PROTECTING PATENT RIGHTS IN THE ACADEMIC COMMUNITY

Disclosure of Scientific Information

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Protecting Patent Rights in the Academic Community: Disclosure of Scientific Information

A scientific discovery or technological innovation deemed to be worthy of patent protection often stems from scientific research at a university or research institute. At some point, either before or after a patent application is filed, the technology may be publicly disclosed. This article will address the questions relating to disclosure of technological information and the potential impact on the patentability of inventions:

- What are the general requirements for patentability in the U.S. and abroad relating to prior art?
- How are foreign and domestic patent rights affected by a public disclosure of the technology at issue?
- What impact does the location of disclosure have on patentability of the invention?
- What are different ways that technology can be disclosed?
- What types of disclosure can be used as prior art for determining patentability?
- What are the requirements with regard to the content of the disclosure for it to be used as prior art in determining patentability?

Maintaining "Novelty": Timing is Everything

To be patentable, an invention must have novelty. Novelty is a requirement under the patent laws of virtually every country having such laws, although the scope of the novelty requirement varies from country to country. Once novelty is lost for an invention, patent rights for that invention are lost as well.

One aspect of novelty concerns the first date on which an inventor places the technological details of the invention into "public use." That is, the date which the inventor "discloses" the invention to the public.

Disclosing an invention can have an immediate or a delayed effect upon novelty, depending upon the country whose patent laws are at issue. In some countries, a public use triggers a so-called grace period under which an inventor must file a patent application within a specified deadline to preserve patent rights for the invention. Missing the deadline is fatal, and the deadline cannot be extended. For example, the U.S. offers inventors a one-year grace period to file an application after a public use occurs. However, in most other countries, for example, Germany, disclosure of an invention presents an immediate bar to patentability.

In short, once the technology is disclosed in the United States, there is a one-year deadline to file a patent application if patent protection in the U.S. is desired. However, this does not mean that filing a patent application should be delayed until after the technology is disclosed. This is especially true if international patent protection based on the technology is desired, as most countries outside of the U.S. do not provide any grace period to inventors. As soon as an invention is placed in public use, or "divulged" according to terminology used in many of these countries, patent rights in those countries are lost immediately. Such countries are said to have "absolute" novelty standards. For example, Germany is an absolute novelty country, as is France and many other countries in Europe.

Thus, to avoid losing international patent rights, a patent application for an invention should be filed before any public disclosure of the technology is made, unless there is a conscious decision not to pursue patent protection for the invention outside the United States.

Location of disclosure

Like timing, the location of a disclosure can have international, or only national, impact depending upon whose patent laws are at issue.

For example, in the United States, only a disclosure occurring within the United States and its territories would constitute a public use under U.S. patent law. Thus, a disclosure at a scientific meeting in California triggers the one-year grace period in the U.S., but a trade show in Madagascar would not. Japanese patent laws have been similar to the U.S. in that a disclosure must occur in Japan to constitute a disclosure in Japan.

Many other countries have international disclosure standards. In such countries, of which Germany is an example, a disclosure anywhere in the world impacts novelty in those countries.

Thus, international patent rights in absolute novelty countries such as Germany are lost immediately, whether the disclosure occurs in Germany, the U.S., or any other country of the world. Again, to avoid losing international patent rights, a patent application for an invention should be filed before the information is divulged to the public, unless there has been a conscious decision not to pursue patent protection for the invention outside the United States.

What constitutes "disclosure"?

Technology developed at a university can be disclosed to the public in a variety of different ways. Examples of ways technology might be disclosed in a manner that impacts novelty include the following:

- **Printed publication**
  - **Abstract**
  - **Journal Article**
  - **Book Chapter**
  - **Manuscript**
  - **Thesis**
  - **Proceeding**
  - **Funded grant**
- **Electronic publication**
  - **Internet site posting of information (e.g., printed publication in electronic form)**
- **Samples, models, or prototypes**
- **Oral presentation**
  - **Poster presentation**
  - **Slide / overhead presentation**
  - **Thesis presentation**
  - **Information discussed in a non-confidential setting**

Again, it is important to keep in mind that the standards that disclosure has upon patentability varies from country to country.

Under U.S. patent law, a requirement for novelty is that there must be no "printed publication" describing the invention more than one year prior to the filing date of the patent application.

A printed publication is considered to be a document that has been generally made available to the extent that one of skill in the art (i.e., a scientist or technician) can locate it. Generally, the term "printed publication" may include electronic publications in appropriate circumstances. Keep in mind that *it does not matter if anybody took interest in, or looked at, the publication!* Once the publication has been made available, it is considered disclosed. (See USPTO MPEP section 2821)

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Dates and Availability of Disclosed Technology

Nowadays, information can be rapidly disseminated and made available to the public. If technology that is, or might be, the subject of a patent application is disclosed, special attention should be paid to how, when, and where the technology becomes publicly available.

Electronic publication

Internet sites may post information immediately after it is received. In this case, the date of disclosure very likely is the date at which the information was available on that site. Academic-related sites that can post scientific information include: laboratory home pages; internet forums for technical discussions sites; and sites for meetings, symposiums, seminars, etc.

In addition, many journals have sites that provide rapid access to articles or abstracts that have been accepted for publication. Posting of the articles or abstracts may be well in advance of their appearance in the hard copy of the journal; thus special attention should be paid to the specific date these articles or abstracts will be made public.

Meeting presentations, posters, and abstracts

Particular attention should be paid to the submission and presentation of information at scientific meetings. Prior to the scientific meeting, abstracts of the scientific research are typically provided to the meeting organizer, or an associated publisher that prepares and publishes a compilation of meeting abstracts.

The abstracts that are submitted may be made publicly available by the meeting organizer or associated publisher *prior to the meeting*. For example, a journal that provides a compilation of meeting abstracts may be made publicly available in printed form or on a website before the meeting takes place. If a U.S. patent application was filed before the meeting but after the publicly-available date of the meeting abstract, foreign patent rights can be jeopardized.

In the case where a patent application cannot be filed prior to the date that the abstract is made publicly available, it is suggested that personnel assess and revise the abstract, if necessary, in order to prevent untimely disclosure of the invention.

In the U.S., oral presentations are not generally considered "printed publications", even if visual aids such as slides, overheads, or computer projections are used to convey information during the presentation. This is because these visual aids have been considered to be transitory (see Regents of the University of California v. Howmedica, Inc., 210 USPQ 727 (1981)).

Nonetheless, such presentations can still constitute a public use or divulgation that would impact novelty, regardless of whether dissemination of a "printed publication" contemporaneously occurred.

Also, it is debatable whether poster presentations that take place in the U.S. are considered to be "printed publications." In one aspect, one could argue that poster presentations are transient, akin to oral presentations, using the poster as a visual aid. In another aspect, one could argue that the poster is "printed material" available to the public which could be used as prior art. Generally, material on posters is not labeled "privileged and confidential" and a poster attendee could easily take a digital picture of the poster, thereby having a copy of the information on the poster.

Yet, as noted above, such presentations can still constitute a public use or divulgation that would impact novelty, regardless of whether dissemination of a "printed publication" contemporaneously occurred.

However, material that is distributed at a nonconfidential meeting, such as copies of overheads or slides used in an oral presentation, is likely to be considered "printed publications" that would qualify as prior art (Massachusetts Institute of Technology v. Fortia, 227 USPQ 428 (1985)).

Dissertation documents

Often overlooked, but nonetheless important, attention should be paid to dates that a thesis is made publicly available. This can occur by placement of the thesis in a publicly accessible area, such as a library, or the date the thesis becomes available through a dissertation service, such as UMI, which catalogs dissertations and makes them publicly available.

Grants

Government grants are at the heart of research funding and can be an important source of technology found in patent applications. However, a grant application may place inventive ideas and any data that supports these ideas in the public domain. Hence, grants could be a source of disqualifying prior art if publicly available prior to the filing of a patent application.

Abstracts of federally funded grant applications will appear in and be available from various databases. These include the CRISP Database (NIH) and the Federal Research In Progress (FEDRIP) Database (National Technical Information Service (NTIS)).

Although the abstract of the grant application may not contain an enabling disclosure of the invention, there has been some disagreement on whether the entire grant application (which may contain an enabling disclosure) is available as prior art. In one instance, a Northern District of California court (E.I. du Pont de Nemours & Co. v. Cetus Corp., 19 USPQ 2d 1174; 1990) held that since a copy of the entire grant can be obtained under the Freedom of Information Act (FOIA), the entire grant application is a public disclosure and hence becomes Prior Art.

Steps have been taken since then to prevent the entire disclosure of a grant from becoming public. For example, sections of the grant that include technical details can be labeled "Confidential and Proprietary," and any FOIA or other requests for this information from a third party must therefore be approved by the grant applicant. Consequently, it is possible that properly labeled, confidential content of a grant might not constitute a printed publication or public use that otherwise could impact patentability.

What is an enabling disclosure?

In most countries, in order for a disclosure to impact novelty, the disclosure of the technology at issue must be conveyed in a manner that is **"enabling"**. A disclosure is enabled if the information is conveyed in adequate detail so that a person of skill in the art could replicate the invention without undue experimentation. Therefore, not all disclosures made public are enabling, and nonenabling disclosures might not impact novelty.

Even if an abstract is considered to be non-enabled in view of the claimed invention, **this does not mean that it cannot be used as prior art in determining the patentability of the claimed invention**. It is true that a reference must enable someone to practice the invention in order to anticipate under §102(b). However, a non-enabling reference nonetheless may qualify as prior art for the purpose of determining obviousness under §103. (Symbol Technologies, Inc. v. Opticon, Inc., 935 F.2d 1569**,** 19 USPQ2d 1241 (Fed. Cir. 1991)).

Therefore, to authorize a talk, presentation, abstract, or the like on the basis that the disclosure is non-enabling, is a risky proposition that could jeopardize patent rights.

Keys to Maximizing your IP Options

There are numerous ways to jeopardize your U.S. and international patent rights. However, these pitfalls may be avoided by managing disclosures of any technology. When patent protection is desired, the safest route is to file a patent application before third party disclosures occur.

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Otherwise, if you file after a disclosure, you may need the advice of counsel to assess to what degree the disclosure impacted patent rights

The foregoing should provide you with helpful suggestions in protecting your organization from avoidable liability concerns in licensing or sale situations. Each transaction is different, and the advice of competent counsel in each situation should be obtained.