

Intellectual Property Rights and the Realm of Cyberspace

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Abstract

With the advent of the internet and its vast growth in recent decades, legislatures and courts have sought to adapt the conventional concepts of law to the context of the internet. The term cyberspace is now widely used to refer to the the internet and everything that lies in its domain. Traditional ideas of contract law for example have had to be adapted for specific use in respect of contracts that are made over the internet. As an increasing amount of commercial transactions are being made electronically, and e-commerce is growing quickly, the traditional statutory and common law concepts of law concerning commercial transactions are being refined for use in the specific context of the internet. This is particularly so in the area of intellectual property law. Intellectual property comprises copyright, patent, trade marks, and trade secrets laws. Cyberspace is adding altogether new dimensions to these areas. Rapidly developing network-based technologies are creating issues that are specific to the internet. These include trademark disputes relating to the domain name system, metatags, hyperlinking, deep linking, framing, and inlining. Similar copyright disputes relate to free software, open source software, copyleft licenses, freeware, shareware, and end user license agreements through shrink wrap, browse wrap, and click wrap. This paper sets out a brief overview of the contours of intellectual property law in the United States, the legal enactments effectuated in response to the digital revolution, and the ways in which the U.S. Courts are adapting and applying the traditional concepts of intellectual property law to deal with the issues raised in the expanding realm of cyberspace.

*Intellectual property (IP) protection has emerged as an important component of national economic policies. Governments face choices on how to design an IP system that best serves their policy objectives. They also need to respond to changes in technology and in business models that may challenge the status quo.*¹

I. Introduction:

Ever since the advent of the internet and its vast growth in recent decades, the U.S. Congress and courts have sought to adapt the conventional concepts of law to the context of the internet. Legal scholars and practitioners have also contributed to this effort. The term cyberspace has come to be widely used to refer to the internet and everything that lies in its domain.² Traditional ideas of contract law for example have had to be adapted for specific use in respect of contracts that are made over the internet. As an increasing amount of commercial transactions are made electronically, and e-commerce is rapidly developing, the traditional statutory and common law concepts of law concerning commercial transactions are being refined for use in the specific context of the internet.

This is particularly so in the area of intellectual property law. Intellectual property traditionally comprises copyright, patent, trademark, and trade secrets laws. Each new technological advance spawns its own challenges for intellectual property laws.³ While some believe that minor tinkering with the traditional areas of law would be sufficient to adapt their use to the emerging technological advances, some others are of the

¹ *The Economics of IP*, World Intellectual Property Organization website. Available at: http://www.wipo.int/econ_stat/en/economics/.

² The *Merriam-Webster* Dictionary defines cyberspace as “the online world of computer networks and especially the internet.” Available at: <http://www.merriam-webster.com/dictionary/cyberspace>. The *Encyclopedia Britannica* states: “Computers and the networks that connect them are collectively known as the domain of cyberspace. Available at: <http://www.britannica.com/EBchecked/topic/147819/cyberspace>. Lawrence Lessig, *Code: Version 2* (Basic Books, 2006), chapter 2, page 9 et seq., offers a more comprehensive explanation of the experience of cyberspace by the millennial generation.

³ See generally: R. P. Merges, Peter S. Menell, Mark A. Lemley, *Intellectual Property in the New Technological Age*, 5th Edition, 2009 (Aspen Publishers).

opinion that a more radical overhaul would be necessary to make the rationale and reach of the laws more meaningful and relevant to the context of the internet. We have the benefit of the experience of almost two decades and beyond to analyze and understand the effects of electronic networks on intellectual property law as a result of internet-based commerce.

Cyberspace is adding altogether new dimensions to all areas of law. Network-based technologies have created issues that are specific to the internet and the worldwide web. Examples of these in respect of copyright law are: file sharing, hyperlinking, framing free software, open source software, copyleft licenses, free/open source software, freeware, shareware, and end user license agreements through shrink wrap, browse wrap, and click wrap licenses. In respect of trademark law, issues unique to the internet include those relating to domain names, hyperlinking, deep linking, framing, metatags, and inlining.

This paper sets out a brief overview of the contours of intellectual property law in the United States, the legal enactments effectuated in response to the digital revolution, and the ways in which the U.S. Courts are adapting and applying the traditional concepts of intellectual property law to deal with the issues specifically raised in the realm of cyberspace.

After the present introduction, sections II, III, IV, and V set out respectively the basics of U.S. copyright, patent, trademark, and trade secrets laws, the issues raised in each field by the advances in information technology, and a few illustrative examples of the application of intellectual property laws by U.S. Courts in recent years. This is followed by a short conclusion.

II. Copyright law of the United States:

The copyright law and patent law of the United States have been enacted pursuant to the enumerated power listed in Article 1, Section 8, clause 8 of the U.S. Constitution which invests Congress with the power “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”

The prevailing copyright law of the United States is set out in the Copyright Act of 1976 which is embodied in Title 17 of the United States Code. Section 102 of that Act sets out the subject matter of copyright as including “(1) literary works; (2) musical works, including any accompanying words; (3) dramatic works, including and

accompanying music; (4) ... and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works.”⁴

Section 106 sets out the nature of the rights of the owner of copyright.⁵ These rights are made subject to certain restrictions, such as fair use, as set out in sections 107⁶ to 122. The rights subsist for a limited period. The U.S. Supreme Court has noted that this

limited grant is a means by which an important public purpose may be achieved. It is intended to motivate the creative activity of authors and inventors by the

⁴ Copyright Law of the United States, available at: <http://www.copyright.gov/title17/92chap1.pdf>

⁵ Section 106 states as follows:

Section 106. Exclusive rights in copyrighted works

Subject to sections 107 through 122, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following:

- (1) to reproduce the copyrighted work in copies or phonorecords;
- (2) to prepare derivative works based upon the copyrighted work;
- (3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
- (4) in the case of literary, musical, dramatic, and choreographic works, pantomime, and motion pictures and other audiovisual works, to perform the the copyrighted work publicly;
- (5) in the case of literary, musical, dramatic, and choreographic works, pantomime, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly; and
- (6) in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission.

Available at <http://www.copyright.gov/title17/92chap1.pdf>.

⁶ 17 USC 107 sets out the limitation of fair use. It reads thus:

Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.

provision of a special reward, and to allow the public access to the products of their genius after the limited period of exclusive control has expired.⁷

The applicability of copyright law in respect of computer operating systems was judicially recognized even prior to the widespread use of the internet.⁸

In order to deal with the issues raised by the rapid advances in technology and the spread of internet use, the member states of the World Intellectual Property Organization (WIPO) entered into two international treaties: the *WIPO Copyright Treaty*,⁹ and the *WIPO Performances and Phonograms Treaty (WPPT)*.¹⁰ Both treaties were adopted on December 20, 1996.

As a member state of the WIPO, the United States implemented the two WIPO treaties through enactment of the *Digital Millennium Copyright Act (DMCA)* in October 1998.¹¹ Pursuant to the provisions of the treaties, Title I of the DMCA proscribes the

The section goes on to state that factors such as the purpose, character, nature, amount of the portion used, and the effect thereof are to be taken into consideration.

Available at: <http://www.law.cornell.edu/uscode/text/17/107>.

⁷ *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 429.

⁸ Although not connected with the use of the internet, one significant early case of the applicability of copyright law to the use of computers was *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240 (1983). In this case the U.S. Court of Appeals for the Third Circuit held that computer operating systems were copyrightable.

⁹ The Preamble to the treaty states that the parties thereto, inter alia, recognize "the need to introduce new international rules and clarify the interpretation of certain existing rules in order to provide adequate solutions to the questions raised by new economic, social, cultural and technological developments," and "the profound impact of the development and convergence of information and communication technologies on the creation and use of literary and artistic works." *WIPO Copyright Treaty*, available at: http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html#P51_3806.

¹⁰ The Preamble to the treaty states that the parties thereto, inter alia, recognize "the need to introduce international rules in order to provide adequate solutions to the questions raised by economic, social, cultural and technological developments," and "the profound impact of the development and convergence of information and communication technologies on the production and use of performances and phonograms."

WIPO Performances and Phonograms Treaty (WPPT), available at:

http://www.wipo.int/treaties/en/ip/wppt/trtdocs_wo034.html#P56_1783.

¹¹ The Digital Millennium Copyright contains five titles. Only Title I deals with the implementation of the WIPO treaties. Titles II, III, IV, and V are, respectively: "Online Copyright Infringement Liability Limitation," "Computer Maintenance Or Repair Copyright Exemption," "Miscellaneous Provisions," and "Protection Of Certain Original

following: “circumvention of technological measures used by copyright owners to protect their works and...tampering with copyright management information.”¹² Although Title II of the DMCA is not directly related to the WIPO treaties, it is relevant inasmuch as it provides online service providers with a safe harbor that protects them from liability for copyright infringement subject to certain conditions.¹³

Title I and Title II of the DMCA have been invoked in numerous copyright infringement lawsuits over the years. Following are some representative U.S. Court cases¹⁴ relating to the anti-circumvention provisions of Title I¹⁵ and the safe harbor provisions of Title II of the DMCA:¹⁶

1. *321 Studios v. Metro Goldwyn Mayer Studios, Inc.* (2004):¹⁷

In this case the, the District Court for the Northern District of California held that 321 Studios’ s software violated the anti-circumvention prohibition of the DMCA because it was designed for use in circumventing CSS (“Contents Scramble System”) that controlled access to Metro Goldwyn Mayer’ s copyrighted DVD movies. The Court

Designs.” Available at:

<http://www.gpo.gov/fdsys/pkg/BILLS-105hr2281enr/pdf/BILLS-105hr2281enr.pdf>.

¹² The Digital Millennium Copyright Act of 1998, U.S. Copyright Office Summary, internal page 2. Available at: <http://www.copyright.gov/legislation/dmca.pdf>.

¹³ “Difficult and controversial questions of copyright liability in the online world prompted Congress to enact Title II of the DMCA, the Online Copyright Infringement Liability Act (OCILLA).” *Ellison v. Robertson*, 357 F.3d 1072, 1076 (9th Circuit 2004). Among other things, the Act aimed to “protect qualifying service providers from liability for all monetary relief for direct, vicarious and contributory infringement.” H.R.Conf.Rep.No. 105-796, at 64, 1998 U.S.C.C.A.N. at 649; S.Rep. No. 105-190, at 18, 36; H.R.Rep. No. 105-551, pt.2, at 50.

¹⁴ Cases in the U.S. Supreme Court, U.S. Courts of Appeals, and U.S. District Court. For reasons of space, only a few of the numerous cases are listed here.

¹⁵ It should be noted that the provisions of the Act (17 U.S.C. 1201 (a) (1) (C) and (D)) provide for the issuance by the Librarian of Congress of exemptions from the anti-circumvention prohibition when the access-controlling measures have an adverse impact on non-infringing uses of the copyrighted works. The current exemptions are listed in the *Federal Register/ Vol. 77, No. 208/ Friday, October 26, 2012/ Rules and Regulations*. Available at: <http://www.copyright.gov/fedreg/2012/77fr65260.pdf>.

¹⁶ Although decided more than a decade before the WIPO treaty and the enactment of the DMCA, it would be useful to note here the case of *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984). In this case, the U.S. Supreme Court ruled that the recording of television shows was fair use and that the manufacturers of video recording devices could not be held liable for copyright infringement.

¹⁷ *321 Studios v. Metro Goldwyn Mayer Studios, Inc.*, 307 F.Supp.2d 1085 (N.D.Cal 2004).

also upheld the constitutionality of the DMCA.

2. *Lexmark Int'l v. Static Control Components* (2004):¹⁸

The United States Court of Appeals for the Federal Circuit held that Lexmark's authentication system which restrictively allowed the use of specific toner cartridges on its Printer Engine Program was not a means to control access as required by the DMCA. Static Control Components' s chip did not circumvent any access control on the Printer Engine Program or the Toner Loading Program and therefore did not violate the provisions of the DMCA.

3. *In re Aimster Copyright Litigation* (2003):¹⁹

In this case, the United States Court of Appeals for the Seventh Circuit held that the Defendant could not avail of the safe harbor provision of the Section 512 of the DMCA to protect itself from a finding of contributory copyright infringement as it had not fulfilled the conditions for invoking the protection of the Act. Specifically, Aimster had not truly implemented its policy to stop repeat infringement.

4. *Costar Group, Inc. v. Loopnet, Inc.* (2004):²⁰

In this case, the U.S. Court of Appeals for the Fourth Circuit noted:

Congress intended the DMCA's safe harbor for ISPs to be a floor, not a ceiling, of protection.... The DMCA has merely added a second step to assessing infringement liability for Internet service providers, after it is determined whether they are infringers in the first place under the preexisting Copyright Act.²¹

5. *UMG Recordings, Inc. v. Shelter Capital Partners LLC* (2011):²²

This is one of the more recent DMCA cases. The U.S. Court of Appeals for the Ninth Circuit, held that the operator of a website that allowed the sharing of video content by users was protected by the safe harbor provision of the DMCA from

¹⁸ *Lexmark International, Inc. v. Static Control Components, Inc.*, 387 F.3d 522 (6th Circuit 2004).

¹⁹ *In re Aimster Copyright Litigation*, 334 F.3d 643 (7th Circuit 2003).

²⁰ *Costar Group, Inc. v. Loopnet, Inc.*, 373 F.3d 544 (4th Circuit 2004).

²¹ *Id.*, paragraph 41. Available at:

<https://bulk.resource.org/courts.gov/c/F373/373.F3d.544.03-1911.html>.

²² *UMG Inc. v. Shelter Capital Partners LLC*, (9th Circuit 2011). Available at:

direct or secondary infringement liability for actions of users in downloading copyrighted songs from the website.

Apart from the Digital Millennium Copyright Act, there are a host of other copyright-related issues that have arisen as a direct result of the development of information technology and the widespread use of the internet. One example of this are copyright issues relates to file sharing.

File sharing, such as through peer-to-peer (P2P) networks raise copyright infringement issues, both primary and secondary: the primary liability of the consumers and the secondary liability of the maker and distributor of the software. The leading case in the United States relating to secondary liability is *MGM v. Grokster*.²³ The Supreme Court of the United States there held that the distributor of the software program could be held liable for contributory copyright infringement if there is evidence of intent to induce infringement.

Another file-sharing case is *BMG Music v. Gonzalez* (2005).²⁴ In this case, the U.S. Court of Appeals for the Seventh Circuit rejected a fair use defense in a case where the defendant had downloaded 1370 copyrighted songs using a file-sharing network and then retained the songs on her computer.²⁵

Copyright issues have also arisen in respect of hyperlinking and framing. So also, there are copyright law implications regarding the use of free software, open source software, copyleft licenses, free and open source software, freeware, shareware, and end user license agreements through shrink wrap, browse wrap, and click wrap licenses.

One recent case, *U.S. Auto Parts Network, Inc. v. Parts Geek LLC*,²⁶ deals with the specific context of the rights of an employer and an employee vis-a-vis each other. This case concerned copyright infringement of software used for e-commerce. The case turned upon the interpretation of 17 U.S.C. 201 (b) relating to “work made for hire,” and 17 U.S.C.103 relating to “derivative works.” The court made an

<http://www.ca9.uscourts.gov/datastore/opinions/2011/12/20/09-55902.pdf>.

²³ *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005).

²⁴ *BMG Music v. Gonzalez*, 430 F.3d 888 (7th Circuit 2005).

²⁵ A more recent district court case is *Arista Records LLC v. Lime Group LLC*, 715 F.Supp.2d 481 (2010). The U.S. District Court for the Southern District of New York held the defendant liable for inducing copyright infringement through the distribution of its peer-to-peer file sharing software.

²⁶ *U.S. Auto Parts Network, Inc. v. Parts Geek* (2012), No. 10-56129. Available at: <http://www.ca9.uscourts.gov/datastore/opinions/2012/08/31/10-56129.pdf>.

extensive discussion of the law relating to these provisions and their interconnection in the specific context of enhancement to software programs. Because there was a genuine issue of material fact, the United States Court of Appeals for the Ninth Circuit set aside the summary judgment of the district court and remanded the case for examination in light of the decision.

III. Patent law of the United States:

Enacted pursuant to the power of Congress under Article 1, Section 8, Clause 8 of the Constitution, U.S. patent law is embodied in Title 35 of the United States Code. The criteria for patent eligibility are described in Sections 101, 102, 103, and 112 of the U.S. Patent Act.²⁷ Section 271 contains the provisions relating to the infringement of patents.²⁸

²⁷ It is useful to mention here that one of the tests articulated by the U.S. Supreme Court to determine patent eligibility is the “machine-or-transformation” test. See: *Gottschalk v. Benson* [409 U.S. 63 (1972)], *Parker v. Flook* [437 U.S. 584 (1978)], *Diamond v. Diehr* [450 U.S.175 (1981)], and *Bilski v. Kappos* [561 U.S.____ (2010)].

²⁸ 35 USC Section 271 (a), (b), and (c) set out the provisions relating to direct and indirect infringement. Subsection (a) deals with direct infringement. Subsections (b) and (c) deal with the two types of indirect infringement (inducement to infringe and contributory infringement). The provisions read thus:

35 USC Section 271

- (a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor infringes the patent.
- (b) Whoever actively induces infringement of a patent shall be liable as an infringer.
- (c) Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

Available at: <http://www.law.cornell.edu/uscode/text/35/271>.

In *R+L Carriers, Inc. v. Drivertech LLC*, decided in June 2012, the United States Court of Appeals for the Federal Circuit made a distinction between the pleading requirements for allegations of direct and indirect infringement.

Available at:

In 1996, the United States Patent and Trademark Office issued the “Examination Guidelines for Computer-Related Inventions.”²⁹

Patent disputes relating to the internet include three lawsuits over Amazon’s 1-click method of enabling shoppers to purchase online by using a single click.³⁰ The current manifestations of cyberspace related patent litigation are the “smartphone wars” in progress at various stages in American and foreign courts. The biggest names in technology such as Apple, Google, Microsoft, Nokia, and Motorola are parties in these lawsuits.

Following are a few illustrative cases relating to patents and cyberspace decided in the past few years by United States Courts of Appeals:

1. *Quanta Computer, Inc., et al. v. LG Electronics, Inc.* (2008):³¹

In a case involving computer technology, specifically method patents on information-processing systems, the U.S. Supreme Court held that the doctrine of patent exhaustion which limits the rights of a patent holder after an authorized sale of the patented product, applied equally to method patents.

2. *Cybersource Corporation v. Retail Decisions* (2011):³²

The U.S. Court of Appeals for the Federal Circuit affirmed the judgment of the U.S. District Court for the Northern District of California that a process claim does not meet the standards of patent-eligibility merely because it relates to the internet.

3. *Akamai Technologies, Inc. v. Limelight Networks, Inc.* (2012):³³

The U.S. Court of Appeals for the Federal Circuit heard the *Akamai v. Limelight* case en banc together with another case (*McKesson Technologies, Inc. v. Epic System Corp.*).

<http://www.cafc.uscourts.gov/images/stories/opinions-orders/10-1493-1494-1495-14911-1101-1102.pdf>.

²⁹ Footnote 2 of the guidelines defines “computer-related inventions” as including “inventions implemented in a computer and inventions employing computer-readable media.” Available at: <http://www.uspto.gov/web/offices/pac/dapp/pdf/ciig.pdf>.

³⁰ (i) *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, (1999), United States District Court for the Western District of Washington, Seattle Division, 73 F.Supp.2d 500, (ii) *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, (2005), United States Court of Appeals for the Federal Circuit, 430 F.3d 1384, and (iii) *Cordance Corporation v. Amazon.com, Inc.* (2011), United States Court of Appeals for the Federal Circuit. Available at:

<http://www.cafc.uscourts.gov/images/stories/opinions-orders/10-1502-1545%20.pdf>.

³¹ *Quanta Computer, Inc. v. LG Electronics, Inc.*, 553 U.S. 617 (2008).

³² *Cybersource Corporation v. Retail Decision, Inc.*, decided on August 16, 2011, U.S. Court of Appeals for the Federal Circuit, 2009-1358. Available at: <http://www.cafc.uscourts.gov/images/stories/opinions-orders/09-1358>.

The *Akamai v. Limelight* case involved a patent for efficient delivery of content over the internet. With a bare 6-5 majority, the court held that for there to be an induced infringement of method claim under 35 U.S.C.271 (b) it was not necessary that all the steps be performed by a single entity. The Court stated:

A party who knowingly induces others to engage in acts that collectively practice the steps of the patented method – and those others perform those acts – has had precisely the same impact on the patentee as a party who induces the same infringement by a single direct infringer; there is no reason, either in the text of the statute or in the policy underlying it, to treat the two inducers differently. In particular, there is no reason to hold that the second inducer is liable for infringement but the first is not.

Likewise, a party who performs some of the steps itself and induces another to perform the remaining steps that constitute infringement has precisely the same impact on the patentee as a party who induces a single person to carry out all the steps.³⁴

The court here made a departure from the earlier understanding of induced infringement.

4. *MySpace, Inc. v. GraphOn Corp.* (2012):³⁵

In an action for patent infringement of technology relating to database records, the United States Court of Appeals for the Federal Circuit affirmed the district court's judgment, inter alia, on the footing that district court's claim construction of database as "a collection of data with a given structure that can be stored and retrieved," thus including both file (hierarchical) and relational systems"³⁶ was correct in the context of

³³ *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 09-1372, decided on August 31, 2012. Available at:

<http://www.cafc.uscourts.gov/images/stories/opinions-orders/09-1372-1380-1416-141710-1291.pdf>.

³⁴ *Id.*, at internal page 16 of the majority opinion.

³⁵ *MySpace, Inc. v. GraphOn Corp.*, (2012) 2011-1149. Available at:

<http://www.cafc.uscourts.gov/images/stories/opinions-orders/11-1149.pdf>.

the facts of the case.³⁷ Balking at the plea to consider the case under the patent eligibility requirements of 35 U.S.C. 101, the majority pointedly noted:

The problem with addressing [35 U.S.C.]101 initially every time it is presented as a defense is that the answer in each case requires the search for a universal truth: in the broad sweep of modern innovative technologies, does this invention fall outside the breadth of human endeavor that possibly can be patented under [35 U.S.C.]101³⁸

IV. Trademark law of the United States:

Trademark law in the United States is governed by federal law as well as by state statutory and common law. Unlike copyright and patent law, the U.S. constitution does not expressly grant Congress power in respect of trademark law. Instead, the federal trademark law of the United States has been enacted pursuant to the Commerce Clause listed in Article 1, Section 8, clause 3 of the U.S. Constitution which invests Congress with the power “[t]o regulate commerce with foreign nations, and among the several states...” The principal statute relating to federal trademark law is the Lanham Act of 1946 (with subsequent amendments). The Lanham Act is embodied in Title 15, Chapter 22 of the United States Code.³⁹ 15 U.S.C. 1127 defines the intent of the Act thus:

³⁶ *Id.*, at internal page 7 of the majority opinion.

³⁷ *Id.*, at internal page 10 of the majority opinion.

³⁸ *Id.*, at 13.

³⁹ Section 1127 of the Lanham Act describes a trademark thus:

The term “trademark” includes any word, name, symbol, or device, or any combination thereof --

- (1) used by a person, or
- (2) which a person has a bona fide intention to use in commerce and applies to register on the principal register established by this chapter, to identify and distinguish his or her goods, including a unique product, from those manufactured or sold by others and to indicate the source of the goods, even if that source is unknown.

Available at: <http://www.law.cor.....edu/uscode/text/15/1127>.

[T]o regulate commerce within the control of Congress by making actionable the deceptive and misleading use of marks in such commerce;... to protect persons engaged in such commerce against unfair competition; to prevent fraud and deception in such commerce by the use of reproductions, copies, counterfeits, or colorable imitations of registered marks...⁴⁰

Other trademark-related federal legislation includes the Federal Trademark Dilution Act of 1955 followed by the Trademark Dilution Revision Act of 2006. Of particular relevance to the realm of cyberspace is the Anticybersquatting Consumer Protection Act of 1999.

A trademark-related issue that arose specifically after the advent of the internet is the use of domain names. The use of domain names has spawned disputes about trademark infringement, trademark dilution, and the altogether new issue of cybersquatting.

A domain name is defined in 15 U.S.C. 1127 as “any alphanumeric designation which is registered with or assigned by any domain name registrar, domain name registry, or other domain name registration authority as part of an electronic address on the internet.”⁴¹ Domain names perform the function of addresses on the Internet.15 U.S.C. Section 8131(1) (A) provides that

Any person who registers a domain name that consists of the name of another living person, or a name substantially and confusingly similar thereto, without that person’s consent, with the specific intent to profit from such name by selling the domain name for financial gain to that person or any third party, shall be liable in a civil action by such person.⁴²

⁴⁰ *Id.*, at internal page 16 of the majority opinion.

⁴¹ *Id.*

⁴² 15 U.S.C. Section 8131 (1) (A). Available at: <http://www.law.cornell.edu/uscode/text/15/8131>.

Provisions relating to trademark infringement, trademark dilution, and cybersquatting are covered by 15 U.S.C. 1125.⁴³

Apart from the trademark issues arising from domain names, other trademark issues related to cyberspace arise in respect of hyperlinking, deep linking, framing, metatags,⁴⁴ and inlining.

Following are a few illustrative cases relating to trademarks and cyberspace decided by United States Courts of Appeals:

1. *Network Automation, Inc. v. Advanced System Concepts, Inc* (2011).⁴⁵

At issue in this case was whether using another entity's trademark as a keyword for an Internet search of one's own advertising constituted a trademark infringement. A key question was whether there was a likelihood of consumer confusion. Stating that the pertinent factors for ascertaining the likelihood of such confusion specifically were: "(1) the strength of the mark; (2) the evidence of actual confusion; (3) the type of goods and degree of care likely to be exercised by the purchaser; and (4) the labeling and appearance of the advertisements and the surrounding context on the screen displaying the results page,"⁴⁶ the U.S. Court of Appeals for the 9th Circuit held that there was no likelihood of confusion and hence there was no infringement.

2. *Southern Grouts & Mortars, Inc. v. 3M Company* (2009).⁴⁷

The United States Court of Appeals for the 11th Circuit affirmed a summary judgment by the District Court against Southern Grouts because, inter alia, 3M Company's continued registration of the domain name in question did not constitute "bad faith intent to profit" which is a necessary element of the Anticybersquatting Consumer Protection Act, 15 U.S.C. 1125 (d). The Court also did not accept Southern

⁴³ 15 U.S.C. 1125—False designations of origin, false descriptions, and dilution forbidden. Available at: <http://www.law.cornell.edu/uscode/text/15/1125>.

15 U.S.C.1125 (a) covers trademark infringement, (c) covers trademark dilution, and (d) covers cybersquatting.

⁴⁴ See, e.g., *Brookfield Communications, Inc. v. West Coast Entertainment Corp.*, 174 F.3d 1036 (9th Circuit, 1999). *Horphag Research Ltd. v. Pellegrini*, 337 F.3d 1036 (9th Circuit, 2003), *AM Gen. Corp. v. DaimlerChrysler Corp.*, 311 F.3d 796 (7th Circuit, 2002).

⁴⁵ *Network Automation, Inc. v. Advanced Systems Concepts, Inc.*, 638 F.3d 1137 (9th Circuit 2011). Opinion for: *Network Automation, Inc. v. Advanced Systems Concepts, Inc.*, 10-5840, available at:

http://www.ca9.uscourts.gov/opinions/view_subpage.php?_id=0000011272. [3223-3260].

⁴⁶ *Id.*, Opinion at 3250 (website page).

⁴⁷ *Southern Grouts & Mortars, Inc. v. 3M Co.*, 575 F.3d 1235 (11th Circuit 2009).

Grouts' allegation that 3M's actions violated the Lanham Act, 15 U.S.C. 1125 (a), as 3M had not used the domain name in respect of any goods or services for commercial purposes, as required by that section.

3. *Rescuecom Corp. v. Google Inc.* (2009);⁴⁸

The U.S. Court of Appeals for the Second Circuit held that recommending and selling the registered trade mark of one entity to a third party for keyword advertising constituted a "use in commerce," which is a necessary condition for trade mark infringement under Lanham Act, 15 U.S.C. 1127.

4. *Venture Tape Corporation v. McGills Glass Warehouse* (2008);⁴⁹

The Court of Appeals for the First Circuit held that in order to establish trademark infringement under the Lanham Act, proof of actual confusion was not necessary. Mere likelihood of confusion would be sufficient if the other elements of the cause of action were established. In this case, Venture's federally registered trademarks were embedded in metatags and background text on the website of a competitor without permission. Since there was likelihood that this could cause confusion among potential customers, the Court of Appeals affirmed the district court's finding of liability for trademark infringement.

5. *Applied Information Sciences v. eBay, Inc.* (2007);⁵⁰

The case involved Applied Information Sciences (AIS)'s federally registered trademark for computer search functions, and an identical name for eBay's internet auction website. The Court of Appeals for the Ninth Circuit held that the fact of the trademark being federally registered was enough to vest its owner with a protectable interest. Infringement can occur even if the owner's trademark is used without permission by another in respect of goods or services different from those listed in the registration, provided there is likelihood of confusion. In this case, as no admissible evidence of likely confusion was produced before the court, the court of appeals affirm the district court's summary judgment for eBay.

6. *M2Software Inc. v. M2 Communications Inc.* (2006);⁵¹

This case was an appeal from a decision of the United States Patent and

⁴⁸ *Rescuecom Corp. v. Google Inc.*, 562 F.3d 123, (2nd Circuit 2009).

⁴⁹ *Venture Tape Corporation v. McGills Glass Warehouse*, 540 F.3d 56 (1st Circuit 2008).

⁵⁰ *Applied Information Sciences Corp. v. eBay, Inc.*, No. 05-56549, decided December 2007. Available at:

<http://www.ca9.uscourts.gov/datastore/opinions/2007/12/27/0556123.pdf>.

⁵¹ *M2 Software Inc. v. M2 Communications, Inc.*, 450 F.3d 1378 (Federal Circuit 2006).

Trademark Office Trademark Trial and Appeal Board. M2 Communications provided materials, inter alia, on CD-ROMs and DVD-ROMs, principally to pharmaceutical and biotechnology companies, and medical associations. M2 Software provided computer software and multimedia applications for the art and entertainment industries. Despite the similarity of the two marks, the U.S. Court of Appeals affirmed the determination of the Board that there was no likelihood of confusion because the two sets of products were unrelated and that the channels of trade of each set as well as the purchasers were different.

*7. Interactive Products Corporation v. A2ZMobile Office Solutions Inc. (2003):*⁵²

The issue in this case, inter alia, was whether the use of a trademark of another entity in the post-domain path of a URL violated trademark law. The court ruled that since the post domain path of a URL does not indicate source, there could be infringement of trademark only if there is evidence of likely consumer confusion. In the absence of such evidence in this case, the action for trademark infringement could not be sustained.

V. Trade Secrets law of the United States:

Intellectual property also commonly includes trade secrets. Trade secrets include all forms of vital and confidential information regarding the means of production, the provision of services, and the overall operation of business that is a source of competitive advantage and economic gain. Trade secrets are an important part of the intellectual property of every business. The ubiquitous use of computers as a means of storing such information and their vulnerability has given a new dimension to trade secrets in the realm of cyberspace. Cyber theft is now becoming a very real risk for major corporations.⁵³ The misappropriation of trade secrets in matters relating to interstate commerce is covered at the federal level by 18 U.S.C. 1832.⁵⁴ Computer-

⁵² *Interactive Products Corporation v. A2ZMobile Office Solutions, Inc.*, 326 F.3d 687(6th Circuit, 2003).

⁵³ See: Pamela Passman, *Trade Secret Theft: Businesses Need to Beware and Prepare*, Forbes magazine, 5/24/2012. Available at: <http://www.forbes.com/sites/ciocentral/2012/05/24/trade-secret-theft-businesses-need-to-beware-and-prepare/>.

⁵⁴ 18 U.S.C. 1832-Theft of trade secrets (part of the Economic Espionage Act, 1996, 18 U.S.C. 1831 to 18 U.S.C. 1839) Apart from this federal statute, each state also has its own common law and statutory law relating to misappropriation of trade secrets. Most states have enacted versions of the Uniform Trade Secrets Act.

related fraudulent acts are addressed by the *Computer Fraud and Abuse Act*.⁵⁵ There is disagreement among the courts regarding the applicability of the *Computer Fraud and Abuse Act* (CFAA) to the misappropriation of trade secrets obtained from a computer.⁵⁶ However, the CFAA covers issues of cyber theft. In order to remain effective, the law relating to the misappropriation of trade secrets in cyberspace will have to monitor and stay apace with the technological means whereby such acts can be committed.

One illustrative case relating to trade secrets and cyberspace decided by the U.S. Court of Appeals for the Ninth Circuit is that of *Asset Marketing Systems Inc. v. Gagnon* (2008)⁵⁷. This case involved issues of copyright and trade secrets (and the enforcement of non-competition agreements) in software prepared by Gagnon under contract from Asset Marketing Systems. The U.S. Court of Appeals for the 9th Circuit held on the basis of the facts of the case that Asset Marketing Systems had an implied license to retain, use, and modify software that was created on its behalf by Gagnon, and that it was unlimited, nonexclusive, and irrevocable. In the court's opinion, access to trade secrets contained in the software was a consequential part of such a license.

VI. Conclusion:

In the early days of the internet, Judge Easterbrook of the United States Court of Appeals famously raised questions about whether cyberspace law merited special status as an independent area of the law.⁵⁸ There was a brief period during which that was a central point of debate among scholars writing about the law of cyberspace.⁵⁹

⁵⁵ *Computer Fraud and Abuse Act*, 18 U.S.C.1030 (2006). Available at: <http://www.law.cornell.edu/uscode/text/18/1030>.

⁵⁶ For a recent decision, see *United States of America v. David Nosal*, United States Court of Appeals for the Ninth Circuit, en banc, April 10, 2012. Available at: <http://www.ca9.uscourts.gov/datastore/opinions/2012/04/10/10-10038.pdf>. The majority opinion states (at [6] on internal page 16) that the purpose of the CFAA is to address acts involving "the circumvention of technological access barriers—not misappropriation of trade secrets—a subject Congress has dealt with elsewhere."

⁵⁷ *Asset Marketing Systems Inc. v. Gagnon*, 542 F.3d 748 (9th Circuit, 2008).

⁵⁸ Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 University of Chicago Legal Forum 207 (1996). Lawrence Lessig, who was present at the conference where Judge Easterbrook first mooted his opinion, responded about three years later with a commentary titled, *The Law of the Horse: What Cyberlaw Might Teach*, 113 Harvard Law Review 501 (1999). He expatiated upon the constitutional and other themes he raised there in two books: Lawrence Lessig, *Code and Other Laws of Cyberspace* (Basic Books, 1999), and Lawrence Lessig, *Code: Version 2.00*, (Basic Books, 2006).

However, with cyberspace law—also called cyberlaw or internet law—becoming a regular part of the law school curriculum and an increasing number of books⁶⁰ and articles on the subject being published indicates that its status as a coherent body of law is widely recognized.

In an era when the rapidly developing technology is bringing about vast changes in the global marketplace, countries everywhere are making increasing efforts to bolster their international competitiveness through the promotion of intellectual property and legal regimes for their protection.⁶¹ As stated by the World Intellectual Property Organization:

⁵⁹ See, for example, Viktor Mayer-Schonberger, *The Shape of Governance: Analyzing the World of Internet Regulation*, 43 *Virginia Journal of International Law* 605 (2003); Jacqueline Lipton, *A Framework for Information Law and Policy*, 82 *Oregon Law Review* (2003); Timothy Wu, *Application-Centered Internet Analysis*, 85 *Virginia Law Review* 1163 (1999); Renato Mariotti, *Cyberspace in Three Dimensions*, 55 *Syracuse Law Review* 251 (2004-2005).

⁶⁰ See, for example, Raymond S.R.Ku and Jacqueline D. Lipton, *Cyberspace Law: Cases and Materials*, 3rd edition, 2010 (Aspen Publishers); Patricia L. Bellia, P. Schiff Berman, Brett Frischmann and David G. Post, *Cyberlaw: Problems of Policy and Jurisprudence in the Information Age*, 4th edition, 2010 (West); *Managing Intellectual Property in Cyberspace: Leading Lawyers on Developing an Effective Internet IP Strategy*, 2012 (Thomson Reuters Westlaw).

⁶¹ See, for example, the *Intellectual Property Policy Outline* of Japan issued by the Strategic Council on Intellectual Property. The *Outline* states its goal thus (Introduction 2. The Information Age and a “Nation Built on Intellectual Property”);

Through abundant creation, protection and exploitation of intellectual property, Japan will become “a nation built on intellectual property” that aims at the sustained development of its economy and culture. In order to realize this goal and construct a new economic and social system, various institutions including laws and public and private practice thereof, must be reviewed from top to bottom and their ideal form should be sought.

Intellectual Property Policy Outline, July 3, 2002, Strategic Council on Intellectual Property. Available at:

http://www.kantei.go.jp/foreign/policy/titeki/kettei/020703taikou_e.html.

This was subsequently followed by

the *Intellectual Property Strategic Program 2005* issued by the Intellectual Property Policy Headquarters in Japan. The Program states (at page 40, Chapter 2):

Accessible, sufficient and adequately funded arrangements for the protection of rights are crucial in any worthwhile intellectual property system. There is no point in establishing a detailed and comprehensive system for protecting intellectual property rights and disseminating information concerning them, if it is not possible for right-owners to enforce their rights effectively in a world where expanding technologies have facilitated infringement of protected rights to a hitherto unprecedented extent.⁶²

Given the ubiquity of the internet as a means of commerce and communication, and the vital importance of intellectual property rights for international competitiveness in the 21st century, the urgency for the protection of all forms of intellectual property rights in connection with the realm of cyberspace is bound to increase. Consequently, legislative bodies and the courts will need to continuously monitor and respond to the new challenges posed by the perennially developing technology, by shaping the intellectual property regime appropriately. This suggests continuous change and refinement of intellectual property laws relating to the realm of cyberspace in the years to come.

I. Strengthening the Protection of Intellectual Property

In order to secure incentives for the creation of intellectual property and to utilize intellectual property effectively, its proper protection is indispensable, and the related systems and frameworks must be further developed. Therefore, the Government of Japan (GOJ) will strive to establish the foundation for the sufficient protection of intellectual property by appropriately protecting new intellectual property, while monitoring the trend in the global harmonization of IP-related systems and in progress made in technological innovation, as well as by developing frameworks for improving and expediting right obtainment procedures and enhancing dispute resolution procedures.

Intellectual Property Strategic Program 2005, June 10, 2005, Intellectual Property Policy Headquarters. Available at:

http://kantei.go.jp/foreign/policy/titeki/kettei/050610_e.pdf.

⁶² *WIPO Intellectual Property Handbook: Policy, Law and Use*, WIPO 2004, Second Edition, at 207.

Available at: <http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch3.pdf>.

知的所有権とサイバースペースの領域

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要約

近年のインターネットの登場とそれが広く普及してから、立法機関や裁判所はインターネットという文脈でも、法律の既成概念をあてはめようとしてきた。サイバースペースという言葉は、インターネットの使用やその領域に関するすべてのことを示すのに広く用いられている。例えば伝統的な契約法の考えは、インターネットに関わることを網羅するように特別に変更を加えて使われる必要がある。電子処理される商業取引が増え、電子商取引は急速に発展し、商業取引に関する法律概念は、インターネットという特定の文脈で使われるように、洗練されてきている。これは特に知的所有権法の領域においてみられる。知的所有権は、コピーライト、特許、商標、企業秘密の分野からなる。サイバースペースは、これらの分野に全く新たな次元を加えつつある。急速に発展しつつあるネットワークを基にしたテクノロジーは、インターネットにとっての特定の問題を作り出している。これらには、ドメイン・ネーム・システム、メタタグ、ハイパーリンク、ディープリンク、フラミング、インリンクに関するトレードマーク論争も含まれている。同様に、フリー・ソフトウェア、オープンソース・ソフトウェア、コピーレフト・ライセンス、フリーウェア、シェアウェア、そしてシュリンクラップ、ブラウズラップ、クリックラップを通してのエンドユーザー・ライセンス契約に関わる論争がある。この論文では、アメリカ合衆国の知的所有権法の外郭と、デジタル革命に応じて制定された法令と、アメリカ合衆国裁判所がサイバースペースの広がりつつある領域で出てきている問題に対処するために、伝統的な知的所有権法の伝統的な概念を適用し、あてはめようとしている、その方法について、短く概観している。