Should Posts on Social Networking Websites Be Considered "Printed Publications" under Patent Law?

Xiaojing Li, Illinois Institute of Technology
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Xiaojing Li*

INTRODUCTION

Since the 1990’s, social networking websites have become increasingly popular among
younger generations as platforms where people exchange ideas and make new friends.1 A 2011
survey found that 47% of American adults used a social network.2 The most popular sites, such
as Facebook, MySpace, Twitter, LinkedIn, already have over 100 million users.3 Countless ideas
and thoughts are posted on these sites; as a result, a large portion of private information is at risk
of being exposed to the public.4 The privacy issues lead to many legal questions in a variety of
areas, a not-fully-discussed one being patent law.

Under patent law, an invention is un-patentable if its idea has been disclosed to the public
before a legally-prescribed date.5 Most of the time, online material such as posts on blogs, forum,

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1 Social Network Service, WIKIPEDIA (July 20, 2011, 5:11 PM),
3 List of Social Networking Websites, WIKIPEDIA (July 20, 2011, 5:13 PM),
4 David Rosenblum, What Anyone Can Know: The Privacy Risks of Social Networking Sites, 5
IEEE SECURITY AND PRIVACY 40, 40-49 (2007), available at
5 35 U.S.C.§ 102 (2006) (“A person shall be entitled to a patent unless . . . (a) the invention was
known or used by others in this country . . . before the invention thereof by the application for
patent, or (b) the invention was patented or described in a printed publication in this or a foreign
country . . . more than one year prior to the date of the application for patent in the United
States.”).
chat rooms, are treated as un-patentable because it is known to the public or disclosed to public.\textsuperscript{6} However, it is not clear whether patent law should treat posts on social networking websites differently than other online material. Admittedly, a post on Lady Gaga’s Facebook viewable to her 41 million fans is almost certainly accessible to the public.\textsuperscript{7} But courts may hesitate before reaching the same conclusion under less extreme situations, for example, when a programmer in silicon valley shared his new idea with only ten friends on MySpace and withdrew the post after one hour. The question is whether all posts on social networking websites are accessible to the public, and if not, what factors are relevant in deciding the public accessibility of posts.

Part I of this Note briefly explains basic principle of patent law, introduces concepts of printed publication and social network websites, and presents cases relevant to website posts. Part II proposes a refined two prong test applicable to social networking websites and argues against the current blanket assumption regarding internet material. Part III discusses some potential objections and concerns.

I. PRINTED PUBLICATION AND SOCIAL NETWORKING WEBSITES

The U.S. Constitution authorizes Congress “[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.”\textsuperscript{8} Congress has enacted many patent statutes since 1790

\textsuperscript{6} Stamps.com v. Endicia, Inc., 2011 WL 2417044, *4 (Fed. Cir. June 15, 2011) (holding that an article published on a public forum is printed publication because leaders in the field would have had access to the article); In re Lister, 583 F.3d 1307, 1311-12 (Fed. Cir. 2009) (determining that manuscript in commercial databases was prior art reference); Amazon.com, Inc. v. Barnesandnoble.com, Inc., 239 F.3d 1343, 1363 (Fed. Cir. 2001) (accepting webpage printout as prior art reference); Guest v. Leis, 255 F.3d 325, 333 (6th Cir. 2001) (holding posts on BBS is printed publication).

\textsuperscript{7} Famecount allstars, http://www.famecount.com (last visited Aug 1, 2011).

\textsuperscript{8} U.S. CONST. art. 1, § 8, cl. 8.
and most recently codified the patent law under Title 35 of the United States Code in 1952. The U.S. Supreme Court has recognized that the “twin purposes” of patent laws are to promote disclosure of inventions and to add knowledge to the public domain. Although rewarding inventors is not the ultimate goal of the patent system, it serves as a lure to encourage inventors to produce innovations that benefit the general welfare. Therefore in practice, courts have to balance the inventors’ interest of enjoying patent gains with the public’s interest of keeping public knowledge free.

Under patent law, a patentable invention must not be anticipated or rendered obvious by the teachings of prior art references. An invention is anticipated under §102 if a single prior art reference discloses and enables every elements of the invention either expressly or inherently. An invention become obvious under § 103 if the subject matter sought to be patented, when taken as a whole, would have been obvious to a person having ordinary skill in the art by

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10 *See Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480-81 (1974) (stating that the Court has articulated patent law policies as that “the patent laws impose upon the inventor a requirement of disclosure” and “that which is in the public domain cannot be removed therefrom by action of the States”).

11 Joanna T. Brougher, *Publish, Present, or Perish: How the Internet and the “Printed Publication” Bar Affect the Dissemination of Research*, 14 NO. 1. J. INTERNET L. 11, 11 (“the Constitution advocates that an incentive should be provided as a means of encouraging inventors to share their innovations with the public, which in turn fosters the progression of science.”); see *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 330-31 (1945) (“the primary purpose of our patent system is not reward of the individual but the advancement of the arts and sciences. Its inducement is directed to disclosure of advances in knowledge which will be beneficial to society; it is not a certificate of merit, but an incentive to disclosure. Consequently it is not concerned with the quality of the inventor’s mind, but with the quality of his product”).

12 *See Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 64 (1998) (stating that patent law “serves as a limiting provision, both excluding ideas that are in the public domain from patent protection and confining the duration of the monopoly to the statutory term”).


referring to multiple prior art references.\(^\text{15}\) The central question of both § 102 and § 103’s requirement of patentability is the finding of prior art.\(^\text{16}\) Courts will find prior art under many conditions, disclosed in “printed publication” being a very common one.\(^\text{17}\) For the purpose of printed publication doctrine, a prior art is something that was made available to the public before the filing date or the critical date of patent application.\(^\text{18}\)

For the purpose of this Note, this section will limit the discussion to “printed publication”. Specifically, this section will explain the development of the “printed publication” doctrine under traditional settings, discuss the application of this doctrine to internet publications, and finally introduce the challenges imposed by social networking websites.

**A. Determination of Printed Publication**

To be considered a “Printed Publication”, a reference must have been sufficiently available to the interested public before the critical date.\(^\text{19}\) The “touchstone” is public accessibility,\(^\text{20}\) and “[a]ccessibility goes to the issue of whether interested members of the relevant public could obtain the information if they wanted to.”\(^\text{21}\) The determination of a “printed

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\(^{15}\) 35 U.S.C. § 103; *KSR v. Teleflex*, 127 S. Ct. 1746, 1739 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results”); *Graham v. John Deere Co.*, 383 U.S. 1, 3 (1966) (stating a test of obviousness to decide whether “the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains”).

\(^{16}\) 35 U.S.C. §§ 102, 103.

\(^{17}\) 35 U.S.C. § 102.

\(^{18}\) *Pfaff*, 525 U.S. at 55.

\(^{19}\) *SRI Int’l, Inc. v. Internet Sec. Sys., Inc.*, 511 F.3d 1186, 1194 (Fed. Cir. 2008) (finding “printed publication” when an item “has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence [could] locate it and recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation”); *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1568 (Fed. Cir. 1988).

\(^{20}\) *In re Hall*, 781 F.2d 897, 898-99 (Fed. Cir. 1986).

\(^{21}\) *In re Natures Remedies, Ltd.*, 315 Fed. Appx. 300, 303 (Fed. Cir. 2009).
publication” is a factual inquiry and thus must be analyzed on a case-by-case basis.22 Throughout the case law, public dissemination and public retrievability are two important aspects in the legal determination of “printed publication.”23 Public dissemination is analyzed by the number of copies, circulation time, complexity level, and potential audience of the publication at issue. Public retrievability depends on whether the publication has been indexed, or whether the author has intentionally blocked the publication from public search.

1. Public Dissemination

Public dissemination can be achieved by the distribution of physical copies or the widespread distribution of information so that the public could easily obtain copies of the publication.24 However, the copy number does not need to be large to trigger the “printed publication” argument.25 In MIT v. AB Fortia, the court found that a paper orally presented at a conference was a “printed publication” because one copy of the paper was given to the head of the conference before the presentation and copies of the paper were distributed to at least six people upon request without any restrictions for future use.26

Additionally, even when no physical copies are distributed, courts may still find printed publication based on some other factors.27 One factor is the time during which a reference is

22 In re Cronyn, 890 F.2d 1158, 1161 (Fed. Cir. 1989).
23 See In re Klopfenstein, 380 F.3d 1345, 1348 (Fed. Cir. 2004).
24 Kyocera Wireless Corp. v. Int’l Trade Comm’n, 545 F.3d 1340, 1340 (Fed. Cir. 2008) (holding the description of commercial standard that available to several companies to make free copy is printed publication); Mass. Inst. of Tech. v. AB Fortia, 774 F.2d 1104, 1109 (Fed. Cir. 1985) (holding that paper orally presented at a scientific conference open to all persons interested in the subject, with written copies distributed among people without restriction, is a printed publication).
25 See MIT, 774 F.2d at 1109.
26 Id.
27 Klopfenstein, 380 F.3d at 1348 (finding a poster presentation was a “printed publication” ever no copies were distributed); In re Wyer, 655 F.2d 226, 226 (C.C.P.A. 1981) (stating that the traditional dichotomy between “printing” and “publication” is no longer valid).
exposed to the public. Generally, the longer the duration, the more likely the reference becomes “printed publication.” For instance, a transient display of presentation slides was not a printed publication because the public had no access to the slides after the short period of lecturing. But when the display time extended to three days, the Federal Circuit may consider it as a printed publication.

Also, courts will consider the “expertise of the target audience” and the complexity of a display to determine “how easily those who viewed it could retain the displayed material.” Courts are more likely to find printed publication when audiences are persons of ordinary skill in the art than when audiences are those who are not familiar with the topic. The persons of ordinary skill in the art are those who “have the capability of understanding the scientific and engineering principles applicable to the pertinent art.” Courts may determine the level of ordinary skills by considering “(1) the educational level of the inventor, (2) type of problems embedded in the art, (3) prior art solutions available, (4) rapidity with which innovations are made, (5) sophistication of the technology, and (6) education level of active workers in the field.” When it comes to presentation slides, courts are less likely to find printed publication when the slides are complex and convoluted for the public to capture the information in a short period of time.

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28 *Klopfenstein*, 380 F.3d at 1351.
29 *Id.*
31 *Klopfenstein*, 380 F.3d at 1351.
32 *Id.*
33 *See id.*
36 *Klopfenstein*, 380 F.3d at 1351.
2. Public Retrievability

Public retrievability depends on the existence of indexed publication or the author’s intention to block the publication from public search.\textsuperscript{37} The first determinate in this category is the existence of a feasible means to locate the reference and the questions under traditional setting are whether publications have been sufficiently indexed or cataloged to be publicly accessible.\textsuperscript{38} On the one hand, courts tend to have a loose index requirement. For example, the Federal Circuit held in \textit{In re Hall} that one copy of a dissertation indexed and placed in a library was qualified as a “printed publication,” even when the only copy was written in Germany and placed in a German library.\textsuperscript{39} The court reasoned that the dissertation was accessible to the public because anyone interested in the dissertation could locate the piece through the index system and finally get access to it by travelling to the library.\textsuperscript{40} In \textit{re Lister}, the Federal Circuit further pointed out that “neither cataloging nor indexing is a necessary condition for a reference to be publicly accessible.”\textsuperscript{41} As long as a reasonably diligent researcher with access to a database can

\textsuperscript{37} \textit{In re Lister}, 583 F.3d at 1311 (listing factors when considering whether a reference was public accessible).

\textsuperscript{38} See \textit{In re Natures Remedies}, 315 Fed. Appx. at 304 (finding a MediTab application was a “public record” because it was listed in an index of clinical trials which was “open to inspection by the public” ); \textit{Bruckelmyer v. Ground Heathers, Inc.}, 445 F.3d 1374, 1379 (Fed. Cir. 2006) (concluding that a reference properly abstracted, indexed and catalogued was public accessible when it was “classified and indexed . . . providing the roadmap hat would allow one skilled in the art to locate [it]); \textit{In re Hall}, 781 F.2d at 897 (holding that an indexed thesis in a German university library was public accessible); cf. \textit{In re Cronyn}, 890 F.2d at 1158 (stating that a thesis in a library with an alphabetical index by the author’s name was not public accessible because “the only research aid in finding the theses was the student’s name, which of course, bears no relationship to the subject of the student’s thesis); \textit{In re Bayer}, 568 F.2d 1357, 1359 (C.C.P.A. 1978) (holding that a graduate thesis in a university library did not constitute a printed publication because the library had not catalogued or placed the thesis on the shelves and only three faculty members knew about the thesis).

\textsuperscript{39} \textit{In re Hall}, 781 F.2d at 897.

\textsuperscript{40} \textit{Id}.

\textsuperscript{41} \textit{In re Lister}, 583 F.3d at 1312.
find the reference after searching of titles using combination of keywords, the reference is publicly accessible.\textsuperscript{42}

On the other hand, publications have to be indexed in a “meaningful way”.\textsuperscript{43} For example, the Federal Circuit held in \textit{Cronyn} that a single copy of a research thesis that was indexed only by the student’s name, which “bore no relationship to the subject of the thesis”, was not a “printed publication.”\textsuperscript{44} The court reasoned that the thesis was not “either catalogued or indexed in a meaningful way” because someone looking for the thesis on a specific topic would not be able to locate the thesis using the index system.\textsuperscript{45}

A second determining factor of public retrievability is the authors’ intent to share their work with the public, and the questions are whether authors have taken protective measures to restrict public from getting access to the work\textsuperscript{46} and whether inventors have a reasonable expectation that the reference is not publicly accessible.\textsuperscript{47} Authors may explicitly keep the references available to a limited number of people by a binding agreement of confidentiality or some restriction rules.\textsuperscript{48} For example, the Federal Circuit held that such a document kept in a company library that was accessible only to people authorized by the company was not sufficiently available to the public and thus did not qualified as a “printed publication.”\textsuperscript{49}

\textsuperscript{42} \textit{Id.}
\textsuperscript{43} \textit{See In re Cronyn}, 890 F.2d at 1158.
\textsuperscript{44} \textit{Id.} at 1159.
\textsuperscript{45} \textit{Id.}
\textsuperscript{46} \textit{See N. Telecomm., Inc. v. Datapoint Corp.}, 908 F.2d 931, (Fed. Cir. 1990); \textit{In re Wyer}, 655 F.2d at 221; \textit{Garrett Corp. v. U.S.}, 422 F.2d 874, 878 (1970) (stating that distributing documents “without restriction on use” constitutes publication).
\textsuperscript{47} \textit{In re Klopfenstein}, 380 F.3d at. 1351 (holding a presenter at a scientific conference failed to create the reasonable expectation because he took no protective measures to prevent the audience from taking the notes).
\textsuperscript{48} \textit{N. Telecomm.}, 908 F.2d at 936.
\textsuperscript{49} \textit{Id.}
Moreover, even when there is no explicit restriction on public access to the work, authors may still have reasonable expectations of confidentiality. Courts are less inclined to find “printed publication” when professional norms entitles an author to a reasonable expectation that the information will not be released to the public. For example, in Cordis Corp. v. Boston Scientific Corp., the Federal Circuit held that “the distribution to a limited number of entities without a legal obligation of confidentiality does not render that monographys printed publication.” The court reasoned that it is important to “preserve the incentive for inventors to participated in academic presentations or discussions” by noting that professional norms may support expectation of confidentiality. And the reasonableness of an author’s expectation is factually based. For example, a simple disclaimer that prohibits audience from copying may be a reasonably precautious method for a small group but not for a large group.

However, releasing one’s work to commercial companies without restriction on use usually shows the author’s intent to share it with the public. In Kyocera Wireless Corp v. Int’l

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50 Cordis Corp. v. Boston Scientific Corp., 561 F.3d 1319, 1335 (Fed. Cir. 2009) (“the mere fact that there was no legal obligation of confidentiality—all that was shown here—is not in and of itself sufficient to show that [the plaintiff]’s expectation of confidentiality was not reasonable”); Aspex Eyewear, Inc. v. Concepts in Optics, Inc., 111 Fed. Appx. 582, 588 (Fed. Cir. 2004) (stating that a meeting without written agreement but under understanding of confidentiality could still be held as confidential).

51 Cordis, 561 F.3d at 1335 (“[P]rofessional norms may support expectations of confidentiality” to “preserve the incentive for inventors to participate in academic presentations or discussions”); Klopfenstein, 380 F.3d at 1350-51 (“Where professional and behavioral norms entitle a party to a reasonable expectation” that information will not be copied or further distributed, the court are more reluctant to find something a “printed publication”).

52 561 F.3d at 1334.

53 Id.


55 Garrett, 422 F.2d at 878 (“while distribution of a government report to government agencies and personal alone may not constitute publication, distribution to commercial companies without restriction on use clearly does); Kyocera Wireless, 545 F.3d at 1351; but see Cordis, 561 F.3d at 1334 (holding author has reasonable expectation of keeping the information in private because
Trade Comm’n, the Federal Circuit held that a global system for mobile communications (GSM) standard documents are a “printed publication” because it is available to the public without restriction.\(^{56}\) The court reasoned that the GSM specifications were visible to several US companies that took part in the project and there were no restrictions that prevented any participating companies from disseminating information to the public.\(^{57}\) Finally, when authors did not restrict public access, the actual proof of someone viewing the reference is insignificant.\(^{58}\)

**B. Cases Relevant to Internet Posts**

Just like the “printed publication” doctrine in traditional settings such as books, thesis, or copies of conference presentation slides, internet publications can be considered prior art under the United States patent law.\(^{59}\) Therefore, the central question associated with internet publication is still whether the information is disclosed to the public before critical date.

Most Internet cases struggle with the question regarding the reliability of the publication date because websites are constantly updated with limited tracing information.\(^{60}\) But this Note will only discuss the first part of the question, that is, whether the information on a website is no similar documents in the past became available to the public as a result of disclosure by the similar commercial entities).

\(^{56}\) *Kyocera Wireless*, 545 F.3d at 1334.

\(^{57}\) *Id.* at 1351 (“the primary purpose of the GSM standard was to develop a system interoperable across the national borders. This purpose made it crucial to grant access to any interested parties. ETSI’s broad membership is a testament to the fruition of this purpose”).

\(^{58}\) *In re Wyer*, 655 F.2d at 226 (finding an Australian patent application on microfilm qualified as “printed publication” even without proof of an actual viewing or dissemination of the reference).

\(^{59}\) MPEP §2128 (stating that electronic documents retrieved from the internet and online databases are sources of prior art reference under “Electronic Documents.”); *Stamps.com*, 2011 WL 2417044 at *4 (web pages printout as prior art); *Amazon.com*, 239 F.3d at 1363 (posts on public forum as prior art).

\(^{60}\) *Internet as a source of prior art*, WIKIPEDIA (July 22, 2011, 8:31 PM), http://en.wikipedia.org/wiki/Internet_as_a_source_of_prior_art (courts may cite posting date or archiving date as evidence showing effective date of publication. In August 2006, The USPTO ordered examiners to stop using Wikipedia as a source of information for determining the patentability of inventions. But in practice, examiners increasingly cite Wikipedia information).
disclosed to the public. Federal and district courts consistently hold that posts on permanent websites are “sufficiently accessible to the public interested in the art” to constitute a printed publication.\(^{61}\) In many cases, courts seem to simply adopt the assumption that everything displayed on websites is accessible to the public.\(^{62}\)

Courts have applied the printed publication doctrine when the information was published on an online database, a bulletin board system (BBS), a chat room, personal blogs, or a forum.\(^{63}\) For example, in \textit{In re Lister}, the Federal Circuit held that a manuscript on commercial databases was publicly accessible because a person of ordinary skills would have been able to locate the reference through a keyword search.\(^{64}\) Similarly in \textit{Guest v. Leis}, the Sixth Circuit held that a message on a password-protected BBS is publicly accessible because the author intended the information to be published online for others to see.\(^{65}\)

Recently, three cases also determined newsgroup postings as printed publication.\(^{66}\) In \textit{Dow Jones & Co., Inc. v. Ablaise, Ltd.}, an inventor posted link to search program’s source code on publicly available newsgroups, including two that were for computer scientists and web programs.\(^{67}\) The District Court of D.C. held the source code was printed publication because the newsgroups was public accessible after analyzing the four factors listed in \textit{In re Klopfenstein}.\(^{68}\)

\(^{61}\) \textit{In re Lister}, 583 F.3d at 1311-12 (determining that manuscript in commercial databases was prior art reference ); \textit{see also Stamps.com}, 2011 WL 2417044 at *4 (web pages printout as prior art); \textit{Amazon. Com.}, 239 F.3d at 1363 (accepting webpage printout as prior art reference).

\(^{62}\) \textit{Stamps.com}, 2011 WL 2417044 at *4; \textit{Amazon. Com.}, 239 F.3d at 1363.

\(^{63}\) \textit{Supra} note 6.

\(^{64}\) \textit{In re Lister}, 583 F.3d at 1307.

\(^{65}\) \textit{Guest}, 255 F.3d at 333.


\(^{67}\) 632 F. Supp. 2d at 36.

\(^{68}\) \textit{Id.} at 37 ("the length of time the display was exhibited, the expertise of the target audience, the existence of reasonable expectation state the material displayed would not be copied, and the
The court reasoned that all factors support the finding of printed publication because the source code was displayed for over a year before the priority date of the patent in dispute; the newsgroups are accessible to experts in computer science and web programmers, and inventor encouraged newsgroup subscribers to copy and use his code. Similarly, in eBay v. MercExchange, defendant of a patent infringement case claimed that a prior newsgroup posting disclosed the invention and thus rendered the patent invalid. The district court held the internet newsgroup posting qualify as prior printed publication. The court reasoned that the system allowed a user to search the participating web sites for keywords entered by the user and thus, was not abandoned or concealed from the public. Such position was also affirmed by USPTO’s ruling in Eolas Tech. v. Microsoft Corp. Although both district court and the Federal Circuit had ruled in favor of the claimed infringer, examiner invalidated all the claims in a preliminary ruling on the ground that it was anticipated by a draft description published as a newsgroup posting.

However, court may not find printed publication when the material is disclosed to a less public accessible space. In SRI Int’l, Inc. v. Internet Sec. Sys., Inc., a website address was distributed to members of review committee through presentations and email and placed on file transfer protocol (FTP) server for seven days as backup to email. District Court of Delaware

sijplicity or ease with which the material displayed could have been copied”) (quoting In re Klopfenstein, 380 F. 3d at 1345).

69 Id.

70 Ebay, 547 U.S. at 390.

71 Id. at 388.


73 399 F.3d at1328, denied Certiorari, 126 S.Ct. 568 (2005).

74 Gu, supra note 9 at 245.

75 SRI Int’l, 511 F. 3d at 1198.

76 Id.
granted infringer’s motion for summary judgment of invalidity and found the online material was
printed publication.\textsuperscript{77} The Federal Circuit vacated the district court’s decision and remands for a
more thorough determination of the publicity accessibility of the Live paper stored on FTP.\textsuperscript{78}
The Federal Circuit reasoned that although paper posted on an open FTP server “might have
been available to anyone with FTP knowhow and knowledge of the subdirectory of the
[system],” the paper on the FTP server “was most closely analogous to placing posters at an
unpublicized conference with no attendees” or “without a conference index of the location of the
posters”\textsuperscript{79}

C. \textbf{Challenges Imposed by Social Networking Websites}

Social networking sites are defined as web-based services that allow users to create a
unique online identity, interact with other users, and compile and share lists of contacts.\textsuperscript{80} By
interacting with existing friends, reconnecting with old friends, or expanding networks and
joining groups, users have a virtual networking experience analogous to their real life.\textsuperscript{81} The
current user profiles based social networking sites did not began to flourish until the late 1990s\textsuperscript{82}
Facebook, the number one social networking site, claims to have over 750 million active users.\textsuperscript{83}

\begin{footnotesize}
\begin{enumerate}
\item It. at 1188.
\item Id. at 1198.
\item Id. at 1197.
\item James Grimmelmann, \textit{Saving Facebook}, 94 IOWA L. REV. 1137, 1143 (2009) (quoting Danah
COMPUTER–MEDIATED COMM. 13(1) (2007), available at
http://jcmc.indiana.edu/vol13/issue1/boyd.ellison.html.
\item N. Telecom, 908 F.2d at 1284; John M. Miller, \textit{Is MySpace Really My Space examining the
Discoverability of the Contents of Social Media Accounts}, 30 NO. 2 TRIAL ADVOC. Q. 28, 28
(2011); Evan E. North, \textit{Facebook Isn’t Your Space Anymore: Discovery of Social Networking
\item Grimmelmann, \textit{supra} note 80 at 1144.
2011).
\end{enumerate}
\end{footnotesize}
Twitter, created only 5 years ago, has won over 350 million registered accounts. LinkedIn, a professional networking website, claims over 120 million members. Even Google+, a site created for about a month, has earned over 25 million users.

These social networking sites share some basic features. First and foremost, individual users join the sites by setting up personal profiles. User profiles may include biographical information, a relationship status, education background, hobbies, and interests. Next, new users can create a list of contacts by searching their friends, co-workers, or people who share their interests. Then, users can upload photos, post blog entries, comments on other users’ posts, or enjoy events or activities. Some sites allow users to send private messages directly to other users. Some sites also provide instant messages service that only keeps the message temporarily viewable to both parties. Recently, the concept of real-time web and location based web has become popular. While Real-time web encourages users to broadcast what they are

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88 Id.
89 Doe v. MySpace, Inc., 474 F. Supp. 2d 843, 845 (W.D. Tex. 2007) (stating a number of social networking websites enable members “to create online profiles, which are individual web pages on which members post photographs, videos, and information about their lives and interest”); Milier, supra note 87 at 544.
91 Social Network Service, supra note 1.
doing or what is on their mind through “tweets” or “Live Feed”\textsuperscript{92} location based webs allow users to “check in” to places where events are occurring and geotag their personal experiences.\textsuperscript{93} Finally, to protect privacy, most social networking sites allow users to control who can view their profile, get access to certain content, or add them to a contact list.\textsuperscript{94}

In addition to basic features, many new uses of social networking sites have been discovered these days.\textsuperscript{95} First, business users can use social networking sites to build brand image, increase brand awareness, advertise product, learn about new technologies and competitors, and most importantly, interact with potential consumers and clients to hear comments on their products.\textsuperscript{96} Second, scientists can use social networking sites to share updated scientific knowledge, cooperation with others in the scientific community, and enjoy a flexible way of learning.\textsuperscript{97} Third, students can use social networking sites to connect with professionals for internship and job opportunities.\textsuperscript{98} Finally, the teachers and parents of school children can

\textsuperscript{92} Id.; Twitter Support, supra note 90.
\textsuperscript{93} Social Network Service, supra note 1; M.G. Siegler, Yelp Enables Check-Ins on Its iPhone App; Foursquare, Gowalla Ousted as Mayors (Jan. 15, 2010), http://techcrunch.com/2010/01/15/yelp-iphone-app-4-check-ins.
\textsuperscript{94} See supra note 90.
\textsuperscript{95} Id.
also benefit from social networking sites. Teachers can gather feedback or even post assignments, tests through group posts while parents can ask questions and make comments easily without talking face-to-face.

A key difference between social networking sites and other Internet resources is the user’s ability to restrict public access to certain information. Users usually change privacy settings of their profiles and thus decide who has access to a certain type of information. Therefore, some scholars divide information on networking sites into three categories: public, semi-private, and private. Public information includes text or media that is available to the general public; semi-private information is only shared by a user selected group of “friends” or “friends of friends” depending on user’s private setting; and private information includes instant messages and user-to-user messages that are only shared by senders and receivers. According to this theory, both semi-private and private information is not automatically accessible to the public, and thus is not “printed publication.” Other scholars, however, argue that once content

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99 Social Network Service, supra note 1(The National School Boards Association reports that almost 60 percent of students who use social networking talk about education topics online and, surprisingly, more than 50 percent talk specifically about schoolwork).
100 Social Networking in Schools: Educators Debate the Merits of Technology in Classroom, (Updated May 27, 2011), http://www.huffingtonpost.com/2011/03/27/social-networking-schools_n_840911.html (“Tech savvy administrators are using blogs as a tool to keep parents, teachers, and students informed of the things going on in their schools”); Social Networking Goes to School, EDUC. WEEK (June 14, 2010), http://www.edweek.org/dd/articles/2010/06/16/03networking.h03.html.
101 See Indep. Newspapers, Inc. v. Brodie, 966 A.2d 432, 438 n. 3 (2009) (describing social networking websites as “sophisticated tools of communication where the user voluntarily provides information that the user wants to share with others”).
102 North, supra note 81at 1288 (discussing privacy controls and the user’s expectation of privacy regarding social networking websites).
103 Id.
104 Id. at 1288, 1289.
105 Id.
is shared with another user on social networking sites, it can no longer be considered private.\textsuperscript{106} These scholars emphasize that although a social networking site requires a username and password for the user to create a profile, there is no law that prevents those that befriend the user from publishing that is on the user’s profile.\textsuperscript{107} Under this theory, almost all information on the social networking websites except user-to-user messages is accessible to the public and thus constitutes “printed publication.”

While most cases regarding networking websites postings focuses on their evidentiary reliability or procedural sufficiency\textsuperscript{108}, at least two non-patent law related cases briefly mentioned the issue of public accessibility.\textsuperscript{109} In \textit{Doe v. Peterson}, a minor uploaded her nude pictures to an online photo website, and sent them to her then-boyfriend via MySpace.\textsuperscript{110} Although the minor immediately deleted all copies of the photos after they were sent and intended the photos to remain private between her and her then-boyfriend, the photos were reposted on another website featuring pornography.\textsuperscript{111} The Eastern District Court of Michigan stated in dicta that “despite the fact that websites do not actually circulate in public like newspapers and magazines, their accessibility to anyone with access to the internet suggests that their contents should be treated as even more ‘widely disclosed’ than information or photos

\textsuperscript{108} \textit{Tienda v. State}, 2010 WL 5129722, *5 (Tex. Ct. App. Dec. 17, 2010) (holding user’s name and hometown from a social networking website was sufficiently evidence to authenticate that the account belonged to the defendant ); \textit{Griffin v. State}, 19 A.3d 415, 428 (Md. Ct. App. 2010) (finding that printed pages from a social networking website is not sufficiently authenticate and thus not admissible).
\textsuperscript{110} \textit{Id.}
\textsuperscript{111} \textit{Id.}
portrayed in traditional printed material.”\textsuperscript{112} Similarly in \textit{Cynthia Moreno v. Hanford Sentinel, Inc.}, a newspaper publicized Ms. Moreno’s critical comments of her town on her MySpace site.\textsuperscript{113} Ms. Moreno sued the newspaper for violation of her privacy because she had meant her thought for a limited few people on her MySpace page.\textsuperscript{114} However, the appellate court of California dismissed the privacy claim and explained that Ms. Moreno’s “affirmative act made her article available to any person with a computer and thus, opened it to the public eye”\textsuperscript{115}

Both courts did not state whether the plaintiffs had set the MySpace privacy settings and the opinions seem to suggest that any posting on social networking websites are publicly accessible. However, until the Federal Circuit makes a determination regarding whether posts on social networking websites constitute “printed publication”, the two arguments will remain.

\section*{II. A Refined Two Prong Test to Determine Whether Networking Websites Posts Constitute Printed Publication on a Case-by-Case Basis}

\subsection*{A. A Two Prong Test to Determine Whether Social Networking Websites Posts Constitute Printed Publication}

Although previous cases laid out many useful factors and tests in the determination of printed publication, most of them are not readily applicable to networking websites. For example, most material on social networking websites are not indexed or catalogued as books in the library. Moreover, it is difficult to determine the how long the material has been posted on the website. Therefore, this Note proposes a refined two prong test with multiple factors under each prong for courts to use in determining whether posts on networking websites are printed publication. While none of the factors alone is determinate, a comprehensive analysis of all

\begin{footnotesize}
\textsuperscript{112} \textit{Id.} at *9.
\textsuperscript{113} 91 Cal. Rptr. 3d 858, 861 (Cal. Ct. App. 2009).
\textsuperscript{114} \textit{Id.}
\textsuperscript{115} \textit{Id.} at 862.
\end{footnotesize}
factors will lead to a just determination of whether social website posts constitute printed publication.

1. Public Dissemination

The first prong requires courts to determine whether the posts are distributed to the interested public. Like the books in a library or presentations at conferences, posts on social networking websites are electronic documents that may be exposed to an unknown audience. Therefore, it is helpful to analyze their copy numbers, circulation duration, or expertise of audience just as in traditional settings. However, unlike the publication in physical format, digitalized information on the social networking websites has its unique feature and thus should be evaluated by two additional factors.

First, courts should consider the policy of different sites. The more a site promotes networking with strangers, the more likely courts will find the posting on the site available to the public. A good example would be the comparison between social networks such as Facebook or MySpace and professional networks such as LinkedIn. While the former features reconnecting and communicating with friends or other “people in your life,” the latter encourages users to actively meet new people and seek to increase their professional networks. Therefore, courts are less likely to treat everything on social networks as public messages than that on professional networks.

Second, courts should consider how many friends the author has and whether the post has been reposted to decide the potential disclosure level of the post. The more times a post has been forwarded, the larger the possibility that the post has already been exposed to a lot of friends or

116 See Milier, supra note 89 at 29.
friends of friends. And the more the friends who have access to the post, the more likely courts may find the post accessible to the public. Therefore, courts may find public accessibility when posts are made by celebrities who have millions of followers on Twitter or hundreds of friends on Facebook. However, when the post is made by users with a small number of friends and has not been forwarded, courts may be reluctant to determine such post as public medium.

2. Public Retrievability

When posts are found to be distributed to the interested public, courts have to consider the second prong of the test to decide whether the posts are searchable by interested parties. Unlike the references in a library, information on the internet may not be catalogued or searched by call number. Although powerful search engines created web directories analogous to the index in the library to foster the search efficiency, these engines often produce too many search results that make it extremely difficult for the user to locate the information. Therefore, courts should consider three different factors under the second prong.

First, courts should consider user’s private setting for the posts. Relevant facts include: 1) whether the social networking sites provide tools to keep posts private, 2) whether the users successfully enabled private setting, and 3) to whom the user chose to disclose the information and what their private setting is. For example, the publisher of a “tweet” on Twitter cannot

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118 North, supra note 81 at 1295 (Tom Anderson, a co-founder of MySpace, has more than 200 million “friends.”); Ashton Kutcher’s Twitter Page, http://twitter.com/APlusK (last visited Aug. 11, 2011) (Ashton Kutcher, an actor, claims nearly four million “followers’ on Twitter); Famecount allstars, supra note 7; Facebook Statistics, supra note 83 (The average Facebook user has 130 friends on the site).
119 See supra note 37.
control who can see the post.\textsuperscript{122} Therefore, courts are more likely to treat Twitter as a web blog site or public forum that is publicly accessible.\textsuperscript{123} In another example, a Facebook user cautiously set the posts viewable only to his friends but one of his friends’ profiles is open to the public. Because privacy settings of the original post are not applicable to a third party, courts may still find the protected post available to public through a third party.\textsuperscript{124}

Second, courts should consider whether the posts are otherwise not restricted from being searched. Usually it is extremely difficult for the author to wipe off a post completely from internet search. Many search engines may provide a preview of the webpage or cache the page periodically so that interested public may be able to take a quick look at the content of a web page already disappeared or being secured by the author.\textsuperscript{125} In addition, a third party who has access to the contents may repost the post somewhere else seconds after the post, therefore the post will keep on line permanently regardless of the original poster’s intent.\textsuperscript{126}

Third, even if the information is not restricted for public search, courts should consider whether information can be easily singled out by ordinary people skilled in art through diligent web searches. Powerful search engines nowadays may produce millions of web page addresses in response to a single key word search.\textsuperscript{127} Additionally, specialties in data mining companies

\begin{itemize}
\item \textsuperscript{122} Lauren McCoy, \textit{140 Characters or Less: Maintaining Privacy and Publicity in the Age of Social Networking}, 21 Marq. Sports L. Rev. 203, 207 (2010).
\item \textsuperscript{123} \textit{Id}.
\item \textsuperscript{124} Decker, \textit{supra} note 121 at 18.
\item \textsuperscript{126} Decker, \textit{supra} note 121 at 18.
\item \textsuperscript{127} Eric W. Guttag, \textit{Applying the Printed Publication Bar in the Internet Age: Is It as Simple as Googling for Prior Art?} 16 Va. J.L. & TECH. 66, 108 (2011) (stating courts should resolve the issue of what “unmanageable” and “overwhelming numbers” of search results means as quickly as possible).
\end{itemize}
may find even more information given sufficient time. However, the requirement of diligent search under patent law should not include anything more than trying out different combinations of key words, viewing the first ten to a hundred pages in the search result, and using different search engines. Since most social networking sites do not arrange posts by topic or title, courts should evaluate the third factor on a factual basis before reaching any conclusions.

**B. The Test Is Better Than a Blanket Assumption that All Posts on Social Networking Websites Are Printed Publication**

A blanket assumption that everything posted on websites is accessible to the public has its merit when it applies to public websites, BBS, blogs, and news groups. Admittedly, the blanket assumption promotes the disclosure of innovation to the public, and thus serve the purpose of printed publication bar, which is to discourage people to wait too long before going to the patent office at the risk of losing their rights altogether. However, there are many shortcomings of extending such a blanket assumption to social networking websites.

First of all, the blanket assumption could reduce the incentive for inventors to participate in activities that “promote progress of science and useful art.” Social networking sites function as a great platform for scientific communities, and inventors use these sites to discuss their new ideas and cooperate with other people. However, if courts hold that posts a social networking sites are automatically disclosed to the public and thus un-patentable, such discussion or cooperation will be discouraged.

Moreover, the blanket assumption goes against the factual inquiry of the printed publication doctrine. Unlike a blog entry on a public site, posts on social networking websites may not be available to every internet user. Instead, many factors, such as the privacy settings or

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128 Driscoll, supra note 120.
129 Generally see supra note 6.
130 Liebeskind, supra note 97.
the number of times a post is forwarded, are determinate when courts evaluate the public accessibility of the posts. Without permitting the courts to consider all the relevant facts, the blank assumption seems to put the entire burden on the users of social networking sites, and as a result, will be detrimental to the fairness of the legal system.

Finally, the blanket assumption taken by a patent court may raise the risk of technology abuse that may adversely affect internet security and privacy. The blanket assumption allows individuals to conduct extraordinary unreasonable searches in order to prove that a piece of information was posted online. To take one step further, technological companies may even offer services that monitor all the social networking website activities as long as the company has access to the website provider’s storage system.\(^{131}\) It is unsettling to consider the possibility that cautious inventors could be deprived of the patent interest because of such technology abuse. Therefore, individuals must be assured by law that their posts on social networking sites are not subject to search without a reasonable basis.

### III. OBJECTIONS AND CONCERNS

Due to the knowledge sharing culture and the potential information leaking of social networking sites, some may argue that all the information on these sites belongs in the public domain. Indeed, social networking websites’ inherent purpose is to encourage users to share information and ideas with other users.\(^{132}\) Many websites keep pushing publicity of user’s

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\(^{132}\) Grimmelmann, *supra* note 80 at 1140.
information and warning users that “information might be re-shared or copied by other users,“ and the company “cannot ensure that information. . . will not become publicly available.”

In addition, many users chose to negate the privacy control in order to maximize the website’s socialization function. One study found that nearly half of social networking sites users do not change the network’s default privacy setting. Considering that many users have hundreds or thousands of friends who have full access to their profiles, even if users disclose information to a small number of close friends on these sites, the information may be disseminated to an unlimited group of people if just one “friend” choose a less private setting. To make things worse, third-party data collectors may use software that automatically examines the information available in the user’s profiles. Therefore, information on an temporarily unsecured account is at the risk of being permanently stored by a third party.

However, the possibility that some information might be disclosed to the public in the future is no substitute for the conclusion that such information is publicly accessible at the moment. The public accessibility of posts is a factual analysis based on objective evidence rather

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135 Grimmelmann, supra note 80 at 1140.

136 Id.

137 See supra note 118.

138 Grimmelmann, supra note 80 at 1140.


140 Terry, supra note 139.
than logical prediction. Therefore, whether a post on social networking websites is publicly accessible should be decided on a case-by-case basis rather than a blanket assumption.

CONCLUSION

The emergence of social networking websites imposes a challenge to patent law. Courts should not make a blanket assumption that everything posted on social websites constitute a printed publication. Rather, courts should adopt a refined multiple factor test to help the analysis. This proposal would result in a balance between private and public interests in an invention, and therefore help achieve the ultimate goal of patent law.