

6-2018

Trademarks, Certification Marks and Technical Standards

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Recommended Citation

Contreras, Jorge L., Trademarks, Certification Marks and Technical Standards, Cambridge Handbook of Technical Standardization Law, Vol. 2: Administrative Law, Trade, Privacy, Tort, Copyright and Trademark, Cambridge Univ. Press, 2019

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CHAPTER [X]

Trademarks, Certification Marks and Technical Standards

Jorge L. Contreras*
Draft for Comment July 8, 2018

The names of many technical standards have become household words. Complex interoperability protocols such as Wi-Fi, Bluetooth and DVD are known throughout the developed world. This chapter describes different approaches that have been taken with respect to the naming and legal protection of technical standards, ranging from those that are wholly unregulated to those that are administered under strict certification and compliance regimes. It concludes by questioning the need for aggressive protection of marks that exist largely to inform consumers about technical product features rather than the source of standards themselves.

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Introduction

When a consumer shops for a new smartphone, she will likely check whether different models implement a range of common standards such as Wi-Fi, Bluetooth, and 4G (soon 5G). Likewise, the typical consumer knows that when she switches from a phone that is charged using a microUSB connector to one that uses Apple’s “Lightning” connector or the more recent USB-C connector, she will need to replace her charging cables as well. Most consumers have only the vaguest notion of how the standards behind these technologies work. Nevertheless, consumers are familiar with the functionality associated with these simple trade names. The names of technical standards thus fulfill a critical informational role for consumers.¹

Standards, and the names given to them, are generally created either by firms that develop a proprietary technology that eventually becomes an industry standard (e.g., Adobe’s Portable Document Format (PDF)) or, more often, by voluntary industry associations known as standards development organizations (SDOs).² As discussed in Chapter x (Vol. 1), SDOs come in many shapes and sizes, from small single-purpose consortia to large multinational organizations. This diversity is also reflected in the range of policies, approaches and attitudes of SDOs toward trademarks. Yet relatively little has been written about the use of trademarks by SDOs or in the context of standardization more generally.³ This chapter seeks to identify the divergent approaches to trademark management and licensing taken by different SDOs and to explain their development and effect on the overall goals of standardization and interoperability.

I. Background – Trademarks and Certification Marks

This section offers a brief overview of the doctrinal principles of trademark and certification mark law that are most relevant in the context of technical standards. Though the emphasis of this section is on U.S. and EU law, many of these principles apply throughout the world.

A. Basic Attributes of Trademarks

1. Scope

A trademark is a word, name, symbol or other device that is used to identify the source of a particular product or service.⁴ While most trademarks are words and phrases, represented either in plain textual form (the broadest form of coverage) or with a stylized appearance (e.g., the novel fonts in which marks such as Coca Cola and IBM are rendered), logos, designs, colors, shapes,

¹ For example, the term *Bluetooth* conveys to the consumer a host of functional details such as the types of products that are generally connected using this technology (phones, computers, headphones and portable speakers), the range over which it works (within a large room, not across the country) and whether or not it is necessary for the application at hand (some consumers may be just as happy connecting headsets to their music players with physical cords and 3.5mm jacks).

² The principal focus of this chapter will be on SDO-developed “voluntary consensus standards”, though it is also important to understand the role of single-firm “de facto” standards.

³ For some early discussions of this topic, see ANSI (2008); Contreras & Updegrave (2016)

⁴ 15 U.S.C. § 1127.

scents, and sounds can also be trademarks in the U.S. To be a valid trademark, the mark must be used in commerce, distinctive and must not be confusingly similar to a mark that is already in use.⁵ While registration provides some extra benefits, in the United States registration is not required in order to have trademark protection. One must merely use the trademark in commerce in connection with goods or services as a source indicator⁶ prior to anyone else who might use a similar mark in a confusingly similar manner. In order to have trademark protection outside the United States under the Madrid Protocol, however, the trademark must be registered.⁷

The degree of distinctiveness exhibited by a trademark affects its ability to be used as a mark, its eligibility for registration, and its enforceability (see Infringement, below). Distinctiveness is generally classified along a five-point scale laid out in *Abercrombie and Fitch Co. v. Hunting World, Inc.*⁸ Marks that are *fanciful* (entirely invented words such as Lexus, Exxon and Prozac) and *arbitrary* (common words applied in an unfamiliar way, such as Apple for computers and Prince for spaghetti) are the strongest and inherently distinctive.⁹ Marks that are *suggestive* (words that require “imagination, thought, and perception to reach a conclusion as to the nature of goods”),¹⁰ are also distinctive (such as Coppertone for sunscreen and PlayStation for a video game platform). However, words that are merely *descriptive* of the good or service they name may not be trademarks without an additional showing of secondary meaning (i.e., that they have come to identify the source of the goods or services in the public eye).¹¹ Marks that could be classified as descriptive include Best Buy (for a discount retailer), Dial-a-Mattress (for a mattress vendor), and CitiBank (for a New York-based bank). In some of these cases, where the mark has come to be associated in the public eye with the supplier of goods or services rather than the item described, the mark may be protected as a trademark (e.g., the name CitiBank today is likely associated with a particular bank rather than viewed as a general description of a metropolitan bank). And, finally, terms that are *generic*, connoting a general category to which a particular product belongs (e.g., car, savings bank, lawnmower) but which give no specific indication of the product’s source, receive no protection whatsoever.¹²

While unregistered trademarks enjoy protection wherever there is market penetration, when a trademark registration is granted, it provides the registrant constructive nationwide market penetration, and, with some exceptions, an exclusive right to use the mark to identify its goods or services throughout the granting jurisdiction.¹³ This right includes the right to use the trademark on product labeling, packaging and advertising. In some jurisdictions, including the U.S., a particular trademark registration only extends to certain classes of goods and services. The classes of protected goods and services must be identified by the applicant in its trademark application. The applicant must also demonstrate actual use of the mark in the requested classes or have a bona fide intent to use the mark in those classes; the latter is limited to three years before either use must

⁵ 15 U.S.C. § 1052(d).

⁶ 15 U.S.C. § 1127.

⁷ See Section I.A.3, *infra*.

⁸ See *Abercrombie* (1976) (establishing four-tier scale for trademark distinctiveness).

⁹ *Id.* at ¶12.

¹⁰ *Id.* at ¶18.

¹¹ See *id.* at ¶6 and 15 U.S.C. § 1052(f).

¹² *Abercrombie*, at ¶12. See further discussion in Sections I.D and III.D, *infra*.

¹³ In some cases, prior users of a registered trademark may be permitted to continue their use after the mark is registered and even prevent use of a later-registered mark within their geographical market.

be demonstrated or their priority in the mark is canceled. Accordingly, the same mark may be used and/or registered to different owners in different classes of goods and services. For example, the mark “PRINCE” is registered in the U.S., among others, to Prince Minerals, Inc. (for specialty mineral products), Buck Knives, Inc. (for pocket knives), New World Pasta Company (for pasta) and Prince Sports Group, Inc. (for tennis equipment). Many countries, however, do not require the specification of a particular class of goods or services to obtain trademark protection. Trademarks in these countries cover all classes of goods and services.

2. *Duration*

Trademark protection is generally of unlimited duration, provided that the mark owner continues to use the trademark in commerce and, if registered, pay required renewal and maintenance fees. In the U.S., for a registered mark, a Declaration of Use attesting to the registrant’s use of the mark must be filed between the fifth and sixth years following registration, and a combined Declaration of Use and Application for Renewal must be filed between the ninth and tenth years following registration, and every ten years thereafter.¹⁴

3. *International Treaties*

Every sovereign nation, and some regional groups (e.g., the European Community, which offers a community-wide trademark or “CTM”), has its own trademark registration system. Trademarks recognized by one country, with some exceptions, are typically not recognized or enforceable in other countries. However, since the nineteenth century, treaties have been established to foster international coordination of trademark registrations. The 1883 International Convention for the Protection of Industrial Property (the “Paris Convention”) requires that member countries grant “national treatment” to parties from other member countries. That is, they must permit residents of all member countries to file applications for protection on the same basis as their own citizens. In addition, if an application for a trademark in a member country is filed within six months of the application filed in the owner’s home country, the second application will have the benefit of the original application’s filing, or priority, date.

The most significant international trademark treaty today is the Madrid Protocol of 1989,¹⁵ an adjunct to the 1890 Madrid Registration of Marks Treaty to which the U.S. never became a party. The U.S. however, did join the Madrid Protocol in 2002.¹⁶ Currently more than ninety countries are members of the Madrid Protocol.¹⁷ The Madrid Protocol allows a trademark applicant to file in multiple countries by submitting a single international application to the International Bureau of the World Intellectual Property Organization¹⁸ (WIPO). Following receipt, WIPO submits the international application to the individual trademark offices of the countries designated in the application. The designated countries then examine the application in accordance with their

¹⁴ 15 U.S.C. §1058-1059.

¹⁵ Madrid Protocol (1989).

¹⁶ Madrid Protocol Implementation Act (2002).

¹⁷ WIPO (2018).

¹⁸ *Id.*

own procedures for national trademarks, ultimately leading to separate and distinct nationally registered trademarks in each country.¹⁹

Thus, while registration is not required for trademark protection in the United States, a mark owner who wishes to take advantage of trademark protection through the Madrid Protocol must have a validly registered mark through the USPTO in order to do so.

B. Certification Marks and Product Certification

A certification mark is, generally speaking, a species of trademark. However, unlike trademarks, which are intended to indicate to the consumer the *source* of a particular product or service, certification marks are intended to identify particular *characteristics* of a product to consumers, typically when those characteristics are not easily discernable from an inspection of the product.²⁰ As discussed in Chapters x (Fromer, Barnett, Lytton), certification may be used to indicate that a product has met specified requirements regarding safety, reliability or manufacturing process. Perhaps the best-known certification mark in the world is Underwriters Laboratories' "UL" certification. Underwriters Laboratories claims that its mark appears on 22 billion products per year, ranging from kitchen appliances and hoverboards to fire extinguishers and industrial carpet. UL tests and certifies products for compliance with its own standards and for standards developed by other SDOs.²¹

1. Registration

In the United States, certification marks may be registered with the U.S. Patent and Trademark Office in a manner similar to trademarks, though they differ from trademarks in several important regards. Whereas trademarks are used to indicate the origin of a product or service and thereby to assure its quality to the consumer, certification marks are used to indicate compliance by a product or service with a particular standard, without regard to its origin. Certification marks are generally subject to the same requirements regarding distinctiveness as ordinary trademarks, except in the case of certifications as to geographic origin (e.g., GROWN IN IDAHO for potatoes).²²

Certification marks may be applied to goods or services by any organization adhering to the relevant standard but may *not* be applied by the mark's owner.²³ For example, thousands of new buildings around the world display the Leadership in Energy and Environmental Design (LEED) certification owned by the U.S. Green Building Council (USGBC). Though USGBC developed and administers the LEED rating system, it does not itself construct buildings bearing the LEED mark.²⁴ Importantly, the holder of a certification mark must allow any organization that

¹⁹ USPTO (2018).

²⁰ For example, a mark identifying a product as a banana is probably not particularly useful to the average consumer, but a mark identifying a product as an organic, "fair trade" banana would be very useful to consumers who value those qualities.

²¹ UL (2018a). Obtaining a UL certification is viewed as a commercial necessity for many product categories in the U.S. See *Board-Tech* (2018).

²² See *Institut National* (1998); Beebe (2017, Sec. 1, p. 27); Belson (2017, p. 60).

²³ 15 U.S.C. § 1064(5)(B).

²⁴ See Contreras & McManis (2013) (discussing LEED, among other building standards).

complies with the relevant standard to apply the mark on a nondiscriminatory basis.²⁵ Violation of the foregoing requirements can result in cancellation of the certification mark.²⁶

Certification marks are also distinct from collective marks, which generally signify membership in a particular group or origin from a particular geographic region (e.g., the REALTOR® mark and “R” logo used by members of the National Association of Realtors).²⁷ Collective marks are registrable in the U.S., EU and numerous other jurisdictions. In the EU, prior to the 2017 adoption of a formal certification mark regime, compliance with standards could be signified through use of collective marks obtained by an SDO “for the benefit of its members”.²⁸ Given that the introduction of certification marks to EU law is recent, many SDOs continue to use collective marks for certification purposes and will likely do so for the foreseeable future.²⁹

Certification marks may be registered in a number of countries in addition to the United States, including Australia, Brazil, China, Egypt, India, and the United Kingdom, and, as of October 2017, the European Union.³⁰ In other jurisdictions such as France, Germany, Mexico, and the Philippines, certification marks are treated as collective marks.³¹ And some jurisdictions, most notably Japan, provide no system for the registration of certification marks.³²

2. *Product Certification*

As noted above, the owner of a certification mark may authorize manufacturers to place the mark on their products that comply with the owner’s requirements for usage. Depending on the standard, the owner of a certification mark may establish different processes to authorize the application of its certification mark to products. As explained by Contreras and McManis in the context of SDOs:

First-party certification, or *self-certification*, occurs when a product manufacturer declares that its own products meet the requirements of a standard. There is an inherent conflict of interest in self-certification, but it also has the virtue of being relatively inexpensive and quick to achieve. *Second-party certification* occurs when an SDO certifies that a product meets the requirements of its own standard. While viewed as more reliable than first-party certification, second-party certification remains somewhat suspect due to the SDO’s inherent interest in increasing the number of products certified to its standard. *Third-party certification* occurs when an outside certification organization certifies that a product meets the

²⁵ 15 U.S.C. § 1064(5)(D). *See also* McCarthy (2008, § 19:92); Belson (2017, p. 63).

²⁶ 15 U.S.C. § 1064.

²⁷ 15 U.S.C. § 1027; Belson (2017, p. 1). The designation of products originating from particular geographic regions (e.g., Champagne sparkling wine and Scotch whiskey) is a complex and developing area of law, a discussion of which is beyond the scope of this chapter.

²⁸ *See* Belson (2017, pp. 80-81).

²⁹ *See, e.g.*, ETSI 2018 (“we have registered the following wordmarks and figurative marks for the benefit of our members”); Belson (2017, p.81) (noting American Petroleum Institute’s EU collective mark AMERICAN PETROLEUM INSTITUTE CERTIFIED).

³⁰ *See* Belson (2017, pp. 33-36); Webster (2017). The EU certification mark was introduced under the EU Trademark Directive in 2017.

³¹ Webster (2017).

³² *Id.*

requirements of a standard. Because the certifier is independent of both the SDO and the manufacturer, third-party certification is generally seen as the most objective form of certification in this field, though even independent certification groups may be susceptible to market pressure to certify as many products as possible.³³

Some commentators have argued that the complexity and limited transparency of the certification process can result in consumer confusion as well as unscrupulous and overzealous use of certification marks, particularly in the area of “green” standards and ecolabels.³⁴ To address this and other concerns, a range of adjustments to the statutory framework governing certification marks have been proposed, including requirements that more information about the standards underlying certification marks be disclosed; applying the doctrines of trademark ‘abandonment’ and misuse to certification marks; and allowing consumer protection actions to be brought against both holders of certification marks and the entities using those marks.³⁵

C. Infringement

Under U.S. law—known as the Lanham Act, a person who makes commercial use of a trademark, or any reproduction, counterfeit, copy or colorable imitation of that mark, without the consent of the owner, in a manner that is likely to cause confusion, mistake or deception, is liable for infringement and/or false designation of origin.³⁶ Liability extends to false advertising and “passing off”—either by the defendant attaching the plaintiff’s trademark to the defendant’s goods (often referred to as “counterfeiting”), or by the defendant labeling the plaintiff’s goods with the defendant’s mark.³⁷ Over the years, courts have developed an eight-factor test to assess the likelihood of confusion arising from the use of a mark. While each circuit’s description of these factors varies, the Second Circuit’s statement in *Polaroid Corp. v. Polarad Electronics Corp.*³⁸ is representative of the general approach taken throughout the U.S. The factors to be taken into consideration under the *Polaroid* test include:

- (1) strength of the allegedly infringed mark;
- (2) similarity of the infringed and infringing marks;
- (3) proximity of the products and their competitiveness with one another;
- (4) evidence that the mark owner may “bridge the gap” by developing a product for sale in the market of the alleged infringer’s product;
- (5) evidence of actual consumer confusion;

³³ Contreras & McManis (2013, p. 494). In addition to the classification structure laid out in this paragraph, alternative definitions of first, second and third party certification exist. See, e.g., ISO/IEC 17000:2004, Sec. 2.2-2.4 (defining first, second and third party conformity assessment).

³⁴ Chon (2009, p. 2316); Contreras, Lewis and Roth (2011). For a further discussion of potential issues with third party certification see Chapter x (Lytton) and x (Fromer).

³⁵ See Chapter x (Fromer); Chon (2009, pp. 2348–49); Contreras, Lewis and Roth (2011).

³⁶ 15 U.S.C. 1114, 1125(a)(1)(A) & (B). Section 1114 applies to registered marks; section 1125(a)(1)(A) covers both registered and unregistered marks as well as passing off, and section 1125(a)(1)(B) applies to false advertising. In addition to claims for infringement, trademark owners may have claims against the users of confusingly similar marks that sound in dilution. See 15 U.S.C. 1125(c). Because dilution claims are less germane in the context of technical standards, they will not be addressed in this chapter.

³⁷ §1125(a)(1)(A)

³⁸ *Polaroid* (1961).

- (6) evidence that the infringing mark was adopted in bad faith;
- (7) respective quality of the products; and
- (8) sophistication of consumers in the relevant market.³⁹

The factors are weighed, and some are given more significance than others. For example, strength of a mark is important, as a weak mark receives less protection than a strong mark. The above analysis is conducted whether an alleged infringer is using an exact copy of the registered mark (e.g., counterfeit goods) or a purportedly different mark that bears some degree of similarity to the registered mark. For example, in the context of technical standards, the mark BLUETOOTH is registered to the Bluetooth SIG, the SDO that developed the Bluetooth standard for short range wireless connectivity.⁴⁰ Bluetooth SIG actively enforces its mark against manufacturers of devices that use the BLUETOOTH mark without authorization.⁴¹ These “passing off” cases typically involve an exact copy of the mark, as the manufacturer of the “counterfeit” product wishes to deceive consumers into believing that the product is a “genuine” Bluetooth product (i.e., a product certified by Bluetooth SIG as conforming to the Bluetooth Standard (see Section III.C below)), though the bad faith intent of the defendant is only one factor that the courts consider, and even if adopted in bad faith, if there is no likelihood of customer confusion, then there is no actionable infringement liability.

In other cases, products may not bear exact replicas of the BLUETOOTH mark, but may bear marks that are similar enough at least to suggest to consumers that Bluetooth SIG may have endorsed or authorized the use. For example, in 2008 an individual sought as U.S. trademark registration for the mark BLACKTOOTH for “MP3 Player Sunglasses”.⁴² In 2009, Bluetooth SIG filed a Notice of Opposition with the Trademark Trial and Appeals Board (TTAB) against the BLACKTOOTH application.⁴³ Bluetooth SIG argued, among other things, that allowing the mark BLACKTOOTH to be used on wireless sunglasses would suggest to consumers that Bluetooth SIG had endorsed, sponsored or approved those products.⁴⁴ While this case involved an opposition to the registration of a mark, the analysis with respect to infringement would be comparable.

A final infringement scenario that is relevant to standardization is the use of a registered mark as part of a compound name (also known as a composite mark). For example, one well known TTAB decision involved the rejection of a registration for the name DARJEELING NOUVEAU for tea, where the name DARJEELING was already registered.⁴⁵ The TTAB rejected the new mark even though it was not disputed that the applicant’s product consisted entirely of certified Darjeeling tea.⁴⁶ Another such case arose with the attempted registration of the mark CANADIAN MIST AND COGNAC, which incorporated the pre-existing certification mark COGNAC.⁴⁷ The TTAB again rejected the application on the ground that it could cause confusion

³⁹ *Id.* at x.

⁴⁰ U.S. Reg. No. 2,909,356 (Dec. 14, 2004).

⁴¹ *See, e.g.*, Bluetooth SIG (2008).

⁴² U.S. Trademark Application Ser. No. 77/506993 (Jun. 24, 2008).

⁴³ *Bluetooth SIG v. Chisholm* (2009).

⁴⁴ *Id.* at 7.

⁴⁵ *Tea Bd. of India* (2006).

⁴⁶ *Id.*

⁴⁷ *Institut Nat’l* (1998).

with the original mark.⁴⁸ Thus, as explained by McCarthy, “even where a defendant’s product contains ingredients which have been certified by the owner of a certification mark, the defendant’s incorporation of that certification mark into its own composite trademark might be likely to cause confusion as to sponsorship, affiliation or connection.”⁴⁹

Various remedies exist if a trademark is found to have been infringed. In the U.S., both injunctive relief to prevent further infringement, as well as monetary relief to redress past harm, are available. Under the federal Lanham Act, damages that may be recovered by the owner of an infringed mark include lost profits and other actual damages, an accounting of the infringer’s profits, attorneys’ fees and legal costs. Actual damages may be computed on the basis of injury to or loss of reputation or goodwill, lost sales or revenue, lost profits, and the expense of preventing further customer confusion (including remedial advertising).⁵⁰

D. Genericism and Genericide

As discussed in Section I.A.1 above, a mark that connotes a general category to which a particular product belongs (e.g., car, savings bank, lawnmower) but which gives no specific indication of the product’s source, is considered *generic* and is not registrable as a trademark.⁵¹ A mark may be deemed to be generic either initially, when registration is refused by the Patent and Trademark Office,⁵² or after registration, if the mark no longer identifies a source of goods. This latter circumstance is commonly known as “genericide” and results in the cancelation of the mark found to be generic. There is a long list of U.S. trademarks that have been revoked as a result of genericide: ASPIRIN, BRASSIERE, ESCALATOR, LINOLEUM, THERMOS and TRAMPOLINE to name just a few.⁵³

Though genericism is typically discussed in terms of trademarks for products and services, certification marks may also be the subject of genericide. For example, in *Community of Roquefort v. William Faehndrich, Inc.*, the court observed that “if an indication of regional origin, registered as a certification mark, becomes a generic term for a certain type of goods coming from any region, then the mark is subject to cancellation”.⁵⁴

Generic terms can, of course, be included as components of distinctive marks. For example, the mark GRIZZLY COFFEE for a chain of coffee shops is likely arbitrary under the *Abercrombie* framework (given the lack of any logical connection between grizzly bears and coffee), and thus a strong mark. Yet the term COFFEE for a coffee shop is clearly generic. Thus, to avoid any implication that the owner of GRIZZLY COFFEE could claim rights in the word COFFEE itself, the PTO generally requires that generic terms included within registered marks be

⁴⁸ *Id.*

⁴⁹ McCarthy (2008, §19:92.50 (citing *Institut Nat’l* (1998)).

⁵⁰ *Id.*

⁵¹ *Abercrombie*, at ¶12.

⁵² See, e.g., Beebe (2017, p. x) (listing numerous examples).

⁵³ See, e.g., Folsom & Teply (1980, p.1324) (citing relevant decisions for each mark).

⁵⁴ *Community of Roquefort* (1962, p. 497).

disclaimed as to separate use of the generic term.⁵⁵ Thus, the owner of GRIZZLY COFFEE would potentially have an infringement claim against Grizzly Cafés, but not against Caribou Coffee.

E. Trademark Licensing: Quality Control and Stylistic Guidelines

Like other intellectual property rights, trademarks may be licensed by their owners to others. In the United States, a trademark owner who licenses a mark must ensure that the goods and services produced and sold by the licensee that bear the licensed mark meet the quality standards of the trademark owner. The owner's failure to impose quality control restrictions, and to police or monitor the quality of the licensed goods or services can be deemed to constitute so-called "naked" licensing and can form the basis for a claim that the mark has been abandoned by its owner, and the owner may no longer prevent others from using it as a trademark.⁵⁶ As a result, most trademark owners impose some degree of quality control measures on the products and services that are branded with the licensed marks. Thus, at one extreme, business franchisors often specify quality and service requirements for their franchisees at an extreme level of detail, often running to hundreds of pages, while SDOs often require only that licensed marks be applied exclusively to products and services that comply with the relevant standard.

It is important to distinguish between quality control requirements and stylistic guidelines for the use of trademarks. Independently of, and in addition to, quality control requirements, many trademark owners impose restrictions on how their marks are to be presented and used (as opposed to requirements pertaining to the quality of the goods and services to which the marks are applied). While the precise requirements vary, below is a non-exhaustive list of stylistic restrictions imposed by trademark owners (and SDOs in particular) on the use of licensed marks:

- Marks must be reproduced according to specified color, size, font and placement guidelines (often including the mandatory use of a downloadable graphics file to reproduce a logo)
- Prohibition on use of a mark as a verb (e.g., "I am going to Xerox these papers")
- Prohibition on use of a mark as a noun (e.g., "DECT" is necessary in this configuration)
- Prohibition on altering the mark or combining it with other marks
- Prohibition on using the mark in a demeaning, derogatory or misleading manner
- Prohibition on registering or using the mark as, or as part of, a trade name, domain name, metatag or similar device (e.g., Bluetooth Consultants, Bluetooth-users.org)
- Prohibition on using the mark in, or as, a pun⁵⁷
- The mark must be accompanied by the ® or ™ symbol and acknowledged as the property of the mark owner

⁵⁵ See TMEP (2017, Sec. 1213.03(c)) ("If a mark is comprised in part of matter that, as applied to the goods or services, is generic or does not function as a mark, the matter must be disclaimed to permit registration...").

⁵⁶ See, e.g., *Barcamerica* (2002, pp. 595-98).

⁵⁷ This unusual requirement was adopted by ETSI, perhaps due to the inherently satiric nature of standards engineers (see ETSI (2018) ("Our trademarks represent our standards, the symbols of ETSI goodwill worldwide. They should be treated with respect as valuable assets. Accordingly, they should not be used as the object of puns")).

F. Nominative Fair Use

Despite a trademark owner's exclusive right to use, and authorize others to use, its marks, there are certain situations in which others are free to use trademarks without permission of the owner. These exceptions to the trademark owner's exclusivity are broadly categorized as "fair use". Under U.S. law, several fair use trademark defenses have been recognized, but the most relevant doctrine in the context of technical standards, "nominative" fair use, has developed principally through judicial decision making.⁵⁸

Nominative fair use allows a third party to use another's trademark in a non-deceptive manner when referring to the products or services of the mark owner.⁵⁹ For example, in considering the case of an automotive repair shop that advertised that it repaired Volkswagen automobiles by using the word "Volkswagen" in its advertising, the Court of Appeals for the Ninth Circuit held that "[In] advertising the repair of Volkswagens, it would be difficult, if not impossible, to avoid altogether the use of the word Volkswagen or its abbreviation 'VW', which are the normal terms which, to the public at large, signify [the mark owner's] cars."⁶⁰ This being said, such uses generally must not imply that the mark owner has endorsed or approved the products or services offered by the user. In order to take advantage of the nominative fair use defense, the auto repair shop may use the words "Volkswagen" or the letters "VW," but not the distinctive Volkswagen logo. Similarly, an advertisement or store circular may state that it sells Sony headphones and show a picture of the product (even if that picture also contains the Sony logo), but it may not use the Sony® logo by itself.

Nominative fair use is also applicable to the reselling of goods. If someone is selling genuine Sony headphones that are either used, repackaged, or merely being resold, then the seller may truthfully advertise the goods using their correct brand name. Thus, the person who is selling unused Sony headphones may advertise them as such; a person selling golf balls retrieved by a nearby golf course may advertise them for sale and indicate them by their origin, but must indicate that they are used, to distinguish them from new/unused and thus avoid confusion with regard to the quality of the goods.

The doctrine of nominative fair use has also been applied to certification marks. Most recently, in *International Information Systems Security Certification Consortium, Inc. v. Security University LLC*,⁶¹ the International Information Systems Security Certification Consortium (ISC²) owned the registered certification mark CISSP® (Certified Information Systems Security Professional), signifying an individual "who has met certain requirements and standards of competency in the information security field, including passing the CISSP® certification examination that ISC² administers."⁶² Security University (SU) offered a preparation class for the CISSP examination. As noted by the court,

⁵⁸ See, generally, McGeveran (2008, pp.88-104).

⁵⁹ See McCarthy (4th ed., § 23:11).

⁶⁰ *Volkswagen v. Church* (1969).

⁶¹ *Security University* (2016).

⁶² *Id.*, slip op. at 7.

It is undisputed that SU is allowed to use the CISSP® certification mark to indicate that its services are directed at preparing students for the CISSP® certification examination. Furthermore, given the nature of ISC²'s certification mark, SU instructors may accurately identify themselves as being CISSP®-certified, so long as they follow ISC²'s regulations governing the use of the mark.⁶³

The dispute arose over SU's use of the term CISSP to describe one of its instructors as a "Master CISSP" and a "CISSP Master", which, ISC² alleged, implied that it offered or endorsed SU's classes.⁶⁴ In considering ISC²'s claim, the Second Circuit first noted that the test for trademark infringement is "whether the defendant's use is likely to cause confusion not just as to source, but also as to sponsorship, affiliation or connection."⁶⁵ It then fashioned a new test for assessing whether a particular nominative use of a certification mark would likely cause confusion, adding the following three factors to the traditional eight-factor test for confusion under trademark law⁶⁶:

- (1) whether the use of the plaintiff's mark is necessary to describe both the plaintiff's product or service and the defendant's product or service, that is, whether the product or service is not readily identifiable without use of the mark;
- (2) whether the defendant uses only so much of the plaintiff's mark as is necessary to identify the product or service; and
- (3) whether the defendant did anything that would, in conjunction with the mark, suggest sponsorship or endorsement by the plaintiff holder, that is, whether the defendant's conduct or language reflects the true or accurate relationship between plaintiff's and defendant's products or services.⁶⁷

Another species of nominative fair use arises in the context of comparative advertising. In the U.S., competitors are permitted to compare their products to the competition in advertising, so long as that comparison accurately identifies the source of each product and does not mislead consumers.⁶⁸ Thus, McDonald's and Burger King, Coke and Pepsi, and AT&T and Verizon are free to name each other in competing ads comparing food taste, beverage popularity and network coverage so long as the information conveyed is accurate and not misleading. While most competition today in the high technology sector is among different standardized *products* (e.g., Apple and Samsung smartphones, each of which implements the latest Wi-Fi, 4G and Bluetooth

⁶³ *Id.* at 8.

⁶⁴ *Id.* at 9.

⁶⁵ *Id.* at 19 (quoting McCarthy (4th ed, § 23:76).

⁶⁶ *Polaroid* (1961).

⁶⁷ *Security Univ.* at 38-39. The reasoning of the Second Circuit in *Security University* is presented here because it is the leading appellate case in the area of nominative fair use for certification marks. However, it is worth noting that the doctrine of nominative fair use, more generally, is in some disarray in the United States. At least four different circuits (the 1st, 2nd, 3rd and 9th) have each developed a different test for nominative fair use, some considering it an affirmative defense to a claim of trademark infringement (Third), some incorporating it into the test for infringement (Second, Ninth), and at least one which has adopted reasoning that does not appear to follow either of these paths (First).

⁶⁸ See *Pizza Hut* (2000); Dornis & Wein (2016, pp. 424-26). The use of comparative advertising is significantly more restricted in the European Union. See Dornis & Wein (2016, pp. 430-39).

protocols) rather than among different standards, competition among standards was prominent in the “standards wars” of the past (e.g., VHS v. Betamax, HD-DVD v. Blu-ray, OpenXML v. ODF).⁶⁹ In these settings, advertising that compared the features of competing standards could have been warranted and may even have assisted consumers in making purchasing decisions. As new technologies such as the Internet of Things emerge, it is again possible that standards will compete for market share and the use of standard-names in advertising may increase.

II. How Trademarks and Certification Marks are used in Standardization

Trademarks and certification marks play an important role in the standardization ecosystem. SDOs identify themselves and their work through their organizational names, also known as “house marks”. For example, APPLE is the house mark of Apple Inc. In addition to its house mark, Apple Inc. has registered additional marks, such as IPAD and MACBOOK, for particular products. In a similar manner, many SDOs select unique names for individual standards, sometimes incorporating the SDO’s house mark and sometimes not. The names of standards (referred to in this chapter as “standard-names”⁷⁰) serve as the primary mechanisms by which consumers identify and differentiate the standardized technologies that are implemented in a broad range of products. Around the world, even young children can immediately identify the distinguishing features of a USB drive versus a DVD disc and the pros and cons of connecting headphones to a computer using a wireless Bluetooth link versus a wired 3.5mm jack. Yet the ways that different SDOs regulate the use of their trademarks vary dramatically, sometimes with potential implications for market adoption and usage.

A. House Marks

Every SDO has a house mark, and in most cases this mark is registered as a trademark in at least the jurisdiction in which the SDO is based.⁷¹ In addition, many SDOs that operate internationally register their house marks in multiple jurisdictions where they or their members conduct significant operations. ISO, for example, claims that it has registered its name and principal logo in more than 100 countries.⁷²

The most comprehensive form of trademark protection exists in the block text version of a mark (also referred to as “standard characters” and “typed drawing”). Most corporate names, including SDO names, are registered in this fashion (Fig. 1a).⁷³ In addition to their names, many SDOs have also registered stylized designs or logos. These may include the SDO name in a distinctive script (Fig. 1b)⁷⁴ or accompanied by one more fanciful design elements (Fig. 1c).⁷⁵

⁶⁹ See Shapiro & Varian (1998).

⁷⁰ For purposes of this chapter, I hyphenate the term “standard-names” when referring to the names of technical standards, as opposed to unhyphenated “standard names” – names that are commonplace or standardized in some manner.

⁷¹ See Biddle et al. (2017) (finding that 33 of 40 SDOs studied have registered their house mark as a trademark).

⁷² ISO (2018)

⁷³ U.S. Trademark Reg. No. 3,249,072 (Jun. 5, 2007) (IETF).

⁷⁴ U.S. Trademark Reg. No. 4,079,772 (Jan. 3, 2012) (ASTM).

⁷⁵ U.S. Trademark App. S/N 89/000874 (filed Jul. 31, 1996) (ITU).

Finally, some SDOs have also obtained trademark protection for stand-alone designs, such as the Bluetooth “Runic B” (Fig. 1d).⁷⁶

Figure 1
Standards and Trademarks



Fig. 1a
Typed Drawing



Fig 1b
Word with design



Fig. 1c
Word with design



Fig. 1d
Design only

B. *Standard-Names*

While some SDOs such as IETF protect only their house marks, other SDOs also seek trademark protection for the names of the standards that they release.⁷⁷ At one level, standard-names are necessary to differentiate one standard from another and to signify different versions of standards as they evolve over time. But trademark coverage for standard-names can also enhance an SDO’s reputation, improve consumer recognition, and help an SDO combat piracy of its standards. SDOs have taken several different approaches to creating and protecting standard-names, including the choice between seeking trademark and certification mark protection. Some of the approaches that SDOs have taken to the selection and protection of standard-names are summarized below.

1. *House Marks*

Particularly in the case of SDOs that are small consortia focused on the development of a single standard or set of standards, the SDO’s house mark may also be used as the name of the resulting standard. Examples include the *Bluetooth* standard released by the Bluetooth Special Interest Group, the *HDMI* standard released by the HDMI Users Forum and the *USB* standard now maintained by the USB Implementers Forum.⁷⁸ What’s more, many SDOs that utilize alphanumeric designations for their standards (see Section II.B.3 below) also attach their house mark to the name of the standard (e.g., ISO 9001 and IEEE 802.11ab). As discussed above, many

⁷⁶ U.S. Trademark Reg. No. 3,389,311 (Feb. 26, 2008) (technically, the “B” is registered as a word mark consisting of a single letter in stylized script).

⁷⁷ See, e.g., Biddle et al. (2017) (of 40 SDOs studied, 33 registered a house mark and 20 of these registered at least one additional mark).

⁷⁸ The Uniform Serial Bus (USB) standard was originally developed in 1994 by a group of seven firms: Compaq, Digital, IBM, Intel, Microsoft, NEC and Nortel. The maintenance and evolution of the standard has since been assumed by the USB Implementers Forum, a non-profit organization.

SDOs have obtained trademark registrations for their house marks. Thus, the names of standards that incorporate an SDO's house mark may have a degree of built-in protection.

2. *Descriptive Titles*

In many cases, SDOs designate standards using descriptive titles. For example, ISO's well-known ISO 9001:2015 standard is titled "Quality Management Systems – Requirements" and IETF's foundational standard for the Internet, RFC 791⁷⁹, is titled "Internet Protocol". These textual titles, which simply describe the nature of the standard in technical terms, are likely to be considered descriptive or generic in nature under the *Abercrombie* framework and unlikely to be eligible for trademark protection. Moreover, from a practical standpoint, they are often long and jargon-laden (e.g., IEEE's 139-1988 standard "Recommended Practice for the Measurement of Radio Frequency Emission from Industrial, Scientific, and Medical (ISM) Equipment Installed on User's Premises"), which, even if protectable, would be of limited use in labeling compliant products in a convenient and consistent manner.

3. *Alphanumerical Designations*

As noted above, in addition to an SDO's house mark and a descriptive textual "title", many standard-names include an alphanumerical designation: ISO **9001**, IEEE **802.11ac**, RFC **791**. In rare cases, this alphanumerical designation may be descriptive of some feature of a standard. For example, the term 3G was used to describe a range of third generation wireless communication protocols. In this case, the term "3G" signifies the third generation standard. A similar situation might arise if a standard's designation were tied to a particular transmission speed (e.g., 512 gigabits per second) or encryption level (e.g., 512 bit encoding). Finally, as in the case of ISO 9001:2015, part of a numerical designation may indicate a release year or version number. In these cases, the alphanumerical portion of the standard-name is likely to be considered descriptive for trademark purposes and would be difficult to protect.

However, in many cases a standard's alphanumerical designation is simply an indication of the sequence in which the standard was published (e.g., IETF's standards are numbered as RFCs in roughly the sequential order of their publication), or an arbitrary numerical designation, like a part number in a piece of machinery. As such, under the *Abercrombie* hierarchy, such alphanumerical designations could be considered arbitrary and hence amenable to registration.⁸⁰ Several famous numerical trademarks exist, including Boeing's registrations of the numerals 737, 747, etc. for aircraft⁸¹ and Levi's registration of 501 for jeans.⁸² In the context of standards, IEEE has registered the numerical designation 802⁸³ for "publications, namely, pamphlets of standards and specifications for local and metropolitan area networks."⁸⁴ It is likely that other arbitrary

⁷⁹ "RFC" is an abbreviation of "Request for Comments" and is the customary nomenclature for IETF standards.

⁸⁰ Numerals may be registered as trademarks in Europe and other jurisdictions as well. See *Seven SpA v. OHIM*, Case T-176-10 (GC Oct. 6, 2011).

⁸¹ U.S. Trademark Reg. No. 857,824 (Oct. 1, 1968) (737); U.S. Trademark Reg. No. 905,785 (Jan. 12, 1971) (747).

⁸² U.S. Trademark Reg. No. 1552985 (Aug. 22, 1989) (501).

⁸³ The 802 series of IEEE standards include 802.11 (wireless networking also known as "Wi-Fi") and 802.3 (Ethernet). As discussed below, the term "Wi-Fi" is not owned by IEEE, but by the Wi-Fi Alliance.

⁸⁴ U.S. Trademark Reg. No. 2,342,235 (Jan. 25, 2000) (802).

alphanumeric designations forming portions of standard-names could also be registered as trademarks.

This being said, most SDOs elect not to register the alphanumerical designations of their standards. There are likely several reasons why they do not. First, SDOs often release large numbers of standards⁸⁵ and seeking to register them all could result in a significant cost and resource burden. Second, most standards that are released by SDOs do not gain significant market adoption and seeking registrations for the numerical designations of these standards would probably not be a good use of resources. Third, it is unlikely, except in rare instances, that consumers will recognize, let alone build up loyalty to, any particular standard's numerical designation, again making a trademark registration of questionable value. Finally, the most common form of infringement faced by SDOs is the unauthorized sale or distribution of their standards, often by offshore entities.⁸⁶ While this practice undoubtedly involves infringement of the SDO's copyrights and other potential claims, it is not clear that a claim for trademark infringement will be available if the copyst is simply distributing the SDO's own work.⁸⁷ Thus, while IEEE may have deemed it worthwhile to register 802 as a trademark for its pervasive networking standards, most SDO numerical designations do not appear to warrant formal protection.⁸⁸

4. *Acronyms*

Many standard-names are acronyms for longer descriptions of one or more principal functional features of the standard. For example, the following acronyms are arguably well-known abbreviations for functional descriptors of standards:⁸⁹

CDMA	Code Division Multiplex Access (Qualcomm)
PDF	Portable Document Format (Adobe)
MP3	Moving Picture Experts Group (MPEG) Layer-3 Audio (ISO/IEC)

⁸⁵ See, e.g., ASTM 2018 (claiming that more than 12,000 ASTM standards are currently in use around the world).

⁸⁶ For example, see the following Reddit post by "StandardsPirate" in April 2018:

If anyone reading this is able to get a hold of pristine standards documents or other technical rules, please get in touch with me (PM). Maybe your employer, university or local library has network licenses or a DVD lying around somewhere? Maybe you are even able to scan some documents for which no PDF exists?

I'm part of a small group of people that specializes in standards piracy and we are always on the lookout for new sources. We are proficient in watermark removal, so don't let those deter you. National or international standards, English or foreign language, official translations, historical/withdrawn documents, drafts. All are welcome.

https://www.reddit.com/r/Piracy/comments/8bfdnb/where_to_find_iso_en_and_din_standards/

⁸⁷ Simply redistributing a manufacturer's branded product without consent may violate one or more agreements and/or constitute an unfair business practice, but under the doctrine of nominative fair use, it is unlikely to be trademark infringement. See *Swarovski v Building #19* (2013).

⁸⁸ Notwithstanding the likely unavailability of trademark protection for alphanumeric designations in standard-names, some degree of copyright protection may be available for SDO numbering systems/series. See *Feist* (1991).

⁸⁹ Note that not all acronyms abbreviate English words. GSM, for example, the principal 2G wireless telephony standard adopted in Europe, originally stood for the French term "Groupe Spécial Mobile". Today, however, the acronym GSM is generally understood to stand for "Global System for Mobile communication".

TCP	Transport Control Protocol (IETF)
HDMI	High Definition Multimedia Interface (HDMI Forum)

Under U.S. law, an acronym or abbreviation will generally be considered descriptive or generic if the terms that it abbreviates are themselves descriptive or generic and consumers would understand the acronym to be “substantially synonymous” with the terms that it abbreviates.⁹⁰ However, if such an acronym develops secondary meaning and comes to be associated in the public eye with a particular source of goods or services, then the acronym may be deemed distinctive. For example, the mark IBM, which is well-known as an acronym for International Business Machines Corp., is likely registered on the basis that IBM is associated in the minds of consumers with IBM Corp. and has thus acquired secondary meaning.

Acronyms may also be registered as trademarks in Europe. However, as in the U.S., the EUIPO explains that “[a]bbreviations of descriptive terms are in themselves descriptive if they are used in that way, and the relevant public, whether general or specialised, recognises them as being identical to the full descriptive meaning”.⁹¹ Thus, according to one commentator, if the term AAC is understood by industry participants to mean “Advanced Audio Coding”, it would not be registrable even if, standing alone, it might seem to be distinctive.⁹² This being said, ETSI claims to have registered certain acronym standard-names in Europe, including LTE (for the “Long Term Evolution” 4G wireless telecommunications standard) and UMTS (for the “Universal Mobile Telecommunications System” 3G wireless telecommunications standard).

5. *Distinctive Standard-Names*

In some cases, the names of standards are not merely descriptive acronyms or alphanumeric designations, but suggestive, fanciful or arbitrary terms. Table 1 below lists a number of standard-names that could be considered suggestive, arbitrary or fanciful.

⁹⁰ TMEP § 1209.03(h). *See, e.g., In re Thomas Nelson* (2011) (acronym “NKJV” is descriptive because it is substantially synonymous with the term “New King James Version”, a descriptive term for a type of Bible).

⁹¹ EUIPO (2017, p.12).

⁹² Graver-de-Looper (2016).

Table 1
Distinctiveness of Standard-Names

Standard-name	Description	Distinctiveness Level ⁹³
Blu-Ray	high-resolution video discs and players	suggestive
Lightning	device charging and data connectivity	suggestive
FireWire	IEEE 1394 serial bus interface (Apple)	suggestive
i.Link	IEEE 1394 serial bus interface (Sony)	suggestive
Lynx	IEEE 1394 serial bus interface (Texas Instruments)	suggestive
Gopher	Internet-based file transfer protocol	arbitrary
Java and coffee cup logo	programming environment	arbitrary
Bluetooth	short-range wireless connectivity	arbitrary
Wi-Fi	IEEE 802.11 wireless local area networking	fanciful or suggestive

As discussed above, suggestive marks are those that may suggest the nature of the marked product or service, but require “imagination, thought and perception to reach a conclusion” as to its actual nature.⁹⁴ For example, the mark BLU-RAY, which is used for a high-definition video disc standard, reflects the use of laser light in the blue-violet frequency band, offering shorter wavelengths, and thus higher storage capacity, than prior generation red laser light. Some highly sophisticated consumers would be aware of the superiority of blue-violet light over red light to store and read data on a physical medium. However, even if this were the case, the BLU-RAY mark for video discs and players would at most be suggestive (unlike, for example, the use of the mark for a flashlight with a blue beam). Thus, under the *Abercrombie* framework, BLU-RAY is likely to be a suggestive mark and thus distinctive. Similar arguments can be made for Apple’s LIGHTNING protocol (suggesting a fast data transfer rate) and the trade names that Apple, Sony and Texas Instruments, respectively, devised for IEEE 1394 serial bus standard (FIREWIRE, suggesting a fast/hot speed, I.LINK, suggesting device connectivity, and LYNX, also suggesting connectivity).

Arbitrary marks are common words that are applied in a unfamiliar or novel context. For example, the GOPHER data transmission protocol was named for the Golden Gopher, the mascot of the University of Minnesota, where it was developed.⁹⁵ Thus, like a toucan representing a breakfast cereal,⁹⁶ the name of a small rodent as an Internet protocol is fairly arbitrary. Sun Microsystems’ use of the mark JAVA and a steaming cup of coffee for a programming language and application development environment are similarly arbitrary.

But perhaps the most curious standard-name in recent times is that of the BLUETOOTH protocol for short-range wireless connectivity that connects peripherals like headsets and speakers to computers, phones and tablets. Lore abounds regarding the origin of this mark, but the following explanation seems more than plausible:

⁹³ These classifications are based on the author’s initial estimates only, without reference to any external sources or data gathering.

⁹⁴ *Abercrombie* (1976) at ¶18.

⁹⁵ Kozierok (2005, pp. 1431-32).

⁹⁶ See *Kellogg v. Toucan Golf* (2003) (“Toucan Sam” is arbitrary, and hence a strong trademark).

Ericsson originally called their technology 'Bluetooth' after Harald Bluetooth, who was king of Denmark between 940 and 981. During his rule, Denmark and Norway were Christianised and united, so Ericsson used the analogy that he "allowed greater communication between people" when naming their wireless communication protocol.⁹⁷

Clearly, even with this remote association with “communication”, using the name of an ancient Viking king to designate a technological protocol is rather arbitrary,⁹⁸ thus making the BLUETOOTH mark quite strong on the *Abercrombie* scale.

Figure 2
Arbitrary Standard-Names



Finally, fanciful marks – coined words with no ordinary language connotation – are considered to be the most distinctive category of marks on the *Abercrombie* scale. One potentially fanciful standard-name is WI-FI, which designates IEEE's 802.11 family of wireless local area networking standards. The significance of the name WI-FI is subject to some debate. IEEE released the first version of 802.11 in 1998. In 1999, the Wireless Ethernet Compatibility Alliance (WECA) was formed to test and certify products for 802.11 compliance. According to one of the founders of WECA, shortly after its formation WECA engaged the marketing firm Interbrand (the creator of blockbuster brands like “Prozac” and “Compaq”) to re-brand 802.11 along more colloquial lines.⁹⁹ From ten candidate names proposed by Interbrand, WECA chose “Wi-Fi”. According to some sources, WI-FI was intended as a pun evoking an earlier era's “Hi-Fi” (high fidelity) sound recording technology. Early on, however, WECA decided to add a tag-line to the new logo: “The Standard for Wireless Fidelity”. This tag-line led many to believe that WI-FI was simply an abbreviation for the term “wireless fidelity”, though one WECA founder denies this.

The mark WI-FI could thus be classified in several different ways under the *Abercrombie* framework. First, if WI-FI is generally understood to be an abbreviation for “wireless fidelity”,

⁹⁷ Nooks and Crannies, *The Guardian*, 2011 <https://www.theguardian.com/notesandqueries/query/0,5753,-18959,00.html> (contribution by Richard Thompson, Allerod, Denmark).

⁹⁸ Note that the “runic B” that is also used in connection with the Bluetooth standard (see Fig. 1.d) also evokes this Viking heritage.

⁹⁹ Doctorow (2005).

then WI-FI should have no greater distinctiveness than the term “wireless fidelity” itself. Wireless fidelity, however, does not indicate precisely what type of product it applies to. Certainly, the word “wireless” implies wireless functionality of some kind, but this could be a television signal, a satellite broadcast or a handsfree speakerphone. Thus, while “Wireless Fidelity” could suggest a wireless LAN, it is not necessarily descriptive of a wireless LAN, and would, most likely, be a suggestive mark. In that case, WI-FI would also be considered suggestive. If, on the other hand, WI-FI is not generally understood to be an abbreviation for “wireless fidelity”, then the mark WI-FI, which has no ordinary English language meaning, could be considered fanciful under the *Abercrombie* framework. In either case, it is likely that the mark WI-FI would be distinctive.

6. *Standard-Names as Certification Marks*

The standard-names discussed above have generally been registered as trademarks or service marks. In some cases, however, SDOs register standard-names as certification marks. There appears to be little pattern regarding the decision to register a standard-name as a trademark/service mark or a certification mark. Table 2 below provides examples of standard-names that have been registered as trademarks, service marks and certification marks, as well as some standard-names that have no U.S. registrations whatsoever.

Table 2
Standard-Mark Types of Registration

Mark	Owner	Type
BLUETOOTH	Bluetooth SIG	Certification Mark
DVD	DVD Format/Logo Licensing Corp.	Trademark
GSM	GSM MOU Corp.	Trademark
HDMI	HDMI Licensing	Trademark
LTE	ETSI	Trademark/Service Mark
UMTS	ETSI	Trademark (EU)
USB	n/a	Not registered
WI-FI	Wi-Fi Alliance	Certification Mark

One might question why standard-names are treated as trademarks rather than certification marks. SDOs that create standards have little use for standard-names other than to designate and identify their standards to product manufacturers. Admittedly, some SDOs support themselves through the sale of paper or electronic copies of their standards documents. However, unlike a breakfast cereal or a video game, the name of a technical standard seems unlikely to affect purchasing decisions in any meaningful way.

Thus, the principal market function for standard-names appears to be enabling product manufacturers to inform consumers that their products incorporate particular technical features (e.g., a smart phone that has Wi-Fi, Bluetooth and 4G LTE capabilities is clearly distinguishable from one that has only 3G UMTS capabilities). Almost certainly a consumer will have little preference for a standard developed by IEEE versus ITU versus Bluetooth SIG, as these

organizations are virtually unknown to the general populace. Thus, the function of a standard-name is oriented more toward third party product manufacturers than the SDO that developed the standard. As such, it is more intuitive that standard-names be treated as certification marks rather than trademarks. But even when standard-names function as certification marks, some SDOs impose rigorous certification and qualification requirements on manufacturers wishing to indicate that their products are standard-compliant. The range of SDO requirements regarding third party use of standard-name trademarks and certification marks are discussed in the following section.

III. SDO Approaches to Authorizing the Use of Standard-Names

In addition to a variety of distinct approaches to naming standards and protecting standard-names, SDOs also have a range of approaches toward authorizing others to use standard-names on products and services that are compliant with the relevant standards. Several of these approaches are summarized below.

A. *Caveat Emptor (Internet Engineering Task Force (IETF))*

IETF is an organized activity of the Internet Society (ISOC), a District of Columbia non-profit corporation based in Reston, Virginia.¹⁰⁰ Prior to becoming part of ISOC, IETF was a loosely coordinated group connected with the early development of the Internet.¹⁰¹ IETF is responsible for numerous key Internet standards including IP (Internet Protocol), TCP (Transmission Control Protocol), and HTTP (hypertext transmission protocol).

IETF holds its intellectual property, including trademarks, domain names and copyrights, through the IETF Trust, an independent Virginia trust that operates for the benefit of the IETF community. The IETF Trust maintains trademark registrations for the IETF mark in multiple countries, and for its logo in the United States. It holds additional registered trademarks relating to the Internet Assigned Number Authority (IANA) function overseen by IETF. These can all be considered house marks.

IETF permits the use of its house marks for descriptive purposes without prior approval, provided that such use conforms to IETF's published style guidelines.¹⁰² Other uses of the marks, including use on t-shirts, social media platforms, conference promotion and the like, require approval of the IETF Trust and the execution of a short-form license agreement.¹⁰³

IETF does not, however, register the names of particular standards as trademarks. If a contributor to an IETF standard includes one or more trademarked terms in its technical contribution, IETF and all IETF participants obtain a royalty-free, perpetual license to use, reproduce and publish those terms in draft and final IETF standards documents.¹⁰⁴ Thus, if BigCo submits a draft standard to IETF entitled "The WHIZBANG[®] Standard for Internet Security",

¹⁰⁰ While this description is accurate as of this writing, IETF is currently engaged in a formal review of its organizational structure.

¹⁰¹ See Contreras (2016a).

¹⁰² IETF Trust (2018c, Item 4 "What usage is OK without a license?").

¹⁰³ IETF Trust (2018a, 2018b).

¹⁰⁴ IETF (2008, § 5.3(d)).

IETF and its participants are entitled to reproduce and publish the trademark WHIZBANG® in the documentation relating to the development of that standard, as well as in the final published standard.

However, neither IETF nor its participants obtain any license to use the trademarked term “in connection with any product or service offering.”¹⁰⁵ Thus, the license that IETF participants obtain to use the term WHIZBANG® in the IETF standardization process does not extend to the use of WHIZBANG® to name their own product or service offerings, even if they implement the WHIZBANG® standard. Instead, each contributor to an IETF standard is “requested to state specifically what conditions apply to implementers of the technology relative to the use of such trademarks.”¹⁰⁶ That is, on what terms would the owner of the WHIZBANG® trademark permit an implementer to market a product as the “WhizBang Kitchen Network Adaptor”? In some cases, the owner of the mark may wish to allow such use, so long as the implementer conforms to the WHIZBANG® standard. In some cases, the owner of the mark may wish to charge a royalty for use of the mark. And in some cases, the owner of the mark may not wish to authorize such use at all (e.g., suppose that instead of WHIZBANG®, the mark were MICROSOFT or APPLE). It is for these reasons that IETF requests that a mark owner disclose its licensing intentions with respect to the WHIZBANG® mark. Thus, if the terms on which the mark owner intends to license the mark are onerous, or if the owner does not wish to license the mark at all, then the relevant working group within IETF would be well-advised to avoid using the term WHIZBANG® in the name of the final standard.¹⁰⁷ But the onus for determining whether a mark used in an IETF standard will become problematic for implementers of IETF standards is left entirely to IETF participants and implementers. The SDO itself adopts a deliberately hands-off approach to all trademark usage issues beyond those involving the IETF house marks.

In summary, IETF controls only its house marks (the names/logos for IETF and IANA). It takes no action regarding standard-names other than requesting that owners of marks included in contributions to IETF standards disclose their intentions, if any, with regard to licensing of those marks. This approach can be broadly termed *caveat emptor* (“buyer beware”). Implementers of IETF standards are on their own to assess the risks and potential costs of using marks contained within IETF standards. While nominative fair use, in jurisdictions where it is recognized, will permit the manufacturers of standardized products to truthfully represent that their products are compliant with relevant IETF standards, other uses of protected marks in advertising and product names are not likely to be shielded from liability. This situation requires that IETF working groups pay attention to potential trademark issues in standard-names before standards are approved and adopted, and suggests that they take action (e.g., altering the names of draft standards to avoid protected marks and/or opposing such marks through available administrative routes (e.g., oppositions at the EU IPR or the U.S. TTAB)) prior to such approval.¹⁰⁸

¹⁰⁵ *Id.* at § 3.4.

¹⁰⁶ *Id.* at § 5.8.

¹⁰⁷ Readers may recognize many of these considerations as also arising in the context of patents covering standards. But while the use and licensing of patents covering industry standards has received significant attention, these issues have been underappreciated in the context of trademarks.

¹⁰⁸ Again, the need to “work around” proprietary positions that are not available for licensing on acceptable terms also occurs in the context of patents, particularly at IETF, which imposes no affirmative obligation on IETF participants to grant licenses under standards-essential patents. See Contreras (2016a).

B. *Member Certification (ETSI, Bluetooth)*

Unlike IETF, many SDOs seek trademark protection for standard-names. Many of these SDOs wish to permit implementers of their standards to use these names in relatively straightforward manner. For example, ETSI, which has registered standard-names including UMTS (3G wireless communications)¹⁰⁹ and LTE (4G wireless communications)¹¹⁰, authorizes (and encourages) its members to use ETSI trademarks “in an appropriate and approved manner on, or in relation to, standard-compliant equipment and/or services,” provided that they adhere to a set of customary stylistic and usage guidelines.¹¹¹ Non-members may also use ETSI trademarks on the same terms, provided that they obtain prior authorization from ETSI.

As noted above, ETSI permits the use of its marks on “standard-compliant equipment and/or services”. Yet the determination whether a product is compliant with a particular ETSI standard is generally made by the product’s manufacturer, not by ETSI. As discussed in Section I.B.2, this arrangement is referred to as self-certification or “first party” certification, and generally offers the lowest certitude with respect to compliance of the branded product.

The Bluetooth SIG has also adopted a members-only usage policy for the BLUETOOTH certification mark and associated logo (see Fig. 1.d). While membership in the Bluetooth SIG is cost-free, Bluetooth SIG imposes fees (generally below US\$25,000) in connection with the certification of products. In order to use the Bluetooth marks, licensees must execute a trademark license agreement with Bluetooth SIG which, when combined with the attached style guidelines, is over thirty pages in length.¹¹² Written license agreements are required by a number of other SDOs, including, for example, the USB Interoperability Forum (USB-IF) and the GSM Association.

The practice of limiting usage of certification marks to members of an SDO could raise questions regarding the mark owner’s compliance with the non-discrimination requirement associated with certification marks. As noted in Section I.B.1, above, certification marks in the U.S. and Europe must be licensed to any party that complies with the relevant certification standard. Some SDOs that require membership in order to use a certification mark, such as Bluetooth SIG, do not charge for membership, thus alleviating this concern to some degree. However, SDOs that both require membership in order to use a certification mark and charge more than a nominal fee to join the SDO, or which charge excessive fees for product testing and certification, may risk the cancelation of their certification marks.¹¹³

Like most SDOs, Bluetooth SIG requires that its marks be used only on Bluetooth-compliant products. However, the qualification procedure for Bluetooth products is more complex than for ETSI-compliant products. Products may be certified as compliant with the Bluetooth standard either by a product manufacturer (provided that it is recognized by Bluetooth SIG as a

¹⁰⁹ UMTS does not appear to be registered in the U.S. It is the subject of European trademark No. 797,688 (Feb. 20, 2001).

¹¹⁰ U.S. Trademark Reg. No. 3,922,100 (Feb. 22, 2011) (trademark/service mark).

¹¹¹ ETSI (2018).

¹¹² Bluetooth (2016).

¹¹³ See Belson (2017, pp. 64-65).

Bluetooth Recognized Test Facility (BRTF)) or by a third party recognized by Bluetooth SIG as a Bluetooth Qualified Test Facility (BQTF).¹¹⁴ Bluetooth SIG charges fees for recognizing BRTFs and BQTFs, and for accepting manufacturers' designation of their products as Bluetooth-compliant.¹¹⁵ BRTFs are permitted to perform certification testing only on their own products, and not for third parties. BQTFs, on the other hand, are authorized to provide certification testing for third party products.

While many SDOs make it relatively easy for implementers of their standards to use the associated marks on standard-compliant products, there have been instances in which mark owners have sought to leverage their ownership of a standard-mark for commercial advantage. Egyedi, for example, describes Sun Microsystems' refusal in the late 1990s to permit Microsoft to use its Java Compatible mark as part of a commercial dispute between the companies.¹¹⁶

C. *Third Party Certification (Wi-Fi)*

As discussed in Section II.B.5 above, IEEE's 802.11 series of wireless local area networking standards is generally known by the term "Wi-Fi". The WI-FI mark¹¹⁷ is owned by Wi-Fi Alliance, an independent testing and certification organization that is not formally related to IEEE. WI-FI is a certification mark that is intended to "certify that goods manufactured by authorized persons comply with interoperability standards". Wi-Fi Alliance has also registered a number of related certification marks, including WI-FI CERTIFIED, WI-FI CERTIFIED VANTAGE, WI-FI TIMESYNC, and WI-FI PASSPORT.

Wi-Fi Alliance conducts an active product certification program. It claims that over 40,000 different products have been certified to its standards. Product testing is conducted through a network of twelve independent Authorized Test Laboratories in North America, Europe and Asia.¹¹⁸ In addition, Wi-Fi Alliance makes available a free, open source test suite that enables any manufacturer to test its products for standards compliance.¹¹⁹ However, running this free test suite is not sufficient to obtain Wi-Fi Alliance certification, which is available only to Wi-Fi Alliance members through its Authorized Test Laboratories. In addition, a full software test suite is available to members. As noted in Section III.B above, an SDO that does not permit all manufacturers of products complying with its standards to apply the relevant certification marks on a non-discriminatory basis may risk cancelation of its marks.¹²⁰

¹¹⁴ Bluetooth (2018a).

¹¹⁵ Bluetooth (2018b).

¹¹⁶ Egyedi (2001, pp. 19-20).

¹¹⁷ U.S. Trademark No. 2525795 (Jan. 1, 2002).

¹¹⁸ WFA (2018a).

¹¹⁹ WFA (2018b).

¹²⁰ Implementers of Wi-Fi Alliance standards may become members for annual dues of \$5,000 (\$2,500 for small businesses). WFA (2018c).

Fig. 3 – The Wi-Fi Certified Logo



Products certified by Wi-Fi Alliance may display the WI-FI CERTIFIED logo or one of the many additional certification marks licensed by Wi-Fi Alliance. Interestingly, the mark WI-FI itself, which is registered to Wi-Fi Alliance as a certification mark, is not one of the marks expressly authorized for use on certified products. This notable absence raises some questions regarding the status of the WI-FI mark. Perhaps Wi-Fi Alliance believes that it would have limited success regulating the use of the term Wi-Fi to signify products that implement IEEE’s 802.11 standards. Certainly, under the nominative fair use doctrine, it would seem difficult for Wi-Fi Alliance to prevent manufacturers from truthfully advertising that their products implement the standard. But this could be achieved, presumably, by advertising a product as conforming to IEEE 802.11a, b, g, n, etc.¹²¹ The term “WI-FI” is not strictly necessary to convey the fact that a product is compliant with an 802.11 standard, just as an auto repair shop that services Volkswagen automobiles may be permitted, as nominative fair use, to display the terms “Volkswagen” and “VW” but not Volkswagen’s tag line “Fahrvergnügen” (a German neologism meaning ‘joy of driving’). This distinction is even more clear when the additional term is owned not by the owner of the principal mark but by a third party. So why does Wi-Fi Alliance retain its registration of WI-FI but not authorize or restrict its use? Is it possible that the term Wi-Fi has effectively become generic and available for all to use? This possibility is discussed at greater length in the following section.

D. *Genericide (USB, W3C)*

As discussed in Section I.D above, terms that identify a general category of goods, rather than the particular source of those goods (e.g., car, café and computer versus Toyota, Starbucks and MacBook), are generic and cannot be registered or enforced as trademarks. Given the large investments that many firms make in building brand identity and goodwill, trademark owners often go to great lengths to prevent their marks from becoming generic.¹²² For example, Xerox Corporation is well-known for appealing directly to the public in advertisements, pleading with readers not to use the word XEROX as a synonym for “photocopy.”¹²³

But, surprisingly, some SDOs have taken a divergent approach. Instead of seeking to prevent their standard-names from becoming generic, they have affirmatively stated that certain

¹²¹ The question whether IEEE could police and/or prevent this usage using its trademark in the numerical designation “802” is a separate one. However, under the doctrine of nominative fair use, it seems unlikely that IEEE could prevent a product manufacturer from truthfully advertising that its product implements the relevant 802.11 standards.

¹²² See, e.g., Johnson (2017).

¹²³ Xerox Corp., Advertisement, ABA Journal, Feb. 2008 (reproduced in Loren & Miller (2017, p. 515)).

standard-names *are* generic. For example, the USB Interoperability Forum (USB-IF) is the owner of several trademarks and certification marks pertaining to the Uniform Serial Bus (USB) standard (e.g., CERTIFIED USB¹²⁴). Yet USB-IF does not hold a registration for the term USB itself. While USB, as an acronym for a relatively well-known descriptive term (Uniform Serial Bus), would likely be deemed descriptive under the *Abercrombie* framework, it is possible that the mark USB, which has been in use for more than twenty years, has developed secondary meaning and thus acquired distinctiveness. As such, it is not a term without potential value.

Nevertheless, USB-IF has publicly declared that the term USB is generic. For example, in a 2008 opposition proceeding before the TTAB, USB-IF opposed a third party's attempted registration of the mark USB-HOUSE (which lacked any disclaimer of the term USB) on the ground that the term USB is generic.¹²⁵ In the proceeding, the President and Chairman of USB-IF submitted a declaration stating that the term USB "is the common generic term used to describe a computer port that can be used to connect keyboards, mice, game controllers, printers, scanners, digital cameras, and removable media drives."¹²⁶ USB-IF also noted that there were more than eighty records in the USPTO's trademark database containing the term USB (e.g., USB NOW, USB REALTIME, FLEXIUSB, etc.), all of which contained a disclaimer of the term USB standing alone. USB-IF was successful in having the registration for USB-HOUSE denied.

Even more notable is the practice of the Worldwide Web Consortium (W3C). W3C is the primary standardization body for the Worldwide Web and is responsible for fundamental Internet application layer protocols including Worldwide Web (www), Hypertext Markup Language (HTML), and Extensible Markup Language (XML).¹²⁷ The acronym W3C is a registered trademark in a number of jurisdictions.¹²⁸ W3C also holds registered and unregistered trademarks in a number of project names including P3P (the Platform for Privacy Preferences Project) and the Amaya web browser/editor. Yet on its web site, W3C expressly identifies twenty additional terms (including HTML, XML and HTTP) that it considers to be generic.¹²⁹ In doing so, W3C likely precludes itself from exercising control over the use of these standard-names. And while a self-declaration of genericism is not itself dispositive of the status of these terms (as genericism is a question of fact that can only be determined definitively through applicable legal processes, either at the TTAB or the courts), such a self-declaration by the creator of the relevant standard is likely to be viewed as strong evidence of the marks' genericism, should any other organization seek to establish proprietary rights over them.¹³⁰

Conclusion

Trademarks and certification marks are critical in identifying the thousands of technical standards that are in use today. SDOs have taken a variety of approaches to protecting standard-names, from the registration of dozens of marks throughout the world, to the registration of none.

¹²⁴ U.S. Trademark No. 2,592,682 (Jul. 9, 2002).

¹²⁵ In re. USB-HOUSE (2008).

¹²⁶ *Id.* at Ex. C.

¹²⁷ See Contreras (2016a).

¹²⁸ Because W3C is not an incorporated entity, its intellectual property, including trademarks, is held by MIT.

¹²⁹ W3C (2018)

¹³⁰ This topic is discussed in substantially greater detail in Contreras (2019).

Likewise, SDO approaches to authorizing others to apply their marks to products vary considerably, from rigorous product testing requirements available only to SDO members to manufacturer self-certification to virtually no requirements at all. In this final category, some SDOs have even gone so far as to declare their own standard-names to be generic terms, a declaration that is still of uncertain legal significance.

But even without a declaration of genericness, there may be limit to the authority of SDOs that create standard-names to prevent product manufacturers from publicly declaring that their products implement the relevant standard. Many standard-names, particularly those that consist merely of descriptive titles and alphanumeric designations, are relatively weak in terms of trademark distinctiveness. And even for distinctive marks such as Bluetooth and Wi-Fi, the doctrine of nominative fair use in the U.S. and other countries permits a product manufacturer to refer to the mark owner's product or service (i.e., the standard) in a truthful manner. Thus, some SDOs, in following corporate models of brand protection, may be over-protecting marks that are, in the end, intended primarily to assist consumer and product designers in understanding the interoperability features of today's complex products.

The same may be said of standard-names that are classified as certification marks. While in many ways a standard-name adheres more closely to the function of a certification mark than a trademark (i.e., indicating that a product meets certain technical criteria rather than that a standard was produced by a particular SDO) the strict certification criteria (and monetary charges) imposed by some mark owners may go beyond what is necessary to enable product manufacturers to inform consumers that a particular product implements a common standard.

References

Cases

Abercrombie and Fitch Co. v. Hunting World, Inc., 537 F.2d 4 (2nd Cir. 1976)

Barcamerica International USA Trust v. Tyfield Importers, Inc., 289 F.3d 589 (9th Cir. 2002)

Bluetooth SIG, Inc. v. Chisholm, Notice of Opposition (TTAB, Mar. 11, 2009).

Board-Tech Electronic Co. v. Eaton Corporation, Cooper Wiring Devices, Inc., 2018 WL 2901336, No. 17-3829-cv (2d Cir. Jun. 11, 2018)

Community of Roquefort v. William Faehndrich, Inc., 303 F.2d 494, 497 (2d Cir. 1962)

Institut Nat'l Des Appellations d'Origine v. Brown-Forman Corp., 47 U.S.P.Q.2d 1875 (TTAB 1998)

International Information Systems Security Certification Consortium, Inc. v. Security University LLC, (2nd Cir. 2016)

Kellogg Co. v. Toucan Golf, Inc., 337 F.3d 616 (6th Cir. 2003)

Pizza Hut, Inc. v. Papa John's Int'l, Inc., 227 F.3d 489 (5th Cir. 2000)

Polaroid Corp. v. Polarad Electronics Corp., 287 F.2d 492 (2nd Cir. 1961)

Swarovski Aktiengesellschaft v. Building No. 19, Inc., 704 F.3d 44 (1st Cir. 2013)

Tea Bd. of India v. Republic of Tea, Inc., 80 U.S.P.Q.2d 1881 (TTAB 2006)

In re Thomas Nelson, Inc., 97 USPQ2d 1712, 1715 (TTAB 2011)

In re. Application S/N 79013672 for the Mark USB-HOUSE, Notice of Opposition (TTAB 2008)

Volkswagen v. Church (9th Cir. 1969)

SDO Materials

Am. Natl. Standards Inst. (ANSI) (2008), *ANSI Guidelines on Embedded Trademark*.

ASTM Intl. (2018), Standards Products, <https://www.astm.org/Standard/index.html> (visited Jun. 15, 2018)

Bluetooth SIG (2016), Bluetooth Trademark License Agreement (E-Sign Version 1.3 – Last Revised Dec. 14, 2016)

Bluetooth SIG (2018a), Qualification Test Facilities, <https://www.bluetooth.com/develop-with-bluetooth/qualification-listing/qualification-test-facilities>

Bluetooth SIG (2018b), Qualification Fees, <https://www.bluetooth.com/develop-with-bluetooth/qualification-listing/qualification-listing-fees>

Eur. Telecom. Standards Inst. (ETSI) (2018), Use of ETSI Trademarks,

IETF (2008), RFC 5378 - Rights Contributors Provide to the IETF Trust

IETF Trust (2018a), Trademark Usage Guidelines, <https://trustee.ietf.org/trademark-usage-guidelines.html> (visited Jun. 14, 2018)

IETF Trust (2018b), General Trademark License Agreement, https://trustee.ietf.org/docs/IETF_General_TM_License.pdf

IETF Trust (2018c), FAQ for use of the IETF Acronym and Logo, <https://trustee.ietf.org/ietf-logo-acronym.html>

Intl. Org. Standardization (ISO) (2018), ISO Name and logo, <https://www.iso.org/iso-name-and-logo.html>

ISO/IEC 17000:2004 – Conformity Assessment

Underwriters Laboratories (UL) (2018a), Marks and Labels, <https://www.ul.com/marks/>

Wi-Fi Alliance (WFA) (2018a). Authorized Test Laboratories, <https://www.wi-fi.org/certification/authorized-test-laboratories>

Wi-Fi Alliance (WFA) (2018b). Wi-Fi Test Suite, <https://www.wi-fi.org/certification/wi-fi-test-suite>

Wi-Fi Alliance (WFA) (2018c). Membership. <https://www.wi-fi.org/membership>

World Intell. Prop. Org. (WIPO) (2018) *WIPO-Administered Treaties*, http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=8

Worldwide Web Consortium (W3C) (2019), W3C Trademarks and Generic Terms, <https://www.w3.org/Consortium/Legal/2002/trademarks-20021231>

Governmental and Regulatory Materials

EU Intell. Prop. Office (EUIPO) (2017). Guidelines for Examination of European Union Trade Marks, Part B – Examination

EU Trademark Directive, EU Directive No. 2015/2436, codified under EU Regulation No. 2015/2424

1989 Madrid Protocol to the 1891 Madrid Agreement Concerning the International Registration of Marks and the Protocol Relating to that Agreement; adopted June 27 1989, Madrid, Spain, amended on October 3 2006 and November 12 2007, 15 U.S.C. § 1141a(b) (2004)

Madrid Protocol Implementation Act of 2002, Public Law 107–273, 116 Stat. 1758, 1913–1921

U.S. Patent & Trademark Off. (USPTO) (2018), *The Madrid Protocol Frequently Asked Questions by U.S. Trademark Owners Seeking International Rights*, <http://www.uspto.gov/trademarks/law/madrid/madridfaqs.jsp>

U.S. Patent & Trademark Off. (2017), Trademark Manual of Examining Procedure (Oct. 2017) (TMEP)

World Intell. Prop. Org. (WIPO) (2018), *How to file your application: Basic Requirements*, http://www.wipo.int/madrid/en/how_to/file/requirements.html

Articles, Books, Chapters

Belson, Jeffrey (2017). *Certification and Collective Marks* (Edward Elgar)

Biddle, Brad, Frank Curci, Matt Dodson, Molly Edwards (2017). “Standards Setting Organizations and Trademark Registration: An Empirical Analysis” (working paper Oct. 18, 2017)

Bluetooth SIG, Thousands of Products Infringing on Bluetooth Trademark Seized, Dec. 15, 2008, <https://www.bluetooth.com/news/pressreleases/2008/12/15/thousands-of-products-infringing-on-bluetooth-trademarks-seized>

Chon, Margaret (2009). “Marks of Rectitude”, 77 *Fordham L. Rev.* 101.

Contreras, Jorge L. (2016a). “A Tale of Two Networks: Patents, Standards and the Internet”, 93 *Denver L. Rev.* 855.

Contreras, Jorge L. (2019). “Intentional Genericide: Building the Naming Commons” (working paper)

Contreras, Jorge L., Megan Lewis, Hannah Roth (2011). “Toward a Rational Framework for Sustainable Building Materials”, *Standards Engineering*, Sept/Oct. 2011.

Contreras, Jorge L. & Charles R. McManis (2013). “Intellectual Property Landscape of Material Sustainability Standards”, 14 *Colum. Sci. & Tech. L. Rev.* 485.

Contreras, Jorge L., Andrew Updegrove (2016). “A Primer on Intellectual Property Policies of Standards Bodies” in *Effective Standardization Management in Corporate Settings*, Ch. 10 at 215-235 (Kai Jacobs, ed., IGI Global).

Doctorow, Cory (2005). “WiFi isn’t short for Wireless Fidelity”, *BoingBoing*, Nov. 8, 2005, <https://boingboing.net/2005/11/08/wifi-isnt-short-for.html>.

Dornis, Tim W. & Thomas Wein (2016). “Trademarks, Comparative Advertising and Product Imitations: An Untold Story of Law and Economics”, 121 *Penn. St. L. Rev.* 421.

Egyedi, T.M. (2001). *Beyond Consortia, Beyond Standardisation? New Case Material and Policy Threads - Final Report for the European Commission.*

Folsom, Ralph A. & Larry L. Tepley (1980). “Trademarked Generic Words”, 89 *Yale L.J.* 1323.

Graver-de-Looper, Milca (2016). “Registering an Acronym as a Trademark”, *Intl. Asset Management – Intl. Reports*, Feb. 16, 2016.

Johnson (2017). “Why Companies Don’t Want You to Take Their Brand Names in Vain”, *Economist*, Sep. 9, 2017

Kozierok, Charles M. (2005). *The TCP/IP Guide: A Comprehensive Illustrated Internet Protocols Reference* (No Starch Press)

Loren, Lydia Pallas & Joseph Scott Miller (2017). *Intellectual Property Law: Cases and Materials* (5th ed.).

McCarthy, J. Thomas (2008). *McCarthy on Trademarks and Unfair Competition* (4th ed., Clark Boardman Callaghan)

McGeeveran, William (2008). “Rethinking Trademark Fair Use”, 94 *Iowa L. Rev.* 49

Shapiro, Carl & Hal Varian (1998). *Information Rules: A Strategic Guide to the Network Economy* (Harv. Bus. School Press, 1998)

Webster, Nadaline (2017). “8 Things to Know About the New EU Certification Marks”, TrademarkNow, Oct. 12, 2017, <https://www.trademarknow.com/blog/8-things-to-know-about-the-new-eu-certification-marks>