

LIBERALISATION OF THE TELECOMMUNICATIONS SECTOR IN SINGAPORE

1. Introduction and Background

January 2000 marked a new chapter in the history of Singapore's telecommunication services sector when Singapore Government announced the full liberalisation of the telecommunications industry. Prior to January 2000, only Singapore Telecommunications Ltd ("SingTel") and StarHub Pte Ltd ("StarHub") were granted the Public Basic Telecommunications Services licenses to provide public switched telephone network services and Singapore Telecom Mobile Pte Ltd ("SingTel Mobile"), StarHub Mobile Pte Ltd ("StarHub Mobile") and MobileOne (Asia) Pte Ltd ("MobileOne") were granted Public Cellular Mobile Telecommunications Services licenses to provide mobile telecommunication services.

Realising that the development of the local telecommunications services sector is dependent on being globally competitive, the Singapore Government advanced the introduction of full market competition in the local telecommunications services sector by two years from 1 April 2002 to 1 April 2000.

To compensate the incumbents for the impact of accelerating the full liberalisation of the telecommunications sector by two years, on 11 September 2000 the government of Singapore announced it would pay SingTel's S\$859 million and StarHub S\$1,082 billion (nett of tax). The two companies have both accepted the compensation offers and indeed as part of the agreement with StarHub, StarHub will commence roll out of a nationwide network that will also serve the residential market.

As part of the liberalisation process, and having recognised the need that global telecommunications players must enter into the Singapore market in order for it to be considered truly global and competitive, the government has also lifted the direct and indirect equity limits for all public telecommunications service licensees.

In addition, the government of Singapore has adopted the following policies:

- (a) to place primary reliance on market forces in those telecommunications markets or market segments that are already competitive; and
- (b) to use regulation to counter market failure in respect of those markets or market segments which are not yet sufficiently competitive.

In promoting competition and transparency in its regulation of the telecommunications sector, the Singapore government hopes not only to further promote Singapore as a regional telecommunications hub but also promote consumer welfare and increase what are already high

standards of service delivery.

The government has also determined that all regulation of technology in the telecommunications services sector should be platform and technology neutral. This is in order to reflect the phenomenon of convergence which is rapidly breaching the technological divide between fixed wire, cable, wireless and satellite technologies.

This liberalisation of the telecommunications services sector has attracted telecommunications service providers from all parts of the world to Singapore including AT&T, MCI Worldcomm, Deutsche Telekom. Since the new regulations were implemented, 22 new facilities based operators and more than 500 services based operators have entered the Singapore market.

In this publication we seek to set out the salient regulations governing the telecommunications industry in Singapore.

2. Regulator and Legislation

The role of regulating telecommunications systems and services in Singapore is fulfilled by the Info-communications Development Authority of Singapore ("IDA"). The IDA was formed in 1999 as a result of a merger between the Telecommunications Authority of Singapore (the then statutory body in charge of the regulation of the telecommunications services sector) and the National Computer Board.

The Singapore government's intention in merging the Telecommunications Authority of Singapore and the National Computer Board, was in recognition (and indeed promotion) of the convergence taking place in information technology industries.

The functions and powers of the IDA are as follows:

- (a) to promote the efficiency and international competitiveness of the information and communication industry in Singapore;
- (b) to ensure that telecommunication services are reasonably accessible to all people in Singapore, and are supplied as efficiently and economically as practicable and at performance standards that reasonably meet the social, industrial and commercial needs of Singapore;
- (c) to act internationally as the national body representative of Singapore and at the same time to advise the government in respect of information and communication matters;
- (d) to exercise licensing and regulatory functions in respect of the information and communication industry, including but not limited to, licensing and regulating the management, allocation and use of satellite orbital slots, radio frequency spectrum and numbering plans in Singapore;

- (e) to maintain effective competition between telecommunication operators; and
- (f) to encourage, promote, facilitate investments in and otherwise assist in the establishment, development and expansion of the information and communication industry in Singapore.

The key act administered by the IDA is the Telecommunications Act, Chapter 323 (the "Telecoms Act"). The Telecoms Act, (together with the regulations and codes of conduct that are issued pursuant to its provisions) regulates:

- (a) the relationship between telecommunications licensees; and
- (b) the relationship between telecommunications licensees and their customers;

The Telecoms Act also:

- (a) grants various protections to and imposes obligations on telecommunications licensees;
- (b) contains provisions relating to the enforcement of its terms; and
- (c) permits the imposition of penalties for breach of its terms.

3. Licensing

The IDA is vested with the exclusive right to operate and provide telecommunication systems and services in Singapore. These rights include the ability to establish, install, operate, maintain, develop, construct, promote, hire and sell telecommunication systems and services.

As a result of the exclusive vesting of these rights in the IDA, operators of telecommunications systems and services are required to be licensed by the IDA. In this regard, the IDA adopts a 2-pronged licensing approach and differentiates between a "facilities based operators" ("FBO") and a "services based operators" ("SBO"), each of which are described in greater detail below. The licensing framework is devised on a hierarchical basis where FBOs are designated at a higher level with SBOs below them.

The IDA requires that an FBO be individually licensed. SBOs are on the other hand may require either an individual license or a class license depending on the services they intend to provide. In general, if service providers intend to lease international transmission capacity for the provision of their services they are required to be individually licensed.

While there is no pre-determined limit on the number of licenses that may be issued by the IDA, the issue of licenses is of course subject to spectrum and other resource constraints (for example frequency spectrum and availability of space for satellite and cable landing stations).

(a) Principle types of Licenses

(i) Facilities Based Operations (FBO) Licences

Public Switched Telephone Services;
Public Switched Message Services;
Public Switched Integrated Services Digital Network Services;
Leased Circuit Services;
Public Radiocommunication Services (in relation to maritime and aeronautical services);
Public Cellular Mobile Telephone Services;
Public Radio Paging Services;
Public Trunked Radio Services;
Public Mobile Data Services;
Public Mobile Broadband Multimedia Services;
Public Fixed-Wireless Broadband Multimedia Services;
Terrestrial Telecommunication Network for Broadcasting Purposes; and
Satellite Uplink/Downlink for Broadcasting Purposes.

Although there are no foreign equity limits imposed on a FBO licensee, such a licensee must be a company incorporated under the Singapore Companies Act, Chapter 50.

All FBO's are required (as a condition of their license) to ensure interconnectivity, interoperability and access with all other telecommunication licensees of the IDA. This is to ensure "any-to-any" communications in a multi-network, multi-operator competitive environment thus allowing end-users to access the services of any service provider regardless of which system the end-users are directly connected to.

The following are some of the considerations of the IDA before they grant an FBO license to any applicant:

vision of the applicant;
organisation structure and financial capability and strength of the applicant;
competition strategies of the applicant for the provision of the services; technical soundness of the applicant's plans and technical capability to implement the plans;
commitment of the applicant in fulfilling its vision and plans; and
technical plan and capability of the applicant.

The IDA will also consider the benefits that will be brought by the applicant to the industry, consumers and the Singapore economy as a whole in terms of investments in Singapore; enhancement of the telecommunications infrastructure, capacity, capability and connectivity; level of technological and service innovation and responsiveness; range and choice of products and services offerings; competitive pricing; level of quality of service and customer support; and resource limitations and physical constraints, in awarding a FBO licence to an applicant.

In general, license fees for FBOs is based on an annual recurrent license fee currently set at 1% of the Annual Gross Turnover, subject to a minimum licensing fee which is dependent on the type of services the applicant intends to provide. "Annual Gross Turnover" is determined as the annual fair value of the consideration received or receivable for licensable activities taking into account the amount of any trade discounts and volume rebates allowed by the enterprise. Each FBO licensee is further required to furnish a performance bond as security for their obligations in relation to the roll-out of their infrastructure, services and other commitments. The licence period will differ depending on the scope of the licensee's operations.

Due to the scarcity of radio frequency spectrum, applicants intending to roll-out wireless technology platforms (including 2G, 3G and local multi-point distribution telecommunications systems) will be either allocated spectrum and/or separately licensed (granting spectrum rights) via a comparative selective exercise and an auction. The granting of the spectrum rights and licenses will be dependent on the available radio frequency spectrum and the bandwidth plan of the applicants. This allocation or separate licence of spectrum

The IDA has awarded 3G spectrum rights to SingTel Mobile, StarHub Mobile and MobileOne on 11 April 2001. As no more than one offer was made for each 3G spectrum right, the 3 G spectrum auction did not proceed, and each spectrum right was awarded at the reserve price of S\$100 million.

(ii) Service Based Operations (SBO) Licences

Service based operations are those which rely upon telecommunications network elements (including transmission capacity, switching services, ducts and fibre) being leased from FBO licensees in order to provide telecommunications services to third parties or resell an FBO's telecommunications services. This includes operators who have deployed telecommunications networks, systems and facilities within their own property, but intend to provide telecommunication services to third parties resident within such premises.

Operators who intend to provide the following services have to be individually licensed under a Services Based Operator (Individual) Licence:

- International Simple Resale Service;
- Resale of Leased Circuit Service;
- Public Internet Access Service;
- Internet Exchange Service;
- Virtual Private Network Service;
- Managed Data Network Service;
- Store-and-Forward Value Added Network Service;
- Mobile Virtual Network Operation;
- Bandwidth Capacity Exchange Operations
- Backhaul Bandwidth Capacity Services; and
- Live Audiotext Service.

The following services, however, must be licensed under a Services Based Operator (Class) Licence:

- Call-back / Call Re-origination services;
- Internet Based Voice and/or Data Services;
- Re-sale of Public Switched Telecommunication Services;
- Store-and-retrieve value added network services;
- International Calling Card Services
- Audiotext Services; and
- Public Chain Payphone Services.

There are no foreign equity limits imposed on a SBO licensee but such a licensee must be a company incorporated under the Singapore Companies Act, Chapter 50.

There are no limits on the numbers of SBO (Individual) Licensees or SBO (Class) Licensees. SBO (Individual) Licences will granted to service providers if they satisfy IDA's requirements in relation to its ability to deliver its proposed services and comply with its quality of service commitments.

In general, license fees for individually licensed SBOs is S\$5000 per annum and S\$200 per annum for class-licensed SBOs. SBO licenses are valid for a period of three years and renewable every three-yearly.

Licensing conditions will vary with the different services to be provided by various licensees.

4. Anti-Competition

There is no general competition law in Singapore, however there are industry specific laws regulating competition. Info-communications is one such industry. The Code of Practice for Competition in the Provision of Telecommunication Services (the "Code") governs competition in the info-communications sector.

Issued on 15 September 2000 and taking effect on 29 September 2000, the Code, in broad terms, strives to set clear boundaries for competitive market behaviour while providing sufficient latitude for innovation and rapid response to the demands of the market. It aims to facilitate the rapid entry of new competition and the deployment of innovative services, while ensuring a strong incentive for companies to invest in infrastructure. It will do this by ensuring that operators' build-or-buy decisions are based on reasonable and appropriate economic pricing signals. The Code will be reviewed within three years to ensure its continued relevance as the market evolves.

More specifically, the Code includes provisions to ensure:

- that telecommunication services meet reasonable performance standards and are reasonably accessible by end users in Singapore (the impact of the Code in terms of interconnection and access are dealt with more fully later in the chapter);

- the promotion of international competitiveness;
- fair and effective competition;

self-regulation; and

the participation of all sectors of the information and communication industry in Singapore.

The Code also imposes certain conditions on dominant and other licensees. A "Dominant Licensee" is defined in the Code as one who controls facilities that provide a direct connection to end users within Singapore, and are sufficiently costly or difficult to replicate such that a significant barrier to rapid and successful entry by an efficient competitor would be created, or such that the licensee has the ability to restrict output or raise prices above competitive levels to end users.

The Code regulates competition in four ways:

establishing and imposing certain minimal duties (including quality of service commitments) on service providers to their customers for the provision of telecommunications services on just, reasonable and non-discriminatory terms;

requiring co-operation between service providers, by imposing certain interconnection and access obligations;

defining unfair methods of competition; and

regulating the consolidation and restructuring of service providers which may have anti-competitive results.

(a) Duty of Licensees to Customers

The Code mandates that licensees must:

comply with minimum quality standards;

render timely, clear and accurate bills, including the advanced disclosure of all prices, terms and conditions;

provide fair dispute resolution procedures; and

prominently specify the basis and procedures for the suspension and/or termination of the services provided providers to its customers.

The following additional duties are imposed on Dominant Licensees. "Dominant Licensees" are those designated as dominant by the IDA. In general, Dominant Licensees are those with facilities that connect directly with customers; and either (i) such facilities are so expensive or extensive that the replication of such facilities by a competitor is a barrier to the said competitor's entry into the Singapore market; or (ii) the licensee has the ability to restrict output or raise or lower prices beyond competitive levels.

These Dominant Licensees are required to provide telecommunication services:

- on demand;
- on a non-discriminatory basis;
- on an unbundled basis;
- on prices, terms and conditions that are just, reasonable and non-discriminatory; and
- pursuant to the tariffs that they have filed at the time when they lodge their applications for their respective licences.

(b) Co-operation between Licensees: Interconnection and Access

The Code provides for the minimum interconnection duties ("Minimum Interconnection Duties") of the FBO's and SBO's using switching and routing equipment to provide telecommunications to the public. Examples of such duties are that licensees must:

- (a) interconnect, whether directly or indirectly;
- (b) establish compensation arrangements for the origination, transit and termination of traffic;
and
- (c) provide billing information.

Non-dominant licensees will be allowed to interconnect, without prior approval, on any mutually agreeable terms that satisfy the Minimum Interconnection Duties.

As for Dominant FBOs, the Code adopts a fairly novel way of regulating their interconnection obligations by setting out the process by which the other licensee ("Requesting Licensee") may enter into an interconnection agreement with a Dominant FBO.

The Requesting Licensee may choose from three options to interconnect with a Dominant FBO. Firstly, the Requesting Licensee can accept the provisions specified in the Dominant FBO's Reference Interconnection Offer ("RIO"). The RIO is a document from the Dominant FBO lodged with, and approved by the IDA that contains a comprehensive and complete written statement of prices terms and conditions on which the Dominant FBO is prepared to provide interconnection related services to any Requesting Licensee. Secondly, the Requesting Licensee may interconnect with the Dominant FBO on the same terms as those of a similarly situated licensee. Thirdly, the Requesting Licensee may seek to negotiate an individualised interconnection agreement with the Dominant FBO.

Licensees are also required, even in the absence of an interconnection agreement, to disclose network interfaces, comply with mandatory technical standards, facilitate number portability and to reject certain discriminatory preferences.

(c) Unfair Methods of Competition

Licensees must not act in a manner that hinders fair competition. A licensee acts in an anti-competitive manner when it: (i) abuses its dominant position in the Singapore market; (ii) abuses its dominant position in a foreign market; and/or (iii) engages in unfair methods of competition.

(i) Abuse of dominant position in the Singapore Market

A Dominant Licensee abuses its dominant position in the Singapore market when it undertakes the following actions:

Pricing abuses: Engaging in the following types of anti-competitive pricing: predatory pricing or price cutting; price squeezing; cross-subsidisation.

Discrimination: Providing services and access to infrastructure to down-stream affiliates on more favourable terms than to non-affiliated competitors.

Predatory Network Alteration: Altering physical and logical interfaces that imposes significant costs to other competing licensees, without justification.

(ii) Abuse of dominant position in a Foreign Market

A Dominant Licensee must not use its dominant position in a foreign market or the dominant position of its affiliate in a foreign market to enable it to unreasonably restrict competition in Singapore.

(iii) Unfair methods of Competition

Licensees must not engage in activities that improperly deters (or is likely to deter) new entrants into the Singapore telecommunications market, or restrict (or is likely to restrict) existing competition in the Singapore telecommunications market, for reasons not connected with availability, price or quality of service. Particularly, licensees are prohibited from:

Making claims or suggestions concerning its services or the services of another licensee without objective evidence, or that would likely confuse or mislead customers.

Acting in a manner that degrades the availability or quality of another licensee's services or equipment, or raises another licensee's costs.

Providing false or misleading information to other licensees.

Interfere with the relationship between another licensee and its customers or suppliers by providing false or misleading information to the said customer or supplier.

(d) Consolidation and Restructuring of Licensees

All FBOs are required to obtain the prior approval of the IDA before assigning its licence or it changes in ownership, shareholding or management. If the IDA believes that a transaction risks unreasonably restricts competition, the IDA will reject or impose the appropriate conditions. The IDA may also reject or impose conditions on any transaction if it considers it is in the public interest to do so.

5. Protection of Information

There are no general privacy or protection of information laws in Singapore, however there are industry specific laws regulating privacy and information protection. In relation to the telecommunications industry, licensees are required to protect information that it obtains as a result of the use by a business or residential customer of its telecommunication services ("End User Service Information" or "EUSI"). EUSI includes but is not limited to the following information of the customer: calling patterns; the services or equipment used; telephone number and network configurations; and the billing name, address and credit history.

Licensees are prohibited to use customer's EUSI without the affirmative consent of the customer save for the following purposes:

Planning, provisioning and billing for any telecommunication services or equipment provided by the licensee.

Managing bad debt and preventing fraud.

Facilitating interconnection and inter-operability between licensees.

Providing assistance to law enforcement or other governmental agencies.

To further protect the EUSI of customers, licensees are required to submit a report to IDA and make the same available to the public, stating the number of complaints that they have received from customers in relation to the above. This report must be made on quarterly basis.

6. Conclusion

Singapore has taken great and bold strides towards the globalisation of its telecommunications industry by establishing a regulatory framework that seeks to promote investment, certainty, competitiveness and efficiency. However, in the current uncertain business climate it remains to be seen whether more global telecommunication players will take up the gauntlet and establish a greater regional presence in Singapore.

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