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ASEAN TELECOMMUNICATIONS REGULATIONS REPORT

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INTRODUCTION

A study on ASEAN telecommunications regulations cannot be done in isolation of global trends. Impacts of the WTO Agreement in basic telecommunications, impacts of global technology trends such as the LEOs, the impact of convergence seen especially with the advent of the Internet, and the impact of new applications of these new telecommunications technologies, etc. are all influencing the traditional ways of regulating telecommunications. ASEAN regulators are being forced to look beyond their traditional methods of regulation.

As for the impact of trade liberalization of regulation in the ASEAN region, which shall be the focus of this paper, these trends can be traced back to 1982 when the US began the deregulation of the US telecommunications industry by the divestiture of AT&T.

As way back as 1986, the US had pushed the services sector onto the agenda in the GATT Uruguay Rounds. Services was the most controversial part of those negotiations. The liberalization of services, let alone basic telecommunications was still in the infancy stages back then. Many countries still operated through government entities. Instead of focusing on the liberalisation of basic telecommunications, therefore, the negotiations concentrated on looking at providing access to basic telecommunications to other service sectors. This was done since telecommunications was seen as a key underlying infrastructure for other service industries, such as the financial industry.

Another reason for this was that no one country had a common definition for value-added and basic services. Some countries such as the United States, tried to adopt a technology based definition, by saying that basic was real time transmissions and enhanced (value-added) were non-real time transmissions. In the European Union, voice communications which amounted to the bulk of traffic was considered basic. Others services that were provided over leased lines or dial-up were considered value-added. In other words, an economically driven definition. With digitization however, one could only wonder how a regulator could tell the difference between voice bits and data bits, not to mention what would they do when data traffic exceeded that of voice. Does this mean they have now to change the definition of basic again? Ultimately, it became clear that each country had its own definitions of basic and voice, and the only common definition was that of infrastructure being basic. Yet, even for infrastructure, some countries such as Indonesia consider cellular services basic, while others such as Singapore consider it a competitive service.

In any case, by the time of the 1994 GATS agreement therefore, while there may have been countries such as Sweden who already put basic telecommunications on the table for liberalization, most others only put their definition of value-added services on the table. Even the European Community in conformity with its 1992 Green Paper, had voice and infrastructure as basic telecommunications reserved for monopoly provisioning. Then there was the GATS Telecommunications Annex which only addressed access to basic telecommunications and NOT liberalization of basic telecommunications.

During these years of negotiations and discussions, ASEAN countries had already begun to see changes to the traditional government entity operating telecommunications. Many began by creating 100% state-owned corporatised entities and creating a separate regulatory body (see Malaysia which began this as way back as 1987). Once corporatised, some began selling off shares to the public or private sector (domestic or foreign) (see Telekom Malaysia and Singapore Telecom). Others began to introduce competition in value-added services and cellular sectors of the industry to domestic providers, even before corporatising or privatising (see Indonesia and Thailand). Others, such as Philippines which already had a private incumbent and competition in some sectors, were working on introducing more competition into domestic markets, etc. with foreign involvement within Constitutional limits.

Meanwhile also, by the 1994 GATS Marrakech agreement, many countries pushing for greater liberalization of basic telecommunications began the Negotiations Group on Basic Telecommunications (NGBT). ASEAN countries were nervous about these rounds, and some such as Singapore joined merely as observers. As the rounds proceeded, many other ASEAN countries joined either as participants or observers, and the NGBT was expected to come out with an agreement by April 1996. Offers were put on the table. Even the European Commission which internally was now moving for infrastructure liberalization by 1998, was pushing for others to join. The United States however, did not feel that the offers on the table were sufficient. Satellite communications in particular, especially for open markets for LEOs was a key concern. This stalled the talks, and there was no agreement by their deadline.

With the Singapore Ministerial Conference expected in December, however, there were pressures to open up the NGBT and get more agreements. This time the group was called Group on Basic Telecommunications (GBT) and more offers were put on the table. By February 1997, agreement was reached and this historic agreement will further propel liberalization in this region.

Interestingly, the currency/financial crisis has also not affected the liberalization drive of the WTO. This is inspite of the fact that telecommunications wise, the currency crisis has had some impact on the telecommunications industry. Telecom companies and Internet services providers are hurting from having to pay out to their correspondents in US dollars for bandwidth and connection charges. In some countries such as Malaysia, competitive domestic players to Telekom Malaysia are almost going defunct and some of their

investment strategies in network development are being rethought. This impact however, is greater on the small players and especially the Internet service providers. Bigger players, especially, those who receive accounting rates in US dollars and those who have made successful overseas investments are not as badly hit.

ASEAN is going full speed ahead with their liberalization plans. Thailand's Cabinet recently approved a Telecom Master Plan providing for a fundamental restructuring of the telecommunications sector and introducing progressive liberalization. Singapore, in line with its new commitments to the WTO to introduce basic telecommunications by the year 2000, is now considering the three new player proposals handed in after an open tender, to introduce at least two new competitors to Singapore Telecom. Other ASEAN countries have made similar significant commitments, and in fact, to a large extent the quality of the ASEAN countries offers were a key factor that enabled the Basic Telecommunications Agreement a success back in April 1997. They are now actively looking at how to implement these commitments.

The following study will therefore primarily focus on ASEAN regulations within the context of WTO liberalisation trends. The paper however will not be complete if some recognition is given the impact of digitization and convergence on telecommunications regulations, and the impact of globalization. Since this goes beyond the scope of this paper, only brief reference will be made to it. Having said as much, the following sections will look at the current state of regulation in the ASEAN countries, the regulator and how this has impacted the shape of the telecommunications industry in these countries.

IMPACT OF WTO OR TRADE LIBERALIZATION TRENDS

On a cursory look, the ASEAN countries may seem more closed to competition as compared to the US or Europe. Yet when one understands the complexities involved in changing laws in this region, one can come to appreciate the creativity of ASEAN countries to come up with solutions allowing of some level of competition and private sector involvement.

The Philippines, for example, does have Constitutional law limitations of foreign investment and Constitutions are almost impossible to change here. In Thailand the government has tried to privatize its telecommunications providers TOT and CAT, since 1990 but have faced resistance from labor unions and strikes from employees. With coalition governments as well, it was near to impossible to change laws. Yet, Thailand has managed to work out BOT and BTO arrangements with private sector, having a fresh approach to competition in Thailand, within the limits of the law.

Other countries such as Singapore and Malaysia, have monopoly licenses to incumbent players which meant exclusion of others in the meantime. Yet these countries have pressured the incumbents to work out arrangement with global providers such as Sprint, MCI, BT, to allow them to provide services to business customers. Regulators had faced

pressures from MNCs wanting the same providers they have back where they come from, and regulators have allowed this type of competition through joint provisioning agreements. To some extent, through these agreements, BT, IBM etc. are already competing with the incumbent in price and service, to business customers.

Today, many ASEAN countries are already embarking on actual legislative reforms. Thailand has finally after so much delay, been able to pass the revised Master Plan approved by Cabinet for telecommunications reform. If they do have a change of government, they may have to return to the drawing board again. In the meantime however Thailand will continue creative ways to introduce private sector involvement and competition.

- **Brunei Darussalam**

Brunei Darussalam has a total area of 5,765 sq. km and a population of 320,000. Overall telephone density is about 26 per 100 and cellular subscribers to date, include about 42,685 subscribers, i.e. a penetration of about 16%- one of the regions highest. Internet services were launched in October 1995, and it has seen a 300% growth rate.

- a) Telecommunication Law

The Telecommunications Act of 1956 was amended in 1984. While the exclusive privilege of establishing, maintaining and working telecommunications in Brunei is reserved for the Government, provision are made to allow for intra-building telecommunications owned and operated by a person occupying that building or part of it, for his sole use and interest. Also the Act allows the Government to grant license to others to establish, maintain or work telecommunications within Brunei.

In 1996- WTO offer. In its offer to the WTO Negotiations on Basic Telecommunications, Brunei indicated:

- 1) For *domestic telecommunications services* will continue on a monopoly basis up to 10 years after the privatization of JTB. At the expiration of the 10 years, the government will conduct a review of policy to see whether additional suppliers should be allowed.

- 2) For *International Services*, JTB and DST will continue to have exclusive rights till the year 2010, after which the government will conduct a review of policy to see if additional suppliers should be allowed.

- 3) For *mobile services*, services exclusively provided by DST, such as AMPS and GSM will be considered by the government in year 2010, if public interest and economic conditions justify the issuance of such license.

- 4) Meanwhile, Switched data services, facsimile services, electronic mail, on-line information and database retrieval, EDI and enhances/value-added facsimile services,

including store and forward and retrieve, are open to competition provided they use the Public Telecom Network under the Brunei Government National Telecom Authority Control.

In 1997, a Ministerial Decree has been issued outlining the licensing of GMPCS services in Indonesia.

b) Regulator

Since the introduction of cellular competition in 1995, a regulatory unit was set up under the Ministry of Communications to oversee the industry. The current structure of the regulatory body includes the following units: International Affairs; Radio Frequency Spectrum; Equipment Type Approvals; and Licensing. The main functions and duties of the regulating authority are: to ensure the reliability, quality and efficiency of national and international telecommunications services that are made available to the people of Brunei; to ensure that every operator employ the technical, managerial and financial resources required for the provision of services; to maintain technical standards in operating these services; to maintain and promote fair and effective competition between persons involved in commercial activities; and to promote Brunei as a service hub for the region.

c) Number of Players

Today, there are two operators in Brunei Darussalam providing telecommunications services:

- Jabatan Telekom Brunei (JTB), which is a government department under the Ministry of Communications. JTB is being prepared for eventual privatization.
- Data Stream Technologies (DST) Communications Sdn Bhd, a private company which began operating cellular service in April 1995

Interestingly, JTB does not really compete with DST in cellular services. Instead JTB transferred the operation of their AMPS B-band system to DST in April 1995. JTB only operates a GSM service exclusively for the royal family. Meanwhile, DST has commenced a public GSM network in 1996 and has about 6,000 subscribers across the country.

JTB instead, owns and operates the national terrestrial network, and the international submarine cables and satellite earth stations. JTB has achieved 100% digitization of transmission and switching networks.

• **Indonesia**

The Republic of Indonesia is an archipelago of more than 17,000 islands with a total area of about 2 million sq. km. It has a population of about 201 million. Telephone penetration is 2.95 per 100. It has about 759,956 cellular subscribers, about 499,812 paging

subscribers and about 50,000 Internet users. The network and switching is about 97.78 % digitized.

a) Telecommunications Law

Telecommunications Law No.3/1989 was introduced in 1989 to introduce national and international private sector participation into the telecommunications industry in Indonesia. Law No.3 introduced a clear distinction between basic services and non-basic services. Basic services include fixed telephony, cellular mobile, GMPCS, VSAT, Satellite, public phone services etc. Non-basic include radio paging, telephone recording, trunking, wireless data, Internet, CT2 and other value-added services such as EDI and audiotext.

Law No.3 basically provided that private companies could be admitted to run basic telecommunications in cooperation with the state company operators under a scheme called build-operate-transfer (BOT). BOT meant that the private sector would finance and construct telecommunications in particular areas, and these assets would be transferred back to PT Telkom or PT Indosat, and jointly operated. Non basic services were opened to private sector on approval by the telecommunications Minister. Foreign companies were also encouraged to participate.

Repelita VI (1994-1999) further expands on the BOT scheme and introduces a new scheme called Kerjasama Operasi (KSO) or Joint Operation Scheme (JOS). In the JOS, unlike BOT, a distinct joint venture company is set up, where shares are held by the foreign operator together with the local business partners, and there will be an agreement with PT Telekom to develop local infrastructure and service to particular areas. The agreements are for a 15 year period. To date, these JSO companies have succeeded in adding at least two million lines within three years.

In 1996- WTO Offer . Meanwhile, Indonesia has made its offer to WTO and has signed the Reference Paper. It has committed to:

1. PT Telekom has exclusive rights for local telephone service until the year 2011. Meanwhile, other players will have to provide services with PT Telekom through joint venture, joint operation or contract management. Foreign equity will however be limited to 35%.
2. PT Telekom's exclusive national long distance rights will end in the year 2006. Private players will have to jointly provide services with PT Telekom through joint venture, joint operation or contract management. Foreign equity participation is limited to 35%.
3. PT Indosat and PT Satelindo's exclusive right to international telephone service will end in year 2005. Callback services are also not allowed. Exclusivity includes X.25, Frame relay, telegraph services, etc. Private players wanting to enter this market will have to jointly provide services with PT Indosat or PT Satelindo, through joint venture, joint operation or contract management. Foreign equity participation is limited to 35%.

4. Cellular mobile services and personal mobile cellular communications services are open provided frequency spectrum is available and provided new entrants work with state-owned companies, and foreign ownership is limited to 35%.
5. Internet access is open to competition provided they use the networks of PT Indosat and PT Satelindo up to the year 2005. More than 30 licenses have been issued to date, and they work through joint venture or joint operation, with a limit of 35% foreign equity ownership.
6. Regional and national paging services, and public payphone services are limited to 35% foreign ownership and are provided through joint venture and joint operation. Division of revenue between the operator and PT Telkom is determined by the government.
7. Meanwhile, voice mail services, electronic mail services, computer time sharing services, videotext services, electronic mailbox services, file transfer services, home telemetering alarm, entertainment services and management information services are open to competition. Each service category is limited to five foreign service provider companies, in addition to existing companies and there are no limitations except for the director and technical expert. A higher paid-up capital is required of the foreign service suppliers than of domestic service suppliers. This measure will be eliminated in the year 2020.

Indonesia has also signed the Information Technology Agreement at the Singapore WTO meeting.

Current developments in telecommunications and these WTO commitments, have meant that the Indonesian government is reexamining its existing regulatory framework, and considering some revisions, including revisions to Law No.3.

One recent newsletter, Communications Asia Update, reported that the Indonesian government has yet to decide whether to introduce the update as an entirely new law or as a revision to the existing law.

The newsletter noted that three of the key features expected to be included in the new law are:

- There will be no distinction drawn between basic and non-basic telephony services. At present, services such as mobile communications and data communication are classed as non-basic services.
- The distinction between the status of the “main provider” (PT Telkom for local and domestic long-distance calls and PT Indosat for international calls) and “other providers” (meaning providers of non-basic services) will be abolished.
- The government will abolish the monopolies over domestic and international calls currently held by the two State-owned companies, PT Telkom and PT Indosat.

It has been said that the government hopes to put the new or revised law into effect before the end of 1998.

b) Regulator

The Directorate General of Posts and Telecommunications (DGPT) within the Ministry of Tourism, Posts and Telecommunications is responsible for posts and telecommunications. DGPT administers the implementation of the government's policy, regulates telecommunications provisioning, decides telecommunications tariffs, sets interconnection arrangements and supervises the implementation of the universal service obligation.

Actual policies are made by the Telecommunications Advisory Board, established by Presidential Decree No.55/1989.

c) Number of players

The main state-owned companies are:

- 1) PT Telekomunikasi Indonesia (PT Telekom), which has exclusive rights over domestic services. Currently, the government owns 75.8% of PT Telekom's stock.
- 2) PT Indosat, which has the exclusive rights to international services. Currently, the government owns 69% of PT Indosat's stocks.

A third main player, PT Satelindo was given a license to set up and operate international telephone services alongside PT Indosat until the year 2005. Satelindo's shareholders include: Bimantara conglomerate, Deutsche Telekom, PT Telekom and Indosat.

According to a report handed in by Indonesia during the 17th meeting of the APEC Working Group on Telecommunications in March 1998 in Brunei, this is the current situation in Indonesia:

For basic telecommunications (through BTO and JSO with PT Telekom or PT Indosat):

Fixed Telephone	4 operators
Cellular mobile- GSM, AMPS, NMT-450	7 operators
PCN-PCS- DCS-1800 and CDMA	4 operators
GMPCS	2 operators
VSAT	7 operators
Satellite	4 operators
Multimedia	3 operators
Public Phone	13 operators

Major BTO and JSO cellular players include: PT Telekom/PT Rajasa, PT Telekom/Elektrindo Nusantara, PT Telekom/CPS, and PT Telekom/Telekomindo.

For non-basic telecommunications (competition)

Radio Paging	11 operators
Telephone Recording	2 operators
Trunking	7 operators
Wireless Data	10 operators
Internet	40 operators
CT2	3 operators
Value-added- Financial, EDI, Audiotext	12 operators

Except for cellular where networks are owned and operated by entities in joint venture with PT Telekom, all other national and international infrastructures are owned by PT Telekom, PT Indosat and PT Satelindo respectively.

- **Malaysia**

Malaysia has an area of about 329,758 sq. km divided into two distinct region: a peninsula just above Singapore and a north west coastal area of the island of Borneo, each separated by the South China Sea. Its population is about 21 million people, and it has a telephone penetration of 19 per 100. There are currently about 2.1 million mobile subscribers, 133,441 paging subscribers and about 64,000 Internet subscribers. The network and switching is about 95% digitized.

a) Telecommunication Law

Before liberalization in 1987, telecommunications was provided by a government monopoly, and although it operated under a separate law, 1950 Telecommunications Act, many decisions were somewhat “internal”. There were, however, significant amendments to this Act even before liberalization. There were amendments made in 1958, 1964, 1968, 1972, 1977, and in 1984. Further amendments to the 1950 Act were seen in 1991, 1993, and 1995. (All these amendments have to be tabled in Parliament for change whereas regulations merely have to be approved by the Minister.)

In 1987, the government operations were privatized and transferred from JTM to Syarikat Telekom Malaysia (STM) which is now Telekom Malaysia. This was done under Section Three of the Telecommunications Act of 1950. STM was given a license for 20 years, effective from 1987. This saw the beginnings of rapid deregulation of the industry in Malaysia, although Telekom Malaysia nevertheless has some monopoly over long distance trunk networks, which will end in 1999.

As for major policy statements, the government formulated the National Telecommunications Policy in May 1994, and the Satellite Policy in 1995. The former set out guidelines for the development of the Malaysian telecommunications industry. The government also lifted the ban on private satellite dishes and also authorized the launching of 2 satellite TV systems. Meanwhile, with all this deregulation there was concern that there would be a waste of resources, such as frequencies. The government then in 1995 announced a Rationalization Policy to reduce the number of operators. As operators could not agree who to merge with whom, and it was causing uncertainty resulting in a lack of investments in the local loop, the government later on the 4th July 1995 dropped this policy. Since then local loop competition has increased and to some extent new entrants are already challenging TM's monopoly ahead of 1999, as they are already entering lucrative corporate and urban residential customer base.

Therefore, as it can be seen, both JTM and the Ministry therefore have long since been handling issues of fair competition, and ensuring that TM does not abuse its dominant position. Besides licensing and tariff issues handled by the Ministry, JTM has been involved in issues of interconnection. Although JTM prefers to have the industry work out the details, it actively came up with a detailed set of guidelines under which such negotiations should take place. In May 1996, JTM issues the General Framework for Interconnection and Access (GFIA). The GFIA deals with issues such as the right to interconnect, infrastructure sharing, charging policies, numbering plans, etc. JTM has ensured the passing of laws making callback and refile illegal.

In 1996- WTO Offer Malaysia's WTO Basic Telecommunications offer includes:

1. The basic local, inter-exchange and international services, supplied over public telecommunications transport networks for: voice (wired or wireless); X.25 and frame relay; circuit switched data transmission services; facsimile service; private leased circuit service; domestic/international satellite services and links; satellite earth stations; international switching and gateway facilities; mobile services; paging services; trunked radio and video transport services will only be opened in the following way. It will only be allowed through the acquisition of shares in existing licensed public telecommunications operators, and foreign shareholding will be limited to 30%.
2. Data transmission services covering electronic mail, voice mail, on-line information and database retrieval, enhanced facsimile, code and protocol conversion; mobile data services; and telex and telegraph services are open to competition with the following conditions. It can only be done through a locally incorporated joint-venture corporation with Malaysian individuals or Malaysian-controlled corporations; or only through acquisition of shares of an existing licensed VAS operator/corporation. Aggregate foreign shareholding shall not exceed 30%. The license shall specify the type of services to be provided and simple resale is not permitted.

In 1997, the following documents were released by the Malaysian government:

- 1) The Telecommunications Regulatory Framework for Service Quality in the Mobile Cellular Telephone Service (March)
- 2) The First Mobile Quality of Service Report (November)
- 3) The Telecommunications Regulatory Framework for Quality of Service in the Fixed Telephone Service (November)

It was also decided in 1997, that as of 1.6.98 existing domestic network operators can operate as Internet Service Providers.

In 1988, the Malaysian Government plans to release a document on "Regulatory Framework for Telecommunications Network Boundary". Meanwhile in February 1988, foreign shareholding capped at 30% in existing licensed public telecommunications operators (see WTO offer), were raised to 49%.

b) Regulator

In 1987, the government decided to open up the telecommunications market and separated the regulatory and operational functions of government, through the creation of Syarikat Telekom Malaysia Berhad (STM) under the Telecommunications Successor Act 1985. STM was then licensed by the Minister of Energy, Telecommunications and Posts under Section 3 of the Telecommunications Act 1950, who was still considered the regulator.

A "separate" regulatory body, Jabatan Telekom Malaysia (JTM) was later set up as a supervisory body with powers to control the telecommunications sector according to the provisions of the 1950 Telecommunications Act. The Ministry still had the powers to formulate policies and directions for the telecommunications industry, including licensing and tariffing, while JTM was responsible for regulating the sector through enforcement and implementation of these policies, including frequency allocation and management, technical standards, numbering plans, type approvals, and quality of service. There are plans in the future to make JTM more autonomous from the government.

c) Number of players

In 1991, Telekom Malaysia, had its share placed on the stock exchange in Kuala Lumpur. About 25% of the shares of TM are now completely in private hands. TM's license is until year 1999.

There are to date, 7 basic network and services operators: Telekom Malaysia, Bina Sat Com, Time Telecommunications, Syarikat Telefon Wireless, Celcom Transmission, Mutiara Telecommunications, and Fiberail.

There are 5 international gateway and services operators: Telekom Malaysia, Cellular Communications Network, Measat Global Telecomms, Mutiara Telecommunications and Time Telecommunications.

Malaysia has 8 mobile phone operators. The dominant carrier is Celcom. Operators provide NMT-450, ETACs, AMPS/D-AMPS, GSM, CT2 and PCN services.

Paging	3 operators
Payphone	3 operators
Internet Service Providers	2 operators
Value-added Service	21 operators
Trunked radio	20 operators
VSAT	4 operators
Mobile Satellite Data	1 operator
Telecommunications Satellite Network	1 operator
Satellite Service Broadcasting	1 operator

From an infrastructure competition point of view, Malaysia is the most open market in ASEAN, as well as in nearly all areas of telecommunications. Apart from the use of submarine cables and Palapa and INTELSAT satellites, Malaysia owns its own satellite called MEASAT belonging to Binariang. Malaysia's second satellite was launched in 1996 and a third is expected to be launched over the next few years.

- **Philippines**

Philippines is made up of eleven major islands and 7,096 other islands, of about 300,000 sq. km of land area. It has a population of about 71,899,123, concentrated mainly in Luzon, Visayas, and Mindanao. Telephone penetration is about 4.66 per 100. Cellular subscribers amount to about 959,024, paging subscribers about 491,025 and network digitization is about 72.5%.

- a) Telecommunication Law

As of 1987, the Philippines has made moves to deregulate their telecommunications industry. The Philippines Long Distance Telephone Company (PLDT) had a license to provide all forms of telecommunications till the year 2028. By 1987, the government began to actively give out new licenses to new operators. In 1987, Department Order 87-188 was issued, approving some new paging and cellular operators and by 1989, two new international gateway operators were allowed.

NTC initiated simplification and decentralization of its licensing procedures and by 1993, it lifted controls over domestic satellite services. In February 1993, the President of Philippines issued Executive Order 59, requiring compulsory interconnection of authorized public telecommunications carriers. This helped increase competition and allow smaller

players to come on board. In July 1993, the President passed Executive Order 109 whereby the Philippines was divided into 11 service areas. These service areas were assigned to international gateway and cellular mobile operators, provided they also provide a certain number of local exchange lines as well over the next three years.

Meanwhile, there is a Constitutional Law limitation to foreign involvement in this new competitive environment. Foreign ownership is limited to 40% in telecommunications companies.

In 1995, The Public Telecommunications Act was passed. The Public Telecommunications Act of the Philippines, RA 7925 is an act to promote and govern the development of Philippines telecommunications and the delivery of public telecommunications services. Highlights of this Act include: usage of radio frequency spectrum; removal of 12% rate ceiling; deregulation of radio paging and value-added services, etc. Prior to this law, Internet service providers and other value-added service providers had to secure a franchise from Congress and a certificate of public convenience and necessity. There is also the Act No.3846 as amended, which provides for the regulation of public and radio communications.

In 1996- WTO Offer. Philippines made the following offer at the WTO negotiations on Basic Telecommunications:-

- 1) That the following services are offered only on a facilities basis, for public use, using either wired or wireless technology except cable TV and satellite: voice telephone services (local, toll services, domestic and international); telegraph services; telex services; packet-switched data transmission services; circuit-switched data transmission services; facsimile services and others (such as cellular mobile and telephone services). These services will be subject to the following requirements and conditions:

- franchise from Congress of the Philippines
- Certificate of Public Convenience and Necessity (CPCN) from the National Telecommunications Commission
- foreign equity is permitted up to 40%
- resale of private leased lines is not allowed
- call back, dial back and other similar schemes which result in the same operation are not authorized
- subject to the availability and efficient utilization of radio frequencies.
- the number of non-Filipino citizens in the Board of Directors of an entity shall be proportionate to the aggregate share of foreign capital of that entity, and
- all executives and managers must be citizens of the Philippines.

- 2) Voice mail, on-line information and database retrieval, electronic data exchange and videotext will only be allowed through a duly franchised and certified domestic public telecommunications carrier. Operations will be subject to securing a franchise from the

Congress of the Philippines and a Certificate of Public Convenience and Necessity (CPCN) from the National Telecommunications Commission.

In 1997, NTC has issued Memorandum Circulars on Public Mobile Telephone Service (PMTS), Spectrum Users Fee, and General Bidding Procedure for the Assignment of Radio Frequencies. DOTC issued Department Circular 97-01, Guidelines on the Procurement of Orbital Slots and Frequency Registration of Philippines Satellites.

In 1998, DOTC also issues Department Circular on Global Mobile Personal Communications by Satellite (GMPCS) as DC: No.98-01. GMPCS will be allowed to provide services in Philippines, provided they comply with national spectrum policy requirements.

Most recently, there has been a change in government attitude of the National Telecommunications Commission (NTC) toward the development of the public mobile telephone system (PMTS), following the resignation of NTC Commissioner Simeon Kintanar, who has left his post in order to stand for election to the House of Representatives.

According to one recent report in the Communications Asian Update Newsletter, bids for frequencies to operate PMTS – the Philippines' equivalent of PCS or PCN – were due to be invited this month, after a series of delays, but have now been delayed again. There were fears that any further delays would mean that the bidding process would be caught up in the 45-day pre-election moratorium on tenders. Existing cellular operators, however, had called for further delays as they said that the cellular market was not yet sufficiently developed for the companies to withstand the extra competition of PMTS networks. According to the report, acting Commissioner Fidelo Dumlao has indicated that he would be amenable to further delays in the bidding process. He has said that he feels that the NTC has not yet adequately assessed the pros and cons of the PMTS system.

b) Regulator

Department of Transportation and Communications (DOTC) is the primary policy, programming, coordinating, implementing, regulating and administrative entity of the Executive branch of the government. It promotes the development and regulation of dependable and coordinated networks of transportation and communications systems, as well as in ensuring fast, safe, efficient and reliable postal, transportation and communication services.

The National Telecommunications Commission (NTC) is a quasi-judicial body which acts as the regulatory body. The DOTC provides the overall policy guidelines to NTC and the NTC uses the guidelines to guide its actions in granting Certificate of Public Convenience and Necessity (CPCNs). It also regulates radio and television broadcasters. In general, NTC oversees that public safety and interest are safeguarded.

c) Number of Players

The dominant player is the Philippines Long Distance Telephone(PLDT) Company, which has been a private operator since 1928. It has a license to operate all kinds of telecommunications services till the year 2008. PLDT has about 62% of the market share today.

There are 9 international gateway operators: They are Capitol Wireless (CAPWIRE), Digital Telecommunications Phils (DIGITEL), Eastern Telecommunications Philippines (ETPI), Globe Telecom (GMCR), International Communications Corp (ICC), Isla Communications Corp (ISLACOM), PLDT, Philippines Global Communications (PHILCOM) and Smart Communications (SMARTCOM).

There are 9 telephone operators: DIGITEL, ETPI, GMCR, ICC, ISLACOM, PHILCOM, PLDT, SMARTCOM and Pilipino Telephone Corporation (PILTEL).

There are 4 players in the domestic and long distance network and services. They are DIGITEL, PLDT, Philippines Telegraph and Telephone Company (PT&T) and Radio Comms of Philippines (RCPI).

Meanwhile, 7 telecommunications companies in Philippines, have formed the Telecommunications Infrastructure Corporation of the Philippines (TELICPHIL) group to build a \$149 million alternative backbone to that of PLDT. This consortium include Bayantel, PT&T, DIGITEL, SMART, Globe, Extelcom, and ETPI.

To ensure nationwide universal service, the Telecommunications Office (TELOF) offers services to the public and training courses, The Municipal Telephone Project office (MTPO) of the government also implements the Government's municipal telephone program. The two programs help unserved areas in every municipality. Private operators still have first option to provide services.

There are 5 cellular mobile operators providing AMPS, AMPS, and GSM services. 4 paging companies and as of March 1997, there were 113 Internet Service Providers.

Mahubay Philippines Satellite Corporation (MPSC) launched the country's first satellite in mid-1997. This is a PLDT backed consortium. Two new PASI satellites are currently under construction and will be launched in 1998. A joint venture between DOTC and CAPWIRE aims to provide nationwide earth stations.

- **Singapore**

Singapore consists of the island of Singapore and 57 smaller islands, covering a total area of about 646 sq. km. It has a population of 3.04 million and a telephone density of 52.6%.

There are now 587,751 cellular subscribers, 1.2 million paging subscribers and 210,928 Internet users. Network digitization is 100%.

a) Telecommunication Law

The 1992 Telecommunications Act is the prevailing law in Singapore. The Act states the functions and powers of the regulatory body with regard to licensing and regulation of telecommunications and the postal services in Singapore. This Act also licensed two private operators, Singapore Telecom and Singapore Post to provide telecommunications and postal services respectively.

There are also subsidiary legislation passed by the regulatory body. This includes: The Radiocommunication Regulations 1994 dealing with the licensing and regulation of the installation and use of all radiocommunication equipment in Singapore, and regulation of harmful interference; the 1994 Telecommunications (Dealers) Regulations dealing with the sale, import, export, shipment and manufacture of telecommunications equipment; and the 1995 Radiocommunication (Certificate of Competency for Ship Station Operators) dealing with proficiency, skills and knowledge of GMDSS satellite terminal operators.

Since its formation, the new regulatory body has been introducing competition into various sectors in the telecommunications industry in Singapore. It announced that ST's exclusive license for cellular and paging will end on 1 April 1997. In August 1994, it announced that it will license other operators to provide satellite uplink/downlink facility for broadcasting purposes. In November 1994, they announced that VSAT self-provisioning licenses for intra-corporate usage will be allowed. For information on policies by the regulatory body, please check their website at <http://www.tas.gov.sg>. Policy directives are often given out through press releases.

1996- WTO offer- Singapore made the following offers to the WTO Negotiations on Basic Telecommunications.

- 1) Basic Telecommunications services (facilities-based) other than those regulated by the Singapore Broadcasting Authority, i.e. public switched services (local and international) and leased circuits services (local and international) shall be subject to commercial arrangements with licensed operators. Up to two additional operators will be licensed in 1998 for the provision of these services commencing 1 April 2000, thereafter additional licenses will be granted. (this brings Singapore Telecom's monopoly to an end 7 years in advance) A cumulative total of 73.99% of foreign shareholding, based on 49% direct investment and 24.99% indirect investment in these operators is allowed.
- 2) Mobile services, which include public mobile data services (PMDS), public trunked radio service (PTRS), public radio paging service (PRPS) and public cellular mobile telephone service (PCMTS) will be allowed subject to commercial arrangements with licensed operators. Only for PCMTS will more licenses be issued from 1 April 2000. A

cumulative total of 73.99% of foreign shareholding, based on 49% direct investment and 24.99% indirect investment in these operators is allowed.

- 3) Resale will be allowed, especially for public switched service (local and international) but not including the use of leased circuits connected to the public switched network; leased circuit services (local and international) but not with connection to the public switched, public cellular mobile telephone services and public radio paging services.
- 4) Value-added network services (VAN) which include: electronic mail, voice mail, on-line information and database retrieval; electronic data interchange and online information and/or data processing are subject to license from the Telecommunications Authority of Singapore (TAS). The basic requirements for a VAN license are: a) foreign companies are required to either set up a local branch of their company duly registered with the Registry of Companies and Businesses in Singapore, or grant a power of attorney to a local agent for the provision of their VAN service in Singapore, and b) VAN does not carry traffic which resembles any of the basic telecommunications services.

Since making these offers, TAS has made public tenders with a pre-qualifying and final round. The main tender for the Public Basic Telecommunications Services (PBTS) closed on 31 December 1997, with three tenders submitted (They are: Directline (comprising of Sembawang Corporation, Singapore MRT Ltd and WorldCom Inc), StarHub (comprising of Singapore Power Ltd, ST Telecommunications Pte Ltd, British Telecommunication Plc, Nippon Telegraph and Telephone Corporation), and TelcomOne (comprising Keppel Telecoms Pte Ltd, Singapore Press Holdings Ltd, Cable & Wireless Pte Ltd and Hong Kong Telecom Ltd))

The main tender for the Public Cellular Mobile Telephone Services (PCMTS) closed on 31 Dec 1997, with two tender submissions. (They are: P2P Communications Pte Ltd (comprising Natsteel, Teledata and GTE Corp), and StarHub (comprising of Singapore Power Ltd, ST Telecommunications Pte Ltd, British Telecommunication Plc, Nippon Telegraph and Telephone Corporation))

A tender evaluation committee has been setup comprising members from the regulatory body, its Board of Directors, and representatives from the Ministry of Communications, the Ministry of Finance and the Ministry of Trade and Industry. The results will be announced by mid-1998.

Singapore is also currently reexamining the 1992 Telecommunications Act. Given the many changes in the telecommunications industry in Singapore, new revisions or even a new Act may be required. Meanwhile, TAS works through policy directives and subsidiary legislation.

- b) Regulator

The passing of the 1992 Telecommunication Act, reconstituted the Telecommunications Authority of Singapore as a regulatory body, and handed operations over to Singapore Telecom and Singapore Post.

TAS mission is to ensure that Singapore telecommunications and postal infrastructure rank with the best in the world, not only in terms of quality and availability, but also in terms of price and service. TAS is also entrusted with the allocation and management of the use of the radio frequency spectrum and satellite orbital slots. In addition, TAS is in charge of developing and promoting the telecommunications and postal industries in Singapore.

Government policies about telecommunications and post are set by the government with the advise of TAS. TAS is then responsible for implementing government policies. Primary legislation is passed and amended by Parliament, while subsidiary legislation is made by TAS with the approval of the Minister. TAS has a Board of Directors who are representatives of private sector, academia, consumer groups and government ministries. This ensures that views from various sectors of society may be reflected in the development of telecommunications policies, regulations and legislation.

c) Number of players

Network infrastructure and services wise, Singapore Telecommunications Ltd is a monopoly provider. They own the terrestrial wired networks, international submarine cables, the earth stations etc. This monopoly will end in the year 2000. Tenders have just been closed for new licensees.

As of April 1997, however, TAS introduced competition. Since then 3 new service providers: MobileOne, ST SunPage and Hutchinson Intrapage have entered the paging market, competing against SingTel Paging.

As of April 1997, SingTel Mobile's monopoly on cellular mobile services was also broken. There is 1 other competitor today, MobileOne. MobileOne is a consortium made up of the Keppel Group, Singapore Press Holdings, Cable and Wireless and Hong Kong Telecom. Within the first weeks of launch, MI captured 10% of the cellular market- one of the world's highest take up rates for a new service provider. Together they currently provide AMPS, ETACS, GSM, CDMA and PCN services.

Value-added services and VANs are liberalized, and there are many providers in these areas.

- **Thailand**

Thailand has an area of 513,115 sq. km with a population of over 59.5 million. Telephone density is 7.41 per 100. There are about 1.25 million cellular subscribers, and 486,487 paging subscribers. Network and switching digitization is about 87%.

a) Telecommunications Law

The 1934 Telegraph and Telephone Act, empowers the Post and Telegraph Department to monopolize the provision of telecommunications services to the public, which at present are transferred to the Telephone Organization of Thailand.

The 1955 Radiocommunications Act, empowers the Director General of the Post and Telegraph Department to manage the use of radio spectrum and determine the radiocommunication equipment that must be licensed, as well as licensing process.

The 1954 Telephone Organization of Thailand Act, establishes the Telephone Organization of Thailand to provide domestic telephone services on a monopoly basis.

The 1976 Communications Authority of Thailand Act, establishes the Communications Authority of Thailand to provide postal services and international telecommunications services on a monopoly basis.

In 1991, the Thai Cabinet, within the boundaries imposed by the existing acts and regulations, invited the private sector to participate in telecommunications on a build, transfer and operate basis (BTO).

1996- WTO Offer Thailand made the following offer at the WTO Negotiations on Basic Telecommunications.

- 1) Thailand will open up public local, domestic, long distance and international services such as voice telephone services, telex services, telegraph and facsimile services conditional to the passing of all necessary new communications acts, commencing from the year 2006. Also the traffic shall be routed through a gateway in Thailand operated by a supplier duly licensed and the provision of the concerned services shall be agreed by the suppliers duly licensed on both ends. The following conditions will also apply:

- each service to be supplied in Thailand requires a specific governmental license
- licenses are granted only to service suppliers duly constituted according to Thai legislation, which requires head office and management to be located in the Thai territory
- due to scarce resources, the number of licenses may be limited
- the services in the Schedule of Specific commitments shall be on a facilities basis
- the service provider shall be a Thai registered company with foreign equity participation not exceeding 20% of the registered capital and the number of foreign shareholders must not exceed 20% of the total number of shareholders of the company

-The Communications Authority of Thailand has exclusive right to link with INTELSAT and INMARSAT.

2) Database access services, online information and/or data processing services, videotext, teleconference, and domestic leased circuits are allowed provided service providers use public telecommunications networks under national telecommunications authorities and radio application services is subject to frequency availability. Also the following conditions apply:

-shall be a Thai registered company with foreign participation not exceeding 40% of the registered capital and the number of foreign shareholders must not exceed 40% of the total number of shareholders of the company

-such company shall be permitted under the build-transfer-operate (BTO) concept

3) Telecommunications equipment sales services and telecommunications consulting services are open, with the only limitation that foreign equity participation does not exceed 49%.

Most recently, on November 4th 1997, the revised Master Plan on Telecommunications Development approved by Cabinet, allows for the privatization of the two state-owned enterprises TOT and CAT and allows for the liberalization of telecommunications services which are expected to be completed within April and October 1999 respectively. The action plan is being accelerated and the time frame will be March 1999, seven months ahead of schedule.

Meanwhile also, Article 40 of the New Constitution which has entered into force in October 1997, stipulates the establishment of an independent state agency to assign frequencies for the benefit of the public and to supervise and regulate radio and television broadcasting and telecommunications activities in accordance with the law. The establishment was approved in principle by the Cabinet, the details of which is still under construction.

b) Regulator

The Post and Telegraph Department (PTD), under the authority of the Ministry of Transport and Communications (MOTC) represents the government in the affairs of telecommunications and post. PTD was founded in 1883 to take over the telephone operations of the Defence Ministry. Its regulatory powers have been reduced significantly since the incorporation of TOT and CAT.

PTD currently controls and manages radio frequencies, regulates and coordinates domestic satellite operations, and acts as Thailand's representative to international organizations such as the International Telecommunications Union (ITU), the Universal Postal Union (UPU), the Asian electronics Union (AEU), the Asia-Pacific Postal Union

(APPU) and the Asia-Pacific Telecommunity (APT). PTD also studies the advancement of telecommunications technologies and prepare proposals for government consideration.

Soon, an independent regulatory body will be set up to substitute PTD, according to the New Constitution, Article 40.

c) Number of Players

There are currently 2 state enterprises responsible for telecommunications.

-The Telephone Organization of Thailand (TOT) providing domestic telecommunications e.g. local and long distance telephone services, cross border telephone traffic with neighboring countries, cellular mobile telephone services and other value-added services.

-The Communications Authority of Thailand (CAT) providing international telephone services to other than neighboring countries, including data communications, radiocommunications, telegraphy, postal, etc.

Since the introduction of the BTO schemes, 2 other operators have come on board to participate in the domestic telecommunications voice sector. One is TelecomAsia, a subsidiary of the Charoen Pokphand Group and the other is Thai Telephone and Telecommunications (TT&T), a consortium composed of Jasmine International, Loxely, Ital-Thai and Phatra Thanakit.

There are 4 other cellular operators apart from TOT and CAT, and they are Advanced Info Services (AIS), Fonepoint (Thailand) Co. Ltd, Tonga Telecoms Commission and Total Access Communications.

Other new players, not including TOT or CAT are:

paging	6 operators
trunked mobile	2 operators
optical fibre networks	2 operators
Value-added services	11 operators
Internet Services	10 operators
Data/Voice transmissions	5 operators

• **Vietnam**

Vietnam has an area of 331,689 sq. km and has a population of more than 76 million. The telephone density in Vietnam is 1.8 per 100. The cellular subscribers are about 110,000 and paging subscribers about 140,000. Network and switching digitization is about 100%.

a) Telecommunication Law

In 1992, the National Assembly promulgated the Law of Private Business Chapter One, allowing the development of private businesses. Foreign investors are invited to invest in Vietnam through 1) business cooperation contracts (BCC), 2) joint venture enterprises or 3) through 100% foreign capital.

Decree No.12/CP was adopted in 1966 that prescribes organizational structure and functions of DGPT (the regulatory authority).

Decree No. 109/1997/ND-CP was adopted in 1997, and it regulates postal and telecommunications activities.

Decree No. 79/CP was adopted in 1997 and it deals with administrative violations related to postal and telecommunications activities.

Decree No.21/CP was adopted in 1997 and it regulates Internet activities.

A new draft law on Posts and telecommunications was submitted by DGPT to the National assembly for approval. This law announces the State's encouragement for the promotion of Vietnamese and foreign investment in the construction and delivery of P&T services and in the manufacture of equipment in Vietnam.

b) Regulator

In July 1995, the operational aspects of the Department General of Posts and Telecommunications was handed over to another separate entity. DGPT now possessed authority over telecommunications regulations.

As well as a regulatory body, DGPT acts as the national management authority and frequency management. It draws up national development policies and strategies, as well as planning.

c) Number of Players

In 1995, when the regulatory body was set up, the operational parts of DGPT was handed over to the Vietnam Posts and Telecommunications Corporation (VNPT). VNPT is a state-owned telecommunications monopoly reporting to DGPT. The government retains 100% ownership over the network.

Under VNPT, the Vietnam Telecom National Company (VTN) manages the national network, and the Vietnam telecom International Company (VTI) manages all communications to other countries, including GSM roaming.

Also under VNPT is the Vietnam Data Communications Company (VDC), the Vietnam Mobile Services Company (VMS), the Vietnam Postal Service Company (VPS) and the

Provincial Post and Telecom Corporation (61 local operators) and import-export companies, etc.

There are two other cellular players- Saigon Mobile Telephone Center and Ho Chi Minh City P&T. Internet services are provided by NetNam.

Under the laws encouraging foreign investment, today DGPT has agreements with large equipment vendors. VNPT on the other hand, has signed BCC agreements with:

- Telstra (Australia) operating International Telecoms Network
- Kennevik (Swedish) operating national mobile telecom services
- Voice International (Australia) and Sapura Holding Sdn Bhd (Malaysia) delivering paging and cardphone services in Ho Chi Minh City.

VNPT also has joint venture agreement with equipment and cable manufacturers.

CONCLUDING REMARKS

Meanwhile, apart from the impact of global WTO liberalization trends affecting regulatory changes in ASEAN, one should not forget that the introduction of new technologies such as the Internet and Low Earth Orbit Satellites such as Iridium, are also challenging the way regulators are used to regulate terrestrial plain old telephone systems. Would a Cable TV operator be regulated by the broadcast or telecom regulator, if he wishes also to provide telecom and Internet services, for instance?

Interestingly, no one regulator has a common definition of what convergence means. To a broadcast regulator, convergence could mean that now all info-communications falls under media or broadcast laws and they are all means of moving information. A telecom regulator may feel that it is all telecommunications (distant communications) under their jurisdiction, while others from the computing world not used to regulations will say this is a new frontier beyond national laws and therefore no regulators purview.

Convergence and its applications, such as Telemedicine, electronic commerce are also bringing new issues and challenges before traditional telecom regulators. Never before had telecom regulators had to deal with issues such as Intellectual Property rights, Privacy, security etc., yet, ASEAN countries who were members of APEC, found themselves discussing issues of content regulation and E-commerce issues at the recent APEC Telecom Working Group in Brunei. Many of these issues have an impact on the development of the Asia Pacific Information Infrastructure, which concerns them. The APEC Telecom Working Group is also called upon to look at the Asia Pacific Information Society and its issues. These and other such issues are making traditional telecommunications regulators nervous, and they would rather leave it to other bodies.

In ASEAN, however, countries such as Malaysia are facing up to reassessing old telecommunications regulations and drafting new convergence laws. They are even reassessing the need to converge regulatory bodies. ASEAN also does not want to be left behind in the Global Information Economy. National Information Infrastructure projects have to go full speed ahead to ensure the region is plugged in to the Global Information Infrastructure. Malaysia has announced that Multimedia Super Corridor (MSC) will proceed as planned, and Indonesia's Nusantara 21 project was not listed among projects that will be rescheduled or postponed. It is predicted that investment in telecommunications and IT will continue to increase, although on a more cautious and prioritized basis. The ITU World Development Report for 1996/97 indicates that already, more than half of the world's telephone lines are installed each year in Asia, amounting to about two thirds of the global telecom expenditure.

Another great challenge that ASEAN regulators are facing today, is the globalisation of technology and the inadequacies of national regulations against this light. Prime Minister Mahatir in fact called for greater cooperation amongst ASEAN countries on such issues. Efforts such as the ASEAN Telecommunications Regulators Council (ATRC) are commendable as regulators in this region grapple to regulate the new global telecommunications environment we find ourselves in. ASEAN regulators are also actively involved in private sector and government regulation cooperative efforts to overcome these border limitations to globalisation, and were involved in ITU World Policy Forum on Global Mobile Personal Communications Satellite Services (GMPCS), and the APEC Telecom Working Group efforts on Mutual Recognition Arrangements for Telecom equipment (MRA).

A study on such issues will indeed make a study of telecom regulation in this region complete, but for now it goes beyond the scope of this paper. The paper, has clearly shown that trends in this region is closely linked to global trends, and ASEAN can no longer insulate itself from the rest of the world. On the contrary, the strength of ASEAN would be the increasing need for cross border collaborations, especially with that of the private sector.

Privatization on a national, regional and international scale is changing the way we look at regional and international organization and the way we regulate telecommunications. Perhaps, the upcoming 198 ITU Plenipotentiary Conference in Atlanta and its attempt to bring in private sector members on par with nation states, may set another trend for this region.

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Interviews with ASEAN regulators

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- Myanmar, Laos?
- Can a classification of the types of regulations be drawn? is a table showing in summary form what is described in the narrative
- Any possible implications for the rest of Asia, particularly S. Asia