

**When is art not art?
Why scientific disclosures may not bar patentability**

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It is customary for scientists to share their research results with fellow scientists, both for recognition and to further their careers. This desire, however, often conflicts with the need to keep results "under wraps" so that public disclosures do not prevent the scientists from obtaining patent protection for inventions developed through their research. This conflict arises frequently in academic settings. Faculty members, postdoctoral fellows and graduate students need to give seminars and present posters on their work in order to further their research and careers. Meanwhile, university technology transfer personnel are continually trying to educate scientists to not disclose their work until patent applications are on file. The result frequently is that public disclosures are made, and the technology transfer officer wrestles with the decision of whether it is worth filing a patent application at all.

There is a general impression that any kind of public disclosure results in (a) an immediate automatic bar to patentability in absolute novelty jurisdictions (such as Europe and Japan), and (b) starts the "one year clock" towards a statutory bar in the United States. This, however, is not necessarily true. While this article will focus on U.S. law, the general impression is not always correct in foreign jurisdictions either. *See, e.g., Macor Marine Systems/Secrecy Agreement*, T830/90, [1995] EPOR 21 (23 July 1993) (circumstances may indicate confidentiality of a document even in the absence of a written confidentiality agreement).

In the United States, 35 U.S.C. § 102 states that a person shall be entitled to a patent unless:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

The printed publication provision was intended to prevent withdrawal by an inventor of subject matter that was already in the possession of the public. **In re Wyer**, 655 F.2d 221, 226 (C.C.P.A. 1981). There is a long history of jurisprudence on the issue of what is considered to be a "printed publication." As publication techniques and the ability to search for documents have evolved, the definition of "printed publication" has also changed. What we are left with today is a very fact-specific analysis that must be applied on a case-by-case basis. Thus, any given public disclosure should be evaluated before it is deemed a "printed publication" within the meaning of the statute and therefore a bar to patentability.

The touchstone for a finding of a "printed publication" is public accessibility. In determining whether a public disclosure is a printed publication, two separate factors must be considered: (1) whether the disclosure is publically available; and (2) whether one interested in the subject would be able to learn of the disclosure's existence and potential relevance. There is a long history of case law in this area, with a surprising number of relevant cases decided in the last two years. The cases tend to fall along two different lines. The first line includes the "library cases," which typically involve the question of whether a single copy of a publication (often a student thesis) sitting on a shelf in a library counts as a publically accessible document. The second line includes the

“dissemination cases,” which relate more to the question of whether different types of public disclosure count as printed publications. Each of these categories will be addressed in turn.

Library Cases

One of the early cases in this series is **In re Bayer**, 568 F.2d 1357 (C.C.P.A. 1978). In this case, the art cited by the United States Patent and Trademark Office (USPTO) was a copy of the inventor’s own master’s degree thesis, which had been given to the University of Toledo library. The thesis, although present in the library, was uncatalogued and unshelved as of the critical date for the application. The Examiner argued that the thesis was available as a reference as of its date of receipt by the library. The Board of Patent Appeals and Interferences (BPAI) agreed, reasoning that the inventor’s thesis defense to his graduate committee counted as an announcement of the availability of the thesis at least to the committee members, who then could have accessed the thesis in the library by request even though it was unshelved and uncatalogued.

The Court of Customs and Patent Appeals (CCPA) disagreed, stating that “in determining whether a printed document constitutes a publication bar under 35 U.S.C. § 102(b) the touchstone is public accessibility.” *Id.* at 1359. The court further stated that accessibility is a matter of degree. Restriction of accessibility to part of the public can still be considered public access, so long as the public concerned with the art would know of the invention. However, the court held that limited disclosure to the three members of the inventor’s graduate committee is not sufficient for a finding of public accessibility.

Additionally, the court said the thesis could not be located by means of the customary research aids available in the library, but only by being informed of its existence by the faculty committee, ensuring that the probability of public knowledge of the contents of the thesis was virtually nil. The court thus held that the unindexed, uncatalogued thesis was not a printed publication.

In contrast to **Bayer**, the Court of Appeals for the Federal Circuit (CAFC) in **In re Hall**, 781 F.2d 897 (Fed. Cir. 1986) did find that a thesis in a library could be a printed publication. The cited art was a doctoral thesis in the library at Freiburg University. The patentee argued that the thesis was not a printed publication because (1) there was no evidence it was cataloged prior to the critical date; and (2) a single thesis in one library is not sufficient public accessibility. The court disagreed, stating that “the proponent of the publication bar must show that prior to the critical date the reference was sufficiently accessible at least to the public interested in the art, so that such a one by examining the reference could make the claimed invention without further research or experimentation.” *Id.* at 899. Here, a declaration by the librarian stated that, although the exact date the thesis was catalogued was unknown, based on routine business practice it must have been catalogued prior to the critical date. The court held that reliance on routine business practice was sufficient for establishing the date as the probative value of routine business practice to show performance of specific act was long recognized. The court also summarily rejected the argument that a single catalogued thesis in one university library was insufficiently accessible to those interested in the art exercising reasonable diligence.

In **In re Cronyn**, 890 F.2d 1158 (Fed. Cir. 1989), the cited art consisted of three senior theses at Reed College. Copies of the theses were housed in both the main and

department libraries. An index was maintained by way of cards containing each student's name and the thesis title, arranged alphabetically by student name. The CAFC held that the theses were not printed publications as they had been neither catalogued nor indexed in a meaningful way, and the only research aid was the student's name (which bears no relationship to the subject of the student's thesis).

The CAFC looked at the issue of private libraries in **Northern Telecom, Inc. v. Datapoint Corp.**, 908 F.2d 931 (Fed. Cir. 1990). The cited art here consisted of reports on the AESOP-B military system that were housed in the Mitre Corp. library. Access to the documents was restricted to persons authorized by Mitre Corp. The documents were not under security classification and had been distributed to about 50 people and organizations associated with the project. The documents were marked "Reproduction or further dissemination is not authorized . . . not for public release." The court found that the documents were not printed publications as there was no evidence that anyone could have had access to the documents by the exercise of reasonable diligence.

In recent jurisprudence on this subject (**In re Lister**, No. 2009-1060 (Fed. Cir. Sep. 22, 2009)), the CAFC maintained a consistent position regarding library documents. The invention in this case was a modified version of golf in which the ball is placed on a tee for all shots except hazards and greens. Claim 21, the only independent claim under consideration, was a method claim that recited certain rules of play for golf. The inventor filed a manuscript explaining the rules with the U.S. Copyright Office more than a year before filing the patent application. The Examiner and the BPAI said that the manuscript was prior art because an interested researcher could have searched the Copyright Office's catalog by title for the terms "golf" and "handicap" in order to find the manuscript.

Additionally, one could have visited the Copyright Office to view the manuscript. The BPAI further rejected the inventor's arguments of inconvenience of visiting the Copyright Office, lack of evidence that anyone had accessed the manuscript, and prohibition by the Copyright Office of making copies, finding that the invention was easy to understand and retain without any need to obtain a copy of the manuscript. Finally the BPAI rejected the argument that no one had accessed the manuscript, finding that actual access is not a requirement.

The CAFC reiterated its position that the determination of whether a document is a printed publication is very fact specific, stating that "[i]n short, we must consider all of the facts and circumstances surrounding the disclosure and determine whether an interested researcher would have been sufficiently capable of finding the reference and examining its contents." *Id.*, slip op. at 8. First addressing the factor of public accessibility, the court stated that the burden of traveling to Washington, DC was not a factor for determining accessibility. The court further found that, in this instance, the inability to copy the manuscript was not a factor. The court also clarified that "[o]nce accessibility is shown, it is unnecessary to show that anyone actually inspected the reference." *Id.*, slip op. at 10. The court then concluded that the manuscript was publicly accessible.

Addressing the factor of searchability, the court stated "[t]he above conclusion that the Lister manuscript was available at the Copyright Office for inspection by any interested person does not end our inquiry. We must also consider whether anyone would have been able to learn of its existence and potential relevance prior to the critical date." *Id.*, slip op. at 11. It was found that the Copyright Office automated catalog is not sorted

by subject matter and can only be searched by either the author's last name or the first word of the title of the work. The USPTO conceded that the automated catalog alone would have been insufficient to support a finding of public accessibility.

At some point, the manuscript was also listed in the commercial databases Westlaw[®] and Dialog[®], along with the rest of the records from the Copyright Office catalog. Users of these databases could perform keyword searches of the titles, but not the full texts, of the works listed in the Copyright Office catalog. The court found that a reasonably diligent researcher with access to a database that permits the searching of titles by keyword would be able to attempt several searches using a variety of keyword combinations to ultimately identify the manuscript, so the manuscript was publicly accessible as of the date that it was included in either the Westlaw[®] or Dialog[®] databases. The record did not contain a specific date on which the manuscript was first listed and no general practice of the Copyright Office, Westlaw[®], or Dialog[®] with regard to database updates had been identified. The court remanded on this issue for a determination of the date the manuscript appeared in the Westlaw[®] or Dialog[®] databases.

In an interesting note in footnote 2, the court raised -but did not answer- the question of whether an overwhelming number of search results might warrant a conclusion that a particular reference included in the list was not publically accessible.

This series of cases has been fairly consistent and several important points can be discerned.

1) A single book in a single library anywhere in the world can be sufficient for public accessibility.

2) The reference must be indexed and/or catalogued in a meaningful way so as to make it identifiable by a diligent researcher.

3) Routine business practice can be relied on to determine a date of accessibility.

4) Indications of confidentiality and restricted access can be sufficient to avoid a finding of public accessibility.

Dissemination Cases

In the library cases discussed above, the issue involved a reference that is clearly printed but may or may not be a publication. In contrast, the issue in the dissemination series of cases comes down to whether a clear public disclosure is sufficient to be considered a "printed" publication. It is in this context that scientific disclosures such as seminars, posters, internal reports, and previous patent applications may or may not count as prior art.

In **Garrett Corp. v. United States**, 422 F.2d 874 (Ct. Cl. 1970), the cited art was a report prepared by a British Government agency. About 80 copies of the report were distributed in Great Britain to various British Government agencies, American Government personnel, and six commercial companies. The report was also disseminated in the U.S. through the Defense Department to government contractors. The report was unclassified and unrestricted in its use. The Court of Claims found that the report was a printed publication, holding that “[w]hile distribution to government agencies alone may not constitute publication, distribution to commercial companies without restriction on use clearly does.” *Id.* at 878, citation omitted.

Prior patent applications were considered in **In re Wyer**, 655 F.2d 221 (C.C.P.A. 1981). Here, the cited art was a previously filed Australian patent application. The application information and abstract were published more than one year before the U.S. application filing date. The full Australian application was available on microfilm in the Australian Patent Office and its sub-offices. Equipment was available in the patent office to make copies. The applicant argued that the microfilm itself was not a printed publication, only copies made from microfilm, and further argued that the application was not distributed to the public. The court said that the “traditional dichotomy between ‘printing’ and ‘publication’ is no longer valid” and that the “‘probability of dissemination’ of an item very often has little to do with whether or not it is ‘printed.’” *Id.* at 226. The CCPA held that the Australian application was a printed publication, stating that “the question to be examined under §102(b) is the accessibility to at least the pertinent part of the public, of a perceptible description of the invention, in whatever form it may have been recorded.” *Id.* at 226.

In **Regents of the University of California v. Howmedica, Inc.**, 530 F. Supp. 846 (D.C.N.J. 1981), the cited art involved a lecture with slides presented by the inventor before approximately 30 persons at a California Medical Association meeting. The district court found that “the projection of the slides at the lecture was limited in duration and could not disclose the invention to the extent necessary to enable a person of ordinary skill in the art to make or use the invention.” *Id.* at 860. In light of the fact that the public had no access to the slides and no prints of the slides were made, the court held that the slide presentation was not a printed publication.

In a similar situation, the court in **Mass. Inst. of Tech. v. AB Fortia**, 774 F.2d 1104 (Fed. Cir. 1985) found that a presentation could be a printed publication. Here, the cited art was an oral presentation to 50-500 scientists at a conference. Copies of the paper were distributed on request afterward to as many as six people. The court held that the presentation was a printed publication because (a) 50-500 interested persons were actually told of the existence of the paper and informed of its contents by the oral presentation, and (b) the document itself was actually disseminated without restriction to at least six persons.

Two factors were addressed by the CAFC in **Constant v. Advanced Micro-Devices, Inc.**, 848 F.2d 1560 (Fed. Cir. 1988). Here, the cited art was a specification sheet for an Intel IC chip. The patentee argued that there was no evidence the sheet was actually received by the public before the critical date. The court stated that “dissemination and public accessibility are the keys to the legal determination whether a prior art reference was ‘published.’” *Id.* at 1568. The court found that evidence of routine business practice can be sufficient to provide a publication date. The court further held that “[a]ccessibility goes to the issue of whether interested members of the relevant public could obtain the information if they wanted to. If accessibility is proved, there is no requirement to show that particular members of the public actually received the information.” *Id.* at 1569.

In **Cooper Cameron Corp. v. Kvaerner Oilfield Products, Inc.**, 291 F.3d 1317 (Fed. Cir. 2002), the cited art consisted of four Subsea Intervention Systems Ltd. (SISL) reports released to SISL members and participants. One report was also submitted to the Commission of European Communities. The reports were neither marked nor considered

confidential. The court reversed summary judgment that the reports were not printed publications and remanded. The CAFC pointed out that the confidentially notice was only on page 4 of a 130 page report and was only related to financial information, distinguishing **Northern Telecom** in which the documents were not authorized for public release and were maintained under a policy of restricted access. The court further pointed out that the interested public may be the very people to which the reports were distributed.

In a case similar to the situation in **Mass. Inst. of Tech.**, the CAFC in **Norian Corp. v. Stryker Corp.**, 363 F.3d 1321 (Fed. Cir. 2004) found that a meeting abstract was not a printed publication. Norian argued that the meeting abstract was available only upon individual request to the authors, and that such request and dissemination had not been shown. The court agreed, stating that, although the general practice for presenters at the meeting was to hand out abstracts, there was no evidence provided of actual availability of this abstract. Thus, dissemination was not established.

In **In re Klopfenstein**, 380 F.3d 1345 (Fed. Cir. 2004), the cited art at issue was a poster presented at a scientific meeting. The poster was displayed 2½ days at one meeting and less than one day at another meeting. There was no notice prohibiting note-taking or copying of the poster. No copies of the poster were disseminated and it was never catalogued or indexed in a library or database. The CAFC said that the key is public accessibility, and that distribution and/or indexing are but one indication of accessibility, not the end all. The court created a balancing test for determining whether a temporarily displayed reference that was neither distributed nor indexed was a printed publication. The four factors are:

- 1) length of time the display was exhibited;
- 2) the expertise of the target audience;
- 3) the existence of reasonable expectations that the material displayed would not have been copied; and
- 4) the simplicity or ease with which the material displayed could have been copied.

On the basis of these factors, the court held that the poster was sufficiently publically accessible.

Bruckelmyer v. Ground Heaters, Inc., 445 F.3d 1374 (Fed. Cir. 2006) presented another patent application-related situation. The cited art was a Canadian patent application, including two figures that were present in the filed application but subsequently deleted and did not appear in the issued patent. The application was available for inspection at the Canadian Intellectual Property Office (CIPO). The patentee argued that there was no evidence of dissemination beyond the CIPO, that the CIPO did not catalogue or index the application, that there was no published abstract, and that the issued patent would not guide one to the removed figures. The CAFC disagreed, stating that the application was publically accessible and that the issued patent is a roadmap to the application, even more so than the abstract in **Wyer**. The court further stated that the specification recited the same use as the claims in suit, that the issued patent was classified and indexed, and that the two figures were still in the application file.

In **SRI Int'l, Inc. v. Internet Security Systems, Inc.**, 511 F.3d 1186 (Fed. Cir. 2008), the cited art was a paper posted on the company's FTP server for seven days as a back-up for pre-publication peer review. There were seven instances in which people

were directed to the same subdirectory on the FTP server to retrieve other papers, but not to the cited paper itself. The court overturned summary judgment for anticipation and remanded because there was not enough evidence to show that the paper was publically accessible. The court acknowledged that the paper was posted and might have been available to anyone. However, the court noted that the FTP server had no index, catalogue, or other tools for customary and meaningful research and that only one non-SRI person knew about the availability of the paper. The court further observed that it was doubtful anyone would search a subfolder of an SRI FTP server, that the paper was not publicized or placed in front of the interested public, that there was no record that anyone accessed it during the seven days (although actual accession is not a requirement), and that the paper had a relatively obscure file name. On the basis of all of the circumstances, the court found insufficient evidence of publication for summary judgment purposes, and remanded. *See also* Joanna Toke, “Can an internet reference be a “printed publication”?” *B.C. Intell. Prop. & Tech. F.* 12101 (2009) for one commentator's view on the availability of internet references as printed publications.

In **Kyocera Wireless Corp. v. Int’l Trade Comm’n**, 545 F.3d 1340 (Fed. Cir. 2008), the cited art consisted of a set of technical specifications devised by an independent standards organization. The specifications were drafted within smaller technical subcommittees but were widely distributed and visible to any member of the interested public without requesting them from an organization member. The organization did not impose restrictions on members to prevent them from disseminating information about the standards to non-members. The court found that the specifications were printed publications. Although archival paper copies of the specifications were

maintained in a limited-access facility, that fact was deemed irrelevant because copies of the specifications were widely distributed.

In a non-precedential opinion (**In re Natures Remedies, Ltd.**, U.S. App. LEXIS 4980 (Fed. Cir. 2009)), the cited art consisted of an application for approval of clinical testing filed with the Scientific-Ethical Committee of Copenhagen in Denmark. Of record was a Declaration from the Secretary of the Committee stating that, under the Danish Open Files Act, the application was a public record and had been open to inspection by the public since its filing. Additionally, an index of notifications of clinical trials was kept, which is open to the public and the application was listed in the index. The court found the application to be publically accessible. Note that many states in the U.S., as well as the U.S. government, have similar open public records acts. *See, e.g.*, Freedom of Information Act, 5 U.S.C. § 552; North Carolina Public Records Law, N.C.G.S. §§ 132-132-10; California Public Records Act, Govt. Code §§ 6250-6276.48; Open Records Act, Oklahoma Statutes §§ 24A.1-24A.24; Open Public Records Act, N.J.S.A. 47:1A-1 *et seq.*

In **Cordis Corp. v. Boston Scientific Corp.**, 561 F.3d 1319 (Fed. Cir. 2009), the cited art was monographs written by the inventor and handed out to various academicians and two companies without any written agreement to keep the documents confidential. However, the inventor requested confidentiality and in actuality the companies did keep the documents confidential. The court said that a binding legal obligation of confidentiality is not essential to avoid a finding of inaccessibility. The CAFC stated that “where professional and behavioral norms entitle a party to a reasonable expectation” that information will not be copied or further distributed, “we are more reluctant to find something a ‘printed publication.’” *Id.* at 1333-34, citing **Klopfenstein**. The court further

stated that academic norms gave rise to an expectation that disclosures will remain confidential. Thus, distribution of the monographs by the inventor to his academic and research colleagues did not render the monographs "printed publications." Looking at general practices, there was no showing that similar documents in the past had become available to the public or that commercial entities typically would make such documents known, or would have incentive to do so. The court found that the absence of a legal obligation of confidentiality is not in and of itself sufficient to show that the inventor's expectation of confidentiality was not reasonable.

In terms of scientific presentations (such as lectures and posters), earlier cases like **Howmedica, Massachusetts Institute of Technology**, and **Norian**, have been fairly consistent: A presentation in which copies of the presentation were handed out was a "printed publication;" when copies were not handed out the presentation was not a "printed publication." **Klopfenstein** appeared to change this line of thinking, making it much more likely that any presentation would be considered a "printed publication." Judging by the four factor test created in **Klopfenstein**, it seemed unlikely that a typical presentation would pass the test, as the expertise of the target audience would always be high, there would seldom be a reasonable expectation that the material displayed would not be copied, and it would be fairly simple to copy the displayed material (unless dense subject matter such as long sequences of DNA or protein or x-ray diffraction patterns was displayed). Several commentators pointed to the dangerous direction taken by the **Klopfenstein** court. *See, e.g.*, Sean B. Seymore, "The "Printed Publication" Bar After Klopfenstein: Has the Federal Circuit Changed the Way Professors Should Talk About Science?," *40 Akron L. Rev.* 493 (2007).

However, **Cordis** may signal a change in the court's attitude to one more favorable to scientists. The **Cordis** decision relies heavily on the expectation of confidentiality present in the academic community, and even between scientists and commercial entities interested in their work. With this expectation of confidentiality, it would be more difficult for a scientific presentation to fail the **Klopfenstein** test and therefore be considered a printed publication. Thus, the risks associated with giving a presentation before a patent application is filed would be diminished under these circumstances.

It is still the safest course to file a patent application before scientists present their work in public. However, if a public disclosure has been made before filing, it is worth investigating the specific facts surrounding the disclosure before assuming that a patentability bar may be in place.

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