

Licensing: A Marketing Tool

Profiles of how four divisions of Dutch company use licensing as a marketing tool

BY PIETER MARS*

In a meeting of LES it would be very inappropriate, because superfluous, to give a definition of "licensing." Hence, no attempt is made. However, for a Dutchman who started his career with the aim of becoming a specialist and who, in a later phase of his active company life has to bear general responsibilities, a look in Webster's dictionary for the definition of "marketing" seemed advisable. This is what I found. I quote:

MARKETING: 1a, the act of selling or purchasing in a market; 1b, the bringing or sending of goods to market; 2a, produce for the market; 2b, things purchased at a market; 3, an aggregate of functions involved in transferring title and in moving goods from producer to consumer including among others buying, selling, storing, transporting, standardizing, financing, risk bearing and supplying market information.

Fortunately, the definition is wide enough to encompass what I wanted to say to you today.

My company, Gist-brocades, was formed as the result of a merger, in 1967, between two old and well-established Dutch companies. Both had started to look across borders in Europe and had set up affiliated companies. At present the company has four product groups organized in the form of four divisions. The management of each has profit responsibility. I will give you a picture of the use of licensing as a marketing tool for each division.

YEAST, ALCOHOL AND BAKERY PRODUCTS

Gist-brocades is the largest manufacturer of baker's yeast in Europe and one of the largest in the world. In the first decade of this century the only form in which baker's yeast was known and used was the compressed baker's yeast, marketed in the form of briquets of one pound or one kilogram each.

Compressed baker's yeast has a short shelf life, even if kept in cool storage. Hence, export to other countries was a tricky affair in the old days. As a result, every country in which bread was a main item of food had at least one yeast factory. Patents covering processes for making baker's yeast were few and far between. There was not much active competition between companies

based in different countries. As a result, holders of valuable technology were prepared to license their inventions and discoveries to others, usually for monetary considerations only.

Many of you will not have realized that compressed baker's yeast—other than may be implied by the descriptive term—consists mainly of water: about 70% of weight. When transportation problems were gradually solved and the world became smaller as a result of that, competition between yeast manufacturers started to become more active. As a reaction to the challenge, and using modern (at that time) technologies, a drying process was developed that made it possible to manufacture granular yeast of good keeping qualities. It could be exported to far-away countries. It indeed successfully competed with fresh yeast in many countries especially in tropical areas.

Although accessible to everybody right now the number of companies that are making and selling granular yeast is limited and licensing was and is very rare. Companies have tried to keep know-how to themselves. Trademarks are centrally owned, and distribution takes place via a network of distributors rather than licensees. Gradually, the old granular yeast is being replaced by instant dry yeast. The "instant" means that the yeast becomes active instantly and does not need to be presoaked.

Basic Invention

I am proud to say that the basic invention was made by scientists employed by my company. This invention eventually was patented in over 70 countries. Success certainly did not come overnight. It took a number of years in which scaling up had to be done, and the conservatively inclined baker had to be persuaded to make a change in his traditional procedures, etc., etc.

Some of our larger competitors showed interest in various ways. In short: the company was (and is) facing the decision: to license or not to license, and if license, license what. Only the patent—in other words, grant a freedom from suit—or also the vital technology. In any event, we want our industrial property rights recognized and we are prepared to go to court to have them respected. On the other hand, a nonexclusive license can be obtained in principle. We would be rather hesitant, however, to license our trademark FERMIPAN which we have been able to register in virtually every country of the world.

Now, to look into the future. Baker's yeast is an exceptional case in that living material incorporating an invention in a self-replicating form is sold. Research is concentrating on "making" new yeast strains better suited for particular purposes. Modern methods such as

*Board of Management, Gist-brocades NV, Delft, The Netherlands; paper presented at LES International Conference, Brussels, May 1984.

recombinant DNA techniques are being used together with traditional methods of hybridization. It is now possible and gradually becoming a routine operation to make a genetic fingerprint of the essential characteristics of a new yeast strain. The EPO, the U.S. Supreme Court and other courts and legislators have decided that a patent *per se* for a microorganism can be obtained provided the normal criteria for patentability are met.

This may mean that research-based companies have a better basis for licensing in the future than they have now with respect to prospective licensees in countries where the patent system is well developed and patents can still be enforced.

INDUSTRIAL PHARMACEUTICAL PRODUCTS

This group of products includes, but is not limited to, natural penicillin (penicillin G), 6-APA and semisynthetic penicillins derived therefrom, 7-ADCA, intermediates for some of the 3rd and 4th generation of cephalosporins, and some basic steroid building blocks out of which therapeutically active final products are prepared by our customers.

The company is the largest single producer of penicillin G. The producers of this important compound can be divided in two groups: those who manufacture for captive use only and those who sell the product either as such or (mainly) in the form of its derivatives.

Needless to say penicillin itself, discovered as its activity was in 1927, is not now patented, although its isolation and structure determination occurred much later. What can still be patented are better processes or equipment and, of course, also better producing strains. I dare say no manufacturer will even think of patenting a particular strain. Rather, it is common to attempt to keep this a well-kept secret. This does not mean, however, that licensing is out of the question altogether. Some specialized companies will accept the task to perform strain improvement programs using proprietary technology of their own (which they keep secret) and when successful they share in the cost reduction at the manufacturer's level. It is these specialized companies rather than the actual manufacturers who use special licensing techniques as a marketing tool.

Penicillin and especially its derivatives such as ampicillin and amoxicillin are some of the most important basic medicines the importance of which is recognized by the WHO and by all governments also in the LDCs. Many countries—and when too small or too obviously lacking means, combinations of countries—try to become self-supporting in the procurement of essential drugs. Common practice is to back-integrate. The first target is the local manufacture, usually by government-owned or government-controlled companies, of bulk ampicillin, followed by the manufacture of 6-APA. Technology for making final product and intermediate can be acquired, although it is not a policy generally followed by potential licensors to grant licenses against standard terms to all applicants. Rather, one more often feels to be faced with a situation in which political overtones are key factors. My company, in principle, has adopted a flexible stance in this respect. "Yes" is possible; "no" sometimes inevitable.

The final part of backward integration, of course, is the manufacture of penicillin itself. In my view, any com-

pany, whether nationalized or independent, that would try "to go it alone" is doomed to fail. Investment cost is high and, hence, the fixed-cost part in total costs. It is only the lowest-cost producers who can hope to survive whether or not they produce only for captive use. In other words: the entry costs are high and so are the exit costs, unless one can use the fermentation and recovery equipment—after having made (again) costly adaptations—for other purposes.

Marketing Tool

Have we, in Gist-brocades used licensing as a marketing tool in this area? Yes, we have, on a limited scale, though not in the area of antibiotics production. We have learned, however, to be very careful in licensing know-how consisting of fermentation technology. This technology, or at least part thereof, is the lifeblood of the company.

What about licenses made available by government-owned companies (whether based in the East block states or in LDCs) to companies in other developing countries? To my best information, the flow of technology—if existing at all—must have remained rather limited or has attracted very little publicity at best. Do potential acquirers of technology (usually governments) realize that the know-how offered is outmoded? Are there political constrictions impeding licensor-licensee relations? Perhaps there are other factors involved, but East-South and South-South licensing is not widely publicized even by media that usually would give prominence to such news.

INDUSTRIAL ENZYMES

Gist-brocades ranks number two in this area. We manufacture and sell a broad pallet of enzymes for use in many branches of industry. When compared to baker's yeast and even antibiotics, industrial enzymes are a young group of products. Research and development work is in full progress in such areas as:

1. Finding new or improved microorganisms for making existing enzyme products.
2. Finding new enzymes and microorganisms that can produce them economically.
3. Adapting enzymes to the conditions of use by immobilization and enzyme engineering.

I will make a number of short observations in connection with each of these subjects.

1. "New organisms for making enzymes and similar products" is a field of research in which several of the venture-capital firms hope to make a breakthrough. You all know the insulin, interferon, bovine growth hormone stories. So far, there is not an "industrial enzyme story," at least not when one counts out the enzymes used for diagnostic purposes. Industrial enzymes are products that are sold in large quantities at usually small or at best reasonable margins.

Genetic engineering companies that compete for industry attention have dreams of becoming big, billion-dollar companies, having their own large-scale production facilities and sales organizations. Some may succeed. A number will not survive childhood, and a score will live on performing contract research and licensing out the results. It is for those companies that

licensing — at least in the early phase of their existence — is a marketing tool “par excellence.”

2. New enzymes are much sought after and when they are found they can be patented. If the inventor is an employee in the fermentation industry his employer will seek to exploit the invention himself. If the inventor is self-employed, member of a university team or an employee of a small but specialized company, the invention including the know-how may be an asset that can be best employed by the grant of nonexclusive licenses for production together with territorially restricted marketing rights.

3. Enzyme engineering is a popular subject in discussions with academia and with companies that specialize in recombinant DNA work. It is now possible to produce a three-dimensional picture of an enzyme molecule highlighting its active sites and how they—and their accessibility to substrates—can be changed by replacing one aminoacid by another. Here again R&D agreements may be concluded that can result in licensing programs if tangible and useful results are obtained. In this way it may become possible to custom-manufacture enzymes for specific purposes. The prices such enzymes, in the limited amounts needed, will be able to command in a competitive market will be the touchstone as to whether the return on assets invested is commensurate with the risks involved.

PHARMACEUTICAL PRODUCTS IN DOSAGE FORM FOR MEN AND ANIMALS

In contrast to the situation for the three already mentioned divisions, this division is a dwarf in the world of drug companies. The company has stopped R&D directed to finding and developing new chemical entities for use as medicine. The efforts have been redirected to the development of new and/or improved administration systems such as better dosage forms, additional dosage forms that make the drug available to certain groups of patients that could not (or not without special help) be

treated with conventional dosage forms.

Moreover, the company is quite active and with success, in acquiring market rights for products that have been developed by others. Licensing-in is a fact of every day life for this division that can show marketing strength in several countries, especially in Western Europe. This does not mean, however, that for our pharmaceutical products division there would be a one-way traffic only. The company is prepared to grant licenses and is actively engaged in doing so f.i. in order to have markets inaccessible to us serviced by companies that are better positioned than we are.

My story would be incomplete if I would not mention our achievements in combating pollution. We have invented and developed an attractive method for purifying our effluent stream. Installations operating on plant scale have been built in Delft and Prouvy (France). The technology is patented and the know-how fairly extensive. Of course it is designed to solve our own problems in the first place. This technology can be made available to third parties under the terms of a license agreement. Here, licensing is our one and only marketing tool.

In this part of the world companies in principle are free to make agreements as they see fit. However, we do not operate in a vacuum. National authorities and, increasingly, the European Commission influence our freedom to license in and out. It is not because we are here assembled in the lion's den that I choose not to elaborate on the subject of block exemptions. I do hope that the new realism industry is encountering in official circles bodes well for the future so that satisfactory solutions for still existing problems can and will soon be found.

I hope I have made clear that a subject of special interest to Gist-brocades is “biotechnology” in its widest sense. International coordination, concentration of efforts across frontiers and a permissive attitude toward licensing by national and supranational authorities will be needed lest Europe loses the race for many exciting markets of tomorrow.