

Australian Approach to Licensing

Review of technical and economic aspects of technology transfer, impact in Southeast Asia-Pacific Region

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(EDITOR'S NOTE: The following keynote address was presented by Dr. H.R. Edwards, MP for Berowra. Mr. Macphee's remarks are edited here to include substantive technology transfer topics.)

We shall look at the role of governments in the transfer of technology to manufacturing industry, and what Australia and her regional neighbors in Asia and the Pacific should do to aid this transfer.

In 1976, the prime minister established a separate department of productivity to provide a national focus of attention on the need for productivity development across all sectors of Australian industry. The underlying philosophy of the department's approach to productivity improvement can be summarized in these statements:

- The problems impeding productivity growth are real.
- The capability exists within Australia to identify these problems and to tackle them constructively.
- Productive solutions of real benefit can be utilized.
- Productivity improvement is both a constructive positive activity and a defensive maintenance activity.

The action which should be taken by any particular government will depend on many factors, such as the current state of development of industry and the extent and nature of the physical and intellectual resources available. This means that a package of measures which might constitute a good solution for Australia might prove a poor solution for other countries. Equally, there are many measures to promote the transfer of technology which we will find to be common.

Most of us recognize that the efficient transfer of technology is essential not only to the development of an efficient Australian manufacturing industry but to all sectors of the Australian economy. Accordingly, our programs and research must be, and are being, directed to all sectors.

The transfer of technology takes many forms. For example, it may occur through:

- People changing employers;
- Through technical literature.
- The purchase of machinery or goods or in the process of training people.

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Technology transfer may:

- Accompany foreign investment by way of establishment of subsidiaries or joint ventures; or finally,
- It may happen by means of patent and know-how licensing agreements.

The Australian Government wants to provide a cli-

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mate conducive to the transfer of technology into and between sectors of Australian industry in as many ways as possible, and to provide direct assistance where this is both appropriate and possible.

Government Action

I shall outline what the government is doing to stimulate a suitable climate for technology transfer in manufacturing industry. We know our current program most certainly does not embrace all possible avenues for the promotion of the transfer of technology.

Nonetheless, we are optimistic about one major initiative concerned with the transfer to industry of the vast resources of expertise and technical information resident in the academic, government, and private research and other institutions in Australia. The emphasis here is to assist in the effective exploitation and application of existing technologies within Australia. The implementation of this scheme is under the direction of a technology transfer council, a body formed by interested organizations representing industry, professional, academic and government bodies with a view to facilitating technology transfer to manufacturing industry. It is serviced by the Department of Productivity.

The basic tenet of this scheme is that effective transfer of technology from the research location to the factory floor is best achieved by direct person-to-person contact. The scheme envisages the creation of a network of regional technical referral centers for specific technologies. These centers would be the base for technical liaison officers, providing the link between the institutions and industry. The scheme should not only aid the use of existing technology by Australian industry, it also has the potential to provide a medium for inter-enterprise and inter-industry transfer of technology, as well as, the introduction of new technology from overseas.

A second initiative is the formation of the Information Technology Council. Its role is to help Australian business, industry and government to improve their productivity through the better use of information technology.

We can't expect, however, that the flow of technology from institutions to industry and between indus-

tries and enterprises will occur at no cost to the recipient. Know-how developed in respect of existing technology, or the development of new technologies and associated know-how represents a considerable cost to the developer. It would never be recovered if the know-how or technology were simply given away.

Licensing, therefore, plays an important role in the transfer of technology at the inter-industry and inter-enterprise level. As many of the enterprises which will be involved are small, generally with little knowledge of licensing, education and assistance in this area is a prerequisite to successful technology transfer.

There is a great deal of international concern over the licensing aspects of technology transfer, especially in regard to the transfer of technology to developing countries. The failure so far of the developed and developing countries to reach agreement on a code of conduct for technology transfer under the U.N. Conference on Trade and Development is evidence of these problems. The Australian Government believes that the imposition of terms on technology transfer which are too severe from the vendor's point of view in effect become a barrier to technology transfer. Clearly, any terms imposed regarding technology transfer should reflect the right of the vendor to a fair return for the sale of his technology.

Some commentators believe that all transfers, whether import or export in nature, should be the sole concern of the vendor and the recipient. That is, there should not be any provision for review by governments. I believe, however, that governments have a duty to concern themselves to the extent that they should ensure transfer agreements generally do not operate against the interests of the public. It is a simplistic view to regard technology as a commodity which may be bought and sold in the marketplace. Technology is a product of the social and political process. The transfer of technology from developed countries to developing countries is a means whereby the knowledge and expertise of the transferer is given to the transferee. In this transfer process, the cultural, economic and geographical differences between the two countries must be recognized and taken account of.

Principal Mechanism

An industrial property system — a patents system — should be one of the principal mechanisms for aiding technology transfer to and within industry. The international patent system which operates under the Paris Convention for the protection of industrial property provides a basis for the transfer of technology across national boundaries, while the national patent systems which collectively comprise the international system provide the basis for transfer at the national level.

The government has recognized and acted upon the need to continually review local Australian industrial property laws as well as participating in reviews of international industrial property agreements.

This approach by government has ensured the existence of an industrial property system attuned to the contemporary needs of Australian industry. Some recent reforms in this area have included:

- Establishment of an industrial property advisory committee to advise the minister on industrial property matters.

- Bringing the Australian Patent Information Service to full strength.

- Introduction of legislation to provide for petty patent protection in addition to standard patent protection.

- Decision that Australia should accede to the Patent Cooperation Treaty.

The patent system aids technology transfer in two ways. First, it provides the legal basis for licensing agreements, and second, it encourages the disclosure of new inventions. Patented technology can be more acceptable to recipient countries than unpatented technology because the existence of patent protection is often the only assurance that the technology is new.

Through introduction of petty patents in Australia it is expected that the base of technology suitable for patent protection will be broadened. Technology transfer over a broader base will be thereby encouraged and facilitated. The petty patent will have the advantages of lower cost and more rapid processing allowing industry and inventors protection for inventions with a short, but nevertheless valuable, commercial life. The early grant and early publication which should occur for petty patent applications will both facilitate technology transfer.

Early grant should enable the early conclusion of licensing agreements. Early publication will provide competitors and others with early access to the technical information contained in the petty patent specification.

We have only recently realized the need to provide easy access for industry to the technical information contained in patent specifications. The Australian Patent Office contains patent specifications from all major developed countries of the world. This is a valuable bank of technical information which industry cannot afford to ignore. Bringing the Australian Patent Information Service up to full strength should make a big contribution to technology transfer by improving the ease of access.

The Patent Cooperation Treaty (PCT) is probably the most significant development in the international patent system since the Paris Convention itself. PCT should operate to enhance technology transfer by providing a more universal and more efficient route for the application and granting of patents internationally and by creating a readily accessible pool of patent literature.

Regional Cooperation

But rewards in technology transfer to be gained from an effective industrial property system should not be thought to be restricted to the so-called developed countries. Many developing nations have recognized the benefits of an industrial property system to technology transfer and subsequently to economic development. The Australian Government expects industrial property to play a major role in the development and progress of all countries in the South-east Asian and Pacific region. However, the maximum benefit to countries of the region will only flow from close regional cooperation. Regional cooperation in industrial property matters is therefore necessary and mutually beneficial.

I have concentrated on what might be called the

technical aspects of technology transfer. Technology transfer is also, of course, an economic activity. As such it is dependent on prevailing economic factors. The government's economic program has as its primary objective the maintenance of a stable economic base against which Australian enterprises can make sound business decisions, including decisions to introduce technology new to the enterprise. We are also aware that the availability of resources such as finance, labor and materials are prerequisites for the effective transfer of technology, and that account has to be taken of this in framing policies affecting the availability of resources.

The social problems arising from the introduction of new technology to increase productivity have been accentuated by the rise in unemployment in Australia. Technological change is a reality of the modern economy. It has been occurring in western societies for

hundreds of years. It is not likely to stop because it is as much the product of social and political processes as the economic process.

Some nations in Southeast Asia are already facing conflict arising from choices between high- and low-labor intensiveness. On the one hand is the pressure to use labor-intensive methods, but on the other hand a more productive machine enables the same output with a lower labor cost or a larger output with the same labor cost. In the private enterprise economy, the trend will always be to use the latest and most productive equipment.

I hope that the actions and views of the Australian Government on the transfer of technology which I have described provide a suitable background against which the views and experiences of the distinguished speakers to follow will be highlighted.