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Patented Prospects

Researching inventors, patents and products

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On February 26, 1996, *The Wall Street Journal* reported that Dr. Donald Tomalia, a former scientist at Dow Chemical Company, has invented a new man-made three-dimensional molecule called the dendrimer, whose potential applications extend from cosmetics to genetics. Dendritech, Inc., the company he formed to develop and market dendrimers, has already won \$20 million in licensing fees from companies experimenting in pharmaceuticals, technology and gene therapy. While it takes several weeks to form just a few pounds of dendrimers, Dr. Tomalia asserts, "a kilogram of dendrimers can generate \$50 million in revenues."

This is the kind of story that makes a fundraiser salivate, and little wonder. But developing and profiting from an original invention with potentially far-reaching applications is more difficult than it looks, and for the prospect researcher the task of estimating the compensation potential for the inventor is even harder than that.

A Patent Primer

Patents issued by the U.S Patent and Trademark Office (USPTO) are the exclusive property of the inventor(s) for 17 years from the date of patent issue. Actually, for patents granted since June 8, 1995, protection will expire on the 20th anniversary of the patent's earliest application filing date. The

inventor is defined as the person or persons who actually developed the new product or process. During the patent's duration, the inventor(s) may assign the ownership of the invention in whole or in part to another entity, or license its use under specific conditions. Once this ownership term has expired, however, the process or invention may be used without fee by any entity. The patent can be renewed only if the inventor has developed a "new and useful improvement" on the existing invention.

The inventor(s) must first disclose their invention to the USPTO, where it undergoes a patentability search to determine its originality. Depending on the complexity of the invention or potential overlap with other inventions (computer software developments are a particularly sticky area), this scrutiny may take some time. Once cleared, however, the inventor can submit an application. The entire process can typically take two to four years. However, by law an inventor is protected from the time of his or her original disclosure filing, if the issue of patent infringement ever comes up (this condition is described as "patent-pending"). In addition, the patent's career is marked by numerous fees to the USPTO, including an initial filing fee and maintenance fees every 3.5, 7.5 and 11.5 years of the patent's duration, easily incurring costs of \$10,000 or more for domestic patents and over \$100,000 for international ones. The Certificate in Good Standing (suitable for framing) will cost you another 20 bucks.

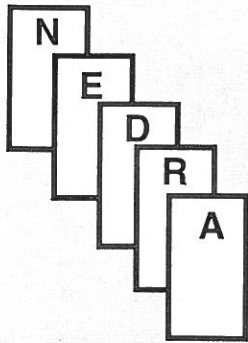
The Inventor/Assignee Relationship

While the word "inventor" may call to mind Fred MacMurray in his living room poring over Bunson-burnered beakers billowing the smoke of some pre-Flubber concoction while his shaggy dog looks on, these days most significant inventions are developed under the auspices of R&D arms of corporations or in university or government research settings. In these situations, it is very common for the supporting organization to assume ownership rights to the invention by assignment from the inventors. The so-called "assignees" handle the filing and maintenance of a patent, identify and cultivate licensee relationships with organizations interested in manufacturing and marketing the invention commercially, collect royalty income from licensees, and deal with patent infringement liability and other legal issues.

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Companies vary in their policies with regard to intellectual property. In the majority of cases, the invention is seen as a product of the scientist's work on the job, and any unique invention that is created on company time (often utilizing company equipment, resources, and even trade secrets) is considered company property, too. This means that an inventor-employee may receive no profit as a result of the invention. However, some corporations offer incentives (for example, a bonus of an agreed-upon percentage of base salary) to encourage scientists to develop important patents. Compensation policies will also vary in university settings: for members of the faculty at Harvard University for example, the Office for Technology and Trademark Licensing shares with the faculty member a percentage of the royalty revenue generated from an invention's licensing.

An invention created on company time is usually considered company property.

Presumably, indirect or minimal compensation are compromises that some scientists are willing to make in order to allow their pursuit of research without having to engage in the time-consuming activities of grantseeking and patent filing.

Of course, any company scientist will be required to engage in research consistent with the company's mandate. Dr. Tomalia, above, decided to leave Dow Corning to pursue the development of dendrimers independently, after Dow decided the endeavor was "frivolous." The wealthiest inventors, therefore, are most likely to be investors, too: equity shareholders in the commercial enterprise of manufacturing and marketing of their product or process.

Resources for Searching Patent Information

The best source of information about any corporation's or university's policy is with that organization's Office of General Counsel. However, confirmation of patent ownership and assignment can be directly accessed through some commercial on-line services like Dialog or LEXIS/NEXIS. On Dialog, U.S. Patents Full-Text (Files 652,

653 and 654) makes available patents issued by the USPTO since 1974, with partial coverage of some technologies since 1973. A file called Claims/Reassignment and Re-examination includes documents related to a patent's protected career, including reassignments, extensions, termination and litigation notices. You can search other Dialog files for international grants, and all files using the Dialindex Category PATENTS. LEXIS/NEXIS offers two libraries, PATENT and LEXPAT, both of which give access to US patents in full-text from 1976, including reissue, correction and litigation information. LEXPAT contains additional documents related to patent case law and legislation. [NOTE: your agreement with LEXIS/NEXIS may or may not include access to these special libraries.]

On the World Wide Web, the Center for Networked Information Discovery and Retrieval (CNIDR) offers an excellent set of search tools for obtaining free bibliographic information on patent issues since 1993. The Boolean search feature allows you to further limit your search to specific fields, like Inventor Name or Assignee Name. The resulting citations include an abstract of the invention, date of issuance, even the attorney handling the patent filing. The Shadow Patent Office (SPO) claims to be the only WWW site offering a searchable database consisting of the full text of USPTO patents issued since January 1972. Search features and access, however, are divided into free and commercial areas. The commercial site (which asks you to register with SPO and bills you for reports), offers the full-text searching capability; the free service is limited to patents issued in the last year, indexed by date of issue only. Some excellent general informational sites are included in the sidebar.

Once you've confirmed the patent holder as your prospect and identified the invention and its assignees, you might try to examine the success of the assignee in marketing or licensing the invention. For public companies with large R&D components this information can sometimes be found in the notes

Some Further Resources on Patents

On the Internet:

The United States Patent and Technology Office (USPTO):
<http://www.uspto.gov/>

The USPTO patent search engine (patents since 1993):
<http://www.patents.cnidr.org:4242/access/search-bool-html>

Association of University Technology Managers
<http://autm.rice.edu/autm>

Shadow Patent Office, offering fee-based full-text searching of patents since January 1, 1972 (full-text reports can be ordered for \$4.95 each):
<http://www.spo.eds.com/>

Patent News Service Listserv:
e-mail to patents@world.std.com

Commercial Information Providers

Dialog

Dialindex File (411): PATENTS
U.S. Patents Full-Text: files 652, 653, 654
CLAIMS/Reassignment & Reexamination: file 123
CLAIMS/U.S. Patents Abstracts Weekly: file 125
CLAIMS/U.S. Patents Abstracts 1950+: file 340
Chinese Patent Abstracts in English: file 344
INPADOC/Family and Legal Status: file 345
JAPIO: file 347
European Patents Fulltext: file 348
Derwent World Patents Index 1963-1980: file 350
Derwent World Patents Index 1981+: file 351
APIPAT: file 353
IMSworld Patents International: file 447

LEXIS/NEXIS

PATENT library
LEXPAT library

following the consolidated financial information in the annual report, where licensing arrangements with other companies are discussed. Industrial technology journals, carried by many commercial information services, are also good sources for information about a company's patent and licensing success. Such success can be indications of

the value of that inventor to the organization. However, beware: especially with pharmaceutical and software companies, the threat of costly lawsuits of patent infringement always exists, and can have dire financial consequences for any company, and should be present as a caveat in any research report.

Calendar of Upcoming NEDRA Events

Mark your calendars! NEDRA has some great educational events planned for the next few months.

Wednesday, May 22: Major Gifts is the theme of NEDRA's Spring Conference at the Marriott Hotel in Newton, Massachusetts. NEDRA will also hold its annual business meeting and elect two new directors. Please send your conference registration form to Margaret Link by May 15 and join us for an interesting day of learning and networking with colleagues! [Editor's note: The date published in the previous issue of NEDRA News was incorrect. NEDRA regrets the error.]

Tuesday, May 7. Researching Private Companies, presented by former NEDRA president David Eberly at Harvard's Kennedy School of Government in Cambridge, MA. Register by May 2 to learn techniques and strategies for locating hard-to-find company data.

Wednesday, June 12. Breakfast Basics: the Individual Profile, will be presented by Sandra Larkin, research consultant and NEDRA News editor, over breakfast at Wes Parker's Restaurant in Reading, MA (just off Routes 93 and 128). This session is appropriate for new researchers and for development officers who need to know more about researching individuals; as a special offer, researchers can bring a development officer at a reduced rate! Registration deadline is May 29.

Wednesday, June 19. Using What You've Got: Segmenting and Targeting Your Constituency will be presented by NEDRA directors Georgia Glick and Margaret Dreger at Rom's Restaurant in Sturbridge, MA. Enjoy a continental breakfast while learning to make the most of your database; register by June 5.

If you need registration forms or further information on any of these events, call Beth Darrah at (617)353-9522.