

## **ASEAN regional telecommunication development interests in a global environment**

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### **ABSTRACT**

*An overview of the regional interests of the countries of Southeast Asia in developing telecommunications and information systems is presented in the context of global issues of systems and services growth as well as policy evolution vis-a-vis global trade. As the economic clout of the Asean countries continues to grow, regional interests in mobile, satellite and undersea fibre cable systems as well as rapidly expanding value-added services are of primary concern. In addition, developmental pressure is forcing telecommunications authorities to reorganize and revise regulatory policies. These interrelated issues are discussed in order to understand the development of telecommunications and information systems and services of ASEAN which are placed in the context of overall economic development in a global environment.*

### **Introduction**

The 1990s may well be looked at as landmark years for the development and assertion of regional interests of Asean (the Association of South East Asian Nations) in a global environment. The Asean countries have renewed pledges and strengthened action plans toward building a lasting peace in the region as well as developing cooperative measures for the enhancement of economic development. A real dynamism in terms of working toward political maturity and economic development rests squarely with the Asia-Pacific region. The Asean countries in

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particular are becoming a collectively strong player in the development of trade relations, industrial and information sector growth as well as a leader in regional development with global implications. As global services and systems become more the norm of operation in telecommunications, strengthening national and regional systems has become a major priority for the Asean countries. This is being done not only to raise the quality and quantity of telecommunications and information systems infrastructure and services to meet an ever increasing demand domestically, but also to be positioned in such a way that they are able to cooperate equitably and compete selectively in expanding global markets.

With the recent positive progress toward a lasting resolution of the conflict in Cambodia, and the beginnings of change toward economic and political cooperation with the entire Indochina region, the Asean countries have begun to succeed in the task of developing cooperative and consultative relations with each other and with other nations in the region to solve political disputes. These political links are translating rapidly into economic links and telecommunication development has become an important part in the realization of development goals. The Asean countries are responding quickly to telecommunications development needs in Laos and Vietnam, with Cambodia not far behind. Sights are now set on beginning to ease the strained relations with Myanmar (Burma). The entire Southeast Asia region is poised on the threshold of a developmental period which will launch it, over the rest of the 1990s, as a major player in the international arena.

Sophisticated regional economic cooperative links are being forged in the wake of increasing political stability. As the political and economic clout of the Asean countries continues to grow, regional telecommunication interests in mobile systems, satellites and undersea cable systems, as well as rapidly growing value-added services, are of primary concern. The integration of these services and systems with both global networks and developing domestic basic infrastructure is becoming an increasingly complex task. Pressure to reorganize government owned, monopoly telecommunication authorities continues. At the same time, these organizations are expanding internationally and are beginning to assert concomitant interests in international trade relations. However, while some reforms are evident, the revision of policy and internal practices tend to lag behind these developments creating a cumbersome brake on otherwise well-intentioned change for both domestic development and international expansion. A mosaic of inter-related issues are presented in this paper to better understand the development of Asean's telecommunications and information systems and services in the context of the global trade environment.

#### **ASEAN economic evolution**

The six Asean countries (Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand) represent an area of the world with one of the highest economic growth potentials. The region has a higher per capita GNP and volume of exports

than Eastern Europe. Cooperation in telecommunications in the region has resulted in the establishment of undersea cable systems linking each country and with the Transpac cable system across the Pacific to Hawaii and on to North America. An undersea fibre cable linking Singapore with Marseilles, France, to be completed in 1994, will result in a complete fibre optic connection from Europe to Japan via Southeast Asia. In addition, Thailand, Singapore, Malaysia, and the Philippines, and more recently Papua New Guinea (a non-Asean country), are using the Indonesian Palapa satellite system. As cooperation grows in economic arenas, Asean could become a major force in political and economic matters similar in nature to the European Community.

Nonetheless, each Asean country is on a different growth pattern and has its own established priorities for economic development. From the more developed Singapore and the near NIEs (Newly Industrialized Economies) of Malaysia and Thailand to the less developed Indonesia and Philippines, the Asean countries have pursued rather independent courses for their telecommunications sector despite the regional cooperative efforts. The response to telecommunications growth and development is quite different in each country and must therefore be analyzed on a country-by-country basis.

More recently, however, world economic changes and pressures have necessitated that the Asean region act in concert in such forums as the Uruguay Round of trade policy talks of the GATT (General Agreement of Tariffs and Trade). The position of Asean is shifting vis-a-vis other less developed countries in terms of the highly protected services including telecommunications. While liberalization in trade services is being supported by Asean as a whole, the reasons are different in each country and there is a fair amount of divergence in the views. It would therefore be premature and perhaps not altogether advantageous for Asean to form a trade bloc.

A new economic framework agreement was accepted in late 1991 (subsequently endorsed at the Asean Heads of Government Summit in Singapore in January 1992) which sets a clear direction for a workable cooperation among the Asean nations. This framework agreement, called AFTA (Asian Free Trade Area), is aimed at creating a regional free trade zone within the next 10-15 years. Parallel to the AFTA agreement was the development of a proposal by Malaysia in early 1991 for an East Asia Economic Group (EAEG). The Asean countries have since agreed to the term EAEC or East Asia Economic Caucus after combining different proposals from member states. The purpose of the caucus is to eventually lead to building an Asian-wide economic cooperative among not only the Asean countries but also other East and South East Asian nations including Japan. The EAEC proposal has however not been endorsed fully and has been sent back for further consultation due to the political overtones of such an agreement and its general negative perception as the formation of a trade bloc.

These economic cooperation developments, whether ultimately successful or not, are significant for a number of reasons. Primarily, they point to an increasing regionalism taking shape as political stability and good regional relations are fos-

tered. This regionalism is in part a response to the development of regional trade groupings elsewhere and the competition it represents including the consolidation of the European Community and the development of a North American Free Trade Area. Other regional organizations continue to build upon the evident goodwill shown primarily through the renewed strength of the Asean grouping. The Asia Pacific Economic Cooperation (APEC) was initially concerned that the development of the EAEC would undermine APEC primarily as the EAEC does not include the United States. Whether APEC's role is diluted or strengthened as a result of more compact regional agreements is yet to be seen. It seems however that the trend in the region for growing economic linkages will allow such forums as APEC to begin to assert themselves in terms of removing barriers to trade, promoting further investment and developing technology, information, and people.

Nonetheless, such regional structuring has not prevented bilateral trade agreements from being formed at the same time. Recently, Singapore signed a Trade and Investment Framework Agreement (TIFA) with the United States. While some may find that such bilateral arrangements are an effort on the part of the U.S. to purposefully circumvent the EAEC, a more lucid analysis would find that such arrangements are pragmatic to both parties and allowable under the Asean agreement despite a trend to greater regionalism.

Underlying the new economic trade relations, and their corresponding increase in activities, are important changes to the economies of individual countries in the region. Many have prospered with over 50% of the exports of each country consisting of manufactured goods. The Asean economies are beginning to achieve comparative advantages in different sectors as the gap closes between the most developed of the group, Singapore, and the lesser developed countries.

Major investment and development plans have been implemented including the concept of 'Growth Triangles' which focus on the advantages of each of three bordering countries concerned in furthering economic development. The 'Growth Triangle' concept is currently being put into practice in the development of the region between Johor State in southern Malaysia, Singapore and the Riau Islands of Indonesia. Efforts are primarily concentrated on two relatively large Indonesian islands, Batam and Bintan, which lie just a few miles southeast of Singapore. Investment in manufacturing, tourism, transportation, and telecommunications in this growth triangle area already total more than S\$1 billion with Singapore providing some 40% of the investment funds. Interestingly, such investments have had the side effect of propelling the Singapore dollar toward becoming an international currency, yet another indicator of the growing economic dynamism of the region. Indeed Singapore, for all intents and purposes, will be a developed nation by the year 2000. Malaysia has ambitious plans to follow suit by 2020.

### **Regional telecommunications evolution**

Asean regional economic cooperation has led to the development of many new relations in various sectors of the economies of the nations concerned including

the development of telecommunications systems. In the Growth Triangle arrangement for example, Singapore Telecom has entered into a joint venture development with PT Telekom (formerly PERUMTEL) of Indonesia, the Salim Group and other private concerns to develop the telecommunications infrastructure on Batam and Bintan islands. The new telecommunications facilities, primarily basic services and international gateways, coincide with the manufacturing and tourism industries being developed. In fact, a shift in policy toward foreign ownership of telecommunications facilities in Indonesia was made to fit the specific development needs of the situation. A joint venture arrangement allows Singapore to both own and operate the basic systems through a revenue sharing scheme for an extended period before finally transferring the system to Indonesia. Such an arrangement has been possible only through the very pragmatic developments in trade relations and an increasing reliance on the various strengths of regional countries to enhance development efforts within each other's country.

Trends toward various forms of privatization, private participation and deregulation in telecommunications in Southeast Asia have been noted (Hukill 1991). In Singapore and Malaysia in particular where privatization of the telecommunications authorities are in various stages of progress, the need to expand beyond the domestic markets is evident. Singapore Telecom, for example, is currently involved in various joint venture and consultancy roles in a growing number of countries in Asia. Both Singapore and Malaysia are looking toward developments in Vietnam as relations with that country are normalized. In fact, the political situation is such that open discussion on the possibility of Vietnam becoming the seventh full member of Asean has ensued. Efforts are beginning now for Asean member countries to take advantage of their own strategic position in providing telecommunications expertise and investment to Vietnam as well as other regional nations.

Another very important trend in the Asean region, indeed in the entire Asia-Pacific region, is the increasing demand for the provision of mobile services including cellular telephony. With a rising GNP per capita, increasing available disposable income, multiple market operators and an increasing telephone line penetration in general, the subscriber base in the Asia-Pacific region for cellular systems is on the increase. In the Asean region alone, the subscriber base is already between 50,000 and 100,000 users in Thailand, Singapore, Malaysia, and Brunei. These numbers are rapidly increasing. Within a country, the degree of competition in cellular services to a large extent influences marketing and distribution issues as well as coverage and capacity considerations. With the exception of Singapore, which operates an efficient island-wide cellular system from the sole monopoly telecommunications authority, competition in a liberalized cellular market provides for cheaper equipment and service prices with a higher quality of service.

Mobile telephone services will become an increasing regional, as well as international, issue as user demands increase in terms of specific market use as well as use of mobile telephones in other locations. Issues of standards and compatibility, access and tariffing for mobile systems will become Asean and Asia-

Pacific wide regional issues in the near future.

### **Competition and cooperation**

Both cooperative and competitive forces are beginning to shape telecommunications developments in the region. An increase in cooperation for telecommunications development is simultaneously taking on a keen competitive side as the various telecommunications authorities of the region begin to flex interests internationally.

International competitive interests are also on the increase in the Asean region. Competition in the provision to governments of basic service infrastructure is as keen as markets for sophisticated value-added services. In addition, the trend toward global mergers and alliances of entities with telecommunication concerns spells an even greater strategic positioning of organizations wishing to participate in the markets of Southeast Asia.

With the increasing investment in telecommunications development in each country, private organizations both domestic and foreign are keen to take part. Deregulation of the CPE market in most countries is accompanied by the push toward both privatization of the various telecommunications authorities and an increase in private participation in network and services development. This means competition for lucrative contracts and various revenue sharing schemes is on the rise. For example, Northern Telecom's UK-based STC Submarine Systems (with an executive office in Singapore), in a joint venture with Thai partner Jasmine International, recently won a \$100 million contract from the Telephone Organization of Thailand (TOT) to install an undersea telecommunications network in the Gulf of Thailand. The competitive tender contract was awarded under Thailand's scheme to build, transfer and operate facilities. It is being financed principally by banks and financial institutions in Thailand. At the same time that competition for telecommunications markets is increasing, growing cooperation in the Asean region and indeed in the entire Asia-Pacific region is evident in the domain of telecommunications development. Such cooperation is acting as a catalyst to change as discussions and activities of the various organizations concerned invariably involve complex issues of management and policy change.

In the area of regional cooperation, several developments are worth noting. With the continual extension of the Asean optical fibre cable network (AOFCN) inter-Asean and Asean regional links to the world are nearing completion. In addition, regional network planning, traffic analysis, and management training continues through the efforts of organizations such as the Asia-Pacific Telecommunity (APT) based in Bangkok. Such organizations and exchanges of ideas can only help to foster a better environment for telecommunications development in the region in the years to come.

One of the most important factors in the development of telecommunications in the Asean region is the diversification of user demands. The convergence of computer and telecommunications technologies has resulted in large scale data

transfers requiring networks with enhanced functions to meet growing demands of multiple users.

On a less visible but no less important scale, the proliferation of international and regional information networks to and from the Asean countries is evident. For example, ASEANET, an electronic trade information network started in late 1991, has been set up to provide business information linked with various Chambers of Commerce and Industry in the Asean region. Members will be able to identify trade opportunities in the region via the network. Plans call for ASEANET to link with equivalent networks in the U.S., E.C., Japan and other East Asian countries notably Taiwan, South Korea, and Hong Kong.

Another major technological trend affecting the region is the merger of broadcast and telecommunications technologies. The results of this merger are just beginning to shift programming and distribution modes away from the monopoly of the national broadcaster and into the realm of international partners for the diversification of programming.

With the recent launch of Asiasat and the continued regionalization of the Indonesian satellite system, Palapa, many countries are beginning to forge new links through direct lease of transponder capacity. Television New Zealand, for example, has leased two transponders on Palapa for the delivery of encrypted television channels to South East Asia in conjunction with Time-Warner. Agreements are being forged in Singapore (as elsewhere) for downlinking the programmes into the domestic broadcast network through a proposed UHF subscription service and eventually onto a cable television system to be developed jointly by the national broadcaster, SBC, and the telecommunications authority, Singapore Telecom. But, as is often the case, regulatory stumbling blocks are slow to be removed in the face of rapid technological and market developments. In this case, the Indonesian Ministry of Information has yet to allow for the actual dissemination of the broadcasting arrangement through Palapa.

Asiasat is also changing the regional telecommunications picture. With the introduction of Star TV from Hong Kong via Asiasat, television programming from that source has a potential audience of over a billion people. Obviously, reception of the Star TV signal by viewers in many countries is limited either by regulation of TVROs or by the prohibitive cost of the reception equipment for the average person, or both.

This has the effect of limiting, for now, the size of the actual audience of Star TV. Competition for rapidly expanding satellite market potential in Southeast Asia is increasing. Malaysia, Thailand and Singapore are studying plans for the development of satellite systems through either the government or private sectors. PT Telekom of Indonesia has also reorganized to allow separate management of the Palapa system. This has led to the strategic positioning of Palapa as a regional competitive system and its possible expansion with private participation to cover a wider Pacific region in the near future.

### **Implications of regulatory evolution**

A common underlying theme of all the diversity in telecommunications development in the region is the need for regulatory policy evolution. The long period of government and monopoly control in many areas of telecommunication is waning in favor of a shift to competitive and cooperative network and service development for a much larger user base. Whether the global drive for changes in the regulatory regime benefits exclusively the larger corporations or can also benefit the smaller user in a low-income country will depend more upon the ability of policy to eventually reconcile economic gains with wider public interest.

The implications of regulatory changes in the Asean countries are being made within the context of the trend toward more open markets for telecommunications systems and services which parallel the general economic trends. The consequence of these cumulative changes has induced a shift in policy from purely quantitative fulfilment of basic telecommunication service to the qualitative improvement of a multiple-source supply of services. The relative importance and influence of Japan, Canada, the U.S. and the European Community in Southeast Asian telecommunications development can be seen in the increasingly keen competition for markets in the region.

In Southeast Asia, the message is clear and gaining and increasingly prominent position in discussions and debates to mandate policy change. A measure of liberalization of markets, regulatory revision and organizational restructuring will help to ensure that telecommunications can fulfil its role in supporting efficient economic and social growth. Whether deregulation and privatization come sooner as in Malaysia or later as may be the case in Thailand and Indonesia, as well as the form such changes take, will be a function of the inevitable demand to create more accessible networks to meet users' needs. In addition, and on a very pragmatic level, the need for additional capital resources to expand domestic infrastructure and the need for venture capital for international expansion is also providing a powerful push toward more private participation and at least nominal privatization. Regulatory revision, organizational and industrial restructuring, increasing privatization and private participation to include more competitive and cooperative players in telecommunication development are primary in the move to meet a more universal demand.

### **Global implications**

The dynamic regional economic growth of Asean has positioned it squarely on the global stage as one of the most important regions for strategic development in the world today. This dynamism is seen in the ever increasing development of telecommunications systems and services throughout the region and in growing network connections globally.

Asean is rapidly becoming a prominent region in the dynamic development of global telecommunications and information systems. While the promotion of the myth of global networks plays an important symbolic development role in the



world today, it is clear that national and, to an increasing extent, regional concerns play a far greater role in the development of telecommunications. True global networks, owned and operated by a single entity, are simply not a reality despite the exhortations of some such as Cable and Wireless which in mid-1991 completed a network of cables connecting all the continents. The simple fact is no one entity can offer customers their own complete end-to-end full circuits that run across sovereign borders. The fact is that alliances, joint offerings and joint promotions are the make-up of global telecommunications networks in a complex interface of technology, business and regulations.

In essence then, the so-called global network is really an array of global networking comprising government and private interests across borders to link users with communication needs beyond their own country's boundaries.

In addition, discussions of telecommunications trade in services need to be played against the market realities which may in fact reduce the need for rules. Global mergers of telecommunication entities are part and parcel of the development of a global networking system. An interconnected global market with corporate mergers, alliances and joint ventures may actually be reducing the impact on the balance of payments in trade which is one of the ultimate goals of GATT in general. Global mergers help to retain a share of the market, diffuse protectionist trade measures and circumvent competition. The problem with such mergers is in guiding the behavior of these corporate behemoths. Perhaps global behavioral rules will supersede inter-nation trade rules in the future.

In Ascan, the growth of local and regional, private and public sector telecommunication industries is coupled with the expansion of basic infrastructure and enhanced services. This means that management revision of the state-owned entities and policy revisions are being geared toward meeting new growth potential and meeting ever increasing user demand. The impact of such regional growth becomes even more pronounced in dealing with issues such as tariffing, access and interconnection, gateways, mobile services, satellite systems and bypass systems as well as needed standardization to meet regional and global integration.

Whether telecommunications and information services in any country can become a leading sector for development as seen in Singapore or suffer the evident neglect which can be seen in some of the systems operations in Thailand is largely a policy question. With the high capitalization costs of telecommunications systems and the pressure to build higher capacity and better quality infrastructure, governments are reconsidering the policies of the state owned and controlled monopoly operating entities. The need to liberalize telecommunications markets, especially in terms of non-basic services, and to look at the privatization of the telecommunication authorities and/or the private participation in the government controlled enterprise is confronting each nation.

In addition, it will become increasingly more important for Asean and indeed all of Southeast Asia to establish strong regional linkages in order to continue to attract capital flows for infrastructure development from Europe. With an inevitable focus of Europe 1992 on the opening of Eastern European markets,

countries of Asean cannot afford to lose one of the three major sources of private financing (Japan and the United States are the others) for its telecommunications sectors. In order to do this, a focus on regional policy and coordination of the trends in policy change may provide a better platform from which to remain an attractive investment opportunity to Europe.

Faced with high costs and the need to provide better service, financing from outside the government for telecommunications is required. This is perhaps the single most important factor driving the trend toward liberalization of telecommunications in the less developed countries of Asean. In the more developed Singapore, the need to respond to international pressures as it moves well beyond domestic basic service provision into the world market for telecommunications services, requires it to substantially re-evaluate its position vis-a-vis privatization and monopoly control of services.

It continues to be important for the World Bank and Asian Development Bank to increase support for the development of telecommunications in the region. Indeed, the World Bank is beginning to attach a greater priority to these needs albeit with conditions for market competition as a prerequisite to forwarding loans. However, loans and grants are not enough. There will be an inevitable need to increase private participation in the form of capitalization through the privatization of the telecommunication authority and/or of private enterprise participation through various politically acceptable schemes in network and services development projects. The form of these changes will be different in each country but are unavoidable.

What this means for the Asean region is a concerted view toward proactive development of the strengths of the national carriers and their eventual privatization. This also means that local and foreign participants in the domestic markets must follow suit in terms of a market development focus. In turn, a simultaneous cooperative and competitive focus on the needs of the region as a whole is emphasized. This is part and parcel of an overarching economic and political alignment in the midst of the need to connect to a global networking in telecommunications and information services development vis-a-vis global trade. Increasingly, the countries of Southeast Asia are capable of making that development occur in the ways they deem profitable for themselves.

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