in this part:

(a) On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a CISPR quasi-peak detector function and related measurement bandwidths, unless otherwise specified. The specifications for the measuring instrumentation using the CISPR quasi-peak detector can be found in ANSI C63.4-2014, clause 4. As an alternative to CISPR quasi-peak measurements, the responsible party, at its option, may demonstrate compliance with the emission limits using measuring equipment employing a peak detector function as long as the same bandwidth as indicated for CISPR quasi-peak measurements are employed.

(b) Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz. When average radiated emission measurements are specified in this part, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. Unless otherwise specified, *e.g.*, see §§ 15.250, 15.252, 15.253(d), 15.255, 15.256, and 15.509 through 15.519 of this part, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device, *e.g.*, the total peak power level. Note that the use of a pulse desensitization correction factor may be needed to determine the total peak emission level. The

instruction manual or application note for the measurement instrument should be consulted for determining pulse desensitization factors, as necessary.

(c) Unless otherwise specified, e.g., §§ 15.255(b), and 15.256(l)(5), when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to Supplier's Declaration of Conformity.

47. Section 15.37 is revised by amending paragraph (c) to read as follows:

§ 15.37 Transition provisions for compliance with the rules.

* * * * *

(c) All radio frequency devices that are authorized on or after July 12, 2004 under the certification, or Supplier's Declaration of Conformity procedures (or the prior verification or declaration of conformity procedures, as applicable) shall comply with the conducted limits specified in § 15.107 or § 15.207 as appropriate. All radio frequency devices that are manufactured or imported on or after July 11, 2005 shall comply with the conducted limits specified in § 15.107 or § 15.207, as appropriate. Equipment authorized, imported or manufactured prior to these dates shall comply with the conducted limits specified in § 15.107 or § 15.207, as appropriate, or with the conducted limits that were in effect immediately prior to September 9, 2002.

* * * * *

48. Section 15.101 is amended to read as follows:

§ 15.101 Equipment authorization of unintentional radiators.

(a) Except as otherwise exempted in §§ 15.23, 15.103, and 15.113, unintentional radiators shall be authorized prior to the initiation of marketing, pursuant to the procedures for certification or Supplier's Declaration of Conformity (SDoC) given in Subpart J of part 2 of this chapter, as follows:

Type of Device	Equipment Authorization Required
TV Broadcast Receiver	SDoC or Certification
FM Broadcast Receiver	SDoC or Certification
CB Receiver	SDoC or Certification
Superregenerative Receiver	SDoC or Certification
Scanning Receiver	Certification
Radar Detector	Certification
All other receivers subject to Part 15	SDoC or Certification
TV Interface Device	SDoC or Certification
Cable System Terminal Device	SDoC or Certification
Stand-alone Cable input selector switch	SDoC or Certification

Class B personal computers and peripherals	SDoC or Certification
CPU boards and internal power supplies used with Class B personal computers	SDoC or Certification
Class B personal computers assembled using authorized CPU boards or power supplies	SDoC or Certification
Class B external switching power supplies	SDoC or Certification
Other Class B digital devices & peripherals	SDoC or Certification
Class A digital devices, peripherals & external switching power supplies	SDoC or Certification
Access Broadband over Power Line (Access BPL)	Certification
All other devices	SDoC or Certification

(b) Only those receivers that operate (tune) within the frequency range of 30-960 MHz, CB receivers and radar detectors are subject to the authorizations shown in paragraph (a) of this section. Receivers operating above 960 MHz or below 30 MHz, except for radar detectors and CB receivers, are exempt from complying with the technical provisions of this part but are subject to § 15.5.

(c) Personal computers shall be authorized in accordance with one of the following methods:

(1) The specific combination of CPU board, power supply and enclosure is tested together and authorized under Supplier's Declaration of Conformity or a grant of certification;

(2) The personal computer is authorized under Supplier's Declaration of Conformity or a grant of certification, and the CPU board or power supply in that computer is replaced with a CPU board or power supply that has been separately authorized under Supplier's Declaration of Conformity or a grant of certification; or

(3) The CPU board and power supply used in the assembly of a personal computer have been separately authorized under Supplier's Declaration of Conformity or a grant of certification; and

(4) Personal computers assembled using either of the methods specified in paragraphs (c)(2) or (c)(3) of this section must, by themselves, also be authorized under Supplier's Declaration of Conformity if they are marketed. However, additional testing is not required for this Supplier's Declaration of Conformity, provided the procedures in § 15.102(b) are followed.

(d) Peripheral devices, as defined in § 15.3(r), shall be authorized under Supplier's Declaration of Conformity, or a grant of certification, as appropriate, prior to marketing. Regardless of the provisions of paragraphs (a) or (c) of this section, if a CPU board, power supply, or peripheral device will always be marketed with a specific personal computer, it is not necessary to obtain a separate authorization for that product provided the specific combination of personal computer, peripheral device, CPU board and power supply has been authorized under Supplier's Declaration of Conformity or a grant of certification as a personal computer.

(1) No authorization is required for a peripheral device or a subassembly that is sold to an equipment manufacturer for further fabrication; that manufacturer is responsible for obtaining the necessary authorization prior to further marketing to a vendor or to a user.

(2) Power supplies and CPU boards that have not been separately authorized and are designed for use with personal computers may be imported and marketed only to a personal computer equipment manufacturer that has indicated, in writing, to the seller or importer that they will obtain Supplier's

Declaration of Conformity or a grant of certification for the personal computer employing these components.

(e) Subassemblies to digital devices are not subject to the technical standards in this part unless they are marketed as part of a system in which case the resulting system must comply with the applicable regulations. Subassemblies include:

(1) Devices that are enclosed solely within the enclosure housing the digital device, except for: power supplies used in personal computers; devices included under the definition of a peripheral device in § 15.3(r); and personal computer CPU boards, as defined in § 15.3(bb);

(2) CPU boards, as defined in § 15.3(bb), other than those used in personal computers, that are marketed without an enclosure or power supply; and

(3) Switching power supplies that are separately marketed and are solely for use internal to a device other than a personal computer.

49. Section 15.102 is amended by revising paragraph (b)(4) to read as follows:

§ 15.102 CPU boards and power supplies used in personal computers

* * * * *

(b)(4) If the system is marketed, the resulting equipment combination is authorized under Supplier's Declaration of Conformity pursuant to § 15.101(c)(4) and a compliance information statement, as described in § 2.1077(b), is supplied with the system. Marketed systems shall also comply with the labelling requirements in § 15.19 and must be supplied with the information required under §§ 15.21, 15.27 and 15.105; and

* * * * *

50. Section 15.123 is revised by amending paragraphs (c)(3) and (c)(5)(iii) to read as follows:

§ 15.123 Labeling of digital cable ready products.

* * *

(c)(3) Subsequent to the testing of its initial unidirectional digital cable product model, a manufacturer or importer is not required to have other models of unidirectional digital cable products tested at a qualified test facility for compliance with the procedures of Uni-Dir-PICS-I01-030903: "Uni-Directional Receiving Device: Conformance Checklist: PICS Proforma," September 03, 2003 (incorporated by reference, see § 15.38) unless the first model tested was not a television, in which event the first television shall be tested as provided in § 15.123(c)(1). The manufacturer or importer shall ensure that all subsequent models of unidirectional digital cable products comply with the procedures in the Uni-Dir-PICS-I01-030903: "Uni-Directional Receiving Device: Conformance Checklist: PICS Proforma," September 03, 2003 (incorporated by reference, see § 15.38) and all other applicable rules and standards. The manufacturer or importer shall maintain records indicating such compliance in accordance with Supplier's Declaration of Conformity requirements in part 2, subpart J of this chapter. The manufacturer or importer shall further submit documentation demonstrating compliance with the procedures in the Uni-Dir-PICS-I01-030903: "Uni-Directional Receiving Device: Conformance Checklist: PICS Proforma," September 03, 2003 (incorporated by reference, see § 15.38) to the qualified test facility.

* * *

(c)(5)(iii)

(iii) Subsequent to the successful testing of its initial M-UDCP, a manufacturer or importer is not required to have other M-UDCP models tested at a qualified test facility for compliance with M-UDCP-PICS-I04-080225, “Uni-Directional Cable Product Supporting M-Card: Multiple Profiles; Conformance Checklist: PICS,” February 25, 2008 (incorporated by reference, see § 15.38) unless the first model tested was not a television, in which event the first television shall be tested as provided in §15.123(c)(5)(i). The manufacturer or importer shall ensure that all subsequent models of M-UDCPs comply with M-UDCP-PICS-I04-080225, “Uni-Directional Cable Product Supporting M-Card: Multiple Profiles; Conformance Checklist: PICS,” February 25, 2008 (incorporated by reference, see § 15.38) and all other applicable rules and standards. The manufacturer or importer shall maintain records indicating such compliance in accordance with Supplier’s Declaration of Conformity requirements in part 2, subpart J of this chapter. For each M-UDCP model, the manufacturer or importer shall further submit documentation demonstrating compliance with M-UDCP-PICS-I04-080225, “Uni-Directional Cable Product Supporting M-Card: Multiple Profiles; Conformance Checklist: PICS,” February 25, 2008 (incorporated by reference, see §15.38) to the qualified test facility.

* * *

51. Section 15.201 is amended by revising paragraphs (a), (b), and (c) to read as follows:

§ 15.201 Equipment authorization requirement.

(a) Intentional radiators operated as carrier current systems, devices operated under the provisions of §§ 15.211, 15.213, and 15.221, and devices operating below 490 kHz in which all emissions are at least 40 dB below the limits in § 15.209 are subject to Suppliers Declaration of Conformity pursuant to the procedures in Subpart J of part 2 of this chapter prior to marketing.

(b) Except as otherwise exempted in paragraph (c) of this section and in § 15.23 of this part, all intentional radiators operating under the provisions of this part shall be certified by the Telecommunication Certification Bodies pursuant to the procedures in subpart J of part 2 of this chapter prior to marketing.

(c) For devices such as perimeter protection systems which, in accordance with § 15.31(d), are required to be measured at the installation site, each application for certification must be accompanied by a statement indicating that the system has been tested at three installations and found to comply at each installation. Until such time as certification is granted, a given installation of a system that was measured for the submission for certification will be considered to be in compliance with the provisions of this chapter, including the marketing regulations in subpart I of part 2 of this chapter, if tests at that installation show the system to be in compliance with the relevant technical requirements. Similarly, where measurements must be performed on site for equipment subject to Supplier’s Declaration of Conformity, a given installation that has been found compliant with the applicable standards will be considered to be in compliance with the provisions of this chapter, including the marketing regulations in subpart I of part 2 of this chapter.

* * * * *

52. Section 15.615 is amended by revising paragraph (a)(4) to read as follows:

§ 15.615 General administrative requirements.

* * * * *

(4) The manufacturer and type of Access BPL equipment and its associated FCC ID number, or, in the case of Access BPL equipment that has not been subject to certification in the past, the Trade Name and Model Number, as specified on the equipment label.

* * * * *

PART 18—INDUSTRIAL, SCIENTIFIC, AND MEDICAL EQUIPMENT

53. The authority citation for Part 18 continues to read as follows:

Authority: 47 U.S.C. 4, 301, 302, 303, 304, 307.

54. Section 18.203 is revised to read as follows:

§ 18.203 Equipment Authorization.

(a) Consumer ISM equipment, unless otherwise specified, must be authorized under either the Supplier's Declaration of Conformity or the certification procedure prior to use or marketing. An application for certification shall be filed with a Telecommunication Certification Body (TCB), pursuant to the relevant sections in part 2, subpart J of this chapter.

(b) Consumer ultrasonic equipment generating less than 500 watts and operating below 90 kHz, and non-consumer ISM equipment shall be subject to Supplier's Declaration of Conformity, in accordance with the relevant sections of part 2, subpart J of this chapter.

(c) Grants of equipment authorization issued, as well as on-site certifications performed, before March 1, 1986, remain in effect and no further action is required.

55. Section 18.209 is revised as follows:

§ 18.209 Identification of authorized equipment.

Each device for which a grant of equipment authorization is issued under this part shall be identified pursuant to the applicable provisions of subpart J of part 2 of this chapter.

56. Section 18.212 is revised as follows:

§ 18.212 Compliance information.

(a) Equipment authorized under Supplier's Declaration of Conformity procedure shall include a compliance statement that contains the information set forth in §2.1077 and a statement identical or similar to the following: *"This device complies with Part 18 of the FCC Rules."*

(b) The compliance information may be placed in the instruction manual, on a separate sheet, on the packaging, or electronically as permitted under § 2.935. There is no specific format for this information.

57. Section 18.311 is revised to read as follows:

§ 18.311 Methods of measurement.

The measurement techniques used to determine compliance with the technical requirements of this part are set out in FCC MP-5, "FCC Methods of Measurements of Radio Noise Emissions from Industrial, Scientific, and Medical equipment", or compliance measurements made in accordance with the specific procedures otherwise authorized by the Commission.

58. Section 73.53 is amended by revising paragraphs (a) and (b)(10) to read as follows:

§ 73.53 Requirements for authorization of antenna monitors.

(a) Antenna monitors shall be approved with Supplier's Declaration of Conformity that demonstrates compliance with the technical requirements in this section. The procedure for Supplier's Declaration of Conformity is specified in subpart J of part 2 of this chapter. Note: The verification procedure has been replaced by Supplier's Declaration of Conformity. Antenna monitors previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950.

(b) * * *

(10) Complete and correct schematic diagrams and operating instructions shall be retained by the party responsible for Supplier's Declaration of Conformity of the equipment and submitted to the FCC upon request. For the purpose of equipment authorization, these diagrams and instructions shall be considered as part of the monitor.

* * * * *

59. Section 73.1660 is amended by revising paragraphs (a), (b) and (e) to read as follows:

§ 73.1660 Acceptability of broadcast transmitters.

(a)(1) An AM, FM, or TV transmitter shall be approved for compliance with the requirements of this part following the Supplier's Declaration of Conformity procedures described in subpart J of part 2 of this chapter. Note: the verification procedure has been replaced by Supplier's Declaration of Conformity. AM, FM, and TV transmitters previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950(j).

(2) An LPFM transmitter shall be certified for compliance with the requirements of this part following the procedures described in part 2 of this chapter.

(b) A permittee or licensee planning to modify a transmitter which has been certified or approved with Supplier's Declaration of Conformity must follow the requirements contained in § 73.1690.

* * * * *

(e) Additional rules covering certification and Supplier's Declaration of Conformity, modification of authorized transmitters, and withdrawal of a grant of authorization are contained in part 2 of the FCC

rules.

60. Section 73.1665 is amended by revising paragraphs (c) to read as follows:

§ 73.1665 Main Transmitters

* * * * *

(c) A licensee may, without further authority or notification to the FCC, replace an existing main transmitter or install additional main transmitter(s) for use with the authorized antenna if the replacement or additional transmitter(s) has been approved with Supplier's Declaration of Conformity. Within 10 days after commencement of regular use of the replacement or additional transmitter(s), equipment performance measurements, as prescribed for the type of station are to be completed. Note: The verification procedure has been replaced by Supplier's Declaration of Conformity. Transmitters previously authorized under subpart J of the Commission's rules may remain in use. See § 2.950.

NOTE TO PARAGRAPH (c): Pending the availability of AM broadcast transmitters that are authorized for use in the 1605-1705 kHz band, transmitters that are approved or verified for use in the 535-1605 kHz band may be utilized in the 1605-1705 kHz band if it is shown that the requirements of § 73.44 have been met. Equipment authorization for the transmitter will supersede the applicability of this note.

61. Section 74.535 is amended by revising paragraphs (d) to read as follows:

§ 74.535 Emissions and bandwidth (aural broadcast auxiliary stations)

* * * * *

(D) * * *

(4) Stations licensed pursuant to an application filed before March 17, 2005, using equipment not conforming with the emission limitations specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal. existing equipment and equipment of product lines in production before April 16, 2003, authorized via certification or Declaration of Conformity before March 17, 2005, for equipment not conforming to the emission limitations requirements specified above, may continue to be manufactured and/or marketed, but may not be authorized for use under a station license except at stations licensed pursuant to an application filed before March 17, 2005. Any non-conforming equipment authorized under a station license, and replaced on or after March 17, 2005, must be replaced by conforming equipment. Note: the Declaration of Conformity procedure has been replaced by the Supplier's Declaration of Conformity procedure. See § 2.950.

* * * * *

62. Section 74.550 is amended by revising paragraphs (d) to read as follows:

§ 74.550 Equipment authorization (aural broadcast auxiliary stations)

Each authorization for aural broadcast STL, ICR, and booster stations shall require the use of equipment which has received a grant of certification or authorized under a Supplier's Declaration of Conformity.

Equipment which has not been approved under the equipment authorization program and which was in service prior to July 1, 1993, may be retained solely for temporary uses necessary to restore or maintain regular service provided by approved equipment, because the main or primary unit has failed or requires servicing. Such temporary uses may not interfere with or impede the establishment of other aural broadcast auxiliary links and may not occur during more than 720 cumulative hours per year. Should interference occur, the licensee must take all steps necessary to eliminate it, up to and including cessation of operation of the auxiliary transmitter. All unapproved equipment retained for temporary use must have been in the possession of the licensee prior to July 1, 1993, and may not be obtained from other sources. Equipment designed exclusively for fixed operation shall be authorized under Supplier's Declaration of Conformity procedure. The equipment authorization procedures are contained in subpart J of part 2 of the rules. Note: The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950.

Note to § 74.550: Consistent with the note to § 74.502(a), grandfathered equipment in the 942-944 MHz band and STL/ICR users of these frequencies in Puerto Rico are also required to come into compliance by July 1, 1993. The backup provisions described above apply to these stations also.

63. Section 74.637 is amended by revising paragraphs (c)(4) to read as follows:

§ 74.637 Emissions and emission limitations (television broadcast auxiliary stations)

* * * * *

(c) * * *

(4) Stations licensed pursuant to an application filed before March 17, 2005, using equipment not conforming with the emission limitations specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal. Existing equipment and equipment of product lines in production before April 16, 2003, authorized via certification or Declaration of Conformity before March 17, 2005, for equipment not conforming to the emission limitations requirements specified above, may continue to be manufactured and/or marketed, but may not be authorized for use under a station license except at stations licensed pursuant to an application filed before March 17, 2005. Any non-conforming equipment authorized under a station license, and replaced on or after March 17, 2005, must be replaced by conforming equipment. Note: The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. See § 2.950.

* * * * *

64. Section 74.655 is amended by revising paragraphs (a), (b), (d) and (f) to read as follows:

§ 74.655 Authorization of equipment (television broadcast auxiliary stations).

(a) Except as provided in paragraph (b) of this section, all transmitting equipment first marketed for use under this subpart or placed into service after October 1, 1981, must be authorized under the certification procedure or Declaration of Conformity procedure, as detailed in paragraph (f) of this section. Equipment which is used at a station licensed prior to October 1, 1985, which has not been authorized as detailed in paragraph (f) of this section, may continue to be used by the licensee or its successors or assignees, provided that if operation of such equipment causes harmful interference due to its failure to comply with the technical standards set forth in this subpart, the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference. However, such equipment may not be

further marketed or reused under part 74 after October 1, 1985. Note: The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under Subpart J of Part 2 of the Commission's rules may remain in use. See § 2.950.

(b) Certification or Supplier's Declaration of Conformity is not required for transmitters used in conjunction with TV pickup stations operating with a peak output power not greater than 250 mW. Pickup stations operating in excess of 250 mW licensed pursuant to applications accepted for filing prior to October 1, 1980 may continue operation subject to periodic renewal. If operation of such equipment causes harmful interference the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

* * * * *

(d) Any manufacturer of a transmitter to be used in this service may authorize the equipment under the certification or Supplier's Declaration of Conformity procedures, as appropriate, following the procedures set forth in subpart J of part 2 of the FCC rules.

* * * * *

(f) Transmitters designed to be used exclusively for a TV STL station, a TV intercity relay station, a TV translator relay station, or a TV microwave booster station, shall be authorized under Supplier's Declaration of Conformity. All other transmitters will be authorized under the certification procedure.

65. Section 74.661 is amended by revising footnote 2 to read as follows:

§ 74.661 Frequency tolerance.

* * * * *

(Table Excluded)

* * *

fn2 Stations licensed pursuant to an application filed before March 17, 2005, for tolerance values exceeding those specified above, may continue to operate indefinitely in accordance with the terms of their current authorizations, subject to periodic renewal. Existing equipment and equipment of product lines in production before April 16, 2003, authorized via certification or Declaration of Conformity before March 17, 2005, for tolerance values exceeding those specified above, may continue to be manufactured and/or marketed, but may not be authorized for use under station license except at stations licensed pursuant to an application filed before March 17, 2005. Any non-conforming equipment authorized under a station license, and replaced on or after March 17, 2005, must be replaced by conforming equipment. Note: The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. See § 2.950.

66. Section 74.1250 is amended by revising paragraphs (a), and (c) to read as follows:

§ 74.1250 Transmitters and associated equipment.

(a) FM translator and booster transmitting apparatus, and exciters employed to provide a locally generated and modulated input signal to translator and booster equipment, used by stations authorized under the provisions of this subpart must be certified upon the request of any manufacturer of transmitters in

accordance with this section and subpart J of part 2 of this chapter. In addition, FM translator and booster stations may use FM broadcast transmitting apparatus authorized via Supplier's Declaration of Conformity or approved under the provisions of part 73 of this chapter. Note: The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950.)

* * * * *

(c) The following requirements must be met before translator, booster or exciter equipment will be certified in accordance with this section:

* * * * *

67. Section 78.107 is amended by revising paragraphs (a) and (a)(2), to read as follows:

§ 78.107 Equipment and installation (cable television relay service, technical regulations).

(a) Applications for new cable television relay stations, other than fixed stations, will not be accepted unless the equipment specified therein has been certified in accordance with subpart J of part 2 of this chapter. In the case of fixed stations, the equipment must be authorized under Supplier's Declaration of Conformity for use pursuant to the provisions of this subpart. Transmitters designed for use in the 31.0 to 31.3 GHz band shall be authorized under Supplier's Declaration of Conformity. Note: The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950.

* * *

(2) Neither certification nor Supplier's Declaration of Conformity is required for the following transmitters:

* * * * *

68. Section 80.203 is amended by revising paragraphs (a), (f), (g), (l), and (m)(2) to read as follows:

§ 80.203 Authorization of transmitters for licensing.

(a) Each transmitter authorized in a station in the maritime services after September 30, 1986, except as indicated in paragraphs (g), (h) and (i) of this section, must be certified by the Commission for part 80 operations. The procedures for certification are contained in part 2 of this chapter. Transmitters of a model that have received equipment authorization before October 1, 1986 will be considered acceptable for use in ship or coast stations as appropriate.

* * * * *

(f) Transmitters certified for single sideband suppressed carrier radiotelephone transmissions may be used for facsimile transmissions without filing for a certification modification provided the transmitters retain certification and comply with the applicable standards in this part.

(g) Manufacturers of ship earth station transmitters intended for use in the INMARSAT space segment

are subject to Supplier's Declaration of Conformity pursuant to the procedures given in subpart J of part 2 of this chapter. Such equipment must be approved in accordance with the technical requirements provided by INMARSAT and must be type approved by INMARSAT for use in the INMARSAT space segment. The ship earth station input/output parameters, the data obtained when the equipment is integrated in system configuration and the pertinent method of test procedures that are used for type approval of the station model which are essential for the compatible operation of that station in the INMARSAT space segment must be disclosed by the manufacturer upon request of the FCC. Witnessing of the type approval tests and the disclosure of the ship earth station equipment design or any other information of a proprietary nature will be at the discretion of the ship earth station manufacturer. Note: The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950.

* * * * *

(l) Ship station transmitters may be certified for emissions not shown in § 80.205 of this part. However, such emissions are not authorized for use in the United States or for communications with U.S. coast stations.

(m) * * *

(2) A transmitter and any internal device capable of transmitting a synthesized voice message must be certified as an integral unit.

* * * * *

69. Section 80.1103 is amended by revising paragraphs (a, and (c) to read as follows:

§ 80.1103 Equipment authorization (global maritime distress and safety system [GMDSS], equipment requirements for ship stations)

(a) All equipment specified in § 80.1101 must be certified in accordance with 47 CFR part 2 specifically for GMDSS use, except for equipment used in the INMARSAT space segment which must be type-approved by INMARSAT and are subject to Supplier's Declaration of Conformity pursuant to the procedures in accordance with 47 CFR part 2 specifically for GMDSS use. The technical parameters of the equipment must conform to the performance standards as specified in § 80.1101. For emergency position-indicating radiobeacons operating on 406.0-406.1 MHz (406.0-406.1 MHz EPIRBs) that were authorized prior to April 15, 1992, and meet the requirements of § 80.1101, the manufacturer may attest by letter that the equipment (indicate FCC ID#) meets the requirements of § 80.1101 and request that it be denoted as approved for GMDSS use.

* * * * *

(c) Applicants using Supplier's Declaration of Conformity must attest that the equipment complies with performance standards as specified in § 80.1101 and, where applicable, that measurements have been made that demonstrate the necessary compliance. Submission of representative data demonstrating compliance is not required unless requested by the Commission. An application must include the items listed in §§ 2.953 and 2.955 of this chapter and a copy of the type-approval certification indicating that equipment meets GMDSS standards and includes all peripheral equipment associated with the specific unit under review. Note: The Declaration of Conformity procedure has been replaced by Supplier's

Declaration of Conformity. See § 2.950 of this chapter. Equipment previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950.

* * * * *

70. Section 87.147 is amended by revising paragraph (e) to read as follows:

§ 87.147 Authorization of equipment (aviation services, technical requirements).

* * * * *

(e) Supplier's Declaration of Conformity for ELTs capable of operating on the frequency 406.0-406.1 MHz must include sufficient documentation to show that the ELT meets the requirements of § 87.199(a). A letter notifying the FAA of the ELT Supplier's Declaration of Conformity must be mailed to: FAA, Office of Spectrum Policy and Management, ASR-1, 800 Independence Avenue SW., Washington, DC 20591. Note: The verification procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950.

* * * * *

71. Section 87.199 is amended by revising paragraphs (c) and (d) to read as follows:

§ 87.199 Special requirements for 406.025 MHz ELTs (aircraft stations, emergency locator transmitters).

* * * * *

(c) As part of its Supplier's Declaration of Conformity a 406.0-406.1 MHz ELT, the ELT must be certified by a test facility recognized by one of the COSPAS/SARSAT Partners that the equipment satisfies the design characteristics associated with the COSPAS/SARSAT document COSPAS/SARSAT 406 MHz Distress Beacon Type Approval Standard (C/S T.007). Additionally, an independent test facility must certify that the ELT complies with the electrical and environmental standards associated with the RTCA Recommended Standards. Note: The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950.

(d) The procedures for Supplier's Declaration of Conformity are contained in subpart J of part 2 of this chapter.

* * * * *

72. Section 90.203 is amended by revising paragraphs (a), (e), (g)(2), (j)(7), and (l) to read as follows:

§ 90.203 Certification required (private land mobile radio services, general technical standards).

(a) Except as specified in paragraphs (b) and (l) of this section, each transmitter utilized for operation

under this part and each transmitter marketed as set forth in § 2.803 of this chapter must be of a type which has been certified for use under this part.

* * * * *

(e) Except as provided in paragraph (g) of this section, transmitters designed to operate above 25 MHz shall not be certified for use under this part if the operator can program and transmit on frequencies, other than those programmed by the manufacturer, service or maintenance personnel, using the equipment's external operation controls.

* * * * *

(g) * * *

(2) Requires the transmitter to be programmed for frequencies through controls normally inaccessible to the operator; or

* * * * *

(j) * * *

(7) Transmitters designed only for one-way paging operations may be certified with up to a 25 kHz bandwidth and are exempt from the spectrum efficiency requirements of paragraphs (j)(3) and (j)(5) of this section.

* * * * *

(l) Ocean buoy and wildlife tracking transmitters operating in the band 40.66-40.70 MHz or 216-220 MHz under the provisions of § 90.248 of this part shall be authorized under Supplier's Declaration of Conformity procedure pursuant to subpart J of part 2 of this chapter. Note: The Declaration of Conformity procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under subpart J of Part 2 of the Commission's rules may remain in use. See § 2.950.

* * * * *

73. Section 101.139 is amended by revising paragraphs (a), (b), (d), (e), and (g)(1) to read as follows:

§ 101.139 Authorization of transmitters (fixed microwave services, technical standards).

(a) Unless specified otherwise, transmitters used in the private operational fixed and common carrier fixed point-to-point microwave and point-to-multipoint services under this part must be a type that has been approved for compliance under Supplier's Declaration of Conformity. Note: The verification procedure has been replaced by Supplier's Declaration of Conformity. Equipment previously authorized under subpart J of part 2 of the Commission's rules may remain in use. See § 2.950.

(b) Any manufacturer of a transmitter to be produced for use under the rules of this part may be approved under the equipment authorization procedures set forth in part 2 of this chapter.

* * * * *

(d) A transmitter presently shown on an instrument of authorization, which operates on an assigned frequency in the 890-940 MHz band and has not received a grant of certification, may continue to be used by the licensee without certification provided such transmitter continues otherwise to comply with the applicable rules and regulations of the Commission.

(e) Certification or Supplier's Declaration of Conformity is not required for portable transmitters operating with peak output power not greater than 250 mW. If operation of such equipment causes harmful interference the FCC may, at its discretion, require the licensee to take such corrective action as is necessary to eliminate the interference.

* * * * *

(g) * * *

(1) The 0.001% frequency tolerance requirement for digital systems in § 101.107(a) or the 0.03-0.003% frequency tolerance for analog systems; and

* * * * *

APPENDIX C

FINAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rulemaking (NPRM)*.² The Commission sought written public comment on the proposals in the *NPRM*, including comment on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.³

A. Need for, and Objectives of the Rules

2. In the *Equipment Authorization First R&O*, we adopt the rules that govern the evaluation and approval of radiofrequency (RF) devices. The Commission ensures compliance with its technical rules through the equipment authorization program for RF devices; the technical rules are the means by which the Commission carries out its responsibilities under Section 302 of the Communications Act of 1934, as amended, which permits the Commission to make reasonable regulations governing the interference potential of devices that emit RF energy and can cause harmful interference to radio communications.

3. The Commission last comprehensively reviewed its equipment authorization procedures more than fifteen years ago. The changes in the way today's equipment is designed, manufactured, and marketed, as well as the sheer number of such devices that need to be authorized warrant modifications to the rules that specify the equipment subject to our equipment authorization procedures. By updating our rules, we can enable innovation and growth in the development and use of RF devices by providing a clear path for products to demonstrate compliance with the FCC rules so that they may be brought to the market expeditiously. At the same time, we continue to ensure that hundreds of millions of radio transmitters, consumer products, and other electronic devices will continue to share the airwaves successfully.

4. The *Equipment Authorization First R&O* addresses the types of authorization procedures used to approve equipment, the ability of equipment to provide information via electronic display, the importation of radio devices, and the procedures related to compliance measurements. Our decisions complement the recent actions taken by the Commission to modify the equipment authorization rules that address the obligations of Telecommunication Certification Bodies (TCBs) that certify RF equipment and the laboratories that test equipment subject to the certification process.⁴

¹ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 – 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See *Amendment of Part 0, 1, 2, 15 and 18 of the Commission's Rules regarding Authorization of Radiofrequency Equipment*, ET Docket No. 15-170, RM-11673, Notice of Proposed Rulemaking, 30 FCC Rcd 7725, 7806-11 (2015) (*EA NPRM* or *Equipment Authorization NPRM*).

³ See 5 U.S.C. § 604.

⁴ See *Amendment of Parts 0, 1, 2, and 15 of the Commission's Rules regarding Authorization of Radiofrequency Equipment and Amendment of Part 68 regarding Approval of Terminal Equipment by Telecommunications Certification Bodies*, Report and Order, ET Docket No. 13-44, FCC 14-208 (2014) (*TCB Order*). The *TCB Order* largely addressed the processes by which certification applications are to be evaluated.

(continued....)

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

5. There were no comments filed that specifically addressed the rules and policies proposed in the IRFA.

C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration

6. Pursuant to the Small Business Jobs Act of 2010, which amended the IRFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.⁵ The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

D. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply

7. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the rules adopted herein⁶ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁷ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁸ A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁹ The Commission has not developed a definition of small entities applicable to RF Equipment manufacturers. The most analogous definition of small entity is that which is contained in the rules applicable to manufacturers of “Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.” This notice also addresses the repair of devices that are subject to the Commission’s equipment authorization rules. For this reason, we also include small entities associated with an additional category, “Communication Equipment Repair and Maintenance,” in our analysis.

8. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and

⁵ 5 U.S.C. § 604(a)(3).

⁶ See 5 U.S.C. § 604(a)(3).

⁷ 5 U.S.C. § 601(6).

⁸ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

⁹ 15 U.S.C. § 632.

broadcasting equipment.¹⁰ The Small Business Administration has established a size standard for this industry of 750 employees or less.¹¹ U.S. Census data for 2012 shows that 841 establishments operated in this industry in that year. Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees and 6 establishments operated with 2,500 or more employees.¹² Based on this data, we conclude that a majority of manufacturers in this industry is small.

9. *Communication Equipment Repair and Maintenance.* This U.S. industry comprises establishments primarily engaged in repairing and maintaining communications equipment without retailing new communication equipment, such as telephones, fax machines, communications transmission equipment, and two-way radios.¹³ The SBA has developed a size standard for this industry which is that any firm whose annual receipts are \$11 million or less is defined as a small business.¹⁴ Census Bureau data for 2012 indicate that in this industry, 1,185 firms operated for the entire year. Of these firms, 1,148 operated with annual receipts of less than \$10 million dollars. Based on this data, the Commission concludes that the majority of firms operating in this industry are small.¹⁵

E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

10. The Commission ensures that RF equipment complies with its technical requirements by specifying that devices must be authorized in accordance with one of three procedures specified in Subpart J of Part 2 of the rules – certification, Declaration of Conformity (DoC), and verification. The *Equipment Authorization First R&O* replaces the DoC and verification processes with a single process, provides an electronic option for the provision of required compliance labeling of RF devices, streamlines the requirements for the importation of RF devices, and updates the testing procedures related to device compliance measurements.

11. Certification is typically applied to RF equipment employing new technology for which the testing methodology is relatively complex or not well defined, or that otherwise is considered to have the highest risk of interference.¹⁶ TCBs approve equipment under the certification procedure based on review of an application that provides test reports and all of the other information specified in the Commission's rules. Certified devices are uniquely identified by an FCC Identifier (FCC ID), which

¹⁰ The NAICS Code for this service is 334220. 13 C.F.R. 121/201. *See also* http://factfinder.census.gov/servlet/IBQTable?_bm=y&-fds_name=EC0700A1&-geo_id=&-skip=300&-ds_name=EC0731SG2&-lang=en.

¹¹ 13 CFR § 121.201, NAICS Code 334220.

¹²

http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_31SG2&prodType=table

¹³ <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=811213&search=2012+NAICS+Search&search=2012>

¹⁴ 13 C.F.R. 121.201, NAICS Code 811213

¹⁵ https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_81SSSZ4&prodType=table

¹⁶ *See* 47 C.F.R. § 2.907.

(continued...)

must be included on the device label.¹⁷ All certified equipment is listed in a Commission database that includes the application for certification, test report and other material.¹⁸

12. DoC and verification are self-approval procedures in which the responsible party is required to take specific actions to ensure that its equipment complies with our rules. DoC and verification procedures are permitted for certain types RF devices that operate under Part 15 or Part 18 of our rules. DoC requires the responsible party, in addition to taking the necessary steps to ensure that the equipment complies with the appropriate technical standards, to use a recognized accredited test laboratory when testing devices.¹⁹ The responsible party also must include a compliance information statement with the product that identifies the product and a responsible party within the United States.²⁰ Under verification, the responsible party must also take the necessary steps to ensure that the equipment complies with the appropriate technical standards, but there are no requirements to use recognized test laboratories and supply a compliance information statement with the product.²¹ Unlike certification, the DoC and verification procedures do not require submittal of an application to the FCC or a TCB, the explicit grant of approval, or submission of a test device (unless specifically requested by the Commission). Also, unlike certified devices, this equipment does not have an FCC ID, and is not listed in an FCC database.

13. In the *Equipment Authorization First R&O*, the Commission establishes a new device self-approval process, "Supplier's Declaration of Conformity" or "SDoC." SDoC, which combines elements of DoC and verification, into a single self-approval process for equipment that has a strong record of compliance and for which there is minimal risk of causing harmful interference. We recognize our increased comfort with self-approval procedures by streamlining the procedures and eliminating those elements that serve to increase the costs of complying with our rules and that provide benefits that are of only marginal utility.

14. We believe that our actions will minimize the compliance costs borne by small entities by, for example, eliminating the mandate to use accredited laboratories that is currently associated with the DoC rules and removing the requirement to display the FCC logo on the equipment identification label. We recognize that manufacturers of devices currently subject to verification may be subject to some minimal additional requirements under SDoC, most notably that the manufacturer include a written compliance statement with the literature furnished to the user that serves to identify the party responsible for the device's compliance with the Commission's regulations. We nevertheless believe that, on the whole, the use of the SDoC process will also make it easier for manufacturers to comply with recordkeeping and reporting requirements because we will for the first time adopt a single, streamlined self-approval process that is easy to understand, simple to apply, and that is better aligned with existing international processes. We anticipate minimal costs associated with modifying existing processes and

¹⁷ See 47 C.F.R. §§ 2.925 and 2.926. The FCC ID consists of two elements – a grantee code and an equipment product code.

¹⁸ The Commission's Equipment Authorization System (EAS) can be accessed at <https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm>.

¹⁹ See 47 C.F.R. § 2.906. The party responsible for compliance is defined in 47 C.F.R. § 2.909.

²⁰ See 47 C.F.R. §§ 2.1077, 15.19(a)(3), and 18.209(b). Only Part 15 and 18 equipment is currently covered by DoC. For example, Part 15 devices subject to the DoC rules must be labeled with the following statement: "This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation." See also 47 C.F.R. §§ 2.1075 and 2.946 (describing circumstances in which the responsible party must submit to the Commission records of the original design drawings and specifications, the procedures used for production inspection and testing, a report of RF emission measurements, the compliance information statement, and a sample of the device).

²¹ See 47 C.F.R. §§ 2.909(b), 2.946, 2.953, 2.955 and 2.956.

(continued....)

procedures to comply with the rule, and that any such costs will be quickly recouped by the savings realized under use of the new SDoC procedures.

15. With the *Equipment Authorization First R&O*, the Commission also implements the E-LABEL Act requirement that it “promulgate regulations or take other appropriate action, as necessary, to allow manufacturers of radiofrequency devices with display the option to use electronic labeling for the equipment in place of affixing physical labels to the equipment.”²² We amended our regulations to comply with the provisions of this legislation. In addition, we amended our labeling regulations to address devices that are too small to be legibly labeled with an FCC ID.

16. Finally, the *Equipment Authorization First R&O* permanently eliminates the need to file FCC Form 740 information with U.S. Customs and Border Protection when importing RF devices into the United States. This action, along with other steps taken to provide additional relief from certain importation related compliance requirements, substantially reduces burdens on entities seeking to import RF devices into the United States.

F. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

17. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”²³

18. As discussed above, the overall approach we have taken is to clarify, consolidate, and simplify the compliance and reporting requirements associated with our equipment authorization program where possible. This includes steps taken in the Report and Order such as not requiring the use of accredited labs under the SDoC procedure, providing for electronic labeling instead of permanent physical labeling of RF devices capable of displaying the electronic labeling, and streamlining importation requirements by, for example, eliminating the use of FCC Form 740. Given our interest in evaluating the interference potential of devices that emit RF energy and can cause harmful interference to radio communications, we believe that these steps should apply to all device manufacturers, including small entities. In crafting this regulatory relief, we have not identified any additional steps that we could take with respect to small entities that could not also be applied to all device manufacturers.

19. The *Equipment Authorization First R&O* also recognizes that we are eliminating existing requirements that certain device manufacturers may nevertheless still find beneficial. These include, for example, filing for certification of devices that are eligible to be approved under the simpler SDoC procedures, and placing the FCC logo on devices that would no longer require such marking. Because these requirements may have value for some entities, we retain the option for parties to follow such more rigorous practice. By allowing but not requiring parties to engage in such practices if they find them useful, we will not unnecessarily burden small entities that no longer wish to retain such practices.

20. As directed by the E-LABEL Act, we adopted to add a new section to our rules to codify electronic labeling procedures.²⁴ The new rule will generally allow a radiofrequency device with an

²² Enhance Labeling, Accessing, and Branding of Electronic Licenses Act of 2014, Pub. L. No. 113-197, 128 Stat. 2055 (codified at 47 U.S.C. § 622) (E-LABEL Act).

²³ 5 U.S.C. § 603(c)(1) - (c)(4).

²⁴ See proposed amendment of 47 C.F.R. § 2.935 in Appendix A.

integrated electronic display to electronically display any labels required by our rules. This will include the FCC ID required by our certification rules as well as any warning statements or other information that our rules require to be placed on a physical label on the device. The rule will require that this electronic labeling information is secured in order to prevent modification by a third party. While the E-LABEL Act is not directed at small entities, we recognize that the use of electronic labeling can potentially decrease costs for all device manufacturers because it will provide a means by which manufacturers will no longer have to affix permanent labels to devices. We nevertheless recognize that small entities may not wish to incur the costs associated with changing their processes to produce electronic label displays. As such, we are not requiring parties to display any information as part of an electronic label not already required by our rules, nor are we eliminating the ability of manufacturers to continue to physically label devices if they wish to do so.

Report to Congress: The Commission will send a copy of the *Equipment Authorization First R&O*, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act.²⁵ In addition, the Commission will send a copy of the *Equipment Authorization First R&O*, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Equipment Authorization First R&O* and FRFA (or summaries thereof) will also be published in the Federal Register.²⁶

²⁵ See 5 U.S.C. § 801(a)(1)(A).

²⁶ See 5 U.S.C. § 604(b).

FASHION-TECH

Why Has Apple Been Poaching Fashion Execs?

BY VIKRAM ALEXEI KANSARA AND HELENA PIKE

AUGUST 11, 2015 16:01

Before the launch of Apple's Watch, the company made a slew of fashion and luxury hires. But the moves at the notoriously secretive Apple are about more than wearable tech.



SAN FRANCISCO, United States — Apple has long applied the rules of fashion to the design and marketing of its popular iPod, iPhone and iPad devices, desirable not only for their functionality, but for their slick aesthetics and symbolic value, differentiating Apple users from others and signalling their affiliation with specific social tribes. But in the last couple of years, Apple has embraced fashion more overtly, making a slew of major hires from the fashion and luxury sector, including top executives like [Paul](#)

[Deneve](#), former CEO of Yves Saint Laurent, and [Angela Ahrendts](#), former CEO of Burberry.

Of course, a big driver of these moves is Apple's Watch, the company's first foray into wearable tech — personal accessories with embedded digital technology — widely predicted to be the next big thing in consumer electronics. Indeed, many of Apple's fashion and luxury hires, including Paul Deneve and Patrick Pruniaux, former vice president of global sales and retail at Tag Heuer, are known to be working on Watch, which Apple is marketing as a luxury fashion accessory.

In February, a [New Yorker piece](#) revealed that Apple design chief Jony Ive was working closely with Angela Ahrendts, now the company's senior vice president of retail and online sales, to revamp Apple's retail stores in order to make them better suited to selling Watch. But the poaching of fashion and luxury executives like Ahrendts is about much more than one device. Indeed, at Burberry, Ahrendts oversaw the creation of a [highly sophisticated new store template](#) that is one of the world's leading examples of tech-infused 'retail entertainment' and omni-channel innovation, two pillars of a next generation customer experience. Ahrendts also brings to the table her knowledge of China, where Burberry has a formidable store network and Apple has big plans for retail expansion.

But underlying these hires is a deeper question: what kind of company does Apple want to be? From its original Apple Computer 1 to its new Watch, Apple has long sold consumer technology. But to call Apple a consumer technology company is to miss the magic of what has become the world's largest corporation.

"The truth is that Apple doesn't sell phones (or computers or tablets); they sell iPhones," wrote Ben Thompson, founder of [Stratechery](#), a blog on technology and business. "iPhones are not just hardware, but also the software that runs on them. But even that is missing the whole picture. To buy an iPhone is to buy into an experience that includes everything from advertising to following the news to visiting a store to buying a phone to unboxing to downloading apps to visiting a Genius and so on and so forth."

Seen through this lens, the hiring of executives from fashion and luxury brands, some of the best in the world at staging emotional customer experiences, is less about wearable tech (or retail or marketing) alone and more about the next chapter in Apple's overall transformation from a tech company to a lifestyle experience brand.

So who are the fashion and luxury executives who have joined Apple to help the company fulfil its vision? Where did they come from? And what are they doing?

Angela Ahrendts, SVP of Retail and Online Sales

Angela Ahrendts came to Apple from Burberry, where, as chief executive, she partnered with creative director [Christopher Bailey](#) to drive the brand's impressive reinvention, turning the staid British heritage label into a global fashion powerhouse and, in the process, tripling the company's revenues. Ahrendts was closely involved in developing [Burberry's next generation retail strategy](#) and joins Apple as head of retail and online sales, where she has been working to revamp the company's in-store experience and better integrate online and offline channels. At Burberry, Ahrendts also oversaw the brand's retail expansion into China, where Apple has plans to grow a network of 30 to 40 stores.

Paul Deneve, VP of Special Projects

As one of the world's rare business leaders with extensive experience in both fashion and technology, Paul Deneve is a unique asset for Apple. Deneve held sales and marketing roles at Apple in Europe before managing a number of luxury fashion companies — including Lanvin, Courrèges, Nina Ricci and, most recently, Yves Saint Laurent — and his return to Apple, in 2013, completes his circuit from tech to fashion to tech. Deneve is currently vice president of “special projects,” which is widely understood to encompass Apple's Watch.

Marc Newson, SVP of Design

British designer Marc Newson is one half of the two-man senior design team behind Apple Watch, along with his good friend, Apple's chief design officer Jony Ive. In fact, it was Ive who brought on Newson as senior vice president of design after the pair collaborated on a customised Jaeger-LeCoultre Memovox watch in 2013. Although the appointment was not announced until September 2014 — when Apple's Watch was

revealed to the public — Newson had already been working with Ive on the design of the company's first wearable device for some time. Newson's design career has seen him collaborate with luxury fashion brands like Hermès, [Louis Vuitton](#) and [Azzedine Alaïa](#). In the 1990s, he also founded a Swiss wristwatch company called Ikepod, a venture that helped Ive conclude that Newson was the best choice to help him design Apple's Watch.

Patrick Pruniaux, Senior Director of Special Projects

Appointed senior director of “special projects” in August 2014, Patrick Pruniaux is a veteran of the luxury watch industry who spent five years as vice president of global sales and retail at Tag Heuer, the LVMH-owned mid-range Swiss luxury watchmaker. A long-time watch industry insider, Pruniaux's understanding of the market has helped Apple navigate its entry into this new product category.

Catherine Monier, Special Projects

Catherine Monier was hired to Apple's “special projects” team in the summer of 2014 to help develop sales strategy for the company's Watch. Like Deneve, Monier was previously at Yves Saint Laurent, where she was European president and global wholesale director. Before that, Monier was wholesale director at Céline and, previously, wholesale director of women's at Lanvin.

Marcela Aguilar, Global Director of Marketing Communications

An ad agency veteran and former senior global marketing and communications director at Gap, Aguilar joined Apple in September 2014 to direct the company's marketing and communications. Aguilar has been credited with helping to reverse Gap's sales slump in the early 2010s and has global experience in China, India and Brazil. Since Aguilar's arrival, Apple's marketing has shifted towards more lifestyle-oriented campaigns.

Anita Borzyszkowska, Consultant

Anita Borzyszkowska is a consultant helping to position Apple's Watch as a genuine luxury accessory and win the support of the fashion industry. A heavyweight PR and brand strategist, Borzyszkowska was previously head of Gap's global public relations and has brought to Apple her network of deep industry relationships. Borzyszkowska

was responsible for enticing top fashion journalists and other industry insiders to participate in the launch of Watch, which has appeared on the wrist of [Karl Lagerfeld](#) and the cover of Vogue China.

Musa Tariq, Digital Marketing Director, Retail

Arriving at Apple in August 2014, Musa Tariq is the company's digital marketing director for retail. Like Ahrendts, with whom he enjoys a close professional relationship, Tariq also came from Burberry, where he was global director of social media — developing initiatives like the company's 'Tweetwalk' campaign and running the brand's expansion on social platforms in China — before shifting, in 2012, to Nike, where he was global senior director of social media and community. His appointment at Apple marks a U-turn in the company's approach to social media marketing, which has historically been muted.

Chester Chipperfield, Special Projects

Another employee to defect to Apple from Burberry, Chester Chipperfield joined the company's "special projects" team in January 2015. At Burberry, Chipperfield was vice president of digital and interactive design, a post he held from 2011. Working closely with Ahrendts, Chipperfield was one of the key figures behind the redesign of Burberry's e-commerce presence and brings his experience to Apple's digital retail strategy for the company's Watch.

Jacob Jordan, Director of Product Merchandising

Jordan joined Apple's "special projects" team as director of product merchandising in October 2014. He has a strong background in luxury merchandising, having come to Apple from Louis Vuitton, where he was director of men's ready-to-wear for two and a half years. Prior to that, Jordan was vice president of menswear at [Theory](#). He brings his understanding of fashion merchandising to Apple, as the company adapts to selling a wearable accessory for the first time.

Lance Lin, Senior Public Relations Manager

Lance Lin was hired as Apple's senior public relations manager in January 2015. A former fashion editor at GQ magazine, who became director of PR at Gilt Group, Lin is familiar with the terrain of the fashion industry and brings to Apple a vital collection of

industry contacts. He has played an important part in helping to position Apple's Watch as a luxury fashion accessory.

Apple employee blogging and social media guidelines revealed

The guidelines that Apple employees are expected to adhere to when blogging and using social media have been revealed in a leaked document.

by Ben Camm-Jones | 05 Dec 11

The guidelines that Apple employees are expected to adhere to when blogging and using social media have been revealed in a leaked document.

[9to5Mac](#) got hold of the document and published it in full. It made its decision to publish it in order to clear up the matter of the sacking of [Samuel Crisp](#), an employee who posted negative comments about Apple on Facebook.

Crisp made the comments which were seen by one of his friends - a fellow [Apple employee](#) - who reported them to managers. Crisp, took his case to an employment tribunal in Bury St Edmunds but the tribunal upheld Apple's decision.

In the document, Apple outlines the conduct that it expects from employees when using social media and blogs. According to the document, Crisp's actions were certainly serious enough to merit disciplinary action.

"If you identify yourself as an Apple employee or are known to be one, you are now connected to your co-workers, Leaders and even Apple's customers. You should ensure that content associated with you is consistent with Apple policies."

It goes on: "All such individuals are expected to comply with Apple's business conduct policy and principles and with all applicable legal requirements. Apple retains the right to discipline (up to and including termination of employment) or end working relationships with those who do not comply."

Much of the document concerns leaking of information. "As an Apple employee you have an obligation to protect the confidential, proprietary and trade secret information of the company. This obligation is laid out in several places including the Intellectual Property Agreement you signed when hired and in Apple's Confidential Information Policy."

Staff can't post pictures taken within an Apple Store - which presumably means that the so-called [iPlankers](#) must have been in trouble. They also can't use their internal Apple email account for personal use or make any comments about unreleased products.

The entire text of the document, posted below, also makes reference to speculating on rumours internally with other members of [Apple staff](#). "Only those individuals on the Company's official disclosure list are entitled to receive and discuss information pertaining to unannounced Company information," the document reads.

There's little that surprises in the document, though one thing that you might find interesting is one of Apple's justifications for not commenting on rumour and speculation. "By withholding comment, Apple hopes to protect customers from making decisions based on information that is incomplete, inaccurate, or subject to change before the formal announcement."

Whether or not you as an Apple employee choose to create or participate in a blog, wiki, online social network or

any other form of online publishing or discussion is your own choice. In general, what you do on your own time is your business. However, activities that affect your job performance, the performance of other Apple employees, or Apple's business interests are still covered by company policies and guidelines. This applies whether you engage in these activities in or outside of work, and whether or not you identify yourself as an Apple employee.

If you choose to participate in these types of online activities it is important that you understand what is recommended, expected and required, whether at work or on your own time. Accordingly, we have developed the following guidelines for you to follow when posting to a blog or some other form of social media like Facebook, MySpace, Twitter or LinkedIn.

Be thoughtful about how you present yourself in online social networks. The lines between public and private, and personal and professional are blurred in online social networks. If you identify yourself as an Apple employee or are known to be one, you are now connected to your co-workers, Leaders and even Apple's customers. You should ensure that content associated with you is consistent with Apple policies.

Respect your audience and your coworkers. Remember that Apple is a global organization whose employees and customers reflect a diverse set of customs, values and points of view. Don't be afraid to be yourself, but do so respectfully. This includes not only the obvious (no ethnic slurs, personal insults, obscenity, etc.) but also topics that may be considered offensive or inflammatory. Use your best judgment, but if you need further guidance regarding what constitutes inappropriate communications please consult with HR, your Leader or Apple's Harassment policy.

Respect the privacy of your coworkers. Blogs, wikis, social networks and other tools should not be used for internal communications among fellow employees. It is fine for Apple employees to disagree, but please don't use your external blog or other online social media to air your differences. Do not discuss your co-workers without their permission, and ask permission before posting their picture. By respecting your co-workers' privacy you will be helping to maintain the professional work environment at Apple.

Respect the privacy of our customers. It is a priority that we respect the privacy of our customers. Do not use or discuss any information regarding customers for any purpose. This includes contacting customers for social reasons or soliciting outside business. If you need further guidance in this area, please refer to Apple's policy regarding customer private information.

Use a disclaimer. When Apple wishes to communicate publicly as a company it has well established means to do so. Only those individuals officially designated by Apple have the authority to speak on behalf of the company. If you identify yourself as an Apple employee, however, people may confuse your opinions with those of the company. In order to avoid this problem you must make clear that you are writing for yourself and on your own behalf, and not for Apple. At a minimum, we strongly recommend that you include a disclaimer similar to the following: "the postings on this site are my own and do not represent Apple's opinions or positions."

Protect Apple's confidential information. As an Apple employee you have an obligation to protect the confidential, proprietary and trade secret information of the company. This obligation is laid out in several places including the Intellectual Property Agreement you signed when hired and in Apple's Confidential Information Policy. For example, do not discuss any Apple confidential information including your store's financial or business performance, and the timing, pricing or design of Apple's products. Also, do not post pictures of the inside of the Apple Store – including the back of house – as those are not generally made public. Finally, do not post or disclose the contents of any Apple policy. These documents are intended for the use of Apple employees, and not for public distribution.

Respect copyright, fair use laws. For Apple's protection as well as your own, it is critical that you comply with all laws governing copyright and fair use of copyrighted material owned by others. For example, this means you should not be using Apple logos or images for your own personal use. Also, you may not copy, digitize, alter or distribute any part of a copyrighted work without first obtaining written permission from the copyright owner. For more information please refer to Apple's copyright policy.

Don't use your Apple email for personal use. Your Apple email address has been given to you for use at work. Therefore you should not use your Apple email address on your personal blog or when posting on social network sites. You have been given a free .mac/.me email address to use for non-work related emails. Please use that email or another personal email address for those types of communications.

In sum, use your best judgment. Remember there may be consequences to what you post or publish online including discipline if you engage in conduct that Apple deems inappropriate or violates any Apple policies. If you're about to post something and you are concerned whether you are following these guidelines or any Apple policy, please discuss it with your Leader or HR before posting.

Confidential, Proprietary, and Trade Secret Information:

Apple recognizes that its confidential, proprietary, and trade secret information and that of third parties constitute our competitive advantage in the marketplace. Apple takes steps to protect its own confidential information and respects the confidential information of others. As a result, Apple expects all employees to take responsibility for protecting these sources of confidential information. Apple identifies, classifies, and protects all of its valuable business information from intentional or inadvertent disclosure, loss, modification, destruction, and copying. You may not disclose Apple confidential information to an outside party unless a written agreement or license has been previously signed and approved by the division vice president.

Likewise, Apple respects the confidential information of others. You may not use or disclose any such third-party information unless you are authorized by the third party to do so and until you have signed a confidentiality agreement with Apple.

Examples of Apple confidential information include, but are not limited to the following:

- sales and financial information of any kind including store and individual metrics*
- product availability and constraints*
- information shared through store meetings, corporate meetings, RNN, BulletNews, Kbase, or any other internal Apple resource*
- hiring and training information including salaries and bonus programs*
- Apple policies and procedures*
- Retail Store Websites*

As an Apple employee, you may not create store websites displaying store-related activities. This includes but is not limited to theater presentations, store openings, posting schedules or other store events.

Employee Personal Websites:

As an Apple employee, you are often the first on the block to see and touch [new Apple products](#). While you may create personal websites, you may not display photographs, articles, or commentary about Apple products, services, or initiatives.

Posting Messages on Mac-Related Websites:

As an Apple employee, you represent the Apple brand. While you are free to view any website on your own time, you may not post messages or commentary on Mac and Apple-related websites, whether you identify yourself as an Apple employee or not.

Speculating on Rumors:

Refrain from speculating on [anything Apple](#) has not officially announced, even if a customer presses you for a personal opinion or indicates an interest in making a substantial purchase. Information leaks can potentially damage Apple's interests, and Apple has zero tolerance for those who leak information. When you began working for Apple, you agreed to keep Apple's confidential information within the workplace, including any information you

receive from an internal Apple source. Be cautious of conversations with other employees on the salesfloor. Customers often overhear these conversations which can lead to misinformation.

Do not confirm or deny any information, even if customers pressure you by saying they are about to make or influence a substantial purchase or refer to non-[Apple websites](#) as sources of information. Refer to the following speaking points:

Apple does not comment on rumors about decisions, products, programs, or promotions that have not been officially announced by Apple.

By withholding comment, Apple hopes to protect customers from making decisions based on information that is incomplete, inaccurate, or subject to change before the formal announcement.

Apple believes this is the best way to ensure that all customers are treated fairly.

In addition to the above, speculating on rumors with internal Apple colleagues is strictly prohibited. Only those individuals on the Company's official disclosure list are entitled to receive and discuss information pertaining to unannounced Company information.

The Way We Do Business Worldwide:

Apple conducts business ethically, honestly, and in full compliance with all laws and regulations. This applies to every business decision in every area of the company worldwide.

Apple's Principles of Business Conduct:

Apple's success is based on creating innovative, high-quality products and services and on demonstrating integrity in every business interaction. Apple's principles of business conduct define the way we do business worldwide.

These principles are:

Honesty. Demonstrate honesty and high ethical standards in all business dealings.

Respect. Treat customers, suppliers, employees, and others with respect and courtesy.

Confidentiality. Protect the confidentiality of Apple's information and the information of our customers, suppliers, and employees.

Community. Conduct business in a way that benefits the communities in which we operate.

Compliance. Ensure that business decisions comply with all applicable laws and regulations.

Making the Right Decisions:

When facing a tough decision:

Use good judgment. Apply Apple's principles of business conduct, review our policies, review legal requirements, and then decide what to do.

Need some help? When in doubt about how to proceed, discuss pending decisions with your Store Leader, your Human Resources representative, or the Legal Department. If you need more support, contact the Business Conduct Helpline.

Your Responsibilities:

Apple's business conduct policy and principles apply to employees, independent contractors, consultants, and others who do business with Apple. All such individuals are expected to comply with Apple's business conduct policy and principles and with all applicable legal requirements. Apple retains the right to discipline (up to and including termination of employment) or end working relationships with those who do not comply.

Please see details of the Apple's Business Conduct policy on the HR Web. [Apple Retail](#) may have policies that supplement what is communicated in this link for our employees.

Apple Hires Nike's Former Head of Social Media — But Why?



Employees wear green shirts near Apple's familiar logo displayed with a green leaf at the Apple Store timed to coincide with Tuesday's annual celebration of Earth Day in Sydney, Tuesday, April 22, 2014.

Image: Rick Rycroft/Associated Press

By [Todd Wasserman](#)

Aug 04, 2014

Apple, perhaps the biggest brand to lack a presence on Twitter and Facebook, has hired the former social media chief at Nike and Burberry.

Musa Tariq confirmed on Twitter that he is now Apple's digital marketing director.

Tariq's [Twitter profile page](#) also includes a mention of his new role. The news was first reported by [9to5Mac](#).



Musa Tariq

Image: LinkedIn

Most recently, Tariq was global senior director of social media and community, digital brand for Nike, a position he had served since 2012, according to his [LinkedIn profile](#). From 2009 until 2012, Tariq, a former ad exec, had worked at Burberry as global director of digital marketing.

In late 2011, he was also named director of social media for the brand — which was then run by Angela Ahrendts, Apple's current retail chief.

Reps from Apple could not be reached for comment.

It's unclear whether Tariq's appointment will change Apple's approach to social media. The company does run Facebook and Twitter accounts for iTunes; top execs such as CEO Tim Cook, VP of Worldwide Marketing Phil Schiller, SVP of Internet Services and Software Eddy Cue and Ahrendts have Twitter accounts as well.

But there is no Twitter or Facebook feed for the Apple brand itself.

At Burberry, Tariq was responsible for the brand's "[Tweetwalk](#)" program that let the brand reveal its new season looks on Twitter before they hit the runway. At Nike, Tariq was best known for [pulling all of the brand's social media marketing in-house](#) rather than relying on ad agencies AKQA and Wieden & Kennedy, Mindshare and R/GA.

Apple has also been [loosening ties](#) with longtime ad agency TBWA/Chiat/Day and its TBWA/Media Arts Lab.

Acting General Counsel releases report on employer social media policies

Office of Public Affairs
202-273-1991
publicinfo@nlrb.gov (link sends e-mail)
www.nlrb.gov

May 30, 2012

NLRB Acting General Counsel Lafe Solomon today issued a third report on social media cases brought to the agency, this time focusing exclusively on policies governing the use of social media by employees.

The [Operations Management Memo](#) details seven cases involving such policies. In six cases, the General Counsel's office found some provisions of the employer's social media policy to be lawful. In the seventh case, the entire policy was found to be lawful.

Provisions are found to be unlawful when they interfere with the rights of employees under the National Labor Relations Act, such as the right to discuss wages and working conditions with co-workers.

"I hope that this report, with its specific examples of various employer policies and rules, will provide additional guidance in this area," Mr. Solomon said in releasing the memo. Two previous memos on social media cases, which involved discharges based on Facebook posts, issued in [January 2012](#) and in [August 2011](#).

L'homme qui ne voit que la mode dans la mode est un sot.

The one who sees nothing in fashion but fashion is a fool.

–Honoré de Balzac