I have described these operations of Occidental, as a means of illustrating that negotiations handled with persistence and respect can result not only in the consummation of deals, but in the creation of an atmosphere in which subsequent contracts become easier.

As an aside, and a commentary on the effect successful and extended contacts may have — even on people immersed in different systems — the Soviets who previously found business negotiations outside their own country inconceivable, have relaxed to a point that the last agreement signed by Occidental and the Soviet Union, which was for the construction of the International Trade Center in Moscow, was finally negotiated and signed by a delegation from the Soviet Union which met us in New York.

As a final word, I would ask you to remember that you are dealing with state agencies, essentially, a government — and this may be strange for you, but as they get to know you, you will find that they prefer to deal with people whom they know and with whom they have dealt before. Give your negotiators authority and with patience and persistence it is almost certain that profitable arrangements for the transfer of technology and perhaps even a technological feed back can be made.

We may even, as a result of your endeavors and those of other Western businessmen, reach a level of understanding with each other which could be of major assistance to our political leaders in developing an understanding which would help us both to live peaceably on this planet.

**About the Speaker: George J. Phocas was elected an executive vice president of Occidental Petroleum Corporation, with responsibilities including international negotiations.*

Phocas came to Occidental from the law firm of Casey, Lane & Mittendorf in London, England, where he was senior partner. He served as counsel to a number of substantial industrial and financial firms based in the United States and foreign countries.

Prior to that, he was with the New York City law firm of Sullivan & Cromwell (1953-56); was legal counsel for Creole Petroleum, a subsidiary of Standard Oil Company of New Jersey (1956-1960) and international negotiator for Jersey Standard (1960-63).

TECHNOLOGY, TRADE AND LICENSING

by
*W. F. Libby**

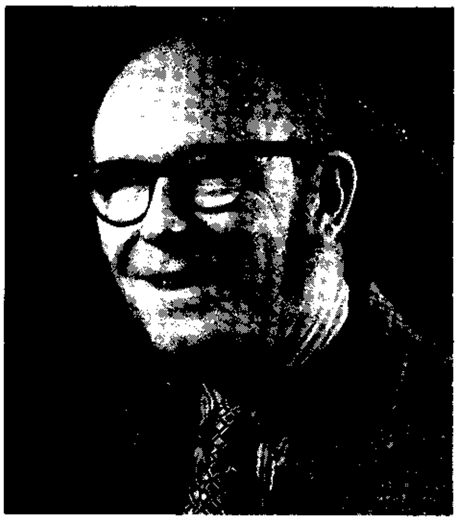
*(In the absence of Dr. Libby, this paper was delivered by Donald F. Howard**, a member of his staff.)*

I. Introduction

Licensing is necessary to protect society. It certainly is a restraint of trade but maybe necessary despite this infringement on the freedom of the individual. A license carries the responsibility to follow an agreed code drawn by the licensing authority to protect society. The protection so afforded is considered by the community through its legislative authorities to be worth the restraint of trade so imposed.

How does technology affect the balance between the benefits to society of licensing and the liabilities inherent in restraint of trade? We have the impact that new technology can create new needs for licensing; For example, the operators for atomic power reactors. Can new technology reduce the need for licensing?

II. Impact of Technological Development on Needs for Licensing



Dr. Willard F. Libby

At first glance it seems that since new technologies require new licenses there must necessarily be a net increase and thus an increased restraint of trade. However, this may not be true. Let's examine the question more carefully.

Consider a case in which new technology is allowed without license; fishing on the high seas. Modern fishing techniques threaten to totally eliminate this source of food unless a system of international licensing and control is instituted. The seas are much less fertile than was believed until recently, Dr. E. T. Degens of the Woods Hole Oceanographic Institute estimates that the total photosynthetic fixation at sea is only half that on land despite the 4:1 ratio in areas. The vast central regions of the great oceans apparently are deserts, for lack of inorganic nutrients such as nitrate and phosphate. So we'd better move quickly to avoid eliminating trade for lack of licensing restraint! So we have a good example of how licensing can promote trade rather than just restrain.

Another example is the lumbering industry where controlled cutting and replanting can lead to a stable economy whereas uncontrolled, it leads to disastrous dispolation and ruin. A third example is the coal mining industry which has ruined large areas for lack of licensed control and we get appalachia and poverty in the wasteland.

Donald F. Howard, Vice President, General Manager of W. F. Libby Laboratories, substitute for Dr. Willard F. Libby

We come to consider, therefore, whether licensing is not the friend of trade, the promoter of permanence and perpetuator of stable trading conditions. It appears that this may be true.

III. Is Licensing Necessary for Progress?

It seems that licensing may indeed be necessary to control new technology. Is it necessary for progress?

Since we live on a planet of finite size, we must always consider the effects on our atmosphere, the oceans and the land of our activities. We should always consider these matters in our plans and indeed it is rapidly becoming a matter of law that this be done. We all have seen odious examples showing the sad consequences of neglect of such planning; the smog in Los Angeles is a famous example.

In certain areas of activity, those affecting the environment, there is little doubt of the need for licensing to control technological progress. In fact in the whole area of energy and environment, licensing and controls obviously are essential. We speak of all energy sources and distribution problems: coal, oil, shale, tar, sands, hydro, solar, geothermal, power transmission and energy storage. All utilization problems; automobiles, and their emissions, mass transit systems, air conditioning, insulation in new buildings, etc. All of these matters require intelligent and sympathetic licensing practices to allow necessary technological progress and in fact, to encourage it.

Are there any areas where licensing is truly inhibitory to technological progress? Unfortunately the answer is affirmative but I do not believe it is necessarily so. The licensing and control boards sometimes err in not being up to date on the technology and thus act in inhibitory ways. Examples: In Los Angeles where earthquake hazard is great, only metal piping is allowed while much of the rest of the country allows flexible plastic pipe which is able to bend as much as 38° without breaking. Another example: For fifteen years a method of food processing to greatly improve the quality and distribution of fresh meat and fruit has been available but unused for the lack of license by the Food and Drug Administration. This has cost untold billions of loss in trade particularly for underdeveloped countries and unnecessary hunger.

**About the Speaker: Dr. Willard F. Libby has become a world renowned author, lecturer, scientist and professor for his works in chemistry. Dr. Libby, who is currently Professor of Chemistry and Director of the Institute of Geophysics and Planetary Physics at U.C.L.A., has received numerous special awards and honors for his pioneering research activities. Dr. Libby was awarded the Nobel Prize in Chemistry in 1960 for his discovery of the carbon-14 method of determing the age of archaeologically and geologically important materials.*

Recently, Dr. Libby's interest in air quality has resulted in new research activities in the area of heterogeneous catalysis and their application to the current auto exhaust problems in the United States.

***Donald F. Howard is Vice President, General Manager of W. F. Libby Laboratories, Santa Monica, California.*

Use of the L.E.S. Mailing List

There was discussion of the policy to be followed regarding use of the membership list. Following discussion of the LES Board of Trustees, it was moved, seconded and passed that use of the U.S.A. Member Society membership list may be authorized at the discretion of the President or President-Elect, subject to Counsel clearance, for a fee of $100.

George W. Morgenthaler

A QUANTITATIVE LOOK AT PROFITS IN LICENSING

by
*George W. Morgenthaler**

I. To License or Not to License –

Many reasons have been given, pro and con, regarding whether a corporation should engage in an active program of licensing of its technology. Some of these reasons are listed in Figure I.

PRO'S & CON'S OF LICENSING

PRO'S	CON'S
1) GATHER INTELLIGENCE & STIMULATE	1) DISTRACT MANAGEMENT
2) OUTLET FOR EMPLOYEE CREATIVITY	2) LITIGATION
3) INCREASE GROWTH OPPORTUNITIES	3) RESOURCE DIVERSION
4) INCREASE PRODUCTIVITY OF WORK THROUGH CROSS LICENSING	4) COMPROMISE PROPRIETARY DATA
5) PRODUCT MARKET PENETRATION	
6) INTERNATIONAL UNDERSTANDING	
7) PROFITABILITY	

On the 'pro' side, we at Martin Marietta Corporation (MMC) have found that the activity of engaging in a licensing program brings us into daily contact with important ideas in the technical field and so this represents an intelligence function or a "G2" function plus a general technical stimulation. For example, some of our recent licensing activity in the field of electronic recording devices has enabled us to better calibrate our own technological level in this field.

A second reason for licensing is that the creative employees of the company derive great personal satisfaction from seeing their innovations employed on a broad scale. Consequently, licensing of technology beyond company product use, is an important morale booster for such employees.

In the course of endeavoring to place the technology via licensing, opportunities are brought forward from without the company which can be classified as growth opportunities for the corporation. For example, one recent licensee candidate, upon viewing our working model, suggested an entirely