

Legal Guidelines, Contractual Practices In Singapore

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Technology transfer is encouraged; few restrictions imposed; procedures are outlined

In economic terms, Singapore is an open society. In the context of technology transfer, this means that there are no special regulations inhibiting the inflow of technology transfer and, indeed, there are certain incentives promoting ventures incorporating transfer of technology.

Before proceeding to discuss these incentives, a general word about the legal infrastructure in relation to technology transfer.

LAW OF CONTRACT

The law of contract applicable in Singapore is basically the English common law. Indeed, in the field of merchantile law, there is a continuing reception of English commercial law, both case law as well as statute law. Thus, subject to the specific restraints contained in statutes such as the U.K. Unfair Contract Terms Act, there is, generally speaking, freedom of contract in Singapore where parties to an arrangement involving transfer of technology are free to settle the terms and conditions of their particular transaction without having to consider statutory prohibitions or restraints. This may be contrasted with the position in Malaysia where detailed policy guidelines on Transfer of Industrial Technology have been established by the Ministry of Trade & Industry, which will screen all types of agreements signed by Malaysian companies licensed under the Industrial Coordination Act of 1975, with foreign partners.

Since there is essentially freedom of contract in the negotiation of commercial terms in contracts relating to transfer of technology,

there is not a great deal to say about contractual practices prevailing in Singapore. We all know that in a Technology Transfer Agreement (whether it is to be by way of sale, license or joint venture), the position of the party acquiring technology is not usually equal to that of the party transferring technology. It is customary for agreements to be drafted, not only subject to the laws of the country of the party transferring technology (which, by definition, will not be the law of Singapore) in the first instance by the transferor's lawyers in its home country.

LAW OF INTELLECTUAL PROPERTY

Singapore has a fully developed regime of trademark protection. Our Trade Marks Act is broadly based on the U.K. Trade Marks Act 1938, although not incorporating the later amendments of the U.K. Trade Marks (Amendment) Act 1984. There is an active and busy Trade Marks Registry in Singapore and owners of trademarks and trade names have a comprehensive system of protection both by way of registered trademarks as well as by the common law of passing off. In addition, the Companies Act and the Business Registration Act also contain specific provisions giving protection to corporate and trade names. There is, however, no legislation protecting service marks.

PATENTS

There is no mechanism for original registration of patents in Singapore. There is instead a system of re-registration of U.K. patents under our Registration of United Kingdom Patents Act. This system of re-registration extends to European

patents (U.K.), i.e. European patents designating U.K. that are mentioned in the European Patent Bulletin. Re-registration must, however, be made within three years of the date of registration in the U.K. If re-registration is made within this period, protection is given to such patents in the same way and for the same period as accorded to the U.K. patent. However, with the establishment of a Patent Registry in Malaysia it is only a question of time before a Patent Registry is set up in Singapore. At the APAA Conference in Singapore last year we received word that the government was actively looking into establishing a Patent Registry which, when implemented, would be a great encouragement to the development of original research and development in Singapore. There is also a regime for compulsory licenses under the Patents (Compulsory Licensing) act, which provides for the granting of compulsory licenses in respect of specified classes of patented inventions (e.g. certain metallic products, glass, textiles, paper and building construction materials). The grounds on which compulsory licensing may be ordered are broadly similar to those contained in the United Kingdom Patents Act 1977, which provides for compulsory licensing of patents on certain grounds of public interest. The Singapore Act further provides for compulsory licensing of patented inventions concerned with food or medicine, surgical or curative de-

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vices. The act also provides that the rights conferred by patent shall not be infringed by the government in making or importing any patented medicine or drug for distribution and use in government hospitals or institutions.

REGISTERED DESIGNS

Similarly, there is no Registry of Designs as such in Singapore. Instead, under our United Kingdom Designs (Protection) Act, there is automatic recognition of the rights of a registered proprietor of a design registered in the United Kingdom under the Registered Designs Act of 1949. We have no information as to whether there is likely to be a Registry of Designs set up in Singapore in the near future.

Copyright

Singapore adopted a Copyright Act in 1987, based largely on the Australian model. There is therefore now a definitive and comprehensive regime of copyright available for the protection of publishers, composers and writers. Under the act there is a Copyright Tribunal to be established, although this has yet to be set up.

ROLE OF GOVERNMENT IN PROMOTING AND ASSISTING TECHNOLOGY IMPORTATION AND DEVELOPMENT

In Singapore, the government takes an active interest in promoting the transfer of the technology to local businesses. The government policies here can be classified into two categories:

1. Policies for promoting and assisting technology importation.
2. Policies for reducing dependency on foreign technology and for promoting domestic technology development.

A detailed discussion of these policies is beyond the scope of this paper, but the policies will be outlined here to provide a general overview.

a. Promotion and assistance of technology importation

(i) International Operations Divi-

sion of the Economic Development Board

This centers on the selection, promotion and acquisition of desired investment and technology for Singapore's manufacturing and service sectors.

(ii) Tax Incentives

These have been consolidated into the Economic Incentives (Relief from Income Tax) Act and have been tabulated in Appendix A for easy reference.

b. Promotion of domestic technology development

(i) Local Industries Upgrading Program

Various programs have been implemented to use the available resources in reputable companies in Singapore. The Local Industries Upgrading Program (LIUP) fosters close business development ties between local and multinational companies in Singapore. By forging stronger ties between local companies and MNCs, our Small and Medium Enterprises ("SMEs") can use the management and technical expertise of the MNCs to upgrade their management and production capabilities. This then helps them to meet the stringent quality and reliability requirements of the MNCs in parts, components and services and therefore compete effectively.

As at the end of 1987, five leading MNCs — Philips, Hewlett Packard, Maxtor, AT&T and Matsushita — had teamed up with more than 50 SMEs to offer assistance and training. Significant improvements in the quality of the products and services of the participating SME suppliers have been achieved. The Small Enterprises Bureau, a set-up forming part of the Economic Development Board ("the EDB"), has declared that priority for the program is given to MNC suppliers even though they make up no more than 1,000 of the 70,000 small enterprises in Singapore because of their spinoff effects. These are companies that form the backbone of the country's manufacturing sector, are export-oriented, have a sizable market, and most importantly, are in a position to gain from new tech-

nology.

Dutch MNC Philips started the program with a \$500,000 budget. Philips deployed three engineers to the project. Philips also seconded its project manager to the Small Enterprises Bureau.

Four Philips suppliers were selected for the program. These companies subsequently reported that they had tidied up their corporate structures and operating systems. In particular, more experienced managers were recruited, jobs re-defined, floor layout redesigned, and computers were used in planning materials requirements.

The Managing Director of one of the companies said in a press interview that his company was enjoying an increase in sales as a result of boosting its management staff from three to eight. Regular management and production meetings were scheduled to plan and discuss problems and strategies.

In addition to management consultancy, the Philips program also includes courses and training workshops. The courses held in 1986 were:

July 1986: Computer Workshop

October 1986: Manufacturing Engineering Workshop

November 1986: Workshop for Supervisors

Philips says that its aim is to train supervisors, mostly from small and medium firms in management techniques, such as team-building, motivation, appraisal, counseling and positive thinking.

Joint-Venture Matching Service

An important goal of the EDB is to help promising SMEs develop into viable business entities. One program geared to such a goal is the Joint Venture Matching Service (JVMS). It promotes business and technical partnerships between local SMEs and foreign companies. The objectives of this program are:

- To promote the benefits of joint-venture partnerships with foreign companies among SMEs.
- To help SMEs upgrade.
- To match SME capabilities and needs with suitable foreign companies.

(iii) Other Local Industry Assistance Schemes

(a) Small Industries Finance Scheme (SIFS): introduced in 1976 to provide low-cost financing for small local companies in the manufacturing and related supporting services.

(b) Product Development Assistance Scheme (PDAS): Introduced in 1978 to stimulate local product innovation.

(c) Small Industries Technical Assistance Scheme (SITAS): Introduced in November 1982 to assist small and medium local companies to seek foreign expertise in upgrading their technical operations and management techniques.

(d) New Technology Incentive: Introduced in 1985 to encourage local companies to branch into new technology business by ameliorating the high risk of loss in such ventures.

(iv) Skills and Manpower Development

(a) Skills Development Fund Initiatives in New Technologies (IN-TECH) Scheme: Aimed at accelerating investment in new technologies by providing training and start-up assistance and developing a pool of highly trained professionals and scientists to spearhead activities in new technologies.

(b) Industrial Training Schemes: Training is provided through seven training establishments and five training units set out in Appendix B.

(v) Research and Development (R&D)

(a) Tax and financial incentives for R&D as listed in Appendix C.

(b) Singapore Science Park: Being developed to serve as a focal point for industrial R&D activities, related services and manufacture of high-technology product.

(vi) Venture Capital

Because a conducive environment to foster local entrepreneurship and innovation, and the acquisition of new and specialized technologies is important to the further development of our manufacturing and services sectors, the EDB established a \$100 million Venture

Fund in 1985 to develop the local venture capital industry.

— Co-invest with local investors in new technology companies both in Singapore and overseas.

— Invest in professionally developed and managed venture capital funds to gain a window to new technology projects.

Areas of advanced technology where investment commitments from these funds and corporate investors were recorded include microwave telecommunications, artificial intelligence, computer integrated manufacturing (CIM) system software, environmental technology, voice messaging systems, medical electronics and biotechnology.

(vii) Incentive for Overseas Investment

A Venture Capital Incentive ("VCI") has been introduced to encourage local investors to take part in venture projects. In brief, this allows individual and corporate investors to write off against their taxable income the full amount of losses resulting from the sale of shares in approved venture projects.

Under the VCI, a qualifying investor is entitled to claim relief for losses suffered on shares held in an approved technology investment company.

Any eligible holding company incorporated in Singapore may qualify as an investor under the VCI where at least 50% of its paid-up share capital is beneficially owned by citizens or permanent residents of Singapore throughout the period during which it holds shares in an approved technology investment company.

An approved technology investment company is defined to mean any Singapore incorporated company:

— That is resident in Singapore.

— That intends to invest in an overseas company which is developing or using a new technology.

— The Minister is satisfied that the technology, if introduced in Singapore, would promote or enhance the economic or technological development of Singapore.

Under the VCI, an eligible hold-

ing company is entitled to claim deduction for losses suffered on the shares held in an approved technology investment company as if these are business losses. However, these losses must be suffered either as a result of the sale of the shares in, or upon the liquidation of, the approved technology investment company. In addition, such losses must be suffered within a prescribed time span, i.e. after the second anniversary of the date of issue of the shares in the approved technology investment company and before the eighth anniversary of the date the approved technology investment company status was granted.

(viii) Overseas Investment Incentive

In the budget debate earlier this year, the government announced that yet another new incentive will be introduced from the year of assessment 1988 to encourage local companies to invest overseas. This new incentive will be similar to the VCI for investment in approved technology investment companies. Deduction will be given for losses suffered by the local companies arising from the sale of the shares in, or the liquidation of, the approved overseas investment.

To qualify for the Approved Overseas Investment (AOI) status, the overseas investment must provide significant economic spin-offs to the Singapore economy. These spin-offs should include one or more of the following:

— Allow access to overseas technology including access to design and engineering facilities, equipment, engineering and scientific personnel, designs, patents or other specialized know-how.

— Create high value-added engineering and technical employment.

— Provide access to overseas markets such that it would substantially increase the company's activities or extend its scope of operations in Singapore.

Only locally incorporated companies may qualify for the AOI status. It is expected that such a company must also satisfy other qualifying conditions similar to those currently imposed on an eligi-

ble holding company for the purpose of the VCI.

The government has indicated that the AOI incentive would be administered by the EDB and that the award would be made only on a case-by-case basis.

Case Study — Technology Transfer in Construction Contracts

An example of government encouragement of technology transfer has been in the field of construction contracts. In the late 1970s and early 1980s the government embarked on civil engineering contracts in Singapore that were then perceived to be beyond the capabilities of local contractors. Invitations were therefore made to large foreign contractors to bid for these large and lucrative contracts, much to the chagrin of local contractors. To alleviate the complaints of local contractors, the government introduced a margin preference scheme whereby any local contractor's bid

coming within a certain percentage of the lowest foreign contractor's bid would be given preference in determining the successful tenderer. This, however, was of not much benefit to local contractors who were simply not able to tender for the larger projects, particularly for the Mass Transit System (which involved specialized engineering skills not locally available).

The answer seemed to lie in joint ventures with foreign contractors and the government, in order to encourage such joint ventures, extended the margin preferences scheme to include "approved joint ventures," i.e. those with 25% local equity participation. An important criterion for conferring the status of approved joint venture for the purposes of the preferential margin scheme was that there had to be a specific and definite technology transfer proposal for each such joint venture. All such joint ventures had to pre-qualify for endorsement by the Construction Industry Develop-

ment Board before being entitled to qualify for the margin preference scheme. In the application form for pre-qualification, the joint venture parties have to specify details of the technology transfer proposals, in particular the site organization chart, which would indicate the number of personnel, a table of executive staff and particulars of personnel for the project. Furthermore, the joint venture parties would have to submit on a quarterly basis, progress reports on technology transfer again by reference to site organization charts.

The scheme has been successful, resulting in large public construction projects in Singapore, including several MRT jobs, being awarded to such joint ventures. With the development and upgrading of the local building construction industry, the margin preference scheme will be phased out when it has served its purpose of making local contractors competitive with foreign contractors.

Appendix A
TAX INCENTIVES ADMINISTERED BY THE ECONOMIC DEVELOPMENT BOARD

TAX INCENTIVES			
Tax Incentives	Qualifying Activities	Minimum Requirements	Tax Concession
Pioneer Status	Approved manufacturing and service activities.	New activity or one which has been granted pioneer status in the past.	<ol style="list-style-type: none"> 1) Exemption of 33% tax on profits arising from pioneer activity. 2) Tax relief period is 5-10 years.
Expansion Incentive	Approved manufacturing and service activities.	Minimum investment of \$10 million in new productive equipment and machinery (for manufacturing activities only).	<ol style="list-style-type: none"> 1) Exemption of 33% tax on profits in excess of pre-expansion level. 2) Tax relief period of up to 5 years.
Investment Allowance Incentive	<ol style="list-style-type: none"> 1) Approved manufacturing and service activities. 2) Approved research and development activities. 3) Approved construction operations. 4) Approved projects for reducing consumption of potable water. 	Qualifying period of up to 5 years within which specified investments must be made.	Exemption of taxable income of an amount equal to a specified proportion (up to 50%) of new fixed investment.
Operational Headquarters (OHQ)	Approved headquarters operations.	Operational Headquarters <ol style="list-style-type: none"> 1) should hold equity investments in companies outside of Singapore, and 2) must provide approved headquarters services to these overseas companies from Singapore. 	<ol style="list-style-type: none"> 1) Income arising from the provision in Singapore of approved services will be taxed at 10%. 2) Other income from overseas subsidiaries and associated companies may also be eligible for effective tax relief. 3) Incentive will be up to 10 years with provision extension.
Post-pioneer Incentive	Approved companies enjoying pioneer status, or export incentive where the export incentive is a follow-up to the pioneer status previously awarded.	Companies must be enjoying pioneer status or export incentive on or after 1 April 1986 and should incur additional investment.	Corporate tax rate of not less than 10% for up to 5 years upon expiry of pioneer or export incentive.
Venture Capital Incentive	Investment by eligible companies and individuals in approved new technology projects.	Companies must be <ol style="list-style-type: none"> 1) at least 50% owned by Singapore citizens or Singapore permanent residents, and 2) incorporated and resident in Singapore for tax purposes. Individuals must be Singapore citizens or permanent residents.	Losses incurred from the sale of shares, up to 100% of equity invested, can be set off against the investor's other taxable income.
Warehousing and Servicing Incentive	Approved warehousing, technical or engineering services.	<ol style="list-style-type: none"> 1) Minimum fixed investment in warehousing buildings and productive equipment of \$2 million. 2) Goods must be traded by company. 	<ol style="list-style-type: none"> 1) 50% exemption of tax on profits in excess of a fixed base. 2) Tax relief period is 5 years.
International Consultancy Services Incentives	Approved consultancy services in respect of overseas projects.	Minimum revenue of \$1 million per annum.	<ol style="list-style-type: none"> 1) 50% exemption of tax on profits in excess of a fixed base. 2) Tax relief period is 5 years.
Approved Foreign Loan Scheme	Approved manufacturing and service activities.	<ol style="list-style-type: none"> 1) Minimum loan of \$200,000 from a foreign lender for purchase of productive equipment. 2) Tax relief should not result in an increase in tax liability in the foreign country. 	Exemption of withholding tax on interest.
Approved Royalties	Approved manufacturing and service activities.	Tax relief should not result in an increase in tax liability in the foreign country.	50% or 100% exemption of withholding tax on royalties.

Appendix B

INDUSTRIAL TRAINING SCHEMES ARE CARRIED OUT BY THE FOLLOWING SEVEN TRAINING ESTABLISHMENTS AND FIVE SPECIALIZED TRAINING UNITS

Training Establishments

1. *Institutes of Technology*
 - i. German-Singapore Institute of Production Technology (GSI)
 - ii. French-Singapore Institute of Electro-Technology (FSI)
 - iii. Japan-Singapore Institute of Software Technology (JSIST)
2. *Technical Institutes*
 - i. Japan-Singapore Technical Institute (JSTI)
3. *Craftsmen Training Institutes/(Centres)*
 - i. Tata Government Training Centre
 - ii. Brown Boveri Government Training Centre
 - iii. Philips Government Training Centre

Specialized Training Units

1. *PCB, IC Design/CAE*
 - Mentor Graphics-EDB CAE (IC Design) Training Unit
2. *Robotics and Factory Automation*
 - Seiko-EDB Robotics Laboratory
 - Sankyo Seiki-EDB Robotics Laboratory
3. *CAD/CAM/CAE*
 - Computervision - EDB CAD/CAM Training Unit
 - Hewlett Packard - EDB CAD/CAM/CAE Training Unit
4. *CNC Technology & Advanced Metrology*
 - Japax Group - EDB CNC Training Unit
 - Mitutoyo - EDB Metrology Laboratory
5. *Expert Systems Development*
 - Bull Computer Laboratory for Artificial Intelligence & Engineering Applications

Appendix C

TAX AND FINANCIAL INCENTIVES FOR R&D

The main incentive schemes aimed at stimulating R&D activities administered by the EDB are:

1. Pioneer status: longer pioneer status for companies include R&D as part of their operations.
2. Investment allowance: taxable deductions of up to 50% allowed.
3. Double Deduction for R&D expenses for up to five years.
4. Product Development Assistance Scheme (PDAS) where the government will bear up to 50% of the cost of the project.
5. R&D Assistance Scheme (RDAS): introduced in 1981 and grants up to 100% of the approved direct cost may be permitted.