

Evaluating University Disclosure

Experienced university patent administrator offers hints which will aid licensing executives dealing with universities

BY LAWRENCE GILBERT*

Evaluation of university technology involves assessing patentability, technical feasibility, and marketability. Patentability can be assessed by questioning the inventor in a manner that will zero in on his/her specific contribution. Technical feasibility of an invention is determined by comparing the invention with the prior art gleaned from the inventor, other university researchers, and licensing specialists in industry. Assessment of the potential market for an invention includes the development of a marketing strategy to identify fields of application, to identify companies that are good prospective licensees, to determine market size and growth, and to ascertain the appropriate legal arrangements to effectuate the further development and public use of the invention.

EVALUATING THE UNIVERSITY DISCLOSURE

The university disclosure is unique in that it can be characterized. Typically, it describes high technology which is state of the art, embryonic, not beyond the breadboard or research stage, and a byproduct of the research. It rarely presents a business opportunity; such opportunities generally are based upon the know-how of a group of university people though a patent position is sometimes an essential ingredient. The discovery disclosed often requires further work to demonstrate technical feasibility or to prepare a patent application.

Where more than two inventors are identified, the probability is high that not all are inventors. Where only one inventor is identified, the probability is good that there is more than one. This is so in the former case because university faculty tend to confuse inventorship with authorship. In the latter situation, the inventor's ego tends to rule out joint recognition.

The disclosure usually is the result of work performed under sponsored research; therefore, patent rights and licensing restrictions must be examined. For the purpose of this paper, it will be assumed that patent rights vest in the university. Notebooks are rarely witnessed, which means that the disclosure is

often the earliest date of invention upon which one can rely.

A university disclosure may be positively evaluated by its administration for reasons other than significant commercial potential; for example, to assist the discloser in obtaining grant support, to establish a better working relationship between the university patent office and a particular department, to comply with the desires of top administration officials, to protect an important invention that may have little apparent commercial application, to protect emerging technologies in which fields of use are uncertain, or to foster development of local industry.

What is the process by which a university disclosure should be evaluated? Broadly stated, a university patent administrator or outside source hired to perform that function for a university should assess patentability, technical feasibility, and the potential market. A sophisticated attempt to utilize objective criteria to evaluate invention and innovation has been developed by Udell.¹

How do you assess patentability?

The disclosure often does not delineate the invention precisely because the inventor is unaware of what he/she has done that is patentable. It is incumbent upon the evaluator, therefore, to make personal contact with the inventor to draw out this information. Success here depends upon the skill of the evaluator in asking the right kind of questions. For example, it doesn't help to ask if it was obvious to have added an element that in turn provided an instrument with significantly greater resolution capability. It was obvious to the inventor!

The questioning must elicit the background factors that led the inventor to add an element to solve his/her problem. Such questioning will zero in on the specific contribution by the inventor that produced the improved performance or provided a new capability or the like. Once there is a clear understanding of the contribution made by the inventor a patent search may be utilized to ascertain the issue of patentability. Such a search is advisable where the invention falls within a crowded field or where the improvement represents but a small feature of a large system.

Always make a search when there is reason to believe the results will be negative. An obvious advantage obtained by a search is acquisition of prior art that will be useful in the preparation of a patent application and in claim drafting. At such time as the Patent and Trademark Office is provided the means to upgrade its search capabilities, a search would be recommended in the majority of cases. Until that time, effective search results at modest cost will be unavailable.

The advent of computerized searching capabilities developed by the private sector affords an alternative,

*Patent Administrator, Community Technology Foundation, Boston University, Boston, MA.

albeit more expensive means, to conduct a search. For example, NERAC, the New England Research Application Center,² has a literature data base search capability and Pergamon International Information Corporation^{2a} has a patent data base search capability.

Next Step

Assuming that the disclosure appears patentable, does the evaluator bring it to the attention of a licensing executive or does he/she file for a patent application? Neither! The next step is to ascertain technical feasibility. Again, one starts with the inventor. Has the invention been reduced to practice; if so, in what form and with what results? What is presently done and who does it? Can it be scaled up? Is it cost effective? The evaluator could also disclose the invention in confidence to a university researcher who has established expertise in the field and with whom the evaluator has developed good rapport.

These relationships will take time but, if used properly, can be extremely effective. Simultaneously, the evaluator should contact one or more licensing specialists in the field, taking care to disclose the what but not the how of the invention. By developing good relationships with a select few in industry, a wealth of information can be obtained quickly over the telephone. In particular, what is presently being done, who does it, and the degree of interest in the invention.

If the opportunity presents itself, should the evaluator immediately disclose the invention on a confidential basis to the company of the licensing specialist? A company often would be interested in obtaining a first look in return for the opportunity to secure an (exclusive) license. There are obvious advantages in doing so: reduction of the risk of filing patent applications that can't be licensed; quick response to the commercial merit of the invention; evaluation by a company whose personnel is well known to the evaluator; and the relative ease with which the evaluation can be carried out.

Unfair Competition

On the negative side, the evaluator should be aware of the possibility of unfair competition inherent in providing to a company a first look should that become a pattern of behavior. For example, a company with a policy of reviewing disclosures only on a nonconfidential basis is potentially excluded from reviewing new concepts generated by the university. Further, to preserve its tax-exempt status, university patent policy typically states that it is to foster and promote the public good by disseminating new information as widely as possible and to ensure that those inventions in which the university has an equity will be utilized in a manner consistent with the public interest.

Accordingly, a policy of letting a select few companies have a first look could be construed to be in violation of such policy and a misuse of patent rights where such inventions are sponsored by the U.S. government or where the university is state-supported. To sum up, the evaluator should exercise care when entering into first-look arrangements and do so only pursuant to a well thought-out marketing strategy for a given invention.

Clearly, the evaluator should recognize that commercial potential can outweigh considerations regarding patentability and feasibility. In the final analysis, the marketability of the invention will determine whether or not the invention will be useful to society. To ascertain marketability, it is necessary to develop a marketing strategy for each invention; identify the fields of application; identify the companies within those fields; determine the size of the markets and their projected growth, and determine the appropriate legal arrangement(s).

FIELDS OF APPLICATION

In those cases where the potential fields are not apparent on their face, initial ideas can be gleaned from those individuals the evaluator has already contacted regarding patentability and feasibility.

Other leads could be obtained from research reports from major stock brokerage companies, business opportunity reports published by specialists such as Business Communication Co.,³ and Frost & Sullivan,⁴ and marketing guides such as Kline.⁵ These could be purchased or might be available through the university library, alumni office, or Treasurer's Office. The National Technical Information Service⁶ is also a valuable resource.

PROSPECTIVE LICENSEES

The review outlined for fields of application applies equally as well as a means of identifying prospective licensees. A business opportunity report can be especially helpful. Another useful tool is the F & S Index, a reference for business trade journals, available in any university library. Directories such as the Technology Transfer Directory of LES⁷ also will provide a laundry list of prospective licensees. Do not overlook the SBA⁸ which provides lists of small companies engaged in research and development with brief descriptions of their activities. Clearinghouses such as Rain Hill,⁹ PRI¹⁰ or GE Selected Ventures¹¹ are a useful means for identifying prospective licensees.

Once the evaluator has developed his/her list, he/she should obtain annual reports from the companies which will often send 10K's¹² upon request. 10K reports can also be obtained for a small fee from those who advertise this service or by writing to the SEC.

You will be surprised by the amount of information the evaluator can learn about a company just from these two documents. Another useful marketing tool is the company wish list; ask for it. Probably the most effective technique is development of personal contacts through organizations such as LES, and technology exchanges such as those sponsored by Dr. Dvorkovitz & Associates.¹³ Assimilation of all of the above material should enable the evaluator to identify the most promising candidates for the technology.

MARKET SIZE

In addition to the material used to identify fields of application and prospective licensees, business opportunity reports can also be very useful in assessing size of market and projected growth. Licensing personnel

usually follow the development of a particular field quite closely. For example, if the field is pesticides, a licensing executive for a company such as Cyanamid could quickly tell you who is developing what, future trends, potential market size, EPA regulations, and degree of licensing interest.

Legal Arrangements

The evaluator should now be in a position to act on the disclosure: to respond negatively; or to conduct a patent search; or to seek patent protection by filing a patent application; or to disclose in confidence to a prospective licensee; or to disclose the what of the invention to ascertain degree of interest; or to telephone licensing specialists from the selected list of potential licensees to ascertain degree of interest; or to do several of the above.

Although a patent portfolio can be costly, there are many reasons for recommending early filing of a patent application where the evaluator has determined that the invention is marketable. In particular, the disclosure process is simplified and the response time of the prospective licensee, which typically is months as opposed to weeks, will not jeopardize the inventor's first to invent position. The evaluator must recognize that the licensed invention will pay for those that are not; and that the successful invention cannot be pre-terminated.

Assume that the evaluator has taken steps to obtain patent protection for the invention and has prepared a list of six to ten companies previously identified. Care should be taken to send the application (sans claims) on a nonconfidential basis to the appropriate individual within the company. If the company is small or the evaluator cannot identify a person responsible for licensing in, the information should be sent to the president. Obviously, determination of the appropriate individual is a learning process.

If the prospective licensee is interested in learning more about the development, what sort of legal arrangement should you prepare? The nature of the invention and, in particular, the stage of its development will require a strategy tailored to each invention. For example, if the invention will require a long-term effort (e.g. a new contraceptive agent), and experimentation, while promising, has been quite limited and performed only on rats, it is vital to seek industrial support for the invention as early as possible to continue and to broaden the experiments. In this situation, government support is usually not available. The legal arrangements typically would entail a research agreement that provides the company with a right of first refusal to any inventions developed under the agreement; a time-limited exclusive license of X years;

and an understanding that royalties will be determined on a mutually agreeable basis.

Joint Ownership

All patent rights will vest in the university except with respect to inventions developed by the company solely or jointly. If a joint invention, the rights of the parties must be spelled out; e.g. the rights jointly-owned, with the university having the sole right to license others.

Usually the company will also enter into a separate consulting agreement with the inventor to obtain his/her services. The evaluator should review any consulting arrangement to ensure that rights of the university or of the U.S. government are protected in the event that the inventor conceives an invention in the field covered by the consulting agreement which is also related to work performed by the inventor at the university under government sponsorship.

Other arrangements such as a straight license will be predicated upon the nature of the invention. Even in this case, however, the inventor is essential to the negotiation of a license to enable the university to respond to questions raised by the technical evaluators of the prospective licensee and, if desirable, to make a presentation to them.

In any evaluation of technical disclosures from university investigators, the evaluator must begin and end with the inventor(s) if there is to be a successful licensing arrangement.

NOTES

1. Udell, G.G., Baker, K.G., and O'Neill, N.F., 1977. *Guide to Invention and Innovation Evaluation*. Experimental Center for the Advancement of Invention and Innovation, College of Business Administration, University of Oregon, 86pp.
2. New England Research Application Center, Mansfield Professional Park, Storrs, CT 06268.
- 2a. Pergamon International Information Corporation, 1340 Old Chain Bridge Road, McLean, VA. 22101
3. Business Communication Company, Inc., PO Box 2070C, 9 Viaduct Road, Stamford, CT 06906.
4. Frost & Sullivan, Inc., 106 Fulton St., New York, N.Y. 10038.
5. Kline Industrial Marketing Guide, Charles H. Kline & Co., Inc., 330 Passaic Ave., Fairfield, N.J. 07006.
6. U.S. Department of Commerce, National Technical Information Service, Springfield, VA 22161.
7. Licensing Executive Society, Inc. U.S.A./Canada, PO Box 1333, Stamford, CT 06904.
8. Small Business Administration, regional office, attention to the Technology Assistance Office.
9. Rain Hill Group, Inc., 80 Wall St., New York, N.Y. 10005.
10. Product Resources International, Inc., 90 Park Ave. N.Y., N.Y. 10016.
11. GE Selected Business Ventures, General Electric Co., 120 Erie Blvd., Schenectady, N.Y. 12305.
12. Form 10K, Annual Report required to be submitted to the Securities and Exchange Commission, Washington, D.C. 20549, by publicly-held companies.
13. Dr. Dvorkovitz & Associates, PO Box 1748, Ormand Beach, FL 32074.