Royalty Rates Conform to 'Industry Norm'

BY PATRICK H. SULLIVAN*

Insights into practices in U.S. computer industry; survey finds most licenses conform to norm with regard to royalty rates

The licensing of technology has become an area of strong business interest for knowledge-based companies. Recent court decisions upholding the rights of innovators have led not only to reimbursements and back payment for patent infringements but to substantial damage awards as well. The financial importance of technology licensing has alerted business as well as technology managers in knowledge-based companies to the need for well-conceived and concisely articulated licensing policies that will contribute to the firm's bottom-line financial performance.

Simply stated, with more money at stake, firms are becoming more interested in strategies for developing licenses that support achievement of the firm's strategic objectives. To do so, licensing strategies must deal not only with developing alternative sources of profits (typically through the negotiation of successful royalty rate agreements) but also with improving the firm's strategic position in its marketplace.

Two aspects of licensing are mentioned throughout this paper. Out-licensing refers to the practice by firms owning the rights to a technology and legally making provision for other firms to have access to those rights through the mechanism of a license. In-licensing refers to the practice of obtaining access to the rights for a technology by procuring the rights from an owner.

In the past, the commercialization of technology, of which licensing is a major component, was usually accomplished by the CEO or the corporate attorney, working on instinct. There were few guidelines or norms, and success depended directly on the background and experience of the person directing the commercialization activity. As long as licensing held only limited importance to the firm, such a hit-or-miss approach was acceptable.

Today, however, the business environment for knowledge-based companies requires licensing as a fundamental component of the firm's basic strategy. This means that licensing strategies must deal with a broad range of interacting legal, business, and technology issues. To be sound those strategies must rest upon an understanding of a wide range of considerations, external as well as internal, and must interact with the firm's overall business, legal, and technology strategies.

Even though licensing has grown more important to the firm and the complexity of the licensing art has increased, there is no available body of work describing models of this complex activity or norms of its successful practice. This lack of information seemed to call for preliminary study to determine whether there is consistency (or a model) for successful licensing activity. This paper reports on the results of the preliminary work done to learn about the availability of licensing information as well as to explore the norms of licensing practice in one industry. It is intended as a precursor to more substantive research into this interesting and complex field of activity.

The Survey

A pilot study was devised to learn whether there is any consistency or standard of practice in licensing and royalty rate setting. The study's subsidiary objectives were to describe current practice and to identify focus areas for any subsequent detailed study.

It was decided that the study should focus on one industry, in order to minimize variance in the results due to variations in business practices across industries. The target chosen for the pilot study was the computer hardware industry. All information used came from publicly available sources (business newspapers, professional journals, SEC filings, and published court case results). To supplement information in the public domain, the author conducted informal interviews of executives in the computer hardware industry to learn their own views of both general and company-specific licensing practices.

As a first step, the author surveyed the relevant literature. Second, six loosely structured interviews were conducted to learn from practitioners how licensing and royalty rate setting are accomplished in the computer hardware industry. On completion of these two steps, the author detected some possible patterns, developed several hypotheses, and conducted six additional interviews to learn whether the hypotheses were consistent with behavior as observed by the interviewees.

FINDINGS ON STANCE

The findings from this investigation fall into three major categories:

1. Positioning or stance of firms engaged in licensing.
2. Factors affecting license terms and royalties.
3. Royalty rate alternatives and

*Sullivan & Associates, Berkeley, California; author expresses special appreciation to Professor David Teece for comments.

current practice in royalty rate setting.

The findings on stance are presented below. The findings in the other two areas follow in succeeding sections.

The stance or posture of firms is not only a major determinant of how they view the terms and conditions of a potential license, but may also be a major predictor of the general outcome of the license negotiations. It was found that for both out-licensing and in-licensing, there were active and passive participants. Some further examination revealed that firms on both sides seem naturally to assume quite distinct roles or positions. The following taxonomy emerged:

Out-licensing firms:

(a) Proactive Out-licensors: firms actively seeking to generate income from their strategic intellectual property, either through product sales or through the licensing of their technologies. Energetic firms are willing to invest in harvesting their portfolio of intellectual properties.

(b) Passive Out-licensors: Firms interested in receiving income on nonstrategic intellectual property, but not ready to invest substantially in an active harvesting of the firm's intellectual property portfolio.

In-licensing firms:

(a) Seekers of technology: Companies actively interested in obtaining already-developed technology rather than bearing the cost of creating it anew. Willing to pay for technology, but not overpay.

(b) Infringers: Companies found to be infringing upon the patent rights held by another person or firm.

The Effect of Company Stance on Licensing Objectives

The details of a firm's licensing objectives are unique to its technological, business, and legal situation, but they are not independent of its stance. Indeed, the firm's stance also is a major determinant of its licensing objectives:

- Proactive out-licensors are interested in developing income from their licensing, and minimizing their license costs. In addition, as licensing typically is sought only for a profit-center line of business, such firms usually press for early cash flow.
- Passive out-licensors, in contrast, are relatively passive in their approach to the market. By definition, such companies license only their nonstrategic intellectual properties, or do not invest in obtaining licensing income. Passive out-licensors seek terms and royalty rates that are consistent with common industry licensing and royalty practice.
- Technology seekers are individuals or firms looking for rapid closure on a technology license so they may implement the technology quickly. Firms in this position seek royalty rates that are low enough to provide a ''good'' profit.
- Infringers are individuals or firms that, for whatever reason, are already using the intellectual property of someone else. Because they are usually already in the marketplace, the finances of their production activities are established and their costs and profit margins are known. They know that any new costs, such as royalty payments, cut into their existing margins and profits. For this reason, the strategies of firms in this position tend to focus on seeking ways to pay the lowest possible royalty and to delay payment for as long as possible.

The Effect of Company Stance on Licensing Strategies

In addition to its effect on licensing objectives, company stance also effects general licensing strategies. Strategic out-licensors, for example, tend to follow a strategy having three components. First, they tend to actively pursue identification of potential licensees, both Seekers and Infringers. Second, they target companies that are financially capable of paying royalties. This often means that they target firms that sell final assemblies or end products rather than companies selling components or subassemblies. Third, they actively work to keep down the administrative costs of generating licensing income through procedures such as license or patent packaging.

Passive out-licensors tend to follow a different strategy in their approach to licensing. They do not actively seek out potential licensees but wait until approached or until an infringer's presence becomes known ot them. Their licensing strategy tends to have two components. First, they tend to seek terms and royalty rates that are consistent with industry norms. Second, they work to keep down the administrative costs of licensing and, like their more energetic cousins, will seek administrative mechanisms to minimize the costs of obtaining or overseeing their licenses.

On the in-licensing side, Technology Seekers have an active strategy that usually centers around two focal points. First, Technology Seekers actively identify the practical range of alternative sources of the technology they seek. As part of this strategy component, they learn in some detail the costs associated with each alternative. If licensing is shown to be the best cost alternative, these firms seek out the owners of the technology and press for rapid closure on a license. The second component of their strategy concerns the price (royalty) they are willing to pay. As they already know what their cost alternatives are, firms in this position are able to identify the cost they are willing to pay to the licensor in order to realize their own profit objectives. Licensors unwilling to compromise on an acceptable cost to the technology seeker will find that companies in this position would rather leave the table and pursue alternatives than pay more than the technology is worth to them.

Infringers pursue licensing strategies that are very different from those already discussed. Because of the special nature of his position, the infringer already knows both the costs and the value of the technology to his operation. He also knows that any royalty payments he is forced to make cut into his own profits, dollar for dollar. The Infringer's strategy usually involves minimizing the amount of royalty to be paid as well as delaying the payment itself for as long as possible.

Following that strategy, an infringer on learning that he is being asked to take out a license will immediately gather a significant amount of cost information. This usually involves identifying alternative sources of the technology and, for each alternative, learning what it will cost to obtain. In addition, the Infringer will identify the amounts probably owed to the owner of the technology and will determine whether it is likely to be cheaper to pay the royalties or to delay and litigate in anticipation of arguing the royalty costs downward.

CHARACTERISTICS AFFECTING NEGOTIATIONS

Proactive	• Both sides interested in exchange • Negotiations likely to be smooth	• Significant Differences likely Licensor: max royalty Licensee: min. royalty • Negotiations likely to be difficult
Passive	• Licensor likely to seek royalty and terms at industry norm • Licensee likely to agree	• Licensor at industry norm • Licensee will try to reduce royalty terms • Negotiations serious but not contentious

Figure 1

The Effect of Company Stance on Licensing Negotiations and Outcomes

The respective positions of the negotiating parties can often be a major determinant of the success of negotiations. Figure 1 shows how the characteristics of in-licensors can affect negotiations.

FACTORS AFFECTING LICENSING AND ROYALTY TERMS

A wide range of factors affect the final setting of licensing terms as well as the amount of royalties to be paid. Nevertheless, our investigation revealed that a small number of factors were always in the foreground. A larger number of factors were often involved in mitigating or directly affecting the final terms and rates, while many more factors sometimes affected the license terms and rates.

Major Factors

Two factors dominate discussions of license terms and royalty rate setting. The first, and by far the most basic, consideration mentioned by all firms interviewed was whether and how the potential license could be structured to the competitive advantage of the firm. This view of licensing was very strong and pervaded every dimension of licensing discussions.

For knowledge-based firms, the use of licenses as part of the firm's competitive strategy is of utmost importance. Firms that survive by selling the products of their intellectual capability must ensure that the licensing of any of their intellectual assets or know-how will be done only if it either enriches the owning firm at the expense of the competing licensee or it puts the competing licensee into a disadvantageous strategic position.

The first question firms tend to ask when approaching a license discussion with another is: Is this company a current or potential competitor? If so, then the firm must create a series of terms and conditions that will either improve its own strategic position or will in some way worsen the tactical or strategic position of the competitor.

The second major factor affecting licensing terms and royalty amounts is duration, or the length of time over which the license is to be in force. Licensors believing that the technology may be short-lived will press for long-term durations while licensees will take the opposite view. Licensees believing that a currently low-royalty technology is likely to become a hot market property will, similarly, want to lock in a long-term license on favorable terms.

License duration is in some ways a surrogate for — or a result of — a number of other factors that affect both terms and rates. It may be an indicator of the commercial success of the technology, its current or potential level of refinement, its acceptability in the marketplace, its immunity (or lack thereof) to substitute technologies, or serve other needs. Duration, for all of the foregoing reasons, appears prominently in the foreground of every license discussion.

Subsidiary Factors

Six other factors often affect the final license terms, royalty rates, or both. These are:

1. **Protection:** The nature and amount of protection that a licensor offers to the licensee as part of the license is a major consideration. Not only must the licensee be assured that adequate legal protection is in force, but also that the licensor is prepared for and capable of enforcing this protection against any potential infringers.

2. **Exclusivity:** The nature and degree of exclusivity offered is another frequent consideration. Exclusivity exists in both specific areas and in degrees. An example of an area of exclusivity might be a territory or market. Degrees of exclusivity might be couched in terms of complete exclusive, or an exclusive under specified terms. Licenses that offer absolute exclusives with no ameliorating conditions are worth more than are licenses offering only area or partially exclusive arrangements.

3. **Utility / Advantage:** The usefulness or amount of advantage the technology confers upon the licensee is also of concern. Technologies offering a great marketplace head start on the competition are more valuable than those that merely provide opportunities for keeping up. Technological capabilities that will enrich the licensee firm and allow it to develop capabilities to significantly enhance its strategic position are the most valuable.

4. **Commercial Success:** Tech-

nologies proven to have marketplace appeal and to significantly affect sales are more valuable than technologies still untested in the marketplace or those whose commercial success is not an issue.

5. **Refinement:** The maturity or immediate applicability of a technology often affects the terms and royalty rates of a license. Technologies requiring further development or refinement before they can be commercially applied are less valuable than technologies that can be immediately used in the design or manufacture of products for the marketplace.

6. **License Commitment:** Negotiators look at the degree to which the licensor is committed to on-going support of the fundamental patent as well as to the license. Licensors unwilling to actively pursue infringers, to continue seeking barriers to infringement, to provide on-going training and support, or to continue development of the technology, will find licensees unwilling to pay high royalty rates for their technology.

The Effect of Company Stance on Perspectives Concerning Major Factors

A firm's position is also a major factor in the view it holds of any of the factors identified above. Table 1 provides examples of the differing views a firm may hold on any factor, depending upon its positioning.

PERSPECTIVES ON FACTORS AFFECTING LICENSING

Factor	Licensors: Proactive	Licensors: Passive	Licensees: Seekers	Licensees: Infringers
Protection	• Has protection, is willing to exchange for financial consideration		• Wants guaranteed protection, particularly if protection is a competitive issue	• Wants protection for as long as possible in order to reduce any future payments
Exclusivity	• Prefer not to offer exclusive license as this precludes other income from the patent		• Wants exclusive	
Utility/Advantage			• Sees cost advantage of not having to recreate the technology	• Sees cost advantage of minimizing costs by obtaining license
Commercial Success	• Unable to guarantee commercialization success unless other licensees or patent-holders have already commercialized		• Want some guarantee of commercialization success	• Already knows about commercialization success, wants to minimize cost outlay
Refinement	• Probably sees little refinement required		• See more need for refinement, which lowers potential profits	• Further refinements unnecessary, by definition
Competition Where Licensor & Licensee are Competitors	• Seek cross-licensing terms			
License Duration	• Minimize duration in order to be able to renegotiate periodically	• Offer license for life of patent	• Seek license for life of the patent	• Seek maximum terms - e.g. license for life of patent
Royalty Amount	• Seek maximum	• Seek standard	• For new technology seek running rate, for known technology seek one-time payment	• Seek one-time payment
Support/Train	• Offer after-sale training and support		• Seek after-sale training and support	• No training sought, to minimize cost
License Commitment	• De facto commitment to license because it is a source of strategic revenue	• Commitment to license must be requested of passive licensors	• Very interested in commitment to license	• Commitment to license not an issue
Enforcement Burden	• Already interested in enforcement	• Enforcement interest unsure, licensee may need to press for guarantees	• Does not want to have to enforce, will seek guarantees of enforcement	• Enforcement already demonstrated
Foreign vs. Domestic	• No preference		• No preference	
Crossover Sales	• Crossover sales may be possible		• Allow crossover sales if terms are advantageous	• Minimize crossover sales to reduce costs
Advice of Expert				

Table 1

For the owner of an intellectual property to transfer some of the rights to its use to another person or firm means that he has also relinquished some opportunity to derive direct economic benefit from the intellectual property himself. For this reason, the owner is entitled to receive compensation for the use of his asset. On the other hand, intellectual property by itself rarely generates economic benefit. It usually requires the joint application of some complementary assets such as facilities, equipment, and trained personnel. Royalty-rate setting activities attempt to balance the amounts of return generated by the nonintellectual assets against the returns due to the use of the technology being licensed.

For an economist, coming to agreement on the amount of return due the intellectual property being licensed entails a series of complex calculations which, when finished, provide an estimate of the fair royalty. More often, however, the actual royalty is arrived at through less sophisticated means, typically with the attorneys of both parties hammering out a mutually agreeable set of rates.

Although the most common form of license involves a running rate (see definition below), royalty arrangements usually comprise one of more of the following approaches:

- **Lump-sum payment** — One-time payment, typically at the outset of the license's duration. This format is often sought by deep-pocketed licensees wishing to reach quick and final agreement on the total amount of their obligation.
- **Recurring Fixed Amount** — Periodic payments, usually annually, of some fixed sum.
- **Running Rate** — A royalty based on some measure of output, usually number of units sold. This most common of royalty structures is often sought when the licensee has insufficient capital or does not desire lump sum or recurring fixed payments. It is also used when there are uncertainties about the market for the technology being licensed.

Although it is very difficult to obtain company-specific information on licensing terms and practices, it became clear in the course of investigation that royalty rate-setting is practiced as an art by a relatively small cadre of intellectual property attorneys. While the attorneys are reluctant to talk in specifics, a researcher is led to realize that the primary method for setting royalties is the running-rate approach. In designing running-rate royalties, there are clearly three major factors to be considered: determining the base unit, determining the base price, and determining the percentage to be used.

- **Base Unit:** Running rates require that there be some base unit of production or output that can be priced and against which a rate can be charged. In the computer hardware industry, the base unit used is the licensee's manufactured unit.
- **Base Price:** Although there are a range of alternative base prices that might be used, all but one have the disadvantage of being too difficult to measure accurately. For this reason, the base price commonly used throughout the industry is the manufacturer's unit price out-the-door.
- **Rate:** The percentage rate is the most difficult figure to obtain. Nevertheless, there is virtually unanimous agreement that this figure is found between 1 and 5%. Percentage rates outside of this range are extremely rare and are found only in cases where special circumstances are at play.

The broad document search for data on royalty rates, produced substantially less data than had been expected. Nevertheless, the search did produce two pieces of scoping information that proved useful in the subsequent interviews with industry licensing executives.

The first piece of information (Figures 2 and 3) was the result of a multi-industry survey of 118 licensing executives (although only a disappointing four of the respondents were from the computer hardware and software industries). The authors of the survey caution that their questionnaire was not tightly controlled nor were there sufficient respondents to claim any measure of statistical reliability. Nevertheless, because the results proved to be closely consistent with other data and interviews, all independently gathered by the authors of this paper, the survey results are of some interest.

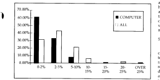
A search of SEC filings, for example, revealed that although companies are required to file information concerning license agreements, most companies deleted the specific dollar figures as well as percentage rate data before forwarding copies of their agreements to the SEC. A test search of 40 filings produced five licenses of potential interest. However, in each case, the actual royalty rate data had been deleted by the filing company. It was determined that the cost of further searching would not be warranted in view of the limited results that were likely to be obtained.

Discussions with attorneys and computer industry executives were conducted once the results of the literature search were known. Attorneys and industry executives were contacted to obtain independent verification of the information gleaned from the desk research. A nonscientific sample of 12 was chosen from the local roster of members of the Licensing Executives Society.

Of the people interviewed, all were slow to reveal specific examples of running rates from their own experience. This reinforced a growing observation that there is an overall veil of secrecy surrounding royalty rate information. When pressed for more general observations, all stated that with the exception of special circumstances, royalty rates in the computer hardware industry tend to be relatively low, although there could be special cases in unique circumstances that might cause an individual licensing royalty rate to be high. In fact, several interviewees cited IBM's policy, redefined in 1988, that specified a range of royalties they would seek as being between 1 and 5%. They felt that this had set the industry norm for running royalty rates in the computer hardware industry.

In the interview, interviewees were reluctant to discuss specific rates used by their own company or

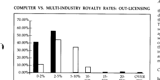
COMPUTER VS. MULTI-INDUSTRY ROYALTY RATES: IN-LICENSING



Source: McGavock, D.; Haas, D.A.; Patin, M.P., "Factors Affecting Licensing Rates," *les Nouvelles*, June 1992, p. 107

Figure 2

COMPUTER VS. MULTI-INDUSTRY ROYALTY RATES: OUT-LICENSING



Source: McGavock, D.; Haas, D.A.; Patin, M.P., "Factors Affecting Licensing Rates," *les Nouvelles*, June 1992, p. 107

Figure 3

clients in actual license agreements. Each was told that the author's desk research to date indicated the range of rates to be generally between 1 and 5%. They were then asked if this range was consistent with their own experience. In all cases their reluctance vanished and they willing responded that their experience was consistent with a range of rates of 1 to 5%. When pressed for information about any licenses they were aware of in excess of the 5% rate, all respondents said they were aware of some license rates that were higher but, in each case, the reason for the rate involved some special circumstance. They also went on to say that the vast majority of licenses in this industry fall within the 1 to 5% range.

One final note. The process of reaching agreement between licensors and licensees on a running royalty rate is far more art than science. A theme that emerged clearly from the discussions with attorneys and executives was that any current negotiation was strongly affected by recent rate agreements in the hardware industry and licensees where generally similar technology was licensed. Further, although royalty rate information is held highly confidential, lawyers and executives involved in this activity have an informal network of communication that keeps them advised of the results of recent agreements.

SUMMARY OF FINDINGS

In the course of the study it became clear that while the craft of technology licensing and royalty rate-setting is not yet a sufficiently routine activity to be subject to rigid decision rules or precise codification, a framework is nonetheless emerging that may be used to better understand and predict licensing outcomes.

Availability of Data

The major finding of this study is that there are no readily available data on actual license agreements in the computer hardware industry. This lack reflects the widespread secrecy within which licensing agreements are held. While such secrecy is understandable given the competitive nature of the industry, the difficulty experienced in obtaining information demonstrates that any future work in this topic area must focus on data acquisition.

Company Stance

Both the licensors and the licensees include companies with active and passive stances. Company stance has a significant effect on the views participants hold of the factors affecting rates as well as on the licensing process itself. For outlicensors, there are strategic and opportunistic stances. For the inlicensees there are seeker and infringer stances. Other stances may also exist, only that there are at least the four identified in this paper.

Factors Affecting Royalty Rates

While there are a large number of factors to consider in determining the terms of a license as well as the royalties, only a small number of factors have major influence. Further, the position firms may take concerning these major factors is likely to be strongly influenced in the stance the firm has assumed.

Royalty Bases

Although facts were difficult to find, the available information showed sufficient consistency to support conclusions. Primarily, there is consistency in the practice of royalty rate-setting to the extent that running royalties are most often used, and three bases are used consistently. They are: the unit basis is the manufactured product, the price basis the list price, and the royalty rate is a percentage of a volume-based measure of output.

SUMMARY TABLE

Source	Running Royalty Rate
Journal Articles	
McGavock et al.	1 to 5%
News Articles	
James Martin (IBM)	1 to 5%
Michael Miller (IBM)	1% for each single patent 1% for each additional patent up to a ceiling of 5% for five or more patents
Russell Parr (Taiwanese)	3% on sales inside the United States 2% on sales outside the United States
Russell Parr	5% on first $5 million 4% on second $5 million 3% on any sales greater than $10 million
les Nouvelles Table	1 to 5%
Interviews (12)	1 to 5% for all interviewees

Table 2

Royalty Rates

The IBM policy on licensing royalty rates has had a strong effect on the computer hardware industry. The IBM range of royalty rates, set at 1 to 5% in 1988, appears to have established the industry norm for royalty rates. In addition, this study's data findings on royalty rates, summarized in Table 2, show that the industry operates at a norm of between 1 and 5%.

CONCLUSIONS

This preliminary research, conducted to describe current licensing practice as well as to learn whether further, more extensive research would be productive, has led the author to several conclusions:

1. Concerning the description of current licensing practice:

• Within the computer hardware industry, there is an industry norm for developing licenses and licensing rates.

• Most licenses in the industry probably conform to the norm, although all licensing executives wish to believe that their next licensing agreement will be outside of these established norms (whether higher or lower depends upon the firm's stance). License agreements outside of industry norms are rare and are usually reached because of some special circumstance, e.g.:

— Persuasive argument and tactics by an energetic out-licensor.

— Some unique characteristic of the technology, its scarceness, or its ability to save the in-licensor considerable amounts of investment in comparison with alternative methods or sources for obtaining access to the technology.

2. Concerning focus areas for further study:

A further, comprehensive study of the factors affecting royalty rates as well as the actual royalty rates used in the computer-hardware industry is warranted. The purpose of such an expanded and scientific study should be to confirm this research's conclusions that there is a *de facto* norm of licensing behavior in the industry and to more finely document the nature of that norm in greater detail.