Other Sources of Innovation

Insights into licensing; its advantages include reduction of risks; licensing within a corporation

BY JOHN E. BOWLER *

May I begin by saying that the views I am going to express in this paper are my own and do not necessarily represent the collective views of the Licensing Executives Society.

Those responsible for the business policy of a public company are constrained by the requirements of the Company Act to act in a responsible and prudent manner to conserve the company's assets.

On the other hand, there is a famous saying of James Marquis of Montrose:

"He either fears his fate too much or his deserts are small
That puts it not into the touch
To win or lose it all"

Of course James Graham's errors of judgment ultimately led to him being hung, drawn and quartered, so I do not hold him up as too good an example.

All Innovation involves risks, risks of miscalculating the market (which I would put as the biggest risk), risk of technical failure or inadequacy, risk of patent infringement, risk of being pipped at the post by a new and competing product, and so on. These risks and others collectively have a profoundly inhibiting influence on the timid or safety first company. And it must be admitted that the prudent board, faced with doubts and uncertainties surrounding launching of a really new and revolutionary product, will listen readily to the siren voices of the Sales Director and his cautious supporters advocating an extension of the existing product line. The consequence of innovation they see through a glass darkly; their own existing product face to face.

This dilemma is exacerbated in the case of the company which is looking at Innovation arising from its own R&D. Although as businessmen we are well aware that decisions on cutting unsuccessful activities should be made solely with an eye to the future, there is always an influential element looking back and saying "we can't axe this project — we've already invested £X toward it." This philosophy can impel a board to go ahead with a new product of its own when all the evidence suggests that it is too late or technically too weak or, as in the case of the RB 211, because costs of development have been grossly underestimated.

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LICENSING — IN AND ITS ADVANTAGES

The licensing route to innovation offers to the potential licensee a safety net protecting him against some if not all the inherent risks. The research has already been done, the usually more expensive development stage has been completed, and the production and marketing work have shown that the product can be made and sold. All this has been achieved at the licensor's expense and risk.

Thus the company seeking diversification products and lacking the resources or perhaps the nerve to enter on long-term research should consider licensing as its first alternative. Thereby it can obtain:

1. A solid physical existing product for consideration rather than a drawing or verbal description.

This is important and carries weight with nontechnical Board members such as the Finance member, or company secretary who finds difficulty in reading drawings.

Moreover, it provides samples which can be tested for quality, performance, conformity with the relevant standards and general market acceptablity.

2. An assurance that the product can be made successfully and profitably.

This cannot be taken too far. The licensor company may be much more efficient with more modern plant, lower labor rates and the like.

3. An assurance that the product can be marketed successfully.

Again the prudent Board is going to make rigorous comparisons between the licensor's market and the potential licensee company market before accepting that the product can be sold in its market. At least, however, it may have samples and a solid basis for market research.

Let me emphasize that with a product on the open market the above information can be obtained without contacting the licensor at all. It is thus possible to make a tentative decision on substantial information before approaching the licensor.

When exploratory conversations open with the potential licensor, more solid information may be forthcoming although in the early stages the licensor has to watch that he does not give the potential licensee information for which he should be paid after the agreement is signed. However, the potential licensee may reasonably expect to obtain the following:

4. An indication whether the licensor policy permits licensing in the licensee territory, or whether it is an export territory.

5. Some idea as to the patent situation.
Probably in the initial stages only that there are patents or patent applications; later the numbers and perhaps some indication of patent strength.

6. Outline ideas as to license terms, royalty down payment.

7. Some indication as to the plant needed for manufacture, the material specifications, the breakdown of the sales pound and so on.
After the agreement has been signed a great many more resources become available. It would be tedious to recite them all, but certainly there will be material specifications drawings, process instructions, cost analysis, labor times, sales and marketing methods and literature, samples and so on. In addition there should be provision for technical and sales staff to visit the licensee plant and assist in commissioning and in planning the sales effort.

Thus a good license agreement provides the whole of the knowledge required to plan manufacture and market a completely new product at minimum risk.

THE SEARCH FOR SUITABLE PRODUCTS

If a policy of innovation by licensing-in is to be adopted there needs to be certain guidelines laid down, otherwise the search for suitable products will be too diffuse and will result in too many rejections with consequent disappointment and disillusion among the searchers.

I believe as a broad principle that innovations should not be such as to call for radically new manufacturing techniques simultaneously with new sales resources. There is one very good reason for this: Even with the advantages of licensing as outlined in the previous section, all risk cannot be eliminated. But at least the very large sums involved in establishing a completely new manufacturing plant simultaneously with a big marketing and stock investment can be avoided by choosing products which can either be made by the existing plant or sold by the existing sales force or both.

There are further subsidiary reasons for this; in particular the estimates of manufacturing cost, the technical assessment of the product, and the sales forecasts are likely to be much more accurate if they are concerned with products not too far from the Board's own experience.

Having defined the product possibilities in the above terms, the search becomes largely a matter of communication — putting the potential licensee in touch with the potential licensor.

It has to be admitted that success in this respect depends significantly on the resources that can be deployed; in other words, a large group with overseas ramifications and worldwide business contacts has a better chance than a small company with only local contacts.

MARKET RESEARCH FOR LICENSING

Earlier I suggested broad principles to be followed by company policy-makers in identifying and specifying products and/or product categories suitable for introduction by the company.

Where and how should the company find such products? I should be deluding my audience if I were to suggest that there is any recognized system of market research in the licensing field. Nor would it be right to say that there exists a worldwide network of market research organizations who may be commissioned to do the work. Certainly there are several active companies in U.S.A. who will for a substantial fee undertake a search for suitable products. The terms usually include a minimum term of engagement of one year. One company at least will survey the client company's activities and produce a specification of recommended products, for which they will then make a search. This method is expensive for small companies which, due to their limited resources and lack of overseas contacts, may well be the ones needing such a service.

For the larger company which decides on a Do-it-Yourself approach the first essential is to appoint an intelligent, imaginative, energetic executive as coordinator. The qualities needed are those of a good Personal Assistant to Managing Director or similar. He will need to be given authority to call for assistance from overseas subsidiaries and associates and from any central information department. He will need to give this work first priority. I would also recommend enrolling him as a member of the Licensing Executives Society!

Having appointed him let me now propose some of the sources of new products which he should examine:

1. New Products of Similar Companies Overseas
It may seem surprising that this can be a successful source; surely the overseas company will wish to export to U.K. and will not be interested in licensing. In fact it is a common source of innovation especially for proprietary components for the automotive and domestic equipment industry where there is usually a strong requirement for local sourcing. The fastener industry is typical in this respect with much licensing of nuts and other fasteners especially between U.S.A. and U.K.

The overseas subsidiaries of the U.K. company should be able to help in informing the licensing coordinator of competitors activities and new products.

The net can be spread wider by desk research using business directories, yellow pages and trade association publications of foreign countries followed by a circular letter expressing interest in licensing new products in U.K.

2. Published Patent Specifications
With the tendency to early publication of the contents of patent applications one can now learn of an invention in certain countries within six months — 18 months of the invention being made and filed. Unfortunately, this does not apply to U.S.A. where there is no publication until the invention is patented.

This is, prima facie, an attractive source but the very mass of material published weekly tends to be selfdefeating. There are also translation problems and, unless someone is deputed very specifically to read the documents every week, this particular source soon fails. In any case, unless the searcher has access to a library of patents, (and assuming that the company is not prepared to spend large sums in specifications) the search will be in abstracts. These often fail to reveal the true significance of an invention.

3. Technical & Sales Literature & Exhibitions

Assuming, as is likely, that innovations for country A are sought in territories foreign to A, the collection of new literature in a series of foreign countries again entails unremitting activity on the part of the potential licensee's overseas associates (if it has any). Failing this, useful material can be obtained by visits to foreign exhibitions. In particular the exhibition catalogues are sometimes indexed by product area in which one hopes to innovate.

Personal contact with potential licensors is important. Sometimes the licensor simply does not realize that he has something of value to other people who will be prepared to pay substantial sums for it.

4. Spinoff from government or publicly financed research

The function of our own National Research Development Corporation is well known. What is not perhaps known is that there are roughly equivalent bodies in most countries of Europe, Japan, the "old" Commonwealth countries and U.S.A. Some tend to be oriented toward advanced scientific concepts or toward medical and instrumentation products.

Some, such as the German Frauenhofer Gesellschaft will finance private inventors to file their patent applications worldwide. Others will only support home patent applications plus a very limited overseas portfolio.

Reverting to U.K. one ought to mention in addition to NRDC various other quasi-government bodies such as U.K.A.E.A. Harwell, Warren Springs, the National Engineering Laboratory and so on. Most of these will negotiate joint development projects as well as licensing their own spinoff.

5. Patent Brokers

There are many organizations which hold themselves out as patent brokers — some better than others. Without being hypercritical, I am bound to say that really good inventions are usually snapped up long before the patent broker comes into the act.

6. Advertising

In the past I have tried a variety of forms of advertising using such media as *The Times, the Express* and the Patents Journal. The response has varied from perpetual motion machines to a simple device for checking the condition of batches of (say) 60 eggs at a glance. I question whether advertising is a valid approach. Nothing has ever been licensed this way in my company.

7. Patent Agents

It is noteworthy in my own experience that neither advertising nor any of the other approaches has produced any significant response from Patent Agents. On one occasion I circulated all the firms of private patent agents in U.K, suggesting that if any of their clients had cases in certain product classes which were not being used or were about to be abandoned, my company would like to know and to have an opportunity to discuss licensing or other arrangements.

From memory I believe we circulated over 100 firms and received five responses.

Now I am well aware of the very special degree of confidence which exists between patent agent and client, and that nothing must be done to imperil such confidences. But, when one reflects on the extremely lucrative nature of the patent agent's business and the high cost to clients of their patent protection, one would like to think that there could be more cross fertilization. What is to stop agents keeping some kind of cross reference of clients with common interests especially as between a U.K. client and a foreign one where cross licensing would be possible? I am open to correction, but I believe the number of patent agents who practice anything of this kind is negligible.

APPROACHES TO THE LICENSOR

The logical follow-up to the sort of desk research which I have postulated, is the approach letter to potential licensors. Such a letter needs to be written with care and is certainly not without its pitfalls. One needs to consider the opening paragraph very carefully; if it sounds like the beginning of a sales letter it may be the only paragraph read before consignment to the wastepaper basket.

So it is probably wrong to begin by introducing the writer's company; rather one should start by expressing interest in the recipient's product; implying surprise that the product is not yet available in the writer's territory and suggesting that the writer's company may be able to help in introducing it.

Then one can go on to discuss one's own company, and its strengths and experiences vis-a-vis the product category for which a license is sought. It is no bad thing to quote some broad market statistics to show knowledge of the market and how one visualizes the exploitation of the licensor's product. Finally, one can suggest a meeting to discuss possible working together.

INTERNAL COMPANY RESOURCES NEEDED TO EXPLOIT A LICENSE PROPERLY

This short section is largely cautionary, and might well have been headed "Why Licenses Fail."

I will assume that there are no problems in respect to the provision of plant and equipment; either (ideally) the new product can be made on existing plant, or the new plant can be readily financed. Perhaps I may use this an an illustration of a major point — communication between licensee and licensor at all levels.

The licensor should have provided as part of the know-how a list of required plant, perhaps specifying a particular make of press as being essential. The licensee's Works Director may argue that some other make of press is perfectly adequate and cheaper.

Before the cheaper press is purchased the matter should be put to the licensor for his opinion.

Similarly a particular specification of material may be laid down by the licensor. The licensee may have a subsidiary company making a similar but not identical material and may wish to use it. Again, the licensor should be consulted.

All of which boils down in general principal to the absolute necessity for close and continuing contact and consultation with the licensor, which in turn calls for the *ability at all levels to absorb the knowledge being supplied by the licensor.*

For example, if it is necessary to carry out hourly checks on the metal employed, using sophisticated spectrographic techniques, the licensee needs staff able to use and understand the techniques. Useless to expect a works chemist who in the past has been concerned only with paint quality, to absorb the new techniques.

Equally, if the licensed product is a component which has to be designed into the customer's product, it is foolish to expect the ordinary nontechnical salesman to handle it successfully.

I cannot overemphasize the importance of communication. If the responsible licensing executive had sufficient authority, he should be the channel for such communication and should ensure that there is a free and continuing exchange between licensor and licensee at all levels and that licensees questions are answered promptly and adequately by licensor. Where licensor and licensee speak different languages and/or use different systems of units he should ensure that really competent translation facilities are used so that unambiguous information is received by the licensee in a form which means something to licensee's work force.

It would be the licensing executive who first becomes aware that something is going wrong in the functioning of the license and takes steps to correct it. If he hasn't the necessary authority, he should have access to the Managing Director who should personally step in.

It is most important, expecially in the early days of a licensor/licensee relationship, that all payments are made promptly and that both parties comply with all their obligations.

INTERNAL OBSTACLES TO LICENSING-IN

It is often assumed that the bitterest opposition to licensing-in comes from the technical development people who are hostile to anything they haven't invented. I shall say more about this later, but let me immediately pronounce my belief that more innovation is rejected by Sales than by anyone else, especially if the innovation is in a completely new product category. The reason for this is fairly clear; there are many mor imponderables and uncertainties in the sales assessment than anywhere else. The Works Director having seen the product, will have no serious difficulty in deciding how to make it and estimating costs, although there may well be special know-how which will introduce some uncertainty. The Finance people will be able to make sensible estimates of the breakdown of the Sales pound, for various magnitudes of sales. Even the Patent investigation may yield a definite clearance to go ahead.

So it all depends on the Sales Director. He has to estimate his annual sales for at least three years ahead in a market which may be strange to him. He may be under pressure to avoid expensive independent market research; it may be strongly suggested to him by the Board that the information already received from the licensor about the U.K. market is perfectly adequate. In the end it is the Sales Director who has to make (often with quite inadequate information) an estimate of sales upon which his colleagues will build their calculations ending in a projected profit-and-loss situation. It is not really surprising therefore that the main obstacle to innovation is often the Sales Director since he knows that, having made his forecasts, he will be expected to achieve them. In this case the buck stops at the Sales Director.

So this particular obstacle to licensing-in is basically a reluctance to commit oneself without sufficient investigation. The solution is to have full and adequate market research upon which the Board as a whole is willing to rely. Don't leave it to the Sales Director and his staff who are not really qualified to assess responses to market research inquiries.

The other obstacle is the famous NIH (not invented here) factor. I happen to believe this is:

(a) of less frequent occurrence than is generally believed

(b) due more to the characteristics and philosophy of the Chief Executive than to any original sin among the proponents of NIH.

Basically, development engineers and research people have a well-developed appreciation of technical achievement and an admiration for ingenuity. Their opposition to ideas and innovation from outside the company comes not from jealousy of the invention itself, but from fear of the consequences. "If this outside license is taken up, will there still be resources to exploit the new product which we shall complete in six months' time in the lab. Indeed, will the internal R&D be cut back as a result?"

This kind of thinking is most often engendered by knowledge that the Chief Executive doesn't much like R&D and that in lean times it has been the lab which has been one of the first departments to suffer cutback in finance, postponement of purchase of new instruments and perhaps staff redundancies.

This attitude is not easy to overcome. Fortunately however, the tendency of many licensors now is to regard the royalty income from licenses as less important than the establishment of an active cross-fertilization of ideas between licensor and licensee. Consequently many licensors will only make licenses with foreign companies having comparable R&D facilities to their own. So a license deal may well result in a much firmer commitment to R&D for the future.

Moreover, a successful profitable licensed product will often provide more funds for ploughing back into one's own R&D.

THE PRIVATE INVENTOR AS LICENSOR

A popular and frequently recurring theme in the media — typically the TV program "Tomorrow's World" — is the alleged incompetence of British industry in missing many valuable inventions. We are frequently told that the British are prolific inventors but fall down on exploitation opportunities. In fact the statistics do not support this claim. I am indebted to M. Savignon, former Director of the French Patent Office, for some figures in this respect derived from WIPO Reports. A rough guide to relative inventiveness is the percentage of the total patent applications in a given country which are filed by native applicants. The table below gives this for some major industrial countries:

Japan	74.1
Poland	74
U.S.A.	68.6
Czechoslovakia	67
German Fed. Rep.	49.9
U.K.	40.5
Switzerland	31.8
France	31.1
Yugoslavia	27.7
Sweden	24.8
Italy	23.3

It must be admitted however that the private inventor does have special difficulties. Rightly or wrongly, the image is of a hopelessly impractical unbusinesslike person with a wholly exaggerated idea of the value of his invention. Often the mysteries of "relevant prior art" seemed quite beyond his comprehension. Consequently, there have been frequent allegations of bad faith and even legal actions initiated by inventors against companies to whom they have disclosed their ideas.

As a result, most companies now have rigid rules requiring the inventor to file a patent application before the company will consider the invention. This can cause the impecunious inventor some problems since he is tempted to file his own provisional without the aide of a patent agent. This may prove inadequate as a basis for the later complete specification. Moreover, delays in negotiating a license arrangement or sale of the invention may bring the inventor up against the costs of filing his complete specification and corresponding overseas cases within the International Convention year. This particular problem is certainly not solved by the continued retention of the L1 official fee for filing a provisional. The private inventor needs some assistance in the actual preparation of his provisional, and possibly for the complete.

At present he may apply to NRDC who will sometimes provide finance, but on rather draconian conditions in terms of the NRDC share. I suggest that the appropriate department of the government might well consider the extension of legal aid to the preparation of patent specifications on a similar basis of need. This could be done for an experimental period in the hope of stimulating invention.

The private inventor is going to face even more severe financial problems if the Common Market patent becomes compulsory. He may then need to pay out sums measured in thousands to cover U.K. and Europe.

The private inventor is also in a weak position vis-a-vis the company when it comes to negotiation of the license terms. Here again there is an argument for legal aid. However, the Institute of Patentees & Inventors offers help to its members in this respect.

I have devoted some time to the private inventor because he does face peculiar difficulties vis-a-vis the large company. However, I must make clear that I do not regard the private inventor as a particularly significant source of innovation.

Analogous to the private inventors is the situation of the expert in state employment, but not within the ambit of NRDC. For instance, these are university professors, doctors under the Medical Research Council, and others holding similar positions who are subject to no active urging to commercialize their inventions. The regulations in regard to the rights in inventions made by university staff while acting in a consultancy capacity for commercial corporations vary widely from university to university and in some cases nothing very clear is laid down.

The consequences of this rather unusual attitude are predictable. Whereas, for example, in laboratory instrumentation U.K. sales to U.S.A. in 1970 were 3% of total, the figure for 1975 was ½%.

Some universities have now seen the light and University College Cardiff, for example, has an associate company called Cardiff University Industry Centre which is devoted full-time to the publicizing and exploitation of university inventions.

THE RELATIVE IMPORTANCE OF PATENTS AND KNOW-HOW

It is impracticable, and indeed would be misleading to lay down hard-and-fast rules about this matter. Some general observations may help to orient thinking however.

The patent rights associated with a license agreement have three main functions:

(a) to define the ambit of the licensed product.

(b) to protect the licensee against plagiarists (but not competitors).

(c) to allow the licensee so to price his product as to make a monopoly profit.

Functions (b) and (c) are both dependent upon the strength of the patent rights; (c) in particular depends upon whether there are close substitutes for the patented product, to which customers may turn if the pricing of the patented items is set too high. The licensee needs to appreciate the distinction between a competitor and an infringer; too often disputes arise over the payment of royalties because a competing non-infringing product decimates the licensee's sales. The licensor can only be expected to give his licensee protection against infringers of the patent rights.

With continual development of technology new competitors will arise and the patented product will become less important. The patent rights will correspondingly decline in importance in the eyes of the licensee.

It is at this stage that continuing know-how from licensor to licensee becomes important. Without it the licensee is understandably starting to ask himself "for what am I paying these royalties? My price is loaded with an extra 5% which my competitors do not pay, so either my profit is cut or my price is too high. I must consider ceasing to pay royalties and/or terminate the license."

But, if continuing know-how has been applied, perhaps in the form of improvement in manufacturing methods resulting in cost reductions, the licensee is less ready to break off relations with his licensor.

Where a license involves patents on the product, patents on the manufacturing process and know-how, it is a sound idea to make an assessment of the significance of each, and then to include in the agreement a clause breaking down the total royalty rate in notional elements respectively representing product patents, process patents and know-how. Failure of one element then automatically reduces the royalty rate correspondingly, but prevents or inhibits a complete cessation of royalties.

JOINT R&D CONTRACTS

I referred earlier to the increasing tendency for companies to seek license partners having comparable R&D resources, with a view to cross-licensing rather than royalty payments. A logical extension of this is the joint R&D contract.

Such contracts may be compelled upon one or other party, because *inter alia:*

(a) One party possesses specialized technology which the other party needs to complete its R&D program.

(b) One party can make available facilities to obtain more experience or data on special applications of the other party's technology, which otherwise would not be available.

(c) There is overlap between the claims of the parties to basic technology and it makes sense for the parties to complete the R&D in cooperation.

Such cooperation and pooling of expertise can have many benefits including: Savings in R&D time and costs, more rapid exploitation of results, avoidance of overlap in patent claims and incipient litigation, and stimulation of R&D activity due to collaboration by personnel from different company environments and philosophy.

It is sometimes argued that R&D cooperation is a source of trouble arising from lack of harmony in the conduct of the program, conflicting company loyalties, difficulties in managing a cooperative program involving two or more R&D centers, national susceptibilities, and disputes as to the relative contribution made by the parties and the consequent loss of marketing opportunities.

In fact, some research in which I have recently been concerned suggests that these alleged disadvantages and conflicts of interest are fairly infrequent and can be taken care of by appropriate terms in the R&D contract. It seems that the main problem is the administration of an R&D program operating in a plurality of centers.

As to the content of an R&D license contract, I want to suggest that attention be given to the following:

1) A clear, unambiguous statement of the patent and know-how position of the contracting parties at the beginning of the cooperation.

2) A definition of the specific objectives of the program.

3) A financial statement showing the contribution to be made by the parties.

4) The technical responsibilities of the parties.

5) The ownership and the procedures to be followed in respect to patents and patent applications.

6) The rights of the respective parties to use, to license and to sub-license know-how and other intellectual property resulting from the cooperation.

7) Safeguarding confidentiality of the information imparted by each party to the other.

8) The rights and obligation of the parties on termination of the cooperation and the agreement.

I would also add that it is wise in the preamble to such agreements to record in some detail the reasons for the cooperation, since especially in U.S.A. there may be antitrust objections to patent and know-how pooling, especially between major companies who between them may have the major share of a market. Obviously, such matters need the advice of antitrust lawyers.

THE LICENSING EXECUTIVES SOCIETY

I have endeavored to give a balanced view of the opportunities for innovation through licensing and the advantages in terms of greater certainty, reduction in risk and so on.

I have also tried to suggest how one should go about a licensing operation. In this respect I hope I may be forgiven a plug for my Society. Licensing Executives Society U.K. is a society of LES International, with sister societies in U.S.A., France, Benelux, Scandinavia, Italy, Japan, Korea, Mexico, Spain, Australia and Switzerland. The U.K. society currently has some 275 members including patent agents, solicitors, barristers, economists and businessmen, all actively involved in licensing. Let me emphasize that we are not a clearing house for licenses; we are a professional society whose main aim is continually to improve on members' knowledge of the ever-changing international licensing and patents, and with the economic conditions of countries worldwide as it affects licensing. We have two main channels of communication:

(a) The quarterly international journal, *Les Nouvelles* which is the only authoritative publication devoted entirely to licensing.

(b) Our sessional lecture program for U.K. which includes monthly evening lectures open without charge to members and their guests, and cooperative presentations with other societies and with bodies such as World Trade Centre Ltd. and European Study Conferences Ltd.

I believe that membership of LES with the contacts it brings with other licensing people, is an important aid to all engaged in Innovation.