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A snapshot of technology transfer in China: A review of the legal regime and its context – Part 1

Lirun London Rabinowitz, KPMG Legal

Lirun London Rabinowitz is an associate in the KPMG Legal technology group in Sydney, advising primarily on technology outsourcing, IT security and privacy, and IPR protection. He is a qualified IP/IT ADR practitioner and an executive of the NSW Society for Computers and the Law. Lirun has recently completed a Master of International Laws degree at Sydney University, specialising in Technology Transfer and Software Piracy with a focus on China, for which he also studied at the Eastern China University of Politics and Law in Shanghai.

1 Introduction

Under international law, World Trade Organisation (“WTO”) members are bound by Article 66 of the Agreement on Trade-Related Aspects of Intellectual Property Rights

(“TRIPs”). In the second paragraph of this article the following is stated:-

Developed country Members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging

technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base.¹

With this in mind, this article will explore the paradoxical Chinese

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technology transfer regime. While the WTO and its agreements strive to globally facilitate trade-flow, it also attempts to balance out fundamental rights of nations and individuals within nation members by establishing a universal intellectual property rights protection standard and reducing the 'have-not', or increasingly, 'know-not' effect.

Accordingly, technology transfer is critically about access rights of developing nations to the technology needed for their development.² Governed principally by agreements, the process will be influenced by national policies reinforced by law and regulation. Without such endorsement it is likely that while technology may sell, it will probably not transfer, in China and elsewhere.

Notably, the stronger nations (in particular the USA) lobby against avid transfer regimes. Such nations have in the past issued fierce criticism and statements that often link the 'offending government' to the infamous US 301 listing, a matter negotiated repeatedly between China and the USA during the years prior to China's WTO accession.

In some ways, the concept of technology transfer compromises global protection of intellectual property rights ("IPRs"). However, this may be a reflection of genuine needs of the global community, perhaps more dire than IPR sanctity. As developing nations become more vocal, their interests are gaining greater recognition and the committees administering WTO agreements are steering a more sympathetic course.³

The need for technology transfer does not always relate to introduction of the technology into the country but sometimes to an identified urgency to diffuse the technologies within the country to homogenise regions and mitigate internal technology divides. Chinese coastal areas have long been the beneficiaries of innovation and technological advancement, largely due to government policies to create trade conducive zones, forming in a sense the country's "technoports". Consequently, China now faces the

challenge of harmonising technological progress across the nation and while the technological adoption rate spikes along the coast, bottlenecks are resulting in infrastructure projects inland.⁴

Technology transfer may seem a mere condition of engagement between two private companies geared to address national interest. However, the ramifications of technology transfer terms can be very far reaching, as it impacts the expansion of entire industries in the receiving countries as well as contesting the international competitive advantages that certain nations currently have. The affect is even more sensitive when it impacts national security⁵ or environment⁶.

As technology transfer generally enables the private sector, heavy involvement of governments has traditionally appeared where governments are committed to reducing barriers to foreign investment, in effect a "cradle of transfer". In China these days, alleviation of poverty is also a major objective.

Notwithstanding the debates, it appears that transfer flow is strong between China and its suppliers of technology. Furthermore, the pressure to enter the Chinese market as an early entrant, for a company to entrench its products into Chinese consumer culture, is increasingly acknowledged by international businesses, and Chinese companies are racing to be the first points of commercial contact for the foreign alliances.⁷

Part 1 of this article seeks to examine the regime of technology transfer into China, by examining its context, the key body of law that applies and the practical impacts on companies transferring technology to China. Part 2 will continue in the December 2003 edition of *Computers & Law*.

2 The underlying landscape of technology transfer in China

China is gradually making its way from being a planned to a market

economy.⁸ Consequently, China set out to establish lower-end manufacturing technologies upon which to base a higher-end research and development/innovation culture and capability.

2.1 Forms of technology transfer

The key methods of transfer to China include (ranked by popularity)⁹:

- joint venture¹⁰;
- licensing;
- setting up a wholly owned subsidiary;
- co-production;
- one-off sale;
- subcontracting relationship; and
- training.¹¹

2.2 Local efforts – the Shanghai experience

Walking through Shanghai, despite the abundance of "Western" technologies everywhere, one could easily conclude that China is not waiting for the rest of the world to "do it for her". Observing construction sites operating around the clock, one contemplates a China that is now busy making her own path.

During the year 2000, Shanghai promulgated the "18 Provisions" to enhance technology achievement and conversion in Shanghai¹², enabling the establishment of 17 agencies, generating more than 12,000 transactions, US\$7.5 billion and a 200% growth rate from 1999.

Thus, over 8000 private enterprises and 70% of public-private joint ventures in Shanghai have technology development departments, 140 technology research and development centres were established and private capital contribution stood at US\$1.4 billion, with a venture capital fund of US\$2 billion of which US\$750 million was contributed by the local government.

The consequential commercialisation was claimed to be US\$37.5 billion from over 400 projects and other local

governments are following suit establishing technology exchanges.

2.3 Traditional difficulties

Traditional difficulties that China has faced during the process of internalising technologies have lingered for decades. However, as explained below, these are gradually being overcome.

2.3.1 Outdated industry

By the late 1990s, China had an outdated and inefficient industrial base which was ill-equipped to manage their innovation. China's expenditure on upgrading was much less than even industrialised nations who already had solid infrastructure for technological development, sitting at 0.5% while other nations hovered around 2%. However, to substitute the capital shortage required to finance the improvements, China has sought foreign direct investment to construct facilities for the development of high tech industries, which is reflected in modified FDI regimes and to a certain extent a factor of WTO accession.

2.3.2 Decentralised investment

The decentralisation of investments was wasteful for China. Provinces dedicated resources to establish technology sectors whether or not they were appropriately resourced, delivering a high level of waste and neglecting the economies of scale that Chinese business should ultimately enjoy. China has more recently demonstrated a higher degree of regional specialisation, with certain areas becoming much more technology investment friendly and therefore more conducive to this specific type of investment.

2.3.3 Deficient R&D base

The deficient research and development infrastructure was previously costly. Learning institutions did not collaborate with private enterprise or government, as technology was not transferring within China, where there was also a difficulty in translation of innovation into production methods.

Exacerbated by China's historic isolation from world markets, denying the benefit of global consumer demands and the lessons provided by sophisticated consumer marketing, China suffered from a shortage of qualified professional staff required to fuel such a sector as well as a brain drain. However, today there is strong evidence of a 'reverse brain drain' with Chinese people from abroad seeking to re-establish themselves in China attending Chinese MBA courses by the scores.¹³

2.3.4 Investment barriers

In recent times, China's tariffs and entry barriers compounded by the Asian financial crisis of 1997 have somewhat lowered China's attractiveness as an investment target due to a higher cost and a perception of risk.

However, with accession to the WTO being a fait accompli, tariffs reducing and Chinese growth¹⁴ continually being demonstrated, this issue is becoming less of a concern.

2.3.5 Intellectual property rights

While China has a deep history of intellectual property and the recognition of rights in it, in the course of the past century the legal-scape of intellectual property was devastated, leaving a nation with no such law. It is important here to note that this is not entirely different from many other areas of law, now existent in China, that were eradicated in the past. As a result, surveys¹⁵ have indicated that 78% of technology transferors feel that China's IPR regime is inadequate to protect their rights. This should be considered in light of the fact that some companies may refrain entirely from dealing with China and this segment would not be represented in the survey.

2.3.6 US opposition

The US has a history of accusing the Chinese technology transfer regime of forming a trade barrier, and yet, has often imposed export controls of its own. Two particularly prominent cases that demonstrate the US efforts (both visible and subliminal) to curtail the

transfer of technologies and its potential impact, occurred with IBM and Intel.¹⁶

As early as 1997, IBM was actively exploring options relating to the Chinese market, and was a premier candidate to participate in China's national semiconductor project (Project 99) worth US\$1 billion. However, the Chinese media reported that US government concerns about technology transfer caused IBM to withdraw. Interestingly, US press cited unfavourable competition regimes and poor IPR protection.¹⁷ Ultimately, NEC, a Japanese contender, secured a joint venture agreement with Shanghai Huahong Microelectronics to manufacture the low-end chips.

Similarly, Intel, who gradually invested approximately US\$500 million in Chinese operations, encountered objections at the political level that effectively made it close to impossible to establish a substantial Chinese-based facility.

Despite the prominence of its criticism, the US is not China's single largest trading partner. Last year, China received over a quarter of technology imports from Japan, 18% from Hong Kong and only 15% from the USA, with 11% arriving from Finland.¹⁸ As the Chinese market progressively opens, it is evident that the US is attempting to exercise global leverage to safeguard the leadership it seeks to assert/defend.

2.4 Current needs

There is much speculation with respect to China's financial and economic viability. Some experts compare the hype of China's growth to the "tech bubble" of the late 1990s and others directly criticise the economic foundations, driven by creating industrial over-capacity supported by billions of dollars of investment into factories and plants by foreigners and increasingly by locals.

Underlying the scepticism are problems facing China's development to which no immediate solutions are guaranteed. It is for this reason that the following fragments are described as races. It is submitted that to the extent that China wins these races it may

indeed create a sound platform for sustainable growth. Nevertheless, these important factors underpin Chinese policy that is central to legal reform and evolution of technology transfer.

2.4.1 Race to trade

Westerners commonly perceive China to be an untapped gold mine. Trading market access for technology is therefore a key aspect of technology transfer law and policy in China.

As China develops, it entrenches capabilities geared at growth. For example, China's recently improved manufacturing base has provided a cost effective avenue for companies worldwide to produce goods, and therefore created a globally competitive industry. Shanghai Electric (Group) Corp this year signed a deal for US\$100 million with foreign companies and simultaneously advertised business worth \$400 million available to foreign companies for investment either by direct funding, co-operative structures or technology transfer.¹⁹

This demonstrates a need for Chinese companies not only to ingest technological advancement locally but also to engage technology to bridge foreign confidence shortcomings. This marks a shift from the classic *access for technology* model of trade to an *access for technology plus access* model, indicating that the paradigms of market power are metamorphosing.

China is busting out of the "global workshop" stereotype and challenging Japan and South Korea as a major competitor for trade and foreign investment as well as research and development kudos.²⁰

2.4.2 Race to feed

China is experiencing a deep dip into the poverty line with mass unemployment of hundreds of millions of people, laid-off from ailing state owned enterprises and an agricultural sector that is yearning for modernisation to meet the efficiency levels required to compete with foreign produce, which has challenged local markets since WTO accession.²¹

Notwithstanding its one-child policy,

China's population continues to grow, stressing its various natural resources. Partly because of local taxes on agriculture which support inefficient government enterprises, China's agricultural produce is relatively expensive. Poverty²² and agriculture therefore are travelling together as a grave concern.

It was found in 2002 that 20 million of China's urban residents, 6% of city dwellers, lived in extreme poverty, on average receiving \$13 in government monthly aid, and as little as \$2 per month in poorer areas. In addition, official figures declare 30 million poor people living in rural areas, and there may be many more unaccounted for.²³ In contrast, Australia's Minister of Trade, Mark Vaile, referred to 200 million Chinese below the international poverty line, comparing this figure to 600 million in the eighties of the last century in a speech in December 2002.²⁴

Technology transfer and foreign investment are vital to break the vicious circle that is keeping masses of Chinese population below its poverty line.²⁵

2.4.3 Race to provide energy

China faces enormous pressures to match its development with energy supply. As its population urbanises and digitises the nation, energy needs have rocketed. This has been partly resolved by the acquisitions of billions of dollars worth of major power generation equipment. However, as part of these deals China also has secured technology transfer arrangements.²⁶

For example, General Electric, now China's premier turbine supplier (\$1 billion forecast sales this year) having already provided over 160 gas and 56 steam turbines, signed a joint venture agreement with Shenyang Liming Aero-Engine Group Corp for the production and technology transfer of combustion systems in a consortium with a local company Harbin Power Equipment Co Limited.²⁷

2.4.4 Race to save the environment

China is suffering an enormous environmental pollution challenge.

Despite the extensive studies conducted, effecting changes and implementing sustainable strategies is slow.

A joint Australian/Chinese project recently analysed water and soil quality over five years,²⁸ discussing the affects of soil degradation, potential management of consequent greenhouse gas effect emissions, water logging and higher crop yield strategies.

Technology transfer strategies noted in this respect were primarily consultation and workshops, to impart land management practices and indicia that were accurate and meaningful²⁹, known as 'soft technology'.

As part of \$160 million of assistance provided by Australia to developing countries over the past decade under the United Nations Framework Convention on Climate Change, it has commissioned substantial technology transfer projects to assist nations to gain uninterrupted sustainable energy resources and pollution control technologies,³⁰ committing millions of dollars to deal with technical and market barriers to renewable energy technology in China. Exploring China's shift from a supply to a demand driven energy market has revealed that China may satisfy up to 8% of its energy supply with renewable energy alternatives with the appropriate technologies implemented.

2.4.5 Race to establish international relations

Having only recently acceded to the WTO following rigorous negotiations of many years, China is gradually stating views on the new world order.³¹ On 25 April 2003, the Chinese Premier Wen Jiabao met French Prime Minister Jean-Pierre Raffarin in Beijing, and discussed this topic.³²

Discussing avenues for mutual cooperation with France regarding China's needs relating to agriculture, energy, medicine, transportation, finance and economic relations, the French Prime Minister expressed France's aspirations to enter these Chinese market segments. Wen Jiabao also commented on world peace and global inequalities, as well as China's role in the Security Council to

cooperate with France and supporting the United Nations.

Upon conclusion, the statesmen attended the signing of 3 major contracts, including one for technology transfer for Sichuan's Baima Power Plant, providing clear evidence of the importance of technology transfer within political agendas, justifying international missions attended by the highest state representation and discussed amongst issues such as global peace. On 2 December 2002 a very similar interaction occurred between the Chinese and Russian presidents³³.

Of obvious importance to China, the Ningxia Autonomous Region, known as the Chinese Muslim Province (being one third Muslim), has commenced dialogue with various Muslim countries to pursue investment. Technology transfer to the autonomous region has been central to these discussions as an avenue for tightening relations.³⁴

2.4.6 Race to establish regional security

Traditionally sceptical of the USA and continuously racing to ensure regional military superiority and information security, China has been outpacing its neighbours to develop home-grown standards and brands that will auto-impose themselves regionally if for no other reason than the power of China's large population.³⁵

China has been forced to create standards due to US technology exports controls that prohibit China from accessing supercomputing and strategic defence measures.³⁶ Furthermore, by encouraging local innovation and rigorously seeking alternatives to restricted technologies, China has introduced new standards perpetrating its standard setting status. Consequently, it will be better placed to defend itself from technology preclusion, in addition to reversing the flow of technology ingestion.

The Siamese risk to this strategy is alienation of multinationals, investment and consequently technology.³⁷ However, Chinese strategists are confident that the 1.3 billion-person market will provide sufficient pull to secure its feasibility

for foreign investors and China has set 2008, the year of the Beijing Olympics, as a year to demonstrate more than mere prestige and athletic kudos.

Beijing has dedicated \$2.4 billion to establishing 35 software colleges and has widely implemented Linux software, allowing it to build systems from their foundations. To counter the absence of supercomputers, China has developed server-clustering expertise, clustering up to 100 servers yielding enormous computing power. Western companies, such as Alcatel, have also followed suit by relocating global innovation hubs to China³⁸.

Another example of China's international standard-struggle is its roll-out of a TD-SCDMA mobile telephony standard in the face of the W-CDMA Japanese and European standards. Doing so assists China to financially retain an otherwise powerful flow of royalties payable to foreign companies on account of IPR licensing and furthers China's cause of technological and logistic security.

2.4.7 Race to provide

While experiencing growth in its manufacturing base, it is not meeting demand. By 2005 China's consumer demand for microelectronic products will be three times its own production capacity.³⁹ China is therefore under pressure to ensure supply of resources within the market and to continuously upgrade manufacturing techniques to meet demand.

China is now being lobbied internally to shift in mentality and strike a balance between technology transfer and innovation, for which balance technology transfer is still required, notwithstanding China's growing innovation and standard setting culture.⁴⁰

3 Legal system manifestations of a system thirsting technology

Domestically, there are three key areas of relevance, which include the contract, management of intellectual property rights and registrations⁴¹. Internationally, there are issues stemming from WTO membership as

well as other sources of international law and the resulting obligations.

Nevertheless, despite having recently established a substantial core legal system, many Chinese still consider the law a mere "concrete formulation of the Party's policy"⁴², which accentuates the relevance of China's national "races" and the need to establish a legal regime for technology transfer.

The backdrop to today's regime is a turbulent century of fluctuations in policy and market strength, during which turn-key deals from the west were replaced by an exclusive stream of Russian technology until the market re-opened to the world and the current day's trends.⁴³

3.1 Legal implications of China's accession to the WTO

China's compliance with its accession agreement is often the key query in this respect, insinuating that all other nations are indeed compliant regarding this new member. However, the membership of a new country not only delivers obligations to that country but also obligations towards that country.

It is also noteworthy that China has long joined other relevant intellectual property treaties including⁴⁴:

- Paris Convention for the Protection of Industrial Property (1985);
- Nice Arrangement concerning the International Classification of Goods and Services for Registration of Marks (1988); and
- Madrid Agreement for the International registration of Marks (1989).

During the 1990s, China and the USA signed several memorandums of understanding⁴⁵ on IPR protection, leading to China's accession to:

- Berne Convention;
- Universal Copyright Convention; and
- Geneva Phonograms Convention.

None of these Conventions are examined in this article.

3.1.1 China's commitments

Prior to acceding to the WTO, China negotiated at length with its major trading partners between 1986 and September 2001⁴⁶ at bilateral levels,⁴⁷ however, the benefits of the discussions since accession are largely available to the entire WTO community on the basis of the 'Most Favoured Nation' principle.

As a member, China must comply with the WTO rules and the 60 agreements impacting its legal framework.⁴⁸ Consequently it must streamline inbound and outbound market access. Under both TRIPS⁴⁹ and the WTO Agreement on Trade Related Investment Measures ("TRIMS")⁵⁰, China is now also obliged to adhere to principles of neutrality and equality of government regulation pertaining to cross-border transactions.

Prior to accession, there was much debate as to whether China should eliminate all technology transfer requirements (a term supported heavily by the US), and if technology transfer regimes remained permissible, then under what terms.⁵¹

3.1.2 The world's commitments to China

It is interesting to contrast the politics in point 3.1.1 above with the legal reality stemming from international law.

As concisely stated⁵² and mentioned in the introduction:

Article 66.2 of the TRIPS Agreement provides that developed countries should provide incentives to their institutions and enterprises to encourage the transfer of technology to least developed countries. (...) Developed countries must report to the TRIPS Council on what they are doing to implement article 66.2 by December 2002 (...)

Canada and Europe responded recently. Canada's report described the various channels and bodies now established to promote technology transfer and Europe's paper adds significant discussion on the obligations of the developing countries themselves. Shortly after on 19 February 2003, the Council for TRIPS

issued a decision regarding reporting obligations of developed nations about their technology transfer efforts, further reinforcing the positive obligation upon developed nations to assist by way of technology Transfer, also the raison d'être of the Working Group on Trade and transfer of Technology set up during the 4th ministerial conference in Doha (November 2001).⁵³

3.2 Direct regulation⁵⁴

Technology and its transfer has been covered by Chinese contract law since the late 1970s, and comprised approximately half of China's contract law when China opened its doors. It is arguable that, in part as a result of this regime, such contracts have comprised a substantial portion of China's international trade and business.

Since then, China's framework was crafted by local protectionism, in the face of aggressive foreign companies potentially engaging in unconscionable conduct, evidenced by the royalty period limitations, severe warranty commitments and an extensive approval process and procedures.

Since WTO accession, China has modified its regime to achieve substantial compliance with its accession commitments⁵⁵, delivering new regulations through the State Council and the Ministry of Foreign Trade and Economic Cooperation ("MOFTEC"), almost immediately after accession. Streamlining the process by reducing government intervention, the reforms limit intervention to areas of sensitivity.

3.2.1 Pre-WTO framework

Prior to accession, the technology transfer regime in China revolved around one set of administrative regulations, the Regulations of the People's Republic of China for the Administration of Technology Import Contracts⁵⁶ of 1985 ("the Regulations"), and two sets of administrative measures, the Detailed Implementing Rules for the Regulations on Administration of Technology Import Contracts 1988⁵⁷, and Provisional Regulations on Trade Administration of Technology

Introduction and Equipment Importation 1996⁵⁸, supplemented by China's intellectual property laws and various other laws.

Most of the regulations (codes) are instinctively irregular to a common law lawyer, and should be considered in light of the need to construct a legal system from its foundations, facing the change management difficulties associated with a population of 1.3 billion. Irrespective, the Chinese government has expressed commitment to withdrawing from the technology transfer contract formation process and acted accordingly.

3.2.1.1 Technology transfer legislation

The Regulations were of rough legal texture, incorporating specific contractual guidelines and prescribing terms that would ordinarily be negotiated freely. Considering the brief tradition of legal services, this may be comprehensible, stipulating contract drafting practices to promote equity. Nonetheless, these would appear dissonant to companies used to dealing with such matters by way of commercial exchange and in accordance with economic forces of supply and demand.

Key features of the Regulations included:

- technology transferred had to be 'advanced and appropriate' (both terms undefined). However, Article 3 of the Regulations provided 8 vaguely described categories of what these terms could mean, and the technology had to appear to fall within one or more of those 8 categories;
- contracts had to be concluded in 'writing' in accordance with Article 4 of the Regulations;
- all agreements had to undergo 'extensive approval processes', involving preliminary approval, formal approval and registration that could take months, also in accordance with Articles 4, 10 and 11 of the Regulations;
- under Article 8, the transferor could only rely on a 'contract term of 10 years' to defend its

intellectual property, which afterwards the licensee could commercialise without restriction;

- limitation of terms that might be agreed appeared in Article 9 of the Regulations, and generally the supplier could not oblige the technology recipient to accept requirements which are 'unreasonably restrictive' without administrative approval; and
- under the Implementing Rules, the government had elaborate visibility of highly sensitive aspects of the contracts and related documents, the ability to amend and judge consistency and draftsmanship and compatibility with public interest under Article 18, as well as the right to review the adequacy of warranties provided.

3.2.1.2 Contracts for technology⁵⁹

Under the contract law reforms in 1999, an entire chapter on technology contracts was included, which applied also to contracts for the transfer of technology.

Section III of Chapter 18 focused on technology transfer. Its unique features included:

- Article 351: the transferor must, 'if failing to transfer the technology' (undefined) as contracted, 'refund partly or total amount of royalty';
- Article 352: the transferee must, 'if failing to pay royalty as contracted', make up its payment of royalty and 'pay a penalty fine' for breach of contract as contracted; if failing to do so, it shall stop its exploitation of the patent or utilization of the technical know-how, return the technical materials and bear the liability for breach of contract;
- Article 353: if the exploitation of the technology by the 'transferee as contracted infringes upon the legitimate rights and interests of others, the transferor shall assume the responsibility', unless the parties stipulate otherwise; and

- Article 355: where 'laws and administrative regulations contain otherwise provisions on contracts for technology import and export or for patents and patent applications, such provisions shall govern'.

Article 355 accommodates the post WTO accession regime.

3.2.2 Post-WTO framework

Post-WTO accession, the key piece of legislation for technology transfer became the Regulations of the People's Republic of China on Administration of Technology Import and Export⁶⁰, adopted 31 October 2001, and effective as of January 1, 2002. The previous regime was repealed under Article 55 of the new Regulations and various additional measures were promulgated by MOFTEC and other departments to assist in the interpretation and administration of the new Regulations, including the Administrative Measures on Prohibited and Restricted Import Technology.

The key features of the new regime are described below (contrasted where appropriate with the former system).

3.2.2.1 Permitted technologies for importation into China

The new regime changes the tone of the rules. For example, it is stated in Article 5 that 'the State allows free import and export of technologies, except otherwise provided for in laws and administrative regulations'. This Article signifies a mind-set shift from intervenor, pro-active regulator and watchdog to neutral maintainer of fairness.

Furthermore, Article 7 states descriptively that 'the State encourages the import of advanced and applicable technologies', a practice generally followed.⁶¹ In contrast, Article 3 of the previous Regulations required technology imported to be 'advanced and appropriate'.

Article 4 states technology import (and export) 'shall conform to the policies of the State (...) benefit the promotion of China's scientific and technological progress and the development of foreign economic and technological

cooperation (...) and China's (...) technological rights and interests', maintaining a sufficient element of ambiguity in the law to revert to policy as required by government.

The restrictive guidelines under Article 3 of the previous Regulations have been removed. Under Article 31 of the new Regulations other guidelines have been inserted by reference to external law. The only items restricted or prohibited are those listed in Articles 16 and 17 of China's Foreign Trade Law⁶², which state that:

Article 16 The State may restrict the import and export of the goods and technologies under any of the following circumstance:

- (1) for safeguarding national security or public interests, there is need to restrict imports or exports; (...)
- (4) for establishing or speeding up the establishment of a particular domestic industry, there is need to restrict imports; (...)
- (6) for safeguarding the State's international financial position and ensuring the balance of international receipts and payments, there is need to restrict imports; or
- (7) under the international treaties or agreements signed or acceded to by the People's Republic of China, there is need to restrict imports or exports.

Article 17 The State shall prohibit the import or export of the goods and technologies falling into any of the following categories:

- (1) those that endanger national security or public interests;
- (2) those whose import or export must be prohibited for the protection of human life or health;
- (3) those that impair ecological environment; or
- (4) under the international treaties or agreements signed or acceded to by the People's Republic of China, the prohibition of import or export is required.

While generally the above exceptions appear to be reasonable, it is difficult

to digest the scope of Article 16 (1) referring to need to restrict imports on the grounds of public interest.

3.2.2.2 Approval process

Previously, a 3-tier approval and registration process was enforced, with cumbersome documentation requirements, taking months. With heavy intervention of government agencies, the transferor would frequently conduct extensive renegotiations with government after the conclusion of the agreement with the transferee and resign.

The new Regulations refer to 3 types of technology imports:

- freely imported (Article 17); and
- prohibited or restricted (which are both noted in Article 8, under which MOFTEC are required to catalogue such technologies).

(a) Freely imported

The best feature of the new regime is the registration and approval process that applies to the technologies of this category.⁶³ The new measures allow for online-registration (<http://info.ec.com.cn>)⁶⁴ by using a 17-digit number representing year, export country, importer's location and technology industry classification. The importer will also provide details of the contract (debatable whether required in Chinese⁶⁵) and MOFTEC will verify the details and must issue a registration certificate within 3 days.

Irrespective of registration, the contract becomes effective upon execution⁶⁶, whereas previously the parties had to wait for approval before the contract was valid.

(b) Technologies prohibited and/or restricted for importation

On 30 December 2001, a two-page catalogue was issued which included mostly environmentally hazardous and redundant technologies from few technology categories, most of which are freely imported.

The process of application appears in Chapter II of the new Regulations, providing two avenues which guarantee (if all matters are in order), a licence within 40 working days, only

marginally less than the 60 day period in the previous regime, approximately 42 working days.

3.2.2.3 Right to trade

Previously under Article 8 of the Provisional Regulations, a contracting party had to either possess the operational right of foreign trade (referred to in these Regulations as a 'unit of foreign trade') or entrust such a party as its agent for such transactions.

The new Regulations are silent in this regard and it is therefore deducible that the requirement has been repealed, along with the regulations within which it is contained. This is clearly a measure geared to open the Chinese market, reduce the cost of transacting and lift trade restrictions.

3.2.2.4 Term of contract/survival of rights

Under Article 8 of the previous regime, the maximum term for a technology transfer contract was ten years unless otherwise approved or the subject of the agreement was urgently needed in China. Furthermore, technology the subject of a transfer agreement could be used freely after expiration of the agreement pursuant to Article 9 of the Regulations.

This was a major concern to transferors, as it limited control over the potential local competition with the transferee and potential overseas competition. In a country where piracy was (and while diminishing still is) rampant⁶⁷, the risk of illegal dissemination and consequently infringement of IPR has been considered a key risk of the Chinese market.

The new regime differs, as parties to agreements are now free to negotiate both duration and IPR. The only limitation is that the parties should negotiate the post-contractual exploitation of the IPR based on fairness and reasonableness (Article 28). However, this should in essence allow the transferor to reasonably prohibit use.

The new regulations continue to prescribe that the creator of

improvements on the technology owns the improvements (Article 27).

3.2.2.5 Confidentiality

Another major concern with respect to IPR is confidentiality. Previously under Article 13 of the Implementing Rules the recipient was not generally committed to confidentiality after the term of the agreement, limited to 10 years. Now contracting parties may deal with the secrecy of information shared between them as they see fit (Article 26).

3.2.2.6 Warranty obligations of transferor

Articles 24 and 25 of the new regime summarise the warranties that the transferor must provide, including ownership of IP and an indemnity against third party claims of IPR infringements, which are practically boilerplate terms of any common law technology contract, and a warranty of the technology as to its completeness, accuracy, effectiveness and capability of reaching its technical goals.

3.2.2.7 Administrative review

In Chapter IV of the new Regulations, any foreign licensor aggrieved by an administrative decision under the Regulations may apply for review of the decision or initiate legal proceedings in a court of law.

This Article has the potential to support notions of transparency and fairness in the system.

3.2.2.8 Restrictive clauses

Under the previous regime it was unclear whether the prohibition of nine types of restrictive clauses listed in Article 18 was discretionary or not. Nevertheless, if a transferor included such clauses then the approval was contingent upon compliance with requested amendments by the competent authority.

In the new regime, under Article 29, a transferor may constrain a recipient from using the technology upon expiry of the term and contract to non-reciprocal terms for exchange of technology improvements, but the

residual restrictions have clearly become mandatory.

3.3 Government procurement law

On 29 June 2002, China's National People's Congress promulgated the Government Procurement Law which came into effect on 1 January 2003⁶⁸ to standardise government procurement. The key benefit is urgently required transparency of an industry that has grown from US\$1 billion in 1999 to an expected US\$12.05 billion this year, and it was estimated to save the government approximately US\$1 billion due to a stark reduction in financial leakage attributed in the past to corruption.

This is not directly relevant to cross-border technology transfer in its traditional sense, because the law focuses on procurement from local companies.⁶⁹ However, as major infrastructure and government projects are relevant to technology transfer, the process is pertinent, demonstrating the nature of reform within the immediate environment surrounding technology transfer deals and the shifting commercial climate in China.

In accordance with China's agreements with the European Union and US pre-WTO accession regarding the terms upon which it became a WTO member, one of the main requirements was the option of a foreign company to establish a wholly foreign owned subsidiary within several years of accession, ultimately providing foreign companies the ability to access the restructured government procurement process and the multi-billion dollar Chinese government spending budget with less restriction by the technology transfer regime.

The new laws will bring China's practices in line with the requirements of the WTO which now form international law, as embodied in the relevant agreements. These laws are also based on instilling principles of openness, fair play, justice and integrity, stipulating appropriate scope, means and procedure, geared to become the basis of supplementary regulations in future.⁷⁰

One measure that will assist in

reducing corruption is the bank account management stipulations, to stream all payments through a single account, in contrast to the previous system whereby various departments co-administered payments.⁷¹

The National People's Congress Standing Committee in their 28th session recognised the inability to supervise the administration of the legislation. It was also stated that ideally the procurement organisations would be competitive yet transparent and therefore standards should be drafted so that the management of such organisations may be better informed.⁷² It was also suggested that permanent staff be employed and trained for regular shifts, and be delivered information via internet. This was noted as key to combat the money-for-power trade and considered as much the interest of China internally as it was for compliance with WTO commitments. While noted as requiring attention, the National People's Congress may in time action these concerns, however, points raised may debatably also be interpreted as areas of potential deficiency currently, which may well be applicable not only to government procurement, but to all aspects of technology trade and transfer.

Local legislation has been effectively tried throughout provinces and has been introduced to defence forces, piloted with the Chinese People's Liberation Army and the Chinese People's Armed Police until 2005, before the entire force is integrated. The key difference from a procedural perspective is that public tendering is now compulsory for all major procurements that are not confidential, subject to certain thresholds.⁷³

3.4 Recent policy⁷⁴

As described above, policy is a vital aspect of the Chinese legal regime. Recent policy on technology transfer suggests the following:

- shift from manufacturing ability to development capability;
- shift from hardware focus to valuing software as well⁷⁵;
- trend towards state of the art technology as opposed to

previous generation philosophy; and

- valuing support, maintenance and upgrades.

This article will be continued in the December 2003 edition of *Computers & Law*

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