

CHAPTER 4

MARKET ANALYSIS

Teledensity in Malaysia

Malaysia has 2.9 telephones per 100 people, or a 2.9% teledensity compared to Singapore of 20.7% teledensity in 1980, up to only 7.3% teledensity in Malaysia compared to 36.5% in the case of Singapore in 1992.

The vast majority of this expansion has taken place in urban regions; according to Telekom Malaysia, Malaysian urban teledensity currently stands at 22.1%, versus just 2.2% in rural areas. However, the Malaysian government, in its quest to have a world-class telecommunications infrastructure by the year 2005 and to become a fully developed nation by 2020, is aiming to raise total teledensity to at least 45% by 2020, and is strongly committed to narrowing the disparity between urban and rural phone line numbers. As is examined later in this report, the magnitude of these

target numbers suggests that continued expansion of Malaysia's wireline alone will not likely be sufficient to accomplish all that the government hoped for, leaving room for additional service providers and new technological solutions to fill the void.

Rural Telephone Services Expansion

In May of 1994, Malaysian Prime Minister Dr. Mahathir announced a New Telecommunications Policy (NTP) aimed at instilling additional consistency and detail to current telecommunications policy and providing much-needed guidance for the future development of telecommunications in Malaysia. The NTP outlines several development strategies. One of the most relevant strategies is the explicit requirement of all telecommunications service providers to share responsibility for providing and upgrading the rural telecommunications network.

In a series of interviews with Celcom executives, many expressed feeling a social obligation to help provide service to rural areas, despite the unfavourable business case

for doing so. Until now, the burden of rural network provision has fallen wholly on Telekom Malaysia, with the Malaysia government influencing most all of the development undertaken.

Within the Sixth Malaysia Plan (1991-1995) a mandated total of RM 900 million was said to be dedicated to the development of rural telephone lines, with the goal of having 500,000 rural telephone lines functioning by 1995. At a conference on rural telecommunications attended by one of the group members on June 1, 1994 in Singapore, the Malaysian Deputy Minister of Energy, Telecommunications and Posts Malaysia cited a goal of a country wide teledensity of 22.5%⁴ by 2005. The Deputy Minister also articulated the Malaysian government's search for more economically and technologically appropriate solutions to improvement of Malaysia's rural telecommunication services. The Ministry of Energy, Telecommunication and Posts has often indicated its willingness to try out new technologies and innovative solutions to expedite rural penetration of telephone service.

⁴ Y.B. Dato' Mohd. Tajol Rosli Ghazali, "The Pan Asia Rural Telecommunication Conference", speech literature at Singapore Oriental Hotel, 31 May - 2 June 1994.

The government also revealed further guidelines for rural telecommunications development at the conference. They emphasized that telecommunications in rural and urban areas should be more balanced, and stated a goal of attaining an urban to rural ratio of telephones at 5 to 1. The Deputy Minister of Energy, Telecoms and Post added that rural telecommunication needs to use less power, have minimum handling problems, and withstand tough weather conditions, such as falling trees due to the ubiquitous Malaysian lightning, and mentioned the need to improve telecommunications in Sabah and Sarawak.

The Deputy Ministry of Energy Telecoms and Posts claims Telekom Malaysia has committed RM1.7 billion for accelerated development of rural areas over the period from 1991-1995 through fiber optics, Multi Access Radio System (MARS) and Radio In The Local Loop (RiLL). In speaking with an official in charge of corporate planning for Telekom Malaysia, we were informed that the government will continue to force Telekom Malaysia to spend large sums of capital on rural development, as is required by the license they have to provide telephone service; the government will not provide any form of subsidies for rural telecommunications develop-

ment.

Threat of Entry

Another major strategic pillar of the NTP is increasing industry competition. However, in July of 1994, the Minister of Energy, Telecoms and Posts announced that the government will not issue any new licenses unless it is for a new service or for upgrades of existing services, as there are more than enough operators. The government is encouraging companies to work together and avoid duplication and waste of resources.

This trend was confirmed during interviews, where service providers indicated the difficulty of obtaining a license. Information regarding which companies are applying for licenses is not made publicly available, and the government seems to go out of its way to be vague with regard to the rights and privileges of licenses awarded. Furthermore, the process of granting licenses is very unclear, and seems to be on a case-by-case basis dependent on the political clout of the company applying. The Government has never

invited tenders for a license. Companies apply for licenses on their own accord. Up until now, open committee hearings have not occurred; lobbying has been done in private, one-on-one meetings. Interestingly within the government's National Telecommunications Policy it is stated that the process of issuing licenses will be carried out in the form of bidding or open tendering to respondents and qualified offers at the discretion of the Licensing Board.

The Move to Digital

All existing analog networks in Malaysia are currently being converted to digital. Eighty-five percent of all switching capacity has already been converted and within the New Telecommunications Policy document it is stated that this restructuring process will continue to be encouraged. Telekom Malaysia is investing RM4 billion each year to upgrade its network. In September of 1994, Ericsson announced a sale of RM112 million of digital mobile equipment to Celcom. This is part of Celcom's plan to fully digitize its telecommunications infrastructure. The company is planning to have all their exchanges digitized within the next

five years. In interviews with both Telekom Malaysia and Celcom, both affirmed their commitment to digital technology. Binariang announced in May 1994 that it will spend RM 3.5 billion through 1998 to build Malaysia's first all-digital network incorporating the latest state-of-the-art switching and transmission systems. Director of Telecommunication Technology Division of MIMOS (Ministry of Science, Technology and the Environment) also emphasized that MIMOS strongly endorses the use of digital technology to ensure that the Malaysian telecommunications infrastructure will be able to accommodate demand both at present and long into the future.

Fixed Cellular Telephone Service in Malaysia

In October of 1994, Celcom announced that it will conduct a feasibility study for the introduction of wireless fixed telephone service in new housing estates. Celcom did not need to apply for a new license for conducting the study, because its fixed cellular service will utilize the

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same frequency as its Art 900 mobile cellular system .
However, Celcom will be forced to charge its service rates
at the same level as Telekom Malaysia's current charges for
its regular land line telephone service.

Celcom demonstrated and promoted fixed cellular telephone service during a June 1994 carnival in Kuching, Sarawak. Celcom was demonstrating two varieties of fixed cellular system, one Motorola's WiLL, and the other Ericsson's RAS 2000. The group has since learned that Celcom signed a marketing cooperation agreement with Tellular Corporation and Fibsat Inc. to provide fixed-cellular services. Under the agreement, Tellular, a manufacturer of fixed cellular technology equipment will supply its products to Fibsat, its authorized dealer.

As mentioned earlier, Syarikat Telefon Wireless, has been awarded a license to provide fixed cellular service on the Pulau Langkawi. The company has chosen Ericsson for the design, supply and installation of its public switched

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Business and Finance, New Straits Time, 7 October, 1994

wireless network, worth RM507 million. Telekom Malaysia also has plans to introduce a similar service and is currently testing the system. After Celcom signed a memorandum of understanding for its fixed cellular deal, the Malaysian government announced it will only give out new licenses if it is found to be necessary.

Government Plan for Rural Telecommunications Development

The government has plans for major growth of telecommunications in rural area. Based on past installation performance, it is highly unlikely that Telekom Malaysia can meet the government's goals on its own, implying that the government plans to enforce the requirement for all telecommunications service providers to fulfill their obligation to increase the amount of telephone service in rural areas. The table below shows the government's aggressive goals for

rural telephony growth.

	1991	1992	1993	1994	1995	1998	200
# of customers	225,700	238,917	278,023	333,119	401,210	950,400	1,547,80
increase from		13,217	39,106	55,096	68,091	549,190	597,40
prev. period							
increase/year		13,217	39,106	55,096	68,091	183,063	119,48

To keep pace with the above increase in customers, in 1994, approximately 55,000 customers will have to be added and in 1995 about 68,000. Yet, in 1996, a total of over 150,000 new customers will need to begin receiving service to reach mandated goal of 1.5 million rural subscribers in 1998. These numbers indicate that the government's New Telecommunications Policy's statements with regard to service carriers' responsibility to add devote resources to rural area development were meant to take effect almost immediately. This represents a prime opportunity for these companies to take advantage of the benefits of installing fixed cellular services.