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Licensing the Pieces

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Daedelus, the great inventor, created wings of wax and 'licensed' his son Icarus to wear them so that both might escape the monstrous Minotaur. But when consulted on how to use them, he found his advice not to fly too close to the sun ignored, and Icarus was lost. In today's even more competitive world, licensing can open up growth opportunities for small business. In this chapter, we shall answer the who, what, why, when, where and how of licensing with some sage advice to be ignored at your peril.

LICENSING THE PIECES!

WHY SHOULD SMALL BUSINESS BE INTERESTED IN LICENSING?

Licensing is one of several options available to get our technology to market. Why should small businesses be involved in licensing? In a single word—profit! In this context, we should not necessarily equate profit with dollars. Businesses can "profit" in a number of ways.

To Make Money. License fees received from royalties, management assistance, and technical service produce income that can support in-house R&D. It is often faster (and safer) to generate income from new markets through transferring technology than it is from direct export sales.

To Sell Additional Raw Materials, Parts, Or Services. Sales to licensees often permit a manufacturer to tool up for longer production runs with consequent economies of scale. Not only does this add income to the top line, but it can increase the profit from the local market. We reduce the unit cost of production and increase our gross margins.

To Set Up Joint Ventures And Subsidiaries. Technology and intellectual property may be bartered for an equity position; the classic venture capital deal. This is our big chance for IBM to come in and buy us out (nice fantasy!). If they do, we reap return in dividends, tax savings, and management fees. Indirectly, we may acquire new people or may be able to develop the capabilities of our existing staff.

To Test Market A New Product Or Process. Regulatory approval in the U.S., for example, for many products (i.e., pharmaceuticals and building products) is costly and time consuming—several years and several million dollars. Licensing permits a quick evaluation in a foreign market without equity contribution. This cautious approach can ensure success not only in introducing a product in the local market, but also can justify overseas investment in a manufacturing venture. McDonalds, P&G, and others use a variation of this theme to test market new products in particular regions before going nationally.

To Swap Technology. As a producer in a specialized field, we may decide to pool resources with a foreign producer in a cross-licensing exchange arrangement. This agreement requires a two-way technical exchange to provide access to new products or to improve the quality and/or application of the existing product line. Research costs would be split and development/introduction of new products to market increased. Union Carbide announced an agreement of this type with a catalyst manufacturer in Japan to exploit a low-density polypropylene process similar to their successful Unipol polyethylene process. If you can't beat 'em, copy 'em!

To Fund R&D. A continuing research effort can often be underwritten by income received from licensing agreements. Either main-line or by-products may be spun off to increase cash flow. Even the U.S. government is getting into the act through transferring

technologies developed at federal laboratories to businesses. Closer to home, most universities are seeking to license campus inventions to keep research costs down. Gentech is a prime example (to exploit gene splicing technology). NASA is another example (Landsat for geological surveying).

To Sell A Company. Often the sale of the company requires transferring key technology to the new owner and continuing service to an existing market for a period of time after the sale. Because it may be cheaper in the long term to buy a smaller company and its key people outright, this transfer is a preferred way to achieve diversification.

To Commercialize New Products. How often does a bright employee come up with a new product idea that is outside of the scope of the existing business? How many horror stories have we read lately about key employees leaving with the goodies and going into direct competition?

The potential of licensing is not fully appreciated by small business

The potential of licensing is not fully appreciated by small business. In these days of rising costs, declining markets, and rapid change, our ability and enthusiasm to engage in licensing can preserve our income, protect our competitive position, and ensure our survival. Licensing should be considered a basic technology management tool.

TECHNOLOGY LICENSING CAN BECOME LICENSE TO MAKE MONEY.

We just looked at what's in it for the licensor, but what's in it for the licensee?

The licensee's position is often more complex than the licensor's, particularly for the small business threatened with obsolescence. Of course, this presumes the potential licensee is in touch with the marketplace. The current computer shakeout is reminiscent of the impact the transistor had on the valve makers in the audio industry. Technology can leap-frog its competition and history does repeat itself.

What other options are available to companies to develop or acquire new or improved products or processes? We can develop it within our own organization; buy the technology (and/or the company) outright; license the technology directly or through a joint venture plus license combination; copy the technology, infringe any applicable patents, and take the consequences; swap technology in a cross-license arrangement; or reverse engineer the technology with the help of an engineering contractor.

With so many options, why would we prefer to license our technology? In general, in setting up any business operation, a company wants to establish a protected position. Proven technology, patent rights, trademarks, access to technical assistance and improvements, and perhaps, even the option to duplicate existing manufacturing facilities all offer protection. Taking a license could be classified as "insurance." Consider these factors when acquiring a license:

- Substantial savings in time and money versus the alternative of developing a similar product or process in-house.

- Costs amortized over a number of years as compared to year-to-year operation expense. There is a significant reduction in financial risk if the process or product is already commercialized.

- Responsibility of the licensor rather than licensee for policing and enforcing the intellectual property rights. The licensor bears the cost.

- Selling a license may be the only way the licensor wants to do business.

- Relationship with a more successful (larger) firm, even a foreign firm, from whom future technology may become available.

Given these choices, we may decide to acquire technology through licensing. When should we act? What factors might incite us to act now instead of later? The basic gut issues often revolve around self-preservation and gross margin. Let's consider some stimuli.

Self-Preservation. If we have a profitable product or process that studies show will soon become obsolete or unprofitable, converting to a new product or expanding our portfolio of products via purchased technology may well be a bargain. We may save time, money, and R&D costs, particularly if the new portfolio can be integrated directly into the existing sales and distribution network. We may save our business if we obtain "first user rights" to a new and better process before it reaches the hands of our competitors.

Improved Manufacturing Economics. In many instances, a third party's improvements may supplement research efforts to improve technology and increase gross margin by reducing production costs (raw material usage, labor content, and/or energy consumption).

Duplicate Plants. As a cautious licensee faced with an expansion in a profitable product line, we may install a number of parallel units of the size of the original manufacturing plant rather than be exposed to any scale-up risk.

Technology Packages. As a refiner or chemical plant operator, for example, we are required to integrate a number of operations to process the initial raw feedstock into various products. Separate licenses may be required for the separation and purification stages to augment reaction technology.

Continuing R&D Access. We may require continuing access to technically trained people in special fields outside of the normal sphere of operations. We can access such service as needed at lower cost. Then, too, we may wish to provide for a continuing technical exchange with a partner to promote a cross-fertilization of ideas.

Trademark Rights. Sales and marketing efforts of imported products, which we have the right to manufacture and sell, will be enhanced if they are promoted under a well-recognized logo, brand name, and trademark umbrella.

For the sake of argument, let's assume we identified potential licensors and commenced a dialogue. We reached a prenegotiation stage where the licensor is about to send us information and we're wondering what steps to take.

Review any information on a nonconfidential basis where possible, or if entering into any obligation of confidence, limit such obligations in time and to specific application. We must not compromise in-house efforts, but neither should we be blinded by the research director's efforts to justify his position at the expense of outside technology.

Study the technology in detail to ensure it can be readily integrated into the existing operations and carefully check the resources, reputation, and credentials of the licensor.

Study the technology in detail to ensure it can be readily integrated into the existing operations and carefully check the resources, reputation, and credentials of the licensor. What is the strength of the organization behind the "front man" who is leading the dialogue? Are we pretty sure when he says "we can do it" that he has the resources and authority to back it up?

Define clearly what we expect to license and the concurrent investment in license, plant, and operating fees. Is the licensor seeking to recover additional income from technical service fees? Do we need any special machinery? What spare parts are required? What is the turn-down production ratio and typical on-stream reliability?

Weigh the merits of negotiating an option to license the technology while requiring the licensor not to negotiate with another party for a period of time. Be warned—this is tough to get.

Check that the licensor will be responsible for protecting his rights if patents are involved; sometimes potential licensees are expected to pay the cost of maintaining patents.

Request the licensor to give pertinent details of any foreign patent filings and/or publications abroad. With whom has the licensor dealt with previously; what rights were conferred; what type of agreements? Can we visit his or another licensee's facility to check that the manufacturing operation is reliable?

Assemble our own licensing team—technical, commercial, and negotiation—and try to forecast what the licensor's position will be. If the company does not have a licensing department, consider hiring a licensing consultant for assistance.

DON'T PLAY LICENSING GAME WITHOUT A PLAN

Now that we've covered the waterfront on using licensing as a basic management tool, we will move along to a corporate policy statement—the game plan. This will help us decide how and when to play the licensing game.

Let's return to SmallBiz, Inc. Our policy statement requires that we define those circumstances under which SmallBiz is prepared to license technology as either a vendor or buyer and state the reasons, if any, why licensing may be inconsistent with corporate goals. Let's go back for another look at our broad policy statement.

The Policy Statement. "The licensing activities of SmallBiz are sensitive and of great potential importance. They will be carried out so as to assist the corporation in reaching its strategic and operating objectives and in such a manner as will preserve the good reputation of SmallBiz in the marketplace."

This is a long-winded way of saying that we will engage in licensing to enhance our strategic and financial positions and our reputation. Now we must examine the details of SmallBiz's policy as both a licensor and licensee. SmallBiz must determine exactly who, when, why, and where it will license technology.

Smallbiz As Licensor. SmallBiz normally will license its major commercial technology and/or patents only under certain circumstances: to those companies in which it has a significant equity participation and a strong management voice (affiliates); as a tool to obtain such participation and voice upon restructuring or upon establishing of a company; and in exchange for technology and patents of comparable value (an exception to this policy will be considered in those countries that do not permit private ownership of manufacturing facilities).

SmallBiz is prepared to license out technology and/or patents other than those mentioned for a reasonable return or to further its strategic interests. SmallBiz would look with favor upon the return being in the form of technology and/or patents that can be put into commercial use by SmallBiz, but is prepared to accept royalties and money payments.

SmallBiz is not normally prepared to license its major commercial technology and patents to other than affiliated companies in the U.S., its primary operating territory. As an exception, SmallBiz may grant licenses where it receives an exchange of technology and patents of comparable value, which grow its core business.

SmallBiz is prepared to receive payment for licenses in equity, cash down payments, running royalties, or any combination thereof. SmallBiz prefers that at least a part of the payment be a running royalty to provide a continuing income to SmallBiz. Such income contributes to funding the continuing expense of SmallBiz research whether in-house or external.

SmallBiz will provide continuing assistance to companies to whom it has previously licensed major commercial technology for a reasonable running royalty of a magnitude sufficient to make a contribution to the cost of SmallBiz research.

SmallBiz prefers that any licensee of major commercial technology grant back to SmallBiz rights to any improvements that the licensee may make in the technology with the right for SmallBiz in turn to pass on such improvements to other SmallBiz affiliates and licensees.

SmallBiz will license unproven technology (technology not in commercial use) only where there is an unusually high probability of commercial success and when the licensee clearly understands the state of development of the technology.

Within these guidelines, SmallBiz will actively seek to license its technology and patents throughout the world, but only where the anticipated payment is large enough to show a reasonable strategic and financial return for the effort.

SmallBiz will do research work primarily to develop technology for commercial use by SmallBiz and will not normally do research work primarily for licensing to third parties.

SmallBiz will not normally give exclusive licenses on a long-term basis.

In formulating this basic outline, we have considered many options that would be suitable for a large multinational corporation. The policy should be written to reflect the company situation and size. A note of caution: do not forget the zero option—not to license out at all.

In this case, the company decided not to exercise the zero option, so let's examine a broad brush policy for SmallBiz as licensee.

Smallbiz As Licensee. SmallBiz aggressively seeks to take licenses from third parties to acquire commercial technology and/or patent rights new to SmallBiz.

SmallBiz will endeavor, when acquiring licenses, to obtain the rights to sublicense its affiliated companies throughout the world.

SmallBiz will develop its own technology rather than license same if the overall costs of licensing, including the restrictions imposed by the licensor concerning how SmallBiz and its affiliates will use the licensed technology, are uneconomic.

SmallBiz is normally reluctant to license technology that has not been used commercially and will do so only when the potential reward fully justifies the risk.

SmallBiz will establish relationships with other companies in the field throughout the world to increase the likelihood that these companies will be prepared to grant licenses to SmallBiz.

SmallBiz normally will license technology that has been highly developed commercially and is available from several sources at a competitive price rather than attempting to develop such technology itself.

Hopefully, this broad policy outline will help and will encourage us to sit down and write a corporate licensing policy. Armed with our play book, we'll be ready to punt, pass, or run an option on fourth down when the coach puts us in the corporate game.

EACH LICENSING AGREEMENT HAS STANDARD TERMS

The good news—we are excited about the possibilities available through licensing. The not too bad news—enter the lawyer from stage left to examine typical terms and conditions found in a license agreement.

Warning: each license agreement is unique even though it may be the sixth in a series conferring the same patent rights to different licensees. Each corporation's needs are very different! It is unlikely that any single agreement reviewed will cover all the terms discussed. Remember that the art of negotiation requires that we give a little to take a little, so expect to bargain. As business people, we must clearly define priorities to decide which items we can give up if necessary, and which ones are critical to preserve.

The art of negotiation requires us to bargain with our critical issues defined.

The following outline can be used as a checklist to assist business decisions by providing possible alternatives, for reviewing draft agreements prior to execution, and for discussing terms if an attorney drafts the agreement. This list may seem a bit exhaustive, but bear in mind that it doesn't come close to covering all the possible variations in the broad field of licensing.

Recitals—Who Is Doing The Deal And When. Who are the parties to the agreement and what are their addresses (to identify them)? If they are corporations, are subsidiaries included? What is the effective date of the agreement? Is it conditional upon governmental approval? Does it include the period of past infringement, or is it effective on signing? Does it supersede or cross-reference other agreements?

Warranties And Whereas Clauses—Why Execute This Deal. These are general statements identifying what the licensor represents is being sold and descriptions of the business purpose for the licensee in acquiring the license. Is the licensor warranting the validity of any patents?

Definitions—Let's Take Care Of Any Misunderstandings. The licensee wants to clarify the licensed rights as broadly as possible to ensure rapid commercialization. Key

words and phrases, such as patents, know-how, field, affiliates and subsidiaries, and improvements, are defined.

Grant Provisions—What You Are Buying/Selling. What rights is the licensor selling? Do they include rights to manufacture, sell, and use the product under patent, know-how, and trademark rights? Is the license to be exclusive or nonexclusive? Does the licensee have/confer the right to grant sublicenses? Are the rights particular to specific territories? Are the rights for a defined period or for unlimited future use? Is there a release for past infringement?

Technical Assistance—Is The Visiting Team Friendly? When the license includes technology and know-how, what assistance is required to set up the operation? Who prepares the technical manuals, process designs, and blueprints? Who trains the plant operators, where, and at what cost? Is the technical assistance provided as part of an initial payment or under continuing service at a per diem cost? For what period is the assistance to be continued?

Payments And Royalties—How Much Protection? What does the "compensation package" include? Does the payment consist of one single lump sum, or is there one or more initial down payments and/or a continuing royalty on the goods produced and/or used? Does the continuing royalty obligation include minimum and maximum annual fees? Are they capacity dependent? Are the fees tied to a future escalator such as the U.S. Government's published Producer Price Index? Are option payments creditable against future royalties? Does the licensee want to pay "in kind"–with a product?

Other Payment Considerations—Watch The Gotchas! Does the payment include stock in a joint venture or affiliate? Are there cross-licensing rights and/or a technology swap and, if so, under what conditions? Is this settling a litigation or an interference action? Will the costs for advertising and patent maintenance be shared?

Special Provisions–The Lawyer Earns His Fees. Set quality standards as a condition of conferring trademark rights. Who has the right to the plant equipment and the residual finished product upon termination? Is there an option to buy a percentage of the licensee's production? Under what terms? Set limits on licensing to/from others in the same "field" bearing in mind antitrust considerations. Use due diligence and "most favored nation" clauses to cancel with notice. Use the "golden rule" clause permitting renegotiation at any future time to cure any inequalities. If licensing out from the U.S., include a provision that the license is subject to U.S. Export Control Laws, including cancellation.

Grant Backs—Protecting Your Rear! A grant back is simply the giving of rights to future improvements, patentable or unpatentable, arising from the licensee's use of the licensed technology. This is a red flag antitrust area! Who will have the rights to future improvements; indeed, will there be any? Does the licensor require these grant backs to protect future business? Does the licensor want such rights for its own manufacturing operation or to extend its licensing program?

Financial Reporting—Keeping Score. What records should be kept, and who may inspect them? When should the royalties be paid and reported—monthly, quarterly, annually? If payments are subject to withholding taxes, who pays? Are they creditable against U.S. taxes? What currency will be used, and how will the exchange rates be set?

Patent Validity—Dirty Pool? Can the licensee contest patent validity? The law varies between countries. If governing law limits the scope of the patent and/or its validity, the licensee benefits. Some jurisdictions hold that it is illegal to obtain continuing royalties under invalidated patents. Is the grant of rights jointly or separately under patent and know-how? When the license grant is under both patent and know-how, if the patent is held to be invalid, the license agreement may still be enforceable.

Trademark Provisions—Using The Family Name. Does the licensor have a foreign mark, or is an application pending? How is the mark identified and displayed? What is the territory and field of use? Who will maintain registration? Who will police and enforce the trademark? Does the licensee agree not to use any confusingly similar trademarks? Does the licensee agree, upon termination, to cease use of trademark rights?

Third Party Infringement—The double-cross. What actions will be taken if a third party infringes the licensed patents? Who will bring suit, who will instruct the attorneys, and who pays? Who has the right to settle infringement actions and who will share in any recovery? If no suit is filed or the infringer prevails, will the licensee continue to pay royalty or will the license be terminated?

Licensee Infringement Suits—The Good Buddy. If the licensee is sued for patent or trademark infringement, who will defend and pay for the suit defense? Will the licensor support the defense with evidence and witnesses? If the plaintiff prevails, will the license, and its obligations, be terminated?

Agreement Term—When The Marriage Breaks Up! Is the period of agreement for the life of the patent or for a fixed term? Is year-to-year renewal automatic, or is it conditional upon performance factors including bankruptcy? Can the license become nonexclusive? Are there continuing obligations that survive termination? Must the licensee cease operation upon termination?

Secrecy—Not Exposing Yourself! What are the terms of confidentiality and the "standard exceptions"—previously known information, public information and, later, bona fide third party disclosures? Is the information disclosed solely to practice the licensed technology and not for any other use. Is disclosure permitted to subsidiaries and affiliates? How is dissemination of information controlled? Does the licensee have employee secrecy agreements? If so, are the terms no less favorable than those required under the license?

Force Majeure—The Catch-All. During the term of the agreement, external factors may change to such an extent as to make the performance of the agreement as

contemplated impossible. What events should be included, if any (acts of God, strikes, government regulations)?

Miscellaneous ("Boiler Plate")—The Lawyer Bites Twice. What law and language will govern the agreement? May the licensed rights be assigned and/or used as collateral to secure capital? How will disputes be settled that may arise, by arbitration or legal action? How and where will notices be sent?

Signatures—Questioning Authority. Does the other party who will execute the agreement indeed have the authority to commit and bind his company?

Schedules—You've Got To Stick It Somewhere. For convenience reasons, schedules covering the list of patents, trademarks, equipment, etc., may be appended to the agreement. Where an option is being exercised, the license agreement itself is the appendix.

Armed with this broad brush checklist and defined objectives on what we want/are willing to give up, we are ready to enter the negotiating arena. One final question remains: how do we determine whether or not we got a good deal? Simple answer: when we leave the negotiating table believing we gave a little more than we should have and we notice that our counterpart has a similar strained expression on his/her face, it's likely the deal is a good one.

LICENSING: THE FACTS OF LIFE

Licensing means different things to different people. To a lawyer, licensing may be law; to a patent specialist, patents; to a business executive, business; and to an inventor, profit—perhaps! High-tech and emerging growth industries are much in vogue today whether in the stock market or in the economic development keenly sought in most states. For all our wisdom and brilliance, we as individuals and corporations often overlook the basic tenet of commerce—businesses exist to make money! To develop or exploit technology is not the primary objective of most businesses. But licensing, as a basic management tool, can be advantageous to small businesses seeking new markets with minimum commitment and lowered risk.

Licensing is not a panacea. It is not a sugar pill for small business! For the unwary, there are some hard lessons to be learned. In view of these hard lessons, I would like to share the 10 licensing facts of life gathered from my associates, my own experience, and other sources.

The commercialization of technology requires significantly more time, effort, and money than that expended in actual invention—there is more technology than money to commercialize it! The world doesn't beat a path to the door of the inventor of the better mouse trap. We can't make money on widgets if we can't sell them. The "press the flesh" approach has not been repealed.

A patent is only as strong as the amount of money available to defend it. Company size is often reflected in the degree of disclosure and detail filed in patents. Why? Patent law simply requires that the degree of disclosure be such that one versed in the art can duplicate the invention. The larger company doesn't have to fence off its territory by describing its technology in as much detail as the small business. Patents, then, are the first line of defense in establishing proprietary turf so that business interests can be preserved.

The major share of intellectual property created by industrial companies is used in the companies themselves to establish and protect a competitive position, rather than for licensing out—3M is a good example. Market share and position is the name of the game. Large companies, such as Dow, DuPont, and Motorola, also license "in" to increase their turf.

The greatest percentage of licensing takes place in the U.S. and EC countries and between companies residing there. Switzerland and Sweden are important countries in this field. Japan, for all the publicity it receives, is just starting to license technology out.

It is comparatively easy for a licensor seeking to license (sell) a product or process to prepare a list of potential licensees (buyers) and make a formal approach. Who makes what and where is published in many magazines and trade journals such as *Thomas Register*.

It is much more difficult for a licensee wishing to license (buy) a product or process to identify licensors (sellers). Businesses neither advertise their problems nor their advantages for competitors to see. In those cases where publicity has occurred and everybody has read it or seen it, we've probably already missed the boat.

An invention or technology that is already proven in terms of production and markets is relatively easy to license, especially overseas. Working plants confer credibility and significantly reduce risk. The majority of licensing situations are in this category, for example, a parent company may license a technology to a subsidiary company to make a specific product.

Beware when the prospective licensor is a private inventor or an R&D organization. They first have to identify companies that are willing to take the considerable risks involved in evaluating the technology and setting up initial manufacturing and marketing operations. Licensors in this category often suffer the frustration of approaching innumerable companies and investors and generally getting either a flat refusal or an offer they find unfavorable. The individual inventor is easy prey to so-called invention management companies. These companies typically charge an up-front fee to assist in the patenting and/or promotion of the idea.

Most major industrial companies have formal departments set up to look for new products with which to expand their businesses, maintain employment levels, and

increase plant utilization. They are looking for products combining the following characteristics:

- Preferably proven technology and markets!

- At least ready for manufacture and marketing. (Some companies search for "conceptions" that they then hope their own R&D, or a partner, can reduce to commercial practice.)

- Compatible with their own manufacturing and marketing activity.

- Reasonably favorable business terms so that the risk is minimized. (It is difficult to judge how favorable the terms are until an in-depth study is made.)

Many companies today employ consultants to monitor the licensing market on their behalf, since such business opportunities are, in fact, few and far between. The consultant scrutinizes computerized databanks, business directories, trade shows, early-issue patent literature, and new product lists; numerous new business and trade journals; advertising of new business opportunities by government departments (including embassies) and other public agencies; "Business Opportunities" from established periodicals and papers such as the *Financial Times* and *The Wall Street Journal*; and technical columns in journals, annual reports of large companies, and similar desk research.

The consultant may approach the following sectors directly or through established licensing contacts: private industries and governmental entities, nationalized industries, and private sector R&D laboratories; merchant banks and other investment organizations; technology brokers, new idea scouts, and consultants; or universities, R&D firms, and other proven sources of new technologies and processes.

Regrettably, the nature of the human species predestines that we continue to repeat the mistakes of our predecessors—reinvent the wheel. However, if we temper our enthusiasm, swallow hard on bitter pills, and remember some of these lessons, we should be able to include licensing as a profitable tool in our management portfolio.

ROUTES VARY ON THE ROAD TO ROYALTIES

A fair royalty has been established when both parties leave the negotiating table slightly disappointed.

One of the most important and difficult issues to be resolved in licensing or buying technology is to figure a royalty or value to be placed on the patents, trademarks, know-how, and services to be transferred.

As licensors, most companies resort to the use of rules-of-thumb in figuring a suitable royalty rate. It is commonplace for royalty rates to be based on a rate equal to a prior rate for a similar license, a rate equal to a rate for a similar industry product, an established rate irrespective of product, a rate to yield a minimum fixed-dollar amount, or "whatever the traffic will bear" or "horse trading."

Keep squarely in mind that any licensee will become a business partner or vice versa. Each will share, equally or not, in the other's gain or loss.

If we price solely on the basis of horse-trading, we may end up with a royalty that is too high to leave the licensee a margin of profit, or worse, any financial incentive to exploit the licensed technology. Alternatively, we may end up with a rate that is too low to cover the minimum cost of writing the agreement, transferring the technology, and maintaining the license.

Setting royalties to yield a fixed return or at a single fixed rate is designed to encourage licensees to perform satisfactorily for licensors. Figuring royalties based on previous experience and/or set industry standards is, by far, the most common of the rules of thumb used to negotiate licensee fees for technology.

The following are typical product royalties, expressed as a percentage of sales:

General Consumer	1/2 to 4%
Specialty Consumer	4 to 10%
General Industrial	4 to 10%
Specialty Industrial	10 to 15%

Compare these rates with so-called industry standards, expressed on the same percentage of sales basis:

Chemical Industry	1 to 3%
Electronics Industry	2 to 5%
Industrial Industry	3 to 6%
Computer Programs	to 50%

The more significant the technology and the greater the protection and market potential, the greater the royalty.

What level of royalty should we expect to pay or receive for a product license? This is a little like asking what price a person can get for a house and its contents. The only possible answer is that it depends on the house and its contents, and on a great many other factors.

Fair royalties are determined generally by negotiation. This assumes we exempt ourselves from any rules-of-reasonableness that are sometimes imposed by foreign governments.

To successfully negotiate a reasonable royalty, we must enter into a license negotiation with some idea of the maximum and minimum royalty range that is attractive to both parties. We, as a licensor, may then propose a rate close to the maximum while knowing how far we can retreat before reaching a minimum profitable price. If we are the licensee, we, in turn, can make reasonable counter offers without risking a walkout or deadlock.

Are we sure we really want to grant/take the license? We'd better do our homework. What do we have to sell—patent rights, trademark rights, know-how, established reputation in the industry, research back-up? What do we wish to buy?

As a licensor, what are our prospective licensee's abilities to perform and to pay? What do we desire and expect? Can the licensee innovate? As a licensee, how will the licensor support us and get us established in business?

Keep squarely in mind that any licensee may become a business partner.

To answer these basic questions, consider the following related to the license, the product, and the markets we plan to serve:

- Is the license exclusive or nonexclusive? How long?
- What is the size of the market and market penetration?
- What is the investment required for manufacture?
- Does the market already exist or must it be created?
- How much will it cost to establish sales channels?
- What is the prospective return on investment?
- What are the nature and extent of competition to be expected?
- What is the market life for the licensed technology?
- What are the market characteristics—mass or specialty?

- What patent coverage is involved?
- Is the right to use a trademark included in the agreement?
- How "firm" and "secret" is the trade secret position?
- What kind of lead time will the license afford?
- Will the agreement include engineering or other data?
- What technical help, know-how, or show-how is provided?
- What would it cost to "reinvent the wheel"?
- Will we create a new market or reduce production costs?
- Are profit margins in the industry sufficiently high?
- What are the "going rates" for the product or industry?
- How do we wish to pay, or get paid?

To determine the minimum rate or break-even point at which the technology should be licensed, estimate and list all the costs involved in fulfilling the obligations of the proposed license for the period of the agreement. These costs should be discounted back to the present day values.

Next, try to estimate the maximum price a licensee could reasonably afford to pay and alternatives available to him or her. These may include licensing competitive technology, infringing on the patent and risking the consequences, designing around the patent, figuring the "added value" of the license, and deciding not to enter the business after all.

Some may argue that this quantitative approach may be quickly negated: irrational behavior by the licensee; rigid adherence to precedent and "industry" royalty rates; and difficulty of making the assessment.

In these cases, we as a licensor may be forced to accept a less than satisfactory agreement or end up with none at all. However, at the very least we will have an idea of how low/high we can go before accepting terms that will result in a loss.

A fair royalty has been established when both parties leave the negotiating table slightly disappointed: the licensor feeling that the royalty is not as high as it could be and the licensee feeling that royalty is more than it should be!