

Guidelines For Marketing Technology

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Rules for lowering frustration level of successful licensing in or licensing out

It can be said without fear of contradiction that unless a trademark is used in commerce, it lacks intrinsic value. Similarly, the intrinsic value of a patent tends to be derived from its being put in the marketplace. It follows that anyone with an economic interest in new technology has a stake in its commercialization — including professionals involved only peripherally with technology marketing, since as disciplines in divorce to the sciences, law and business.

Technology marketing is contrast to product marketing, is a somewhat uncharted sea. It is the objective of this article to establish a number of guidelines for successful technology marketing. These rules are based on my personal experiences as well as those of other licensing specialists, developed during 25 years of toil in the vineyards of technology transfer. These observations will undoubtedly address a topic concerning anyone involved directly or indirectly in the licensing process.

THE TANGIBILITY RULE

A truism has it that a tangible is simpler to market than an intangible property. A personal computer, for example, is equally easier to sell than a life insurance policy. This principle also applies to technology marketing, requiring licensor's definition of what constitutes a tangible as opposed to an intangible item. The tangibility of a technology is determined by its stage of development. Other things being equal, a paper patent is at the bottom of the tangibility scale. Fully developed products or processes in production, are at the top. If the

licensor can develop a product to the laboratory, forward model, or prototype stage, and produce test results as evidence of its satisfactory performance, its technology will tend to be more marketable than a concept disseminated only on paper. Technicians enhance the tangibility of technology in the lab test stage; test results should be reinterpreted to show the viability of the manufacturing process when scaled up in size, production volume or other aspect reflecting on its industrial potential.

THE INDEPENDENT VERIFICATION RULE

It is important to have tests conducted or confirmed by an independent agency. Results produced by inventors or licensing licensees tend to be notoriously unreliable. This may be ascribed to bias rather than deliberate dishonesty on the part of inventors. Having patented an invention, like other patents they tend to lack objectivity when judging their babies.

In a recent licensing-out assignment concerning a diamond-studded saw for cutting granite, marble and other stone, our company's client, the licensor, is claiming its operational product service life of 30 hours. We have no reason to doubt the veracity of this claim, but pending its verification, by test results from an independent testing organization we do not feel justified investing the time and effort to market the technology. It is a foregone conclusion that potential licensees will require independent corroboration of the licensor's claims. Promoting the license without independent test results means putting in doubt our credibility as well as that of our client.

THE NEED FULFILLMENT RULE

No matter how obvious the need, no final rate of technology marketing may appear. It is frequently disregarded by licensors. The rule states that a product to be marketable must fulfill a need.

An example is the case history of a neonatal diarrhea drug our company was commissioned to license in the U.S. by a European pharmaceutical house. The product is marketed with considerable success in a number of developing countries. As in all licensing-out assignments, after acquiring ourselves with the technology, we spent a few hours networking among manufacturers in the appropriate industry — in this case the pharmaceutical industry.

We learned that neonatal diarrhea is not a problem in America. We advised our client to abort its U.S. licensing efforts, undoubtedly saving considerable unwarrented expense.

Another overseas client, a national oil company, asked us to commercialize a heated diesel oil filter intended for cold weather starting of truck engines. Our research determined that all companies in North America supply winter grades of diesel oil during the cold seasons. Filter elements that perform best are redundant.

Yet another example is the invention the U.S. Postal Service recently withdrew from patent office files. It was an envelope-addressing vending machine for which there was little demand.

An innovative product need not meet an existing demand. It may create a demand. A classic example is Kleenex tissue. Determining

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whether a technology meets an existing demand requires intensive studies of the appropriate industry. Establishing whether a new technology can create a demand requires comprehensive marketing research. As evidenced by the numerous new products launched and subsequently withdrawn, marketing research frequently leads to conclusions that prove fallible. It tends to be safer on the whole, for licensees to test a proven product need.

THE ECONOMIC BENEFIT RULE

The most important single attribute making technology marketable, without a doubt, is an inventor's economic viability. The \$200 licensee and \$1,000 licensee could not comprehend, unless it can be demonstrated that an invention is economically advantageous, it will be almost certain at the potential licensee's office.

The history of licensing is replete with cases in which companies committed to substantial up-front fees and annual minimum royalties for technologies offered in a black box, only to discover that the products whose manufacturing details were kept under wraps lacked economic viability. Companies intending to bid on a license for technology in a black box or, as is generally the case, in a cut-and-dry production area, should make any licensing offer contingent on competitive production costs. The other side of the coin is that the would-be licensee of black-box technology should be prepared to document economic benefits of his production process. Keeping production costs secret fails to meet the most fundamental requirement in licensing out a process.

The rate that economies in the governing jurisdiction in licensing holds over in the face of an inventor's market technological opportunity. Apart from a few isolated instances in the defense sector, the only modification of this rule is that quantifiable savings by the end user of a superior product may justify costs higher than those of comparable existing products.

THE TECHNOLOGICAL PERFECTION RULE

The cases that production economies outweigh the technological merits of an invention in determining its marketability should not, however, lead to the inference that perfection is not required in technology offered for licensing. Viable licensees frequently believe that an insufficiently developed concept is nevertheless marketable because potential licensees expect to be in the field of the invention will purchase it on an "as-is" basis. This line of reasoning is frequently embraced by manufacturers with special technology that they do not want to develop fully because of budgetary constraints.

Our company assisted an effort to license a sophisticated rotary piston engine covered by some 120 international patents. The engine had two problems our client had not solved, believing that potential licensees would take these defects in stride. The system's sealing mechanism was insufficient. And torque on the engine shaft was excessive. Despite our client's hope that engine and compressor manufacturers with specialized knowledge in engine engineering could fix the product's defects, they failed to license it.

Another client, a start-up company, held a patent on bending optical fibers at right angles without signal distortion or attenuation. The invention, had it worked, would have made it possible to manufacture correction fitting tight contacts, as in aircraft. When, during demonstrations, the test rig did not produce those right-angle bends in optical fibers, the failure was blamed variously on fiber quality, faulty bending elements in the bend machine, flawed fiber coating methods, etc. None of the specialized-correction manufacturers who examined the invention bid for a license.

There is a way to possibly solve that type of problem — a joint-development agreement between the seller and purchaser, rather than a license. Forming such a strategic alliance, however, makes inevitable further expenditures toward the development of the invention by the

company owning it. It also requires a somewhat different marketing approach.

THE MARKETING KNOWLEDGE RULE

The next rule points out a fundamental difference in marketing products versus technology. Potential purchasers should know their product inside out, backward and forward. Selling a personal computer or an insurance policy requires technical knowledge on the part of the seller. However, technology marketing does not require a thorough technical knowledge of the end product. Admittedly, a licensee should be knowledgeable about licensing law and procedures, including the negotiating process, but not, necessarily, everything the product to be licensed. By and large, the most know-how is present in the licensee data provided by technical specialists. An in-depth understanding of an inventor's technical intricacies will tend to be a hindrance to the licensing effort. Technology is marketed directly to generalists, not technical specialists.

An innovative concept is evaluated in the first place on the basis of product applications, benefits, markets, sales potential, competitive advantages, production costs, production machinery, distribution, after-sales service, environmental and regulatory compliance, shelf and service life, magnitude and return on investment and so on. In most cases the grasp of these market and economic factors requires technical judgment. Inadequate technical specialists on both sides, while essential, is auxiliary in the main technology marketing thrust.

THE NEED-FOCUSING RULE

Effortwork promulgated at each step of your marketing effort should be planned to coincide with the recipient's need to know at the particular point he has reached on the learning curve applicable to the technology. Ideally, you may wish to send just nothing more than a copy of the patent with a summary as concise as one page. This sum-

may should be both economic and technical benefits of the product or process and describe the product's properties and functional utility.

Very second meetings may consist of technical data sheets, depending on the nature of the technology. At that stage you will probably wish your prospect to enter into a confidentiality agreement so that you may answer specific questions relating to both technological and commercial aspects of the intellectual property.

A secrecy agreement covering know-how should, incidentally, be of sufficient duration — preferably recurring, valid "until the information becomes public knowledge through no fault of the recipient."

Especially, *why* does not understand why we distribute information sparingly to targeted licensees. First, we avoid wasting material that is overly hypothetical; it is important the chances of it being read and understood. Technical details, rather than being set out in narrative form, are tabulated to be easily followed.

To a prospect with a specific end use in mind we do not describe product advantages targeting across a genus of applications. These may be mentioned only in passing.

We avoid analyzing the market for the end product to target licensees likely to be much more informed about this than we or our client.

We disclose information gradually, so as to match the recipient's gradual progress on the learning curve. This methodology also avoids later meetings that duplicate information previously provided.

THE ACE-IN-THE-HOLE RULE

A corollary to the need-to-know rule is the need-not-to-know rule. Licensees may wish to build back a key piece of technical information on the product or process to be licensed, even if this detail is not in jeopardy of being misappropriated by the recipient. This ace-in-the-hole principle is based on the psychological premise that complete knowledge before the signing of a license tends to sharpen a would-be licensee's perception of an inven-

THE CONFIDENTIALITY RULE

An aspiring licensee sometimes objects to signing a confidentiality disclosure waiver from a firm that requires a waiver before accepting submissions from licensees for a preliminary review. The terms of a waiver should fit the situation.

With a strong patent position and no area of proprietary know-how of which the aspirant company is made aware, waivers merely stating the recipient's statutory misappropriation obligations may be acceptable.

Declining the contents of a U.S. patent filed but not issued may require the recipient to commit himself to secrecy until the patent issues. Licensees should be guided by their patent counsel on what waivers are safe to execute.

The reason for corporations not wanting to receive confidential technology is based on their list of an investor using for misappropriation of his intellectual property. While claims of theft of non-patented data voluntarily submitted by an investor may not stand up in court, actions of this type are costly. Also, in the experience of inventor-computer, outside-submissions are not likely to produce worthwhile results so that they do not consider it prudent to risk evaluating them without iron-clad protection from being used as a result of accepting them.

Finally, the licensor should propose a secrecy agreement stipulating the aspirant company will concede his (the submitter's) rights in his technology unless it can demonstrate this was previously in its (the recipient's) possession or was provided by an independent third party. Such an agreement permits the submitter to disclose marketing or other non-patented details.

In our experience, such agreements can be negotiated with many companies other than those with an inflexible policy concerning outside submissions. Whether companies that discourage outside submissions pay a price for not receiving information prior to a patent issue and non-patented data helpful in their technology evaluation pro-

cess, I believe they probably lose more than they would gain under a more liberal policy on confidentiality agreements. This is true especially when the submitter is another competitor, rather than an individual inventor.

THE COPYRIGHT NOTICE RULE

It does not hurt to put a copyright notice on technical material intended for technical or potential licensees. Funding from a marketing prospect is conveyed to the recipient that the licensor means to safeguard his ownership rights in the contents of the document and, by extension, the technology it describes.

THE NETWORKING RULE

Let us discuss a tool that is basic to marketing and pursuing technology networking. Unless your company has an established clinic with the licensee or licensor, you will have to beat the bushes for potential partners. You are unlikely to know all firms of the appropriate size to focus on, so you will need to research to determine your target.

Your initial research will be industry directories, Thomas Register, D&B's Million Dollar Directory, government resources, trade associations, etc. These sources will provide the names of companies and individuals familiar with the structure of the target industry. They in turn may refer you to other sources.

Especially, you have to dig several levels deeper to reach potential licensees. Networking, then, is the process of obtaining referrals from one party to others until you identify the individuals who are likely targets in your technology commercialization effort. It is the prelude to the marketing effort proper.

If this appears obvious, what is frequently not recognized by would-be licensees is that the networking process requires managerial skills not likely to be possessed by the lay person on the company sales staff. If no in-house managerial talent is not available for this task, it might be

scuttlebutt considering employing an independent licensing consultant as a skilled networking resource.

THE FOLLOW-UP RULE

Licensing perhaps more than any other commercial activity requires constant follow-up with the other party. Apart from persistence, the planning of a specific agenda during each stage of the follow-up is essential.

At each step, the marketer should agree with the other party on action items and a completion date so that follow-up calls better than being regarded as a nuisance by either side ensure the importance they deserve.

Moreover, the follow-up process should be a two-way street with constant feedback from the target company and further research by the licensor/in lic. One of our company's recent projects involved aging tests by the intended licensee on samples of the licensable product. Following up under these conditions will try the patience of a saint. Fortunately, not all projects are as drawn out.

THE TECHNOLOGY ACQUISITION RULE

Unlimited submissions may yield the recipient company slim pickings by way of usable new-

product technology. Manufacturers seeking new products will tend to benefit from an active technology search. A longer search may also include searching acquisition consultants owning desirable technology.

In this sourcing process most of the success of licensing-out will apply, with a most essential additional rule coming into play: The acquiring party should purchase technology with the marketing of the end product — though not necessarily with its manufacture. Production can be subcontracted while marketing orientation should reside within the core company.

Examples are legion of acquisitions during the 1970s that led to divestitures during the 1980s because of the inability of the parent company to understand and integrate with its corporate policies the marketing requirements of the firms swallowed up by them.

Technology will tend to be suitable if it fits the licensor or licup's marketing orientation though not necessarily his previous manufacturing expertise.

Examples while our experience include a waste-chopping pump that was licensed to a farm-into manufacturer. Pump manufacturers, despite their manufacturing skills, did not possess the necessary marketing experience.

A major project involved our marketing a hydrogen client in the in-

duction by America of the Liberator, which states kidney stones noninvasively. We failed to identify a single North American manufacturer skilled in selling major medical equipment that combined diagnostic and therapeutic functions.

Accordingly, our client wisely decided not to license anyone in America. It established a company in the U.S. to import, market and service the product. (The Liberator has since become the standard kidney stone treatment method in the United States and Canada.)

An additional example is that of a leading manufacturer of textiles that went into and out of the manufacture of automatic treated hairnets. His marketing expertise was in bedspreads, while an electric hairnet has to be marketed as an appliance.

CONCLUSIONS

A director of licensing of a Fortune 500 company once told me that during his 12-year tenure he had not succeeded licensing-out a single item. While this may not typify the technology transfer success rate, it illustrates the difficulties of marketing intellectual property. This article, which summarizes successful marketing techniques in an eclectic field, is intended to contribute to making the task of licensing out of it somewhat less frustrating.