CHAPTER II

MALAYSIA TELECOMMUNICATIONS IN PERSPECTIVE

Telecommunications services or rather telephone were first introduced to Malaysia during the British colonial period for the conveyance of information. Since then, telecommunication began to take shape, develop and grow tremendously. The good understanding of the historical of telecommunications in Malaysia is important and will provide a clear view of its progress and development in Malaysia.

The Beginning of Telecommunications in Malaysia

The telephone was first introduced in Perak in 1874. It was during the period of the first British Resident (Telekom Malaysia Berhad 1986). It was during these turbulent times that an effective communication system was developed and the need was enhanced. Such urgent need proved to be the catalyst in the development of telecommunications in Malaysia. Two years later in 1876, a 27 mile-long telegraph line was installed. It cut across the jungle to connect British Resident's office in Kuala Kangsar to the Assistant Resident's office in Taiping (Telekom Malaysia Berhad 1986). By 1882, Perak could communicate with Province Wellesley and across the Island of Penang through a submarine cable connecting the island to the mainland. The progress continued. In 1891, the first telephone exchange was installed in England and Kuala Lumpur had its first telephone exchange in the country installed in the same year (Telekom Malaysia Berhad 1986). Four years later in 1895, there were only 21 phones in Kuala Lumpur supported by

400 miles of telephone and telegraph lines. However buildings of more exchanges were already in the pipeline (Telekom Malaysia Berhad 1986).

Meanwhile across the areas, development was also taking place in Sabah and Sarawak or what was then known as British North Borneo. The year 1894 was the landing of the first submarine cables for the Singapore-Labuan-Hong Kong route in Labuan. In the same year the telegraph line between Mempakul and Sandakan has commenced and completed in 1897. It had the first message transmitted over this line from Sandakan to London. By 1900, the first magneto telephone service was introduced in Kudat, Kota Kinabalu and Sandakan. By 1908, the telecommunications systems were fairly advanced especially in West Malaysia (Telekom Malaysia Berhad 1986).

Telecommunications During Colonial Period

The expansion of Malaysia's basic telecommunication infrastructure took place during the pre-war colonial period. At that time all the telephone wires were overhead wires strung on poles. Most of the telephone installations were heavy and made of iron. As each telephone line required a complete link up, the overhead wires became numerous and criss crossing the skies. The people running the telecommunication services were having problems too. Besides the tropical storm and thunder playing havoc with the overhead wires, there were also the "cable snipers" to contend with. Despite these and other problems, progress nonetheless continued. Radio communications were also developed during this period. The first wireless station in West Malaysia was built in 1926 in Penang (Telekom Malaysia Berhad 1986). This was set up in conjunction with another station in Singapore to communicate with ships at sea using the International Marine Frequency of 500 KHz. In the year 1930, a radio station was set up in Port Swettenham (Telekom Malaysia Berhad 1986). Unfortunately the ships it was intended to serve, frequented Penang or Singapore instead. The Northeast monsoon with its torrential rains

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helped speed up the development of the radio network. Following the great floods in 1926, a radio flood warning system was set up and it became the nucleus of Malaysia's radio network (Telekom Malaysia Berhad 1986).

Telecommunications were not spared the usual ravages of war. Not only was equipment destroyed by the British, the Japanese Occupation Forces brought down thousands of telephone poles, miles of copper wire for the war use. Equipment from non-essential areas was removed and some were even shipped back to Japan. Further damages were also done by the local underground forces resisting the occupation (Telekom Malaysia Berhad 1986).

Telecommunications After Independence

Following the war and independence, telecommunications in Malaysia began to make swift progress. Telephone networks were improved. Thousands of miles of new lines were laid. New telephone exchanges were commissioned to service. In the year 1962, the familiar subscriber trunk dialing (STD) facility between Kuala Lumpur and Singapore via the microwave network was introduced (Telekom Malaysia Berhad 1986). The first microwave system was installed a year later, again between Kuala Lumpur and Singapore. This was extended northwards to Ipoh and Penang in the West Coast of Peninsular Malaysia and later to Kuantan and Kota Bharu (Telekom Malaysia Berhad 1986). International Radio Telephone Service from Kuching to Peninsular Malaysia and Singapore was inaugurated in 1960. This service was later extended to United Kingdom and several other overseas destinations (Telekom Malaysia Berhad 1986).

In 1963, the historical year of the formation of Malaysia and ensuing years saw many interesting developments in telecommunications. It was in this year that Peninsular Malaysians were introduced to television, thanks to the nation-wide telecommunications network. While Radio Television Malaysia was responsible for the programs, Jabatan

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Telekom Malaysia had to ensure the programs reached the home viewers (Telekom Malaysia Berhad 1986). In April 1970, the first international standard satellite Earth Station in Kuantan was commissioned. It was to provide overseas telephony and television transmission. International events of interest such as the Thomas Cup, World Football championships were brought "live" over television to the homes of Malaysians (Telekom Malaysia Berhad 1986). In 1975, the manual telex exchange was replaced with the automatic system. This was another milestone in the progress of telecommunications, and a boon to the commercial world. Businessmen could then telex direct to other parts of the world without having to wait for manual connection to be made (Telekom Malaysia Berhad 1986).

The rapid advancement of telecommunications technology led to more sophisticated exchange systems being introduced. These ranged from Strowger to Cross-bar and Semi-Electronic. In 1979, subscribers connected to the latter were provided with International Direct Dialing (IDD) facilities. Among the first countries with whom direct access was available were United Kingdom, Australia, Japan and Hong Kong (Telekom Malaysia Berhad 1986). Later the second Standard Satellite Earth Station in Lendu, working to the Indian Ocean Satellite was commissioned in 1981 (Telekom Malaysia Berhad 1986). The advancement in computer technology and its link with telecommunications had brought swift and sophisticated changes. This was leading to the introduction of new services in the years 1983 onwards. Besides the telephone and telex services, data communication was available only through private leased circuits. As an initial step, Datel was introduced in 1983. Computer users could use the public switched telephone network for data communications (Telekom Malaysia Berhad 1986). The next step, was the introduction of Malaysia's own public data network using packet switch technology. Computer users could now access foreign data bases through this network. In the same year, facsimile was introduced as a new service. Customers having compatible equipment could send and receive copies of print, images and graphics. This service is

now available to the public by means of the domestic bureau fax service (Telekom Malaysia Berhad 1986). International Maritime Services to ships in national and international waters was provided with the commissioning of the Kuala Muda Maritime Coast Station the same year.

More recently, the new service that stole the limelight was ATUR 450 service introduced in 1985. It uses cellular radio technology and provides almost nationwide coverage through the installation of five Mobile Telephone Exchanges and many radio base stations. Malaysia can proudly claim to be the first in Asia to commission this system (Telekom Malaysia Berhad 1986). The introduction of Multi Access Radio Systems customers in remote and far flung areas, to whom telephone services would be impossible, can now access the telephone network. Meanwhile, development to improve existing telecommunication services with the aim of further enhancing the telecommunications network and services continued. It was at this exciting juncture of fiber optics, digital networks and computer technology that Jabatan Telekom Malaysia handed over its operational portfolio to Syarikat Telekom Malaysia (later named as Telekom Malaysia Berhad) on January 1, 1987, (Jabatan Telekom Malaysia 1993). The first installation of fiber optic transmission system in Malaysia by Jabatan Telekom Malaysia was commissioned in 1984. This installation is mainly between large exchanges in the city of Kuala Lumpur and Penang. Currently, Telekom Malaysia Berhad (TMB) is in the process of laying optical fiber cable for a long distance network. Beside TMB, Time Telecommunication Sendirian Berhad has licensed to provide telecommunications services via the optical fiber laid along the North-South Highway. The initial optical fiber cable is dedicated to serve the 66 toll plaza along the 800 kilometers North-South Highway. Later, the Government has decided to optimize this infrastructure for the benefits of the country and used it for telecommunications purpose. In the year 1989, ART 900 was introduced. It became the second cellular mobile telecommunication in Malaysia. It was aimed to overcome the capacity limitations of ATUR 450 system. In June 1994, the third cellular

mobile telecommunications system "Mobifon 800," using AMPS 800 MHz became operational in Malaysia. It is expected that the fourth cellular mobile telephone will be operational in June 1995 (Jabatan Telekom Malaysia 1993).