



Asian Strategy & Leadership Institute
Dedicated To Creating A Better Society

“The Convergence Factor: Next Generation Telecommunications in the Making”

16 – 17 July 2009 * Putra World Trade Centre, Kuala Lumpur

Summary of Proceedings

Day 1: Thursday, 16th July 2009

Welcome Remarks

Dato’ Dr Michael Yeoh, Chief Executive Officer/Director, Asian Strategy and Leadership Institute

Dr Michael Yeoh began by noting that, in a globalized world, we will increasingly be influenced by what he calls the four C’s: crisis, complexity, competition, and communications. Crises will often be sudden, unexpected and transnational. Global politics and economics will be defined by a growing interconnectedness between people, groups, nations, and corporations; they will be dynamic and will not necessarily settle into equilibrium. Competition at all levels to produce superior products and services at the lowest prices will drive the process. Finally, a convergence of information technologies into a single, highly versatile platform will lubricate and accelerate the globalization process.

He also noted that, while there is an increasing convergence of telecommunications and information technologies, there are still many challenges to overcome in Malaysia, including the difficulties associated with the rollout of broadband, and the persistent digital divide between urban and rural areas.

Keynote Address: “Facing Next Generation Telecommunications Challenges”

YB Dato’ Seri Utama Dr Rais Yatim, Minister of Information, Communications and Culture

Dato’ Seri Utama Dr Rais Yatim began by explaining how breakthroughs in information technology (IT), especially the advent of the Internet, have fundamentally changed the way we live. The Internet’s explosive growth has given rise to a plethora of new online services – ranging from internet protocol television to Twitter – that few would have been able to imagine just a decade ago.

Many in the industry agree that the future of information technology is convergence: The integration of our network infrastructure into single network platform. This will lead to better speed and quality, and will herald a cyber revolution that liberates information everywhere, allowing it to be digitized and spread with unprecedented efficiency.

However, while the growth of IT presents numerous opportunities for society to take advantage of, it also presents tremendous challenges to the policy and business sectors.

The biggest challenge that confronts the government is the growing digital divide between urban and rural areas. While many of those living in urban Malaysia have access to high-speed Internet, overall the country only has a broadband household penetration rate of 25%, meaning it has a lot of catching up to do in order to be on par with other developed Asian countries.

Another challenge will be to ensure that the right institutional and structural environments are in place that will propel the development of the communications sector.

A third challenge is to identify a regulatory approach that will promote creativity and innovation in content and services, as well as the creation of local content that represents Malaysian culture, values, and traditions. It will be necessary for policy-makers to encourage and facilitate skill-building and enhancement programmes in the areas of multimedia and information management, content development and integration, animation and other technical skills.

Lastly, it will be necessary to create a regulatory environment that allows for the delivery of a high level of service, but also protects information from threats like hacking, viruses, and natural disasters. To this end, Dato' Seri Utama Dr Rais Yatim encouraged the swift passage of the Personal Data Protection Law through Parliament before the year's end.

The government's goal is to develop Malaysia into a regional IT hub by means of privatisation and liberalisation, new institutional arrangements, and schemes designed to broaden infrastructure reach to various community groups such as internet centres, schools, rural libraries and clinics. With the awareness that IT will play a huge role in Malaysia's economic development, the government has set a target 50% broadband penetration by 2010.

With new freedoms come new responsibilities. While the Internet has much to offer, it also includes amoral elements as well. As a society, Malaysian must be concerned about preserving values. It is a matter of the greatest urgency that the content industry infuses a sense of responsibility in all that is produced on the Internet.

In the coming years, the Malaysian government will look to establish forward-looking strategic policies to foster growth of this all-important sector. To this end, it is contemplating a comprehensive study of the sector during the upcoming 10th Malaysia Plan.

Session One: "The Asian Telecommunications Landscape – The Story So Far"
Dr Mathias Baer, Principal McKinsey & Company, Kuala Lumpur

Dr Baer began by pointing out that, according to a study by the World Economic Council, there is a linear correlation between increasing competitiveness within a country and its overall levels of broadband penetration. Improving competitiveness can lead to dramatic increases in GDP, for a number of reasons. There are direct and indirect effects, primarily the multiplier effect and increases in productivity that increased Internet access can bring.

Currently, South Korea leads the world in broadband development, with 95% household penetration and affordable prices. This affords the country the luxury of using broadband applications in education and other areas, something other places cannot do. Government played an active role in helping to roll out broadband in South Korea, particularly in the early stages.

The spread of IT has led to entire "content ecosystems" in places like Japan, where new mobile applications are attracting large numbers of subscribers. In other countries, like Argentina, government investments in IT have increased foreign direct investment (FDI). R&D and software companies, including Google, have relocated their Latin American divisions to Buenos Aires. The speed of the Internet in a country is factored into a company's decision to relocate. Baer cited a Harvard study of fisherman in India, who use mobile technology to gauge market demand in local markets such that they can make the most profit from the day's catch.

In the years ahead there will be multiple platforms – fixed and mobile – the ratio of which will be determined by consumer demand, which will vary by countries. A trade-off exists between mobility and speed, and the decision to adopt fixed or mobile technologies will be a path-dependent choice based on pre-existing infrastructure levels and investment.

To date, the rollout of a fixed communications structure remains a huge challenge. In emerging markets, the challenge is that there is a poor existing copper structure. The infrastructure is poorly planned, and copper theft remains a problem. For this reason, in a country like India, for example, mobile penetration is expected to grow faster, as it has lower start-up costs. By 2012 Baer expects to see roughly 60% mobile penetration vs. 24% fixed in emerging market countries. However, fixed lines may play a role in Malaysia and other more developed Asian countries with pre-existing infrastructure.

There are many factors that influence the rollout of broadband infrastructure in a country or region: population density, population size, income level, market structure, and the base of competition. Other factors are important as well: Regulatory conditions, spectrum availability, infrastructure sharing, coverage obligations, industry structure and spectrum license fees are also influential.

The key message that Baer emphasized was that, regardless of geography, consumers are increasingly demanding high bandwidth services such as social networking and file sharing, video on demand, IPTV, video conferencing, and CCTV. Broadband access is a prerequisite condition for providing these services.

In the years ahead, Baer's expectation is to see tremendous growth in mobile technologies and increasing innovation in services and applications.

Luncheon Keynote Address: "Leading Malaysia's Next Generation Telecommunications: The TM Vision"

Tan Sri Dato' Ir Muhammad Radzi Haji Mansor, Chairman, Telekom Malaysia

Tan Sri Dato' Ir Muhammad Radzi Haji Mansor began his address by outlining the new vision and mission of Telekom Malaysia (TM), which is to reflect, and drive, change. TM's goal is to be Malaysia's leading new generation communications provider, embracing customer needs through innovation and execution excellence.

Throughout its history TM has been a pioneer in broadband investments. Currently there are two types of broadband in Malaysia: broadband for general population (BBGP), which is slower, and high speed broadband (HSBB), which is faster and tends to be concentrated in the Klang Valley.

HSBB will have a big impact on the economic and social development of Malaysia. It is estimated that 50% penetration broadband will lead to 1% GDP growth, and will also create spinoff effects as it improves national competitiveness in a wide variety of domains.

Right now, HSBB access is provided through a combination of FTTH ETTH and VDSL2/ADSL2+, depending on the type of property.

TM's new generation network (NGN) platform will allow a host of new services to be provided to its customers, enabling a new lifestyle for consumers that includes virtual shopping, interacting with the online community, high-quality entertainment, and an ability to collaborate with anyone, anytime, anywhere.

In the coming years, the level of HSBB coverage will establish Malaysia's infrastructure as on par with leading HSBB nations in Asia, and there will be an explosion of new applications that we cannot now anticipate, but will surely take us in new and surprising directions.

Session Two: “The Telecoms-Internet Convergence – An Emerging Online Ecosystem”
Moderator: Ms Anita Devasahayam, Project Manager, Trinetizen Media

Speaker 1:

Datuk Robin Wong, Chief Executive Officer, Optical Communications Engineering Sdn Bhd

Datuk Wong opened by telling a brief parable intended to demonstrate how rapidly technology is transforming how we work and play, making us more efficient, effective, and improving our lives in countless ways.

Convergence, he claimed, is here. Many hardware devices that were once considered indispensable – TV, phone, fax – have now been replaced by the PC. And there are many types of convergence taking place: voice and data; fixed and mobile; telecom and media; telecom and IT, and others.

Driving convergence is consumer behaviour and the market economy. People need to know and learn, want convenience, and desire cost and performance efficiency. Providers that can offer these services at a reasonable cost can, and will, thrive.

Datuk Wong closed by noting that there will be many players in the convergence of telecommunications and the Internet into a single online ecosystem, including traditional telecoms; wired Internet service providers (ISP); integrated virtual network operators; content providers (including newspapers, media production houses, TV stations, and music producers); integrated data centre operators; and application providers.

Speaker 2:

Mr Kelvin Lee, Senior General Manager, Green Packet Berhad

Mr Lee started off by defining convergence as he sees it: the formation of new value chains, new business models, new market structures, new business entities, new competitors, and new opportunities.

Convergence, he described to the audience, is occurring all around us. It will occur as social networks are combined with mobility (i.e. Facebook), or as companies like Google and Amazon tie up with operators. Telecoms, media, and the Internet are also converging. Convergence is bridging the gap between mobile and internet services, and new revenue streams are being derived from these newly converged services.

The drivers of convergence are manifold, though the market and industry are leading the way, with services like Vonage, Skype, Wi-Fi and Wi-Max being crucial to the process.

Mr Lee described what he sees as the key implications of convergence:

- First, data rates will rise as usage increases. ARPU (average revenue per user) will increase.
- Second, because consumers are sticky – in his view – to the applications provided by the operator, there will be churn reduction.
- Third, network capacity will increase and will drive operators to look at offloading intensive data traffic to cheaper networks (e.g. Wi-Fi)
- Fourth, convergence will place increasing stress on operators to enrich the customer experience and incorporate a wide diversity of services to attract and retain customers.
- Fifth, a new regulatory framework will include a re-conceptualization of definitions used in converging devices, networks technologies and services.

Mr Lee went on to describe what he sees as useful strategies for industry leaders to adopt in order to effectively deal with the implications above:

- First, ISPs will need to be able to learn and deliver converged services themselves.
- Second, Internet service specialists like MSN are well positioned to provide integrated services telecom networks. Other operators, however, will need to reassess their business models to integrate their offerings.

The speaker concluded by stressing how convergence will offer opportunities for the development of new value added services, greater convenience, improved efficiency and the expansion of consumer choice. Users will expect to do more with their communications services for less money, and in a user friendly manner.

Session Three: “Regulatory Boost – Bridging the Broadband Gap in a Downturn”**Moderator: Mr Mohamed Sharil Mohamed Tarmizi, Acting Chairman & COO, Malaysian Multimedia Commission****Speaker:****Mr Bajat El Darwiche, Principal Booz & Company**

Mr Bajat El Darwiche opened his presentation by noting that we are currently in the midst of a very severe economic downturn, before highlighting his conviction that the IT industry will play a major role in the economic recovery of Malaysia and other nations.

One way that the government can jumpstart this process is by stimulating broadband network growth. Next generation broadband networks promise faster transfers of information services, and benefits to the national economy such as promoting overall growth productivity and prosperity.

Governments around the world are looking for effective ways to stimulate investments in national broadband networks. Government can play a role in providing greater certainty and support for deployments of broadband services. The policy choices they make will likely determine how much nations like Malaysia will benefit from deployment.

This raises several questions about the government's role in enabling next generation broadband networks. Why should government intervene? How should it do so? And, finally, when?

Governments are increasingly regarding broadband networks as essential national assets. US President Barack Obama as well as British Prime Minister Gordon Brown have both recently made statements confirming as much. Governments around the world are investing to accelerate next generation national broadband network (NGNBN) deployment.

In the coming years NGNBN is expected to yield significant socio-economic benefits, ranging from increased innovation, productivity, national competitiveness, resource utilization, social inclusion, and improved lifestyles.

Consumer habits are evolving and driving the demand for new types of applications. Supporting these applications will require a next generation broadband network enabled by new technologies. Yet the deployment of next generation broadband networks, unfortunately, is stalling.

Investments in mass NGNBN deployments have been hindered by three factors: (1) The enormous magnitude of the required investments; (2) Revenue pressures; (3) Regulatory risks (e.g. companies are unsure what future regulations will look like).

Recent government intervention initiatives can be classified into three different models: (1) New business models; (2) Network infrastructure investments; and (3) Demand stimulation.

Governments are introducing horizontal business models to rationalize risk-returns across multiple entities, and horizontal business models have already been introduced in several markets. And, while governments have already committed total of USD 19 Billion, further investments are currently being considered. Finally, one additional way that governments can further stimulate broadband growth is through the use of end-user subsidies to enhance affordability.

In the future, adopting the right government intervention model will require a careful assessment of local broadband market dynamics. The speaker closed with three tips for governments to consider when debate how to accelerate broadband initiatives. (1) Understand local market specifics; (2) Engage all of the major stakeholders; and, lastly (3) Set clear national goals.

Day 2: Friday, 17th July 2009

Session Four: “Rolling Out the Next Generation Network – Towards Broadband as a Basic Utility”

Moderator: Dr Mazlan Abbas, Head, Wireless Communications Cluster, MIMOS Berhad

Speaker 1:

Datuk Ismail Osman, Executive Director, Asiaspace WiMAX Sdn Bhd

Datuk Ismail Osman began his speech by offering a definition of ‘next generation network (NGN)’ as defined by the International Telecommunications Union (ITU): “An NGN is a packet-based network able to provide telecommunication services and make use of multiple broadband QoS-enabled transport technologies, in which service related functions are independent from the underlying transport related technologies.” In essence, it offers unrestricted access by users to different service providers. It supports generalized mobility which allows for the consistent and ubiquitous provision of services to users.

More and more countries are participating in WiMAX rollout, and the Asia-Pacific region is leading the way. Increasingly, uninterrupted WiMAX service exists across international borders to provide seamless coverage.

At Asiaspace, there is a convergence of WiMAX with IP Multimedia System (IMS). One of the main challenges, and opportunities, associated with convergence, according to the speaker, is creating an NGN that is based on a combination of WiMAX and IMS.

A paradigm shift is under way at Asiaspace and similar companies, where they are moving away from conventional mobile services of 3G Hi-speed wired and Hi-speed data services, to high speed data service with minimum speed of 1bps access.

The speaker concluded by predicting that the services of the future will be packet switched, and that the backbone of the network will operate using IP.

Speaker 2:

Dr Mohamed bin Awang Lah, Chief Executive Officer, Jaring Communications Sdn Bhd

Dr Mohamed bin Awang Lah began by posing the question of what a utility is, and then proposes that broadband fits the definition. While water is a necessity for nourishment and cleanliness, and electricity is necessary to enhance the quality of life, broadband is needed to enable communications and knowledge exchange.

However, broadband and other utilities also differ in key respects. Broadband, for instance, can no longer be supplied ‘monopolistically’ like water and electricity. Prices are independent of geographical locations. The industry has already been liberalised and, according to the speaker, we cannot turn the clock backward.

Many challenges remain in the quest to achieve high levels of broadband access. Broadly speaking, these challenges can be grouped into two categories.

The first category is pricing. The costs of last mile infrastructure may vary with technology, but are similar irrespective of locations. Furthermore, the cost of backhaul is largely distance dependent. This creates a problem if the desire is to have distance-independent broadband pricing. Incumbents will always have great cost advantage against new players due to ready infrastructure.

The second category is provisioning. In theory, a user is supposed to be able to order broadband from any provider. But most civil infrastructure is normally handed over to, and exclusively managed by, one provider. This has resulted in non-competitive environment with higher broadband costs and a lack of advanced applications. Broadband is therefore less attractive to the consumer.

The cost of broadband in Malaysia is still relatively high and therefore its information and communication technology (ICT) development is lagging. According to the speaker Malaysia is not moving fast enough. It has a long way to go to catch up, and the untapped market is still large.

Currently, the backbone infrastructure cost is a major hindrance towards broadband utilisation. The actual cost of fibre for backbone and backhaul is insignificant compared to the cost of ducting, trenching and road re-surfacing. However, through proper planning and regulation the extra cost can be reduced or totally eliminated.

Moving forward, it would be worth remembering the similarities between broadband and other utilities. This means building broadband-ready buildings, homes, roads, etc. There are only minimal costs associated with broadband rollout if it is planned from the very beginning.

In general, basic infrastructure should be managed by a neutral third party to ensure open access. The infrastructure should be service-neutral, meaning that it uses an NGN platform with strong regulation, and that service can be provided by any service provider.

Dr Mohamed bin Awang Lah closed by saying that, in the spirit of One Malaysia, it is the right time to review the purpose and implementation of USP (Universal Service Provision) to cater to the sustainable utilisation of broadband. USP funds could be used to flatten the availability and pricing of the Internet backbone to make broadband service more universal across Malaysia. The Internet is already a converged utility platform through which many kinds of services can be delivered by many competing service providers.

Speaker 3:

Mr Sharat Sinha, Managing Director, Service Provider Business, Asia, Cisco Systems

Mr Sharat Sinha started by sharing Cisco's IP NGN Vision: Connecting customers with services, services with networks, and networks with each other.

The speaker introduced the concept of the connected life, in which online connectivity becomes a defining feature, dictating many facets of our world. The four key enablers of this life are Internet protocol, bandwidth, connectivity, and quality of experience, in which information becomes agnostic to content, time, space, and form, respectively.

The speaker also presented a broadband network model in which retail services like servers and content providers function as the gateway between the end-users (business, residential, consumers) and the active infrastructure (routers, data-center, CPE). The latter serves as the gateway from retail services to passive infrastructure.

Session Five: "Next Generation Operations and Business Support Systems (OSS/BSS) Challenges"

Moderator: Mr Sharat Sinha, Managing Director, Service Provider Business, Asia, Cisco Systems

Speaker 1:

Mr Andrew Lau, Senior Director, Communications Industry Solutions Group, Oracle Corporation Malaysia

Mr Lau began by arguing that a fundamental technology shift is underway, in which we are moving from a legacy approach to a platform approach. There is a convergence of fixed and mobile networks into a fully deployed IP IMS platform.

The integration of IT and core network operations is increasing the prominence of IT. OSS is becoming service-centric and segregated from the core network. There is a drive toward finding

sustainable customers. There is also now an agreed-upon framework within the industry for operational and business support systems that use OSS and BSS infrastructure.

The key characteristics of OSS/BSS include: business processes; data models; integration architectures; Enable high degrees of process integration of automation.

The speaker then described what he called the Oracle product information management solution, which included the following components:

- Software is the key enabler
- Business Process Flow – Order to Cash
- Key considerations
- Customer the centre of focus
- Leverage industry standards and industry collaboration
- Business process based rather than technology based
- Embracing data management discipline
- Breaking the network barrier
- Service exposure to monetize the network

Speaker 2:

Mr Nitin Bhat, Senior Vice President, ICT Practice Growth Consulting, Frost and Sullivan

Mr Nitin said that an attractive virtuous cycle is shaping up. The next phase of 3G adaption will be driven by a mix of strong demand and supply drivers. The cycle is driving a business transformation.

The key business drivers are: (1) device evolution; (2) network infrastructure (becoming more ubiquitous); (3) business maturation; (4) regulatory changes; and (5) new business models.

The following, according to Mr Nitin, are the future of OSS/BSS: transformation; the 2-3 sided business model; customer experience management; cost control; charging and revenue management; product lifecycle management; desired customer experience mapping; customer-centric process planning; customer-centric systems architecture design; differentiated strategy and operations.

Telecoms in the coming years will be differentiated, competitive, and minimal. The most practical approach will be to choose areas of low capability and phase them out. It will mean that companies choose smaller mission statements based on experiences and then solve them. Lastly, companies must choose the overall metrics that matter for their organization.

Session 6: “Innovations in Applications and Content – Propelling Broadband Uptake and Revenues”

Moderator: Ms Hanis Harun, Global Executive Director, Consumer Research, Telecoms Industry Practice Group, The Nielsen Company

Speaker 1:

Mr Azli Paat, President, Malaysia Mobile Content Providers Association (MMCP) & Executive Vice President, Dapat Vista Sdn Bhd

Mr Azli Paat began by describing some of the broad parameters of the broadband ecosystem. There are content creators, content hosts, infrastructure providers, mobile and computer users, as well as various payment technologies and services.

He then moved to a discussion of how broadband should be. Important features, he argued, included speed, reliability, public IP, and no ‘choking’ of Internet service, among others.

The type of content that users are creating today is wide-ranging and growing. There is user-generated content, like YouTube and podcasts. Increasingly there is IPTV and WebTV, with popular sites like Justin.tv and Hypp.tv gaining new customers all the time. There is Internet radio, telephony,

and videoconferencing. There is software, like Opera, that is faster and safer, and allows for file sharing and transfer. And then there are web applications like Zoho, and even online storage, like Box.

Next, the speaker talked about the timeline of content, which has changed dramatically, almost exponentially, in recent years. He also discussed the future of mobile broadband, in which applications, services, and software will be available for mobile subscribers.

He also touched upon the topic of revenue, whether from fixed lines or mobile. Fixed lines, which are subscribed to, often provide speed and functionality, whereas mobile services, which can have an access charge in addition to a subscription fee, offer the advantages of flexibility and freedom of movement.

Lastly, he touched on the topic of mobile advertising. He made several recommendations, including: no peer-to-peer (P2P); assign a series of short code for advertising purposes; opt-in advertising; the maintenance of a no-spam database by the content providers; and, finally, formulate advertising guidelines for mobile devices.

Speaker 2:

Mr Owen Chen, President NGC Systems Sdn Bhd

Mr Chen began his talk by addressing the issue of there not being enough local content on the Internet. His perspective was that there are lots of mobile phones, and the broadband infrastructure is getting better every day. Therefore, it will increasingly be possible to build more local content, though it will require a new, multi-prong approach.

One way to do this is to “speak to the wallet,” by addressing basic economic questions about consumer costs and benefits. The multi-prong approach would find ways to derive revenue from micro content and micro-transactions, thus introducing market forces to areas of Internet commerce where they have not previously existed.

One area of great promise is micro video blogging. Only recently, the ability to upload videos from mobile applications was very limited. However, this is changing rapidly, and companies like NGC Systems are working to expedite the process.

**** End of Forum ****