Bridging Communities

FEATURES

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Malaysia has always been an early adopter of new technologies and services and the drive towards a digital and mobile world has increased this tempo. While the Government is fully engaged in this process through proactive regulations and an enlightened licensing regime, it has not neglected its responsibility to also ensure that everyone in the country has access to these services. To bridge the digital divide, the Universal Services Provision (USP) programme is rolling out infrastructure and services to underserved areas. At the same time, the initiatives of private organisations are laudable and very welcome. Maxis has done good work through its Maxis Cyberkids programme and this issue's cover story is devoted to this programme which aims to bridge the 'digital gap' by targeting school children in rural areas.

Another interesting article in this issue spotlights yet another initiative to bridge the gap between urban and rural communities. Read about how the opening of a Community Broadband Centre in Felda Chini, Pahang is bringing a community in an oil palm plantation into the digital age. Yet another somewhat related article is a detailed feature on the basic connectivity programme, the initiative to bring broadband to the general population. This programme runs parallel to the public-private partnership (PPP) HSBB project which will bring broadband in access of 10Mbps to the population. This HSBB project was covered in the previous issue of myConvergence.

This issue also provides an analytical journey of the online behaviour of the Malaysian Internet User. This comes from the results of user surveys carried out over four years by SKMM using its Computer Assisted Telephone Interview (CATI) Centre. Another fascinating feature focuses on the next stage of growth in the mobile industry. The advances in handsets and high speed mobile broadband are creating a demand for mobile content and applications and the article explores likely growth areas and possible strategies.

Even as this magazine explores future trends and technologies, the past is never put away completely. This issue's Now & Then article focuses on an appliance that has occupied prime positions in living rooms for more than a century. Believe it or not, the television has been around, remarkably unchanged, for 126 years now.

Last but certainly not the least important is an overview of the very illuminating SKMM's Outlook Conference 2009. Engaging presenters drawn from the mobile, ICT, broadcasting and advertising industries shared experiences of how the forces of convergence are resulting in innovative cross industry collaborations.

I hope you will enjoy reading this edition of .myConvergence.

Thank you,

Mohamed Sharil Tarmizi

What makes Malaysia unique is the diversity of our people. 1Malaysia's goal is to preserve and enhance this unity in diversity which has always been our strength and remains our best hope for the future.

People First, Performance Now

MAXIS CYBERK

MAXISBRIDGING COMMUNITIES

THE CYBERKIDS INITIATIVE

Since 2002, Maxis has been doing its part to bridge the digital gap by reaching out to rural schoolchildren. Yap Chong Ping shares the journey thus far.

Perhaps because of the efforts to improve broadband infrastructure in the Klang Valley in recent years, other regions and especially rural areas throughout Malaysia lack the same level of Internet penetration as urban population centres. According to the Household Use of the Internet Survey 2008 released by the Malaysian Communications and Multimedia Commission (SKMM), in 2008, 14.7 percent of all Malaysian Internet users are from rural areas. From the viewpoint of the whole pie, those aged below 15 years took up 6.8 percent, the second least within the entire age range (the least was in the range of 45 to 49 years).

In 2002, Maxis Communications Berhad together with Ministry of Energy, Water and Communications (KTAK) initiated the KTAK-Maxis Cyberkids Camp as part of a corporate social responsibility (CSR) programme known as Maxis Bridging Communities. This joint-effort between Maxis and KTAK was designed as an outreach project targeting school children in rural areas within Malaysia, with the intention of helping to bridge the 'digital gap' through a series of sustained Information and Communications Technology (ICT) training. KTAK has now been restructured as Ministry of Information, Communications and Culture (KPKK).

The programme is fully supported by the Ministry of Education (MoE) and created as part of a Government initiative with a series of distinctive activities to ensure the sustainable and developmental impact on school children, not only affecting their schools but also their local community. Since 2002, more than 7,000 students and teachers from over 1,300 schools across the country have attended the programme.

In late 2007, Maxis launched the next phase of the Maxis Cyberkids Camp, in which the focus audience was changed to secondary school students from Form 1 & 2 (aged 13 to 14 years). The students were exposed to ICT activities within the programme. They were also coached from a psychological point-of-view to increase the level of self-confidence among the participants while at the same time enhancing their leadership qualities.

BRIDGING THE DIGITAL DIVIDE

The Maxis Cyberkids Programme consists of the Maxis Cyberkids Camp which is supported by the Maxis Cyberkids Challenge, the Maxis Cyberkids Portal and several other affiliated programmes.

Its objective is to empower the students and school communities to upgrade their knowledge in using Internet application tools as a source of learning and obtaining global knowledge. Taking place over a span of 5 days and 4 nights, the camps utilise a "train the trainer" concept, enabling the participating students as well as the teachers

14.7%
Malaysian Internet users are from rural areas.

Source: Household Use of the Internet Survey 2008, SKMM

to effectively use the computer and Internet to train their peers in school after the camps were completed.

Participants for the 2009 Cyberkids Camp (held from May to July) comprised six students as well as two teachers from each school, selected from seven different secondary schools from each state that already come equipped with the required ICT infrastructure. Schools were selected from six Maxis sectionalized regions. A typical camp consisted 42 students and 14 teachers though the Selangor/Pahang camp comprised 112 participants (84 students and 28 teachers) grouped under one roof. In total, 42 schools and 336 participants from across the country participated.

The Selangor/Pahang camp marked the official launch of Maxis Cyberkids Program 2009 and it was officiated by YB Dato' Seri Utama Dr. Rais Yatim, the Minister of Information, Communications & Culture. The camp was held at the Sheraton Subang Towers & Hotel, Subang Jaya from the 8th to the 13th of May 2009.

The training module in Cyberkids Camp has also been expanded to cover mobile application content such as M-Blog and Morphing, encompassing ICT learning modules and project management techniques, from which participants will be taught basic computing and cyber-surfing skills in a fun learning environment.

Internet modules are also a part of the criteria, whereby participants will get first-hand knowledge of how to use the Internet more effectively, including browsing the web and manipulating search engines. Finally, participants apply

Cyberkids camp attendance statistics: Phase 1

Year	No. of Camps	No. of Schools	No. of Participants (Students & Teachers)
2002	1	6	72
2003	9	146	876
2004	21	230	1107
2005	21	337	2010
2006	20	360	2156
2007	12	191	1140
TOTAL	84	1,270	7,361

Cyberkids camp attendance statistics: Phase 2

Year	No. of Camps	No. of Schools	No. of Participants (Students & Teachers)
2007	3	21	168
2008	6	42	336
2009	6	42	336
TOTAL	15	105	840

their ICT skills by developing their school and personal blogs in the Maxis Cyberkids Portal to share information with their respective friends and adjacent communities.

As part of the curriculum, the camps also incorporate classroom and outdoor activities such as team-building activities and educational games that are aimed at instilling leadership qualities, good moral values and environment awareness. The activities also hope to inspire as well as encourage pioneering minds into the emerging knowledge based societies.

By promoting the use of ICT through empowering participants with the necessary skills as well as enabling them to explore ICT capabilities in order to work efficiently with technology, the school children are meant to gain confidence to explore more ICT capabilities. They are also expected to share and spread the knowledge acquired especially within their respective communities, thereby contributing immensely to society.

After the participants return to their own schools, they are required to share their new knowledge and skills with their peers so that others gain some knowledge about technology and communications too. As part of the camp, participants will also become automatic members of the Maxis Cyberkids Portal (http://maxis.cyberkids.com.my) which was specifically set up for them to keep them informed

of current and upcoming activities and news. Through the portal, participants can continue to take part in a host of distinctive activities to continually nurture their interest in ICT, such as the Maxis Cyberkids Challenge Competition.

EDUCATIONAL DEVELOPMENT OF MALAYSIANS

One month after attending the Cyberkids Camp, each school will have to submit a project that will contain a proposal framework and conceptualisation in order to qualify for the Maxis Cyberkids Challenge Competition, a competition-based activity that will commence upon a successful proposal framework submission. The purpose of this Challenge is threefold; to not only sustain the learning momentum, but also to create a platform for the participants to use the knowledge and skills learned during the camp, and finally to empower leadership skills and harness the ability to make changes to the community in which they reside in.

In total, each school/camp will have 3 months to implement their project. After the submission of the proposal framework, a qualified school will be given two months to complete their respective project. They will be required to conduct a number of activities known as Cyberkids@School and Cyberkids@Community in order to

Cyberkids Camp

Cyberkids Portal

Cyberkids Programme

ASEAN Cyberkids Camp

Cyberkids Challenge

Cyberkids @ School

Cyberkids @ Community

The Cyberkids Programme Framework
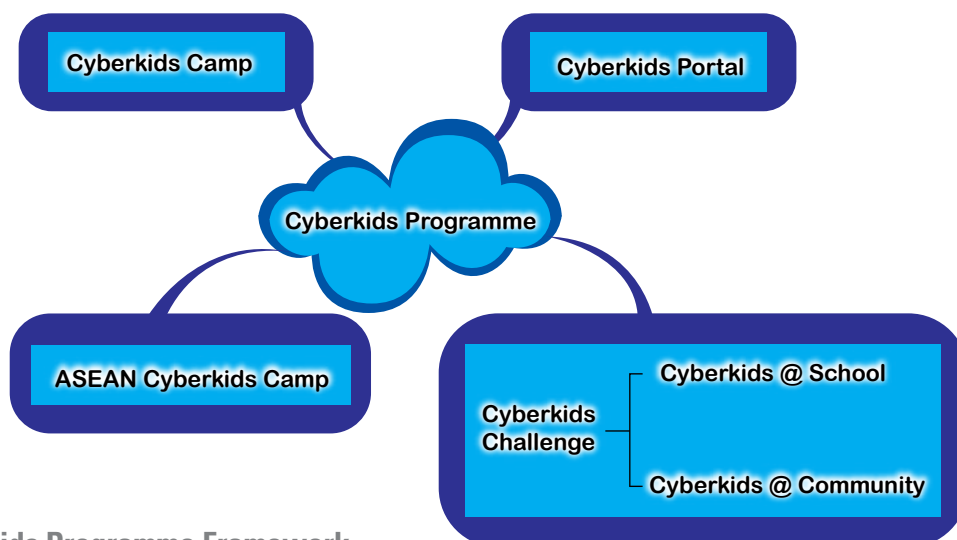
create awareness and spread their learning to the rest of their peers and their surrounding community. Each school will be required to develop a multimedia presentation on their project and will have to submit their project report through online means to the Maxis Cyberkids Portal.

Among the projects that have been created in past camps include the managing of virtual gardens, environmental champions, traditional games conservation, safety tools for farmers, an automated agricultural system for the disabled, a high-tech toilet, an online Arabic dictionary and a knowledge bank. These ideas are also continually honed and improved upon at each consecutive camp.

After the projects are judged according to the Challenge's criteria, one winner will be selected per state, bringing to a total of six regional winners that will be allowed to compete at the National Maxis Cyberkids Challenge. This is intended to create excitement and promote sharing among the regional winners, as well as encourage networking and potential collaboration amongst each other. The new set of participants will then be placed in a workshop environment to share, view and discuss the implementation plan of each school, after which a winner will be chosen to represent Malaysia to the ASEAN Cyberkids Camp which is scheduled to be held in December 2009.

The first ASEAN Cyberkids Camp was hosted in Kuala Lumpur from the 24 to 28 November 2008, and consisted 120 school children and teachers from 9 ASEAN countries. Hailing the Cyberkids idea as a 'great programme', Datuk Dr. Halim Shafie (immediate past Chairman of SKMM) added that the ASEAN Cyberkids Camp was a solid platform to sow the seeds of ASEAN camaraderie and spirit amongst its participants.

LOOKING TO THE FUTURE

Instead of influencing the community as a whole by reaching out to entire population centres, the Cyberkids programme concentrates on a few participants who would then be nurtured through a series of curriculum supported by the Government, who would then in turn propagate what they have learned with not only their peers but also, hopefully, with their families.

As a slow, yet conscious effort, it comes in line with the objective of the Government to increase the Internet penetration within rural communities. It also helps to increase the level of online awareness amongst school children, with hope for putting them on par with their urban counterparts and opening their eyes to the world outside.

In short, it will be interesting to see how this one plays itself out. .my

Yap Chong Ping is Head,
Regulatory Department, Maxis.

A group session in progress

Perseverance

Education

Acceptance

Integrity

Humility

Loyalty

Meritocracy

Culture of Excellence

8 Values of 1 Malaysia

New Era Of
CROSS INDUSTRY
COLLABORATION

The forces of convergence are bringing the communications and information industries ever closer. Yee Sye Chung shares the highlights of this conference.

"**C**ross Industry Collaboration" is an emphasis for business success going forward. This was promulgated as a message to the industry by the Acting Chairman of SKMM, Mohamed Sharil Mohamed Tarmizi during his opening address at the Communications and Multimedia Conference 2009 (C&M).

This year's conference focused on a New Era of Cross Industry Collaboration. This is the second conference held in May 2009 after the inaugural event in 2008. Industry analysts, market leaders, ventures capitalists, entrepreneurs, bankers and Government officials came together under one roof and with one thing in mind - to move forward in the changing telecom and information technology landscapes.

As different speakers pointed out, the world is changing and it is changing fast. The scope of the changes is very broad. Not only can one watch television at home on large TV screens, through the latest technologies one can also watch similar content on small phone screens or on PCs through the Internet. This scenario of same or similar content offered on multiple platforms demands collaboration between different industry players. Such collaboration enables players to draw on each other's expertise to develop enhanced services and hence, business models to gain or maintain market share.

Already a strong picture is taking shape and continued collaboration will allow Malaysians to look forward to a new always connected lifestyle with services such as e-Government, e-Commerce, e-Education, e-Health, e-Payment, teleworking, IPTV and green energy.

Taking stock, Sharil said that the worst hit was the IT industry about 10 years back but that is not holding it back now. Today, the IT industry is one of the fastest growing industries in the world and Malaysia is also playing its part. "Did you know that Malaysians are top five in Facebook and MySpace in the world?" asked Sharil.

Even the current economic weakness around the world has not stopped Malaysia from moving forward in the social networking media. Sharil pointed to the fact that the ICT industries are one of the largest contributors to the GDP growth in the country over the last decade.

The growth is especially evident in the mobile industry. "Today, we have over 96% penetration of mobile users and the scope of "mobile connection" touches every part of the industry" he added, referring to Malaysians who now work from home or anywhere in a global environment.

While the economic crisis in the United States is expected to recover next year, Sharil is confident that Malaysia will take huge steps this year towards the goals of MyICMS 886, targeted to be achieved in year 2010.

Speeding up BROADBAND - Fibre to the Home

Malaysia's household broadband penetration rate stands at 21.1% as at end-2008, having grown steadily over the past two years at a compounded annual growth rate (CAGR) of 38.9%. The target is to achieve 50% household broadband penetration by the end of 2010. The National Broadband

Sharil delivering his address; a panel session at the conference; a view of the attendees at the conference

Implementation plan has been put in place where basic broadband will reach wherever there is demand. In addition, high speed broadband will be implemented in high economic impact areas and this is where Telekom Malaysia (TM) comes into play with its High Speed Broadband (HSBB) project. HSBB is a collaborative project between TM and the Malaysian Government. The project will also create opportunities for other players to have access to the network for their respective use in services provision, including myriad content and applications services.

The RM11.3 billion project to be unfolded over a period of 10 years is expected to be operational by the end of this year. TM is investing RM8.9 billion over ten years, while the Government is co-investing RM2.4 billion in initial years. TM has already started signing up some of the Internet Service Providers (ISPs). Once it is completed, HSBB will offer speeds from 10Mbps (Megabits per second) to 100 Mbps for residential customers and up to 1Gbps (Gigabits per second) for businesses at high economic impact areas delivered through fibre optic infrastructure.

Dato' Zamzamzairani Mohd Isa, Group Chief Executive Officer of TM, who spoke at the conference, said that TM wants to see industry growth. In collaboration, there is risk to lose market share but the pie is growing a lot faster and indeed more overall gains can be expected from a much bigger pie of the growing communications services market in Malaysia.

Under the HSBB initiative, TM will roll-out last mile access network to homes and businesses to facilitate HSBB services using 3 main technologies, i.e. fibre-to-the-home (FTTH), Ethernet-to-the-home (ETTH) and Very High Speed Digital Subscriber Line (VDSL2). In addition, TM will be rolling out its Next-Generation Network (NGN) core backbone network based on an all IP Platform as well as grow the nation's global capacities by building new international gateways for enhanced connectivity and network efficiency.

The HSBB project promises a new lifestyle experience for consumers from all aspects such as teleworking, telehealth,

infotainment, virtual shopping, high resolution video on demand, gaming and distance education among others.

Businesses too for example will be able to improve management efficiency through new applications in managed services in accounting, supply chain or customer relationship management and can enjoy better integration with business partners worldwide.

"HSBB has a high multiplier effect for business, boasting productivity and allowing for easier collaboration," added Dato' Zamzamzairani. The high speed broadband national strategy would play an important role in boosting the nation and the economy.

Prime Minister, YAB Dato' Sri Najib Tun Razak, during the signing of the HSBB project between the Government and TM last year said, "HSBB will be a key national infrastructure initiative which will allow Malaysia to enhance its economic competitiveness in the region, help attract FDI to the country as well as accelerate the nation's ICT and high technology aspirations and agenda through an enhanced knowledge capital workforce. More importantly, consumers will now be able to enjoy an exciting lifestyle with a variety of services such as high speed Internet access, file sharing, e-Commerce, e-Government, e-Learning, video-conferencing, web browsing, IPTV and high definition TV."

One way it could achieve this would be by working with content developers who could leverage on TM's platform of products to bring their content to market. To that end TM will invest in an end-to-end content eco-system to support small and medium sized local content developers. This ecosystem platform would link content creators to a wider base of end users.

He added that emerging companies could avail themselves of the entire range of the services offered by TM over a content delivery platform while more established companies might need just a few services. Either way, collaboration with TM would benefit any organisation as it offers scale and channel access.

Dato' Zamzamzairani was confident that the deployment of high speed broadband would enable a new lifestyle

Striking a Balance Between Capex & Green Initiatives

Different environment conditions	Minimum CAPEX	Maximum CO2 Reduction	Renewable solutions are still expensive
Deepening economic crisis	Cost efficiency in operations	Volatile energy prices	CAPEX management
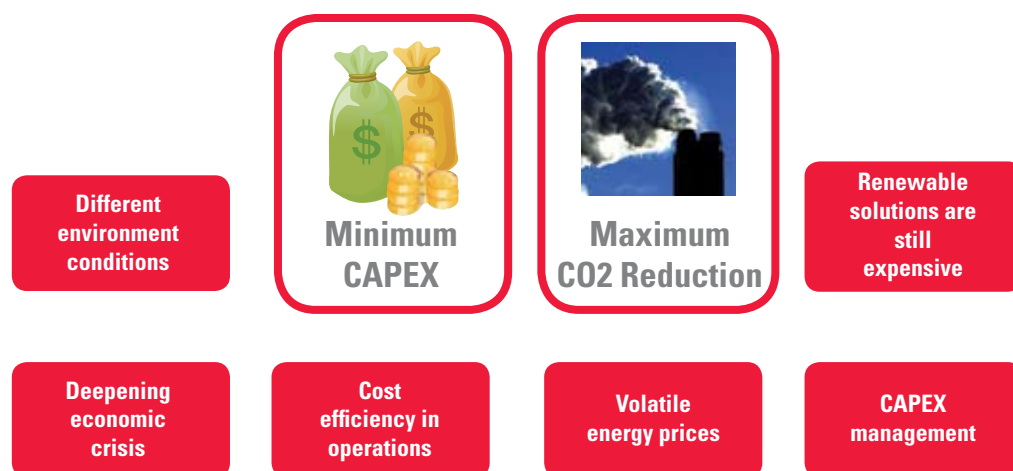
Source: DiGi

for consumers. Their shopping experience would evolve, presenting new opportunities for commerce. They would be able to work from anywhere; interact with others in virtual communities and enjoy high quality entertainment anytime and in multiple formats.

Enterprises would also benefit when high speed broadband is rolled out. They would have access to new applications, managed services and converged solutions. The nation's enterprises would integrate better with their partners and also have the opportunity to explore new markets. Productivity and collaboration would increase in the workplace.

Access to Content Delivery Platform

Dato' Zamzamzairani also told the conference participants that TM wants to collaborate with other industry players to grow the industry further. "We want to see the industry grow and we want to collaborate with other industry players," he said. He said that it will play its role as an enabler that will allow the industry to benefit from it.

The content delivery platform that TM is building on its HSBB network will link content developers to a wider range of users, according to TM. "TM will invest in a content eco-system to support small and medium sized local content developers," said Dato' Zamzamzairani.

TM said that with its content delivery platform, it could offer a solution for content developers who suffer from unsustainable business proposition due to the lack of a neutral content aggregation platform.

The new content delivery platform will offer six different platform services including Content and Application creation/ownership, Content Aggregation (portal), Content Provisioning, Network Delivery, Billing, Marketing and Sales.

The Content & Application creation will offer support in creation of content where TM will help content developers with seminars, toolkits and sourcing of the contents.

Content owners who want to aggregate their content could use the Content Aggregation platform to personalise their content and manage their content in a catalogue. Content Provisioning offers hosting of the content while Network Delivery offers delivery of the content and services. Billing provides the billing services and collection platform for content owners while they can use Marketing and Sales for customer services and retail channel.

Mobile Web is growing faster than Web

On the mobile front, data uptake continues to grow exceptionally well in Malaysia. Maxis Communications, a major mobile operator in this country said that it has achieved 48% of growth in non-SMS data usage. The mobile operator said that it handles more that 100 million SMSes per day, 4.6 million Caller Ringback Tune users, 1.9 million MMS users and more than 3.1 million Friend Finder customers.

According to its Head of Products and New Business, Dr. Nikolai Dobberstein, Maxis receives over 50 million hits on its WAP site every month while the company now has 4.8 million mobile Internet users, making its subscribers among the most active mobile Internet users in the world.

Dr Nikolai's conviction that mobile Internet is the current wave of growth for the mobile industry was echoed by a mobile interface developer. "Mobile Web is growing eight times faster than PC-based web" said the co-founder of social networking site, Plurk.com. Alvin Woon, when he addressed the conference on the subject of developing the right interface for mobile applications. Alvin added that the mobile web is expected to have over 1 billion new users by 2012.

"Good mobile interface takes into consideration the limitation and advantages of a cell phone," he added. A mobile phone today has limited battery life, small CPU, multiple networks, many variants, no mouse, numerous

platform and technologies. Alvin said that mobile phones applications should focus on being useful, usable (as in user friendly) and engaging for the consumers. Alvin believes that the key requirement to a mobile web is putting content first. Other things such as graphics are prioritised later.

Green ICT

Around the world, climate change is the greatest environmental challenge we are facing today and everyone has a responsibility to address this issue, whether on an individual, corporation or industry level.

According to a report called "Smart 2020: Enabling the low carbon economy in the information age" the ICT industry is set to surpass the aviation industry as a major carbon emitter by 2012.

At the conference, Johan Dennelind, the Chief Executive Officer of mobile operator DiGi, said that DiGi will invest up to RM100 million in its Deep Green programme. Launched in 2008, Deep Green is a programme that addresses climate change with an aim to reduce CO_2 emissions by nearly 50% by 2011.

"We are consuming massive amount of energy," says Johan Dennelind and he pointed out that the ICT industry is a big culprit in emission and will be high on the climate radar within the next decade.

DiGi said that it managed to save RM4 million in 2008 just by conserving energy within the company. Some of the company's internal programme for Deep Green includes car-pooling, recycling and conserving energy. The mobile operator claims that it made 600% in savings when recycling was made a core requirement in vendor selection

for pre-construction demolition work of their new Technical Operation Centre.

"More than 25% of DiGi customers are engaged through e-billing and these are expected to increase", said Johan. He added that the company is building a new RM300,000 data centre that is "green".

"Going green makes good business sense," says Johan. "It improves operational cost and efficiency,"

Educational Content

Astro, a direct-to-home service satellite operator in Malaysia currently offers over 116 channels of which 27 carries the Astro brand. The company is not just profit driven, but it plans to offer more content beyond entertainment.

"Learning and infotainment continue to be the key drivers for customers' growth," says Henry Tan, Chief Operating Officer of ASTRO TV.

Since March 2009, Astro has revamped its educational content under a new educational brand called Kampus Astro.

Some of the educational TV channels being offered under Kampus Astro include National Geographic, Disney, Discovery Science, Astro Awani, Animal Planet, History, TVIQ and Astro Ceria.

In support of the Education Ministry, Kampus Astro involves four areas of approach - academic, knowledge and life skills, events and community.

As part of the campaign under Kampus Astro, Henry said that over 10,000 primary and secondary government schools will benefit from Astro decoders with multiple recording functions, TV sets and access to 12 international

Source: Astro TV

360 degree approach

kampus astro

academic	Knowledge & life skills	events	community
Goal: Supporting Malaysian school syllabus	Goal: Enriching minds and lives	Goal: Enhanced learning via hands-on experience	Goal: Enriching learning in the community via Astro content +technology +people
Students	General public	Students	Government schools (students , teachers)
Gatekeepers (parents & teachers)		General public	MOE

Going Digital

The conversion from analogue to digital
needs to benefit all stakeholders

Consumers
More Choice,
Better quality

Government
Digital dividend

Industry
Relevance in multi
channel, multi
platform market
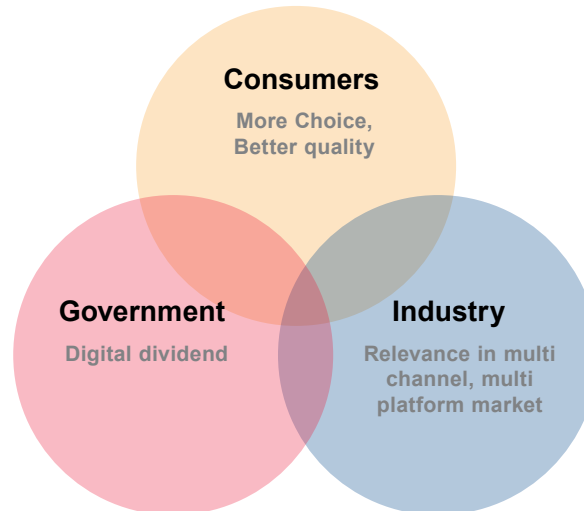
Source: Broadcast Australia

and local channels under a three-year project. Funding is as much as RM30 million.

"With 66% of Malaysian schools located in the rural areas, the plan is to roll out the Kampus Astro programme in Sabah, Sarawak and Labuan this year, before turning to the Peninsula in 2010," said Mazhairul Jamaluddin, Astro financial controller in a local newspaper.

Under the campaign, teachers will be able to record up to 80 hours of a particular show they want and play it at a time that suits their students.

Social Network is the "Hottest Trend"

Wikipedia describes social network services as a service that "Focuses on building online communities of people who share interests and/or activities, or who are interested in exploring the interests and activities of others".

Today, there is probably close to a hundred social networking sites with popular ones such as Facebook, Twitter, MySpace, Friendster, LinkedIn, Bebo, Hi5, Tagged, Plurk, and Multiply.

According to a recent report by market researcher Nielsen Online, the time that people in the U.S. spend on social network sites is up 83% from a year ago. Facebook enjoys the top spot among social networks, with people having spent a total of 13.9 billion minutes on the service in April of this year, 700% more than in April 2008, Nielsen said.

Another interesting fact revealed at the conference came from Dr. Nikolai Dobberstein: "Do you know that the highest traffic from Malaysia to Friendster comes from Pahang and not the Klang Valley?" he asked creating a buzz among the participants.

While popular social networking sites like Facebook and Twitter are yet to make huge profit with their services, MySpace sees great potential in social networking.

"Social Networking can generate US2 billion in revenue in coming years," says Deep Malhotra, Senior Director for MySpace India and South East Asia.

The senior director said that MySpace has over 100 million music playlist with over 5.5 billion music listened to and over 7 billion photos uploaded by MySpace users.

The social networking site also attracts more than 600 celebrity bloggers on MySpace.

Ads are Converging too!

Today consumers are not only watching TV at home, but they are also watching TV on their phone, on the Internet, at work, at restaurants and practically anywhere. So where should advertisers target their ads?

"A 15 year old today was born in 1994. They use remote controls, DVD, Microwave, PC, email, mobile phone, chat and more. These are digital natives, not immigrants," says Paul Moss, General Manager, Platforms, Technology & New Business of Alt Media Bhd, the new media arm of Media Prima Berhad.

An average Malaysian today spends about 3 hours watching TV, 2 hours listening to radio, 1.5 hours online and about 1 hour of reading the newspapers. However, newspapers followed by television lead the ad spending in Malaysia.

The dynamics of new media today involve the emergence of amateur content, content filtering by the masses, sharing, freely available video, social networks, live streams, feeds, search, blog, micro-blogs and more.

"If conversation is the new content, and content is king, does it make conversation king?" asked Paul. He shared that research shows that 86% of consumers no longer believe what brands says about themselves whereas 78% of consumers believes what other consumers say about them.

On September 2007 Alt Media Sdn Bhd, a subsidiary of Media Prima Berhad, launched an online entertainment portal at www.gua.com.my providing Internet users with the latest update on happenings in the entertainment world, both local and international.

Within the first month of its launch, Gua achieved 1 million hits on its site.

The portal also made entry into Malaysia Book of Records for the country's first online drama series "Kerana Karina" which was produced in partnership with Grand Brilliance Sdn. Bhd. Today, Gua is the most popular entertainment and lifestyle portal in Malaysia with close to 400,000 members and records an average of 1.5 million hits per week.

Media Prima together with Gua also launched the first video call based third generation (3G) mobile television service under the new media project which serves as a channel for users to view programmes from television networks, TV3, ntv7, 8TV and TV9 on their 3G-enabled mobile devices.

Globally, MySpace's Malhotra claimed that 90% of the advertisers on MySpace are Fortune 500 companies. The fact that at least 1.8 million Malaysians are on MySpace is solid proof that citizens of this country have a strong presence online.

Collaboration in Convergence - A key to success

The primary forces driving the transformation of national and global economies are dramatic changes in technologies, policies and markets. The convergence of telecommunication networks, broadcast and all forms of communication and information content to digital standards has created the avenue towards a new single IP platform network.

For decades, fixed line took the largest share of the voice market when it was expensive to make a call on a mobile phone. Today, things have changed and fixed line subscription is declining. Malaysia is also switching over to digital broadcast in a few years time.

As pointed out by Graeme Barclay, Managing Director from Broadcast Australia in the conference, among key ingredients to the switchover are the critical end-to-end co-operation and coordination among all players - broadcasters, regulators and infrastructure providers from the requirements to share infrastructure to the pricing of set-top boxes. Also, there is need for expertise in planning, systems design and integration critical to successful execution of the switchover.

In the mean time, something else has changed too - the consumer demands more. The popularity of mobility is a case in point, apart from interactivity and personalisation.

In today's world, a consumer has a mindset that if he or she is at the same time a subscriber of a pay TV station, a mobile phone user and also an Internet subscriber, then what he or she wants is to have access to content from any device using any type of medium. This is not achievable from an industry point of view if a satellite pay TV station operator, the mobile operator and the Internet Service Provider do not collaborate with each other. The regulator or the authorities should also step in to ensure a fair mutual gain for stakeholders concerned.

Convergence involves many levels and many types and this include cultural, device, fixed and mobile lifestyles. As Kamil Othman, Vice President (Creative Multimedia), Multimedia Development Corporation (MDeC) pointed out, there is also the need to have convergence of the authorities.

Audience deep in thoughts during a session

Convergence demands the same value proposition as it is based on the traditional style media such as in providing quality content in a 30 or 60 second mobile online teaser. Adapting to the change, content providers can now have the view of "we work it for the world". There is partnering in content, services and applications, and delivery in the communications network. "The missing element in new media at the moment is Malaysian talent, and this also requires the education of producers," said Kamil.

"Previously, a lot of services were offered on a device basis," said Delesh Kumar Chandrakarant, Director, ICT Practice Malaysia, Frost & Sullivan. "Content Providers should now build content that works on any device," he added.

A simple collaboration is when a media broadcaster works with a telecom operator to offer SMS voting in a reality show. This allows both companies from different industries to benefit under a win-win situation.

The content delivery platform offered by TM can be viewed as a long term or large scale collaborative ecosystem for content and service providers to work out the appropriate business models with a network service provider.

Media Broadcasters like Astro or Media Prima could rely on this new platform to offer their current content to a whole new type of consumers such as those on the mobile platform or the Internet. Content developers like animation makers could use this platform as a start from hosting, billing to marketing content. This will also attract different types of advertisers from different industries.

Telecom operators have also converged to become fixed and mobile Internet Service Providers. One simple example is Celcom who managed to lead in the mobile broadband market with over 300,000 subscribers.

"People want to switch from their mobile to fixed line the moment they walk into their home," said Delesh. In this case, collaboration between TM and a mobile operator could benefit TM in increasing revenue while a mobile operator like Celcom could off-load their heavy data traffic to TM's fixed broadband service when the customer is at home. This can also allow a single billing platform for fixed line, broadband, mobile services and mobile broadband.

Convergence is changing content generation and usage. "Video streaming is taking off and it is not the P2P type," says Mr. Amrish Kacker, Head of Asia-Pacific, Analysys Mason. There are YouTube and Skype, and there are news clips, legal and illegal movies to full fledged IPTV services like the PCCW type. There is tremendous avenue for increased applications as bandwidth and capability increases. For example, the iPhone charted phenomenal use in the first 18 months of launch, with 1 billion applications downloaded.

"Increased bandwidth also means increased cost", Amrish added.

New business models are coming forth as convergence plays out. Next generation type business models include those in countries where telecommunications service providers are effectively large pipes for video due to high bandwidth offered and advanced video development. Another new business model has iPhone and Apple Store combination where this ecosystem adds substantive number of users per month. "On ownership of content rights, there is convergence of customer ownership – as in customers for TV, mobile and broadband," Amrish pointed out.

"We need to recognise the business models and monetise it. There is a need to sell the model to others," says Mr. Gurtaj Singh Padda, Executive Director/Chief Operating Officer, Tune Talk.com. This way you draw on the capabilities across the spectrum. For example, a terrestrial television content provider can get inputs from the telecoms provider to capitalise on the new mobile platform. "It has to be a win-win structure," emphasised Gurtaj.

WiMAX offers an option to obtain mobile broadband service apart from a cellular option or a digital subscriber line connection. WiMAX is a new service in Malaysia and indeed worldwide. "The WiMAX service needs to get scalable to service the applications. The P1 network is a next generation network which P1 expects to roll out not only locally but also on global basis," says Mr. Mohamad Idham Bin Nawawi, Chief Operating Officer, P1.

Mohamad Idham added that P1 cannot afford to deal without the device, network and applications. The Intel incentive in WiMAX is that the WiMAX chip will eventually be embedded in laptops and devices. There is also a need for more content; a need to build into the device games for example; introduce the device into the market, launch new portals and more. Therefore, P1 need enough partners for WiMAX network service setup and maintenance apart from new content partners for the ecosystem.

The number of participation from different industries at the C&M conference 2009 indicated that this industry was ready for a new transformation. Now it is just a matter of time for a new collaboration and deepening convergence at all levels including the industry, consumer and regulator. **my**
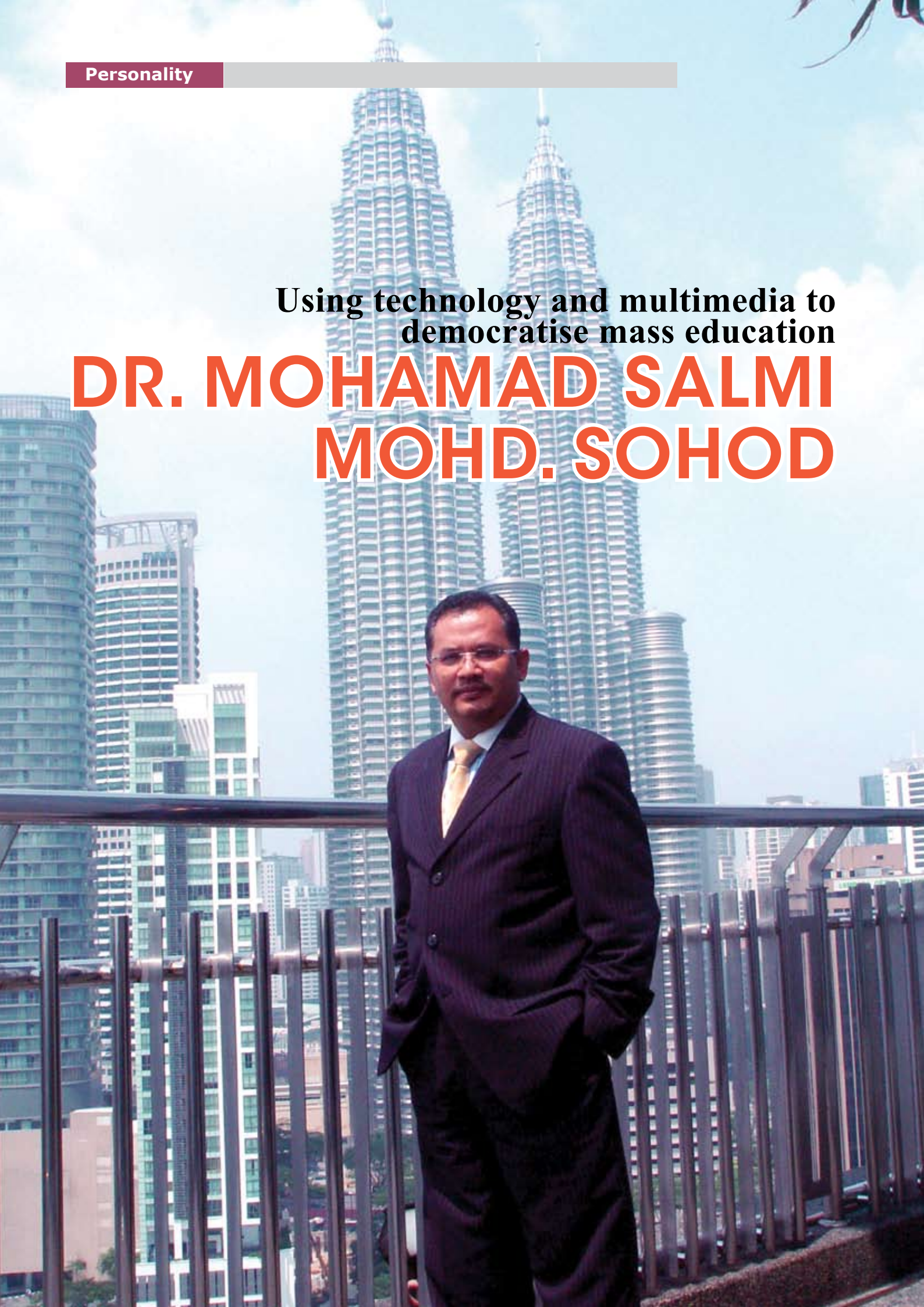
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Using technology and multimedia to democratise mass education

DR. MOHAMAD SALMI MOHD. SOHOD

With both his parents and most of his uncles and aunts serving as teachers, In-Fusion Solutions Managing Director, Dr Mohamad Salmi Mohd. Sohod regards himself as a teacher and firmly believes that educators must move with technology to capitalise on the future, which comprises teaching and knowledge.

He also sees technology as a means to democratise mass education and technology and multimedia as tools to get the young interested in knowledge and education.

"While Malaysians are very open to overseas influences, the cost to study at foreign universities and institutes, especially in the west are too costly for most Malaysians," said Dr. Salmi.

For example, back in the 1970s the fees for overseas students in an engineering course in the United Kingdom were about 350 pounds for a whole year, the rent for a bedsitter apartment in a place like Salford was about six pounds a week and 35 pounds per week was enough for food, transport, heating, electricity, some entertainment and social activity, all of which added up to about 2,482 pounds (or about RM12,410) per annum.

However, tuition fees for overseas students have risen to 2,000 pounds (about RM10,000) per year and today, the annual fees for a degree course for overseas students at the University of Salford range from 8,600 pounds to 10,700 pounds for the academic year 2009 to 2010.

Private student accommodation costs have risen to a few hundred pounds a month, while the cost of living has risen dramatically since the late seventies. Such fee increases have occurred across other Commonwealth countries as well.

Dr Salmi graduated with a Bachelor of Science in Manufacturing and holds a Master of Manufacturing/ Industrial Management from Western Michigan University in the United States in 1984. Upon returning to Malaysia, he was offered a job as an industrial engineer with auto manufacturer Proton but turned that down and instead accepted a post with Universiti Utara Malaysia (UUM) in 1985, where he held several posts, including as a Lecturer in Management Studies and as a Senior Lecturer in Human Resource & Organisation Development.

While at UUM, Dr Salmi grew beyond his academic responsibilities and progressed into management positions. At the young age of 27, he was the youngest Programme Director at UUM, where he was appointed the Director of its Research and Consultancy Division and subsequently as Director of its Entrepreneurial Development Institute.

Dr Salmi then took a break from his academic duties to pursue a PhD in Management at the University of Bradford in the United Kingdom, which he completed in 1992 at the young age of 30 and resumed his academic duties at UUM as an Associate Professor in Strategic Management & Entrepreneurship. He was also a member of the Senate and Council of UUM.

After 11 years, he left UUM and joined KUB Malaysia Bhd to establish one of Malaysia's first private universities, Universiti Tun Abdul Razak (UNITAR), and in 1997 he became Project Director of Unitar Sdn Bhd a company tasked with the setting up of UNITAR, which was launched on 21 December, 1998.

With that, he was appointed a Professor and at the same time, Deputy President (UNITAR) and also a Member of the Senate. He was also Chief Executive Officer of United Multimedia Sdn Bhd, a KUB subsidiary which manages the electronic-learning (e-learning) infrastructure and systems of UNITAR.

While still there, Dr Salmi extended his service to E-TQM College in Dubai where he was a Professor and Associate Dean of Content Development for three years.

Then in 2003, his passion for education led him to leave UNITAR and found In-Fusion, together with like minded entrepreneurs, with the aim to reshape the Malaysian educational landscape. "We wanted to prove that knowledge-based companies such as ours are viable," said Dr Salmi.

But there are still three basic challenges to overcome. First is the availability of knowledge-workers with the correct competencies and attitude. Second is the availability of Government policies regarding knowledge-based economics, and third is the company's ability to face international competition head on, since it cannot be protected unlike the automotive, plantation, agricultural and other such industries.

"In-Fusion focuses in three key areas, namely Education, Electronic-Learning (e-learning) and Edutainment (educational-entertainment)," said Dr. Salmi.

Lifelong learning

Lifelong learning is one of the areas which tend to be sidelined in Malaysia. The market, Dr Salmi said, is not ready for it since there are not enough Government policies to support or encourage it. Also, degrees obtained through lifelong learning programmes are generally regarded as questionable. Moreover, people in corporate jobs cannot afford to leave to do courses.
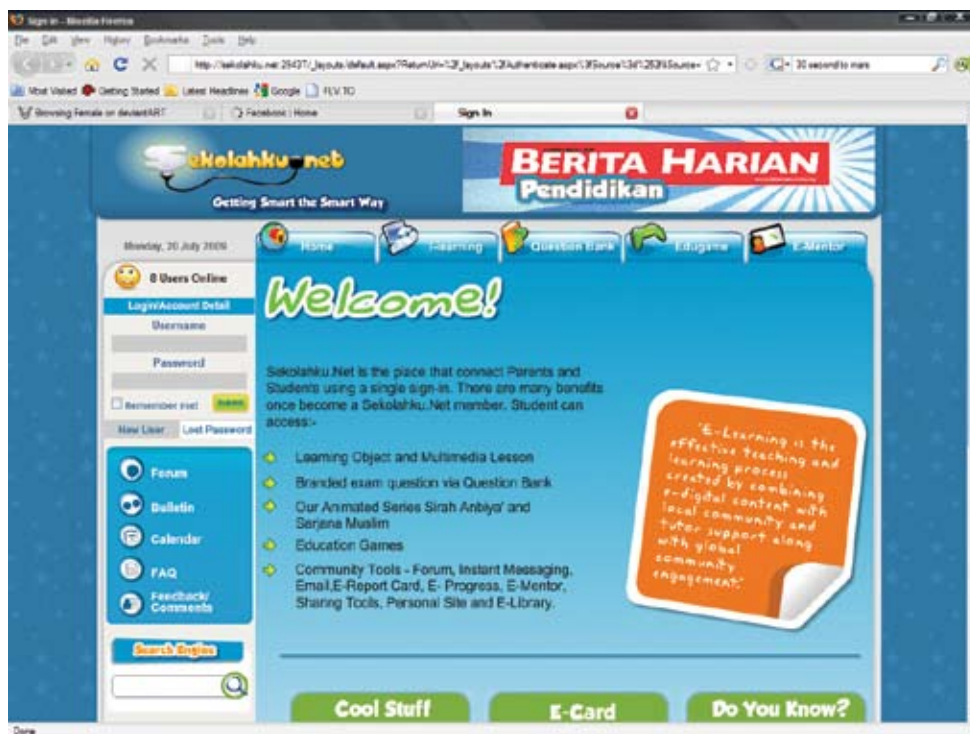
Sekolahku.net portal

"So when I left KUB, I started an online learning programme with the Ministry of Defence," said Dr Salmi.

Many soldiers join with low qualifications, mostly a Malaysian Certificate of Education (SPM), which is equivalent to a Senior Cambridge in the UK or Grade 11 in the US and they retire at the ages of 40 or 45, which is relatively young.

In-Fusion set up small study centres in army camps across the country and provided blended learning, comprising teachers who provide face-to-face classroom lectures, complemented by online training content and reference materials through its K-ForceU.com web portal. The company manages the delivery of degree or diploma programmes from UNITAR in four areas, including Management, Information Technology and Business.

"Armed with a higher qualification helps soldiers find decent jobs when they retire," said Dr. Salmi. "We are also starting a Masters programme for the army and plan to begin a diploma course in law for the police through E-PoliceAcademy.com."

At time of writing, In-Fusion was also about to launch a learning community portal Sekolahku.net in collaboration with Microsoft and the portal is intended to replace the practice among many parents to send their children for private tuition after their regular school classes.

In-Fusion planned to charge RM50 monthly subscription for five subjects and the portal will provide students with access to good quality learning content, including learning objects for better understanding of each subject, an online questions bank for exam preparation, an electronic library, access to edutainment, educational games and community tools for interaction between students, parents and teachers.

Edutainment

In-Fusions also has several animated edutainment series which have been broadcasted over Malaysian TV, interactive content and educational games especially aimed at children.

"For example, we did an animated series about the journeys of Ibn Battuta, a Muslim traveller who travelled across more countries than Vasco Da Gama or Marco Polo which teaches history, while our Sirah Anbiyaa series about Muslim Prophets teaches religion and our Wira Merdeka (Independence Heroes) series teaches Malaysian history," said Dr. Salmi. "We're now

producing a 2D animated series of Asian Legends which teach values."

Its educational games such as Math Millionaire teaches mathematics, Dropping Letters teaches spelling and Sepang Boleh teaches everyday life processes, such as to drive a car along the Sepang race track while avoiding obstacles and to collect fuel and answer a question at designated point along the way to the finish line. The games aim to teach students in exploratory ways.

Mobile education

Dr Salmi also believes that mobile phones and PDAs are also tools for education and learning.

"Malaysians tend to be late bloomers. We are very good at grabbing all new kinds of tech gadgets and master all their sophisticated features but we don't see them as a great tool for learning and education, so we need to change people's mindset," he said.

"While at eTQM College in Dubai, we produced learning content accessible on PDA-phones and In-Fusion now plans to launch online learning for members of the Malaysian Institute of Accountants around July and we are looking at mobile learning (m-learning) as a solution for busy executives," he added.

Snippets of m-learning content, such as small videos, animations, text must be no longer than 20 minutes, since adults cannot learn for too long and passengers in a car, bus or train can learn while on their way to and from work.

For example, it was reported back in the 1980s that a university in the US converted a train coach into a classroom in which it conducted MBA courses during the 90 minute journey.

Let the children choose

Dr Salmi also believes that parents should allow children to choose their discipline of study and type of qualification, as too many Malaysian parents are obsessed with their children obtaining a university degree in medicine, pharmacy, engineering, accountancy and so on.

"There are many para-professional persons who support these professionals and Malaysia must make vocational and

technical careers a respectable option to train for without children being forced to do courses by their parents, as these para-professional provide more employment opportunities," he said.

"The skills used to create 3D architectural simulations are no different from those required to create 3D animations or games, though the former is regarded as a professional skill, while the latter vocational," he added.

In-Fusion subsidiary Go Academy conducts especially tailored courses in Digital Design and is the only centre in the world offering certification in 3D Modelling, Animation and Visual Effects from the United Kingdom's City & Guilds, the world's largest vocational certification awarding body. It also offers short courses and part-time programmes.

It also owns the Academy of Digital Animation & Media (ADAM) which provides highly specialised 3D animation and visual effects programmes.

In-Fusion also produces e-learning solutions and content such as the StudentSpace web-based student information management software; LearnSpace learning activity management solution for organisations; ContentSpace for the creation, management and publishing of learning content creation; and its proprietary SPEED (Study, Plan, Execute, Evaluate and Deliver) content development methodology.

Back to the future

Dr Salmi would also like to see children's old habits of doing practical things, such as making their own bat to play a game of rounders, since it develops the spirit of innovativeness within them, which can be applied in later life.

He also would like to see more training opportunities for para-professionals to upgrade themselves to full professional level with degrees.

"One of the problems, even with PhDs who've taken the purely theoretical academic route is that they lack appreciation of the practical aspects of what they are dealing with or advising about, while the technician with just a diploma does, and in fact would even make a better professional after he upgrades himself," he said.

More holistic education

Being a product largely of the American university education system, Dr. Salmi believes in a more all-rounded education, with emphasis in key disciplines, and that students should not be streamed too early, such as Malaysian students are into Science and Arts streams after their Penilaian Menengah Rendah (PMR) examinations in their ninth year of school, as this leaves them less options if their interest should change later.

"During my course at Western Michigan University, I took 90 credits in engineering and 30 in a choice of various subjects, including political science, history, communications, the history of the Middle East and others, as this makes one more open and provides one with more options," said Dr. Salmi.

He also believes that Malaysia should look around the world for the best courses in specific disciplines at universities anywhere in the world, since no one university, however prestigious it may be, offers the same standard of qualification for every subject.

"For example, you'd hardly expect one to get a degree in 3D Animation from Harvard, even though it may be a very prestigious university," said Dr. Salmi.

Besides all the above, Dr. Salmi has held several leading positions in professional and business bodies, including Director of the Malaysia Techno-Entrepreneurs Corporation (MTec), Director of the Malaysian Multimedia Entrepreneurs Corporation (MMEC), Editor of the Journal of Small Business, the Asian Management Journal and the Journal of Business Transformation. He also was Vice-President of the Asian Academy of Management.

He is also Provost and Senate Member of the Cyberjaya University College of Medical Sciences which In-Fusion wholly owns.

Dr Salmi is also regarded as an expert in Strategic Management and Human Capital development, who's highly sought after by the Government, for which the projects he's undertaken include Blue Ocean Strategy Macroeconomic research for the Economic Planning Unit, Prime Minister's Office which is still ongoing since 2007.

He also undertook the Higher Education Corporatisation and Total Quality Management in Education projects (TQM/ISO9000), for the Ministry of Education, Malaysia in 1996, as well as the Strategic Planning project for the same ministry the year before.

For the Ministry of Entrepreneur Development, Malaysia, he conducted Training & Consultancy for the Development of Bumiputera Commercial and Industrial Community (BCIC) from 1994 to 1997 and Multimedia Entrepreneurs Training Programmes. He also conducted Corporate Training Programmes for Perwira Affin Bank from 1993 to 1996.

So what's next?

So what will be next for In-Fusion over the next five years?

"In the next five years, I personally would like to see In-Fusion listed as a knowledge based corporation on Bursa Malaysia (the Malaysian Bourse) and having international offices in India, the Middle East, and around the ASEAN region," said Dr Salmi. "This will be in line with our growth strategies where the newly developed economies will need the kind of services that we provide - education, e-learning and edutainment."

He expects the online learning environment to overtake the class learning environment, where people will learn more while on the go, rather than when in one place, hence mobile learning with more simplified learning tools and devices will be more ubiquitous in the next 5 - 10 years from now.

As for new technologies, channels and avenues for learning, Dr Salmi believes that we may be using the TV more than usual as a learning platform but the TV will be mobile and handy. The Internet will always get more friendly and purposeful in years to come, while wireless technologies such as WiFi and WiMAX will make communication more accessible throughout the country and internationally.

"Lifelong learning is going to be the biggest growth area over the next five years, where people will learn new work productivity related skills on-line," Dr Salmi concluded. **.my**

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Getting An Entire Nation

Online

The National Broadband Implementation is bringing broadband to virtually the entire nation which is critical to this nation's economic and social well being. Nor Akmar Shah Minan tells how the targets will be met.

The National Broadband Implementation Strategy or better known as NBI puts in place a national strategy that will bring broadband to the whole nation. The broadband experience depends on the economic activities and the size of the population in those particular areas. In high economic activities areas such as major cities and towns as well as industrial zones, the current broadband infrastructure will be upgraded to provide higher speed broadband.

In areas where there is demand for broadband, the services will be widened to suit the requirements of the population. In sparsely populated areas such as in Sabah and Sarawak, community broadband centres will be built to enable communities to access Broadband Internet service. The NBI outlines a strategy to provide basic communications services such as public phones and widening of the current cellular coverage by building more communication towers so that the cellular services can be provided in a more efficient manner in these places which normally are in remote and rural areas.

Under the NBI, basic broadband service will be made available throughout the country. Where there is demand, High speed broadband is being implemented to provide broadband speed in excess of 10 Mbps and will be made available to high density economically critical areas.

Basic broadband is an important component of the National Broadband Implementation and its timely implementation will play a critical role in the wholesome development of the nation. There are challenges but the drive to bring broadband to the general population is well in motion and various wired and wireless technologies are being utilised to ensure that Malaysians living outside highly urbanised parts of the country have access to broadband. Programmes are also being implemented to drive the demand for these services as well as for the creation of content that is relevant to the population.

A Connected World

Ever since the industrial revolution, infrastructure has always been an important element in the development of a nation. Education, transport, energy infrastructures for example are vital for a country whose economy depends on manufacturing, services and knowledge.

Telecommunications is the other vital cog especially as the economy of the globe became intertwined. The ability of businesses to interact with the international business community is a fundamental requirement of modern businesses. But what was once handled by voice communications and narrowband services are increasingly being taken over by applications and services that require broadband.

The experiences of countries like Korea, Taiwan and Japan in this region and in other countries in the Western hemisphere demonstrate that increased telecommunications capacities are a competitive advantage to organisations. This is even more critical today when more business applications are taken onto networks. The 'always-open' business model of today is a direct result of the 'always-on' nature of broadband networks. Every sector of the economy, every industry and service, whether private or public, will benefit from the introduction of broadband services.

The same is true of households and individuals. The 21st century lifestyle is one that is connected and transcends distance. Its characteristics are that of sharing and networking. Broadband facilitates this lifestyle and by

Women engrossed in an Internet class

inference; the quality of life. Education, social undertakings, civic movements and all the facets of society benefit from broadband.

Malaysia has always been in the forefront of implementation of communications services. The programme to bring broadband to the far reaches of the nations follows a pattern which has seen this country being one of the earliest adopters of technologies such as 3G and WiMAX. The move to promote a broadband culture in Malaysia is a natural next step. Its implementation is also critical because many other countries are in the midst of implementing similar national strategies.

The National Broadband Implementation Plan

The National Broadband Implementation (NBI) plan divides the country into 3 zones. Each zone has different population densities, economic activities and existing telecom infrastructure. Zone 1 consists of high economic impact areas such as the inner Klang Valley and the Iskandar Development region in Johor. Zone 2 will be other urban and semi urban areas while Zone 3 will be rural areas.

High speed broadband will be implemented in Zone 1 and it will be likely that this area will feature multiple broadband technologies simultaneously. TM (Telekom Malaysia) has entered into a public-private partnership (PPP) with the Government to roll out high speed broadband in excess of 10 Mbps in this Zone. Zone 1 inhabitants will also have access to other competitive broadband solutions.

The national Broadband Plan envisions private initiatives bringing broadband to Zone 2 areas. The rollout of broadband in Zone 3 will require intervention by SKMM using Universal Service Provision (USP) funds. Provision of broadband in these areas includes Basic Telephony (through fixed and mobile network), Community Broadband Library (CBL) and Community Broadband Centre (CBC). The cellular coverage in these areas will be widened by building more communication towers funded through USP to facilitate the cellular operators to expand their coverage to 97% of population by 2011.

The Connected Malaysia Programme

The National Broadband Plan has set milestones that will mark the stage of rollout and adoption of the Plan. One

National Target

50%

Household Broadband Penetration by End 2010

looming and very important target the Government aims for is for the country to achieve 50% broadband penetration by households by end 2010 or equivalent to 3.2 million homes. According to the Malaysian Communications and Multimedia Commission (SKMM), Malaysia's broadband penetration was 24.9% of households at the end of the second quarter of 2009.

This places the telecommunications service providers and SKMM still far from their desired target. The target will not be reached if focus is only placed on Zone 1. The story of broadband thus far bears this out. In the early days, SKMM licensed close to 30 service providers to provide broadband services. The justification behind that many service providers was to create healthy competition to roll out their services, covering a wide area. Unfortunately, SKMM saw that these service providers end up competing in the same areas, leaving out the suburbs, rural and remote areas. Current infrastructure mostly serves major cities and some city outskirts but that's where broadband coverage ends.

The main challenge faced by service providers boils down to money. There is demand in the suburbs and rural areas but there isn't enough volume to encourage service providers to build infrastructure and roll out their services in those areas. SKMM carried out a survey in 2000 and the results showed that 85% broadband usage came from the major cities. But that alone will not help achieve the 50% household penetration target. A rough calculation would show that by 2010 if every household in the major cities were to have broadband, it would only make up 35% of total broadband penetration in the country.

The onus is really from the basic broadband services that would help to achieve a major portion of the household target. So by end 2010, 40% of the target of 3.2 million homes will be served by basic broadband, while the remainder will be served by high-speed broadband. However, both SKMM and operators are facing numerous challenges to

ensure suburbs, rural and remote areas have access to basic broadband (up to 2Mbps).

While it will be a challenge to achieve the target, the target is still achievable. The prospects are still bright because of the implementation strategy that was adopted for basic broadband.

Instead of relying on or picking one service provider to roll out broadband in Zone 2, the Government has taken the multiple technologies and service providers approach. Broadband in 2010 will see enough coverage by the multiple technologies and service providers.

Thus, current licensees using fixed ADSL (asynchronous digital subscriber line), wireless HSPA (High-Speed Packet Access) and WiMAX (Wireless interoperability for Microwave Access) among other technologies will provide broadband throughout the country. Other technologies such as satellite solutions are also in the picture.

The challenge of rolling out broadband infrastructure

Broadband suppply and uptake is a chicken and egg situation. On one hand, service providers should service less profitable areas to achieve 50% household penetration but at the same time the service providers do not want to venture into areas because the demand does not justify building expensive infrastructure.

In these cases, service providers opt for the wait-and-see approach. There is demand but not widespread. For instance, it could be that one in ten households want broadband. From their perspective, it is not going to be worth the trouble or expense to put in expensive infrastructure if only one in ten people will sign up for their services. To make it profitable on their end, they will wait until there is a higher percentage of potential subscribers before going in to provide broadband services. Coupled with the economic slowdown everyone is facing this year, service providers are happy to stick to major cities where there is a ready demand.

Broadband equipment and infrastructure

Another main challenge is to educate folks in the suburban, rural or remote areas on the benefits of being connected to the online world. The situation today is very much like that faced by the mobile phone industry in its early days. Today, everyone including someone in the remotest area will understand how much difference a mobile phone can make to their lives but in the early days, most people were reluctant to take up phones. Broadband has to overcome this same perception barrier in the hinterlands.

Finally, there is the affordability issue. For many people living in rural and remote areas broadband would probably be the last thing on their mind if their priority is to meet basic needs. Also, broadband rates as a subset of monthly incomes is likely to be a very high percentage of rural incomes, making it difficult for households to justify taking up broadband even when there is a need.

Creating Demand

To meet the targets, actions are being taken on many fronts.

In efforts to drive household broadband penetration, the Government has allocated incentives in last year's Budget. The Ministry of Finance approved tax allowances on expenditure on last-mile broadband equipment. Among them, last-mile network facilities providers will be given an investment allowance of 100% on capital expenditure incurred for broadband up to 31 December 2010. Import duty and sales tax exemptions will be given on broadband equipment and consumer access devices.

Tax deductions will also be given to employers on benefits in kind in the form of new computers and payment of broadband subscription fees for employees. Such benefits in kind received by the employees will also be tax exempt.

But making it easier for service providers to justify moving into Zone 2 areas alone will not help if demand from consumers does not increase sharply. With that in mind, various programmes are being undertaken to spur broadband demand. Most of these initiatives consist of showcasing the possibilities that broadband can bring into the lives of citizens and businesses. There are also direct interventions where people are given exposure to broadband services. The experience is that once people try broadband services, they will see how it can impact their lifestyles.

For example, there are programmes that provide Internet training geared towards housewives. Traditionally, in rural areas, the women in the family call the shots as to whether to have broadband at home. Women who have small businesses such as producing handicraft or are selling local goods and so on can be taught the benefits of putting up their products online. These people are taught how to use it to expand their businesses.

SKMM is not alone in driving broadband penetration in these areas. For example, the Ministry of Rural and Regional Development (KKLW), the Ministry of Women, Family and Community Development (KPWKM) and the Ministry of Education (MOE) are each conducting their own efforts to push Internet within their jurisdictions.

Another major initiative that is taking place is to spur the creation of local content and applications. When the right contents or services are available, demand will go up and more households will sign on for broadband.

The Government is also addressing the issue of affordability by providing needy segments of society affordable broadband services. Attractive entry packages with PCs and subscriptions included for individuals and households can be explored. Besides, there are also

Participants of a housewife's computer class with their teacher at a Community Broadband Centre in Bandar Baharu, Kedah.

🔴 A user at an Internet centre set up in a library in Terengganu

🔴 A young user learning how to use a PC

Community Broadband Centres (CBC). These have PCs set up with broadband connections and hired supervisors to facilitate Internet usage. This will particularly appeal to household who cannot afford to have computers yet and who need to gain the ability to use computers and Internet.

Delivering Tangible Benefits

According to an Economic Planning Unit study, broadband can deliver significant benefits to the country. Achieving at least 50% household broadband penetration by 2010 can result in tangible contribution of 1% to the nation's gross domestic product (GDP) and create 135,000 new high-value jobs. That will also create opportunities and markets for applications and content developers. It will enhance human capital and allow for movement up the value chain. It will also enable the K-economy and serve as a catalyst for overall national competitiveness.

With the private sector and Government working hand in hand, bringing broadband to the general population is entirely achievable. It appears that the steps taken by Malaysia are in the right direction. At a recent keynote address that kicked off the Next Generation Broadband Forum at CommunicAsia, Zhao Houlin, deputy secretary-general of the ITU urged countries to be more proactive in closing the broadband gap through initiatives like public-private partnerships. He cited Malaysia as a prime example of public-private partnerships in action. **.my**

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Creating A Media Literate Society

Institutions of higher learning are collaborating with SKMM to develop knowledge resources on the use of new media by Malaysians, Amarjit Singh elaborates on this initiative.

Back row (L-R): Mr Amarjit Singh (SKMM), Tuan Haji Mohamad Suandi Hasan (Ministry of Information, Communications and Culture), Asst Prof. Dr Wong Siew Fan (Universiti Tunku Abdul Rahman), Puan Eneng Faridah Iskandar (SKMM), En Mohamed Sharil Tarmizi (Chief Operating Officer, SKMM), Dr Nor Laily Hashim (Universiti Utara Malaysia).

Front row (L-R): Assoc. Prof. Dr Mohd Fo'ad Sakdan (Universiti Utara Malaysia), Prof. Dr Md Salleh Hassan (Universiti Putra Malaysia), Datuk Dr Halim Shafie (immediate past Chairman, SKMM), Prof. Dr Abu Bakar bin Salleh (Universiti Putra Malaysia), Prof. Dr Lee Sze Wei (Universiti Tunku Abdul Rahman), Dr Lim Tong Ming (Sunway University College).

We live in the media age where a large segment of our society experience a constant barrage of information in our every waking moment and where multimedia and communications are an integral part of our daily lives. There is a heightened sense of connectedness and of the global community due to the capabilities of today's communications network.

The increase in the availability of new media over the past decade or so has enabled members of the public to regularly turn to sources such as websites and weblogs for news and information and social networking sites for interaction. Not surprisingly, new media has increasingly become the primary distribution channel to the connected communities.

Although traditional media services such as print and broadcast services in Malaysia continue to thrive, they are finding themselves increasingly in competition with new media for the consumer's attention. This has led to traditional media services and broadcasters to venture into new media availing services over mobile and the Internet in the form of online news and entertainment portals.

Personalisation of the Web

In recent years, the media landscape has been shaped by major developments which in turn started new trends in lifestyle and attitude of consumers towards media and its content. The rate that new media content is being consumed is astounding; fueled by the popularity of user-generated content and social media, these trends have profoundly changed the way content is shared and how information is organised and disseminated. Thanks to the dynamism presented by converging technologies and applications, user empowerment and personalisation of content have so transformed the media landscape, that Yahoo! acknowledged in 2007 that indeed personalisation (targeted content) of the

web experience is the future of the web and this was underscored by the fact that many web companies had shifted focus from search to personalisation.

Malaysians have clearly taken to new media. A study in 2007 revealed that 70% of Malaysian online users read blogs, 35% were bloggers and 80% watched video clips online.

According to a more recent research by O'Reilly Research, Malaysia had close to 1.3 million Facebook users (or 0.67% of the worldwide Facebook total) as of early May 2009 compared to 800,000 last December, and Malaysia was ranked fourth after Indonesia, Hong Kong and India in terms of Facebook users. As of May 2008, there were over three million unique visitors to Friendster from Malaysia, versus 758,000 to Facebook and 735,000 to MySpace, according to comScore.

Communications and Multimedia Connections in Malaysia

With these rapid and dynamic changes taking place in the communications landscape, Malaysia is becoming a more networked society. The public is able to access, interact with information services in new and innovative ways and will continue to be presented with new challenges and benefits as convergence takes its course. Furthermore, the consumer now has more personal control than ever over the media that they consume especially with the added convenience of mobility and converging services. Given this scenario, if consumers are to reap the benefits that the level of development communications has arrived at today, it is critical for the consumer to be able to manage the complexities as well as the often accompanying confusion and anxieties although in varying degrees.

Undoubtedly, the influence of new media is growing; its benefits and impact tremendous. This underscores the concerns of the Government, in particular the impact of negative aspects on society such as pornography, false information, online gambling and so on and its implications for regulation and the requirement to enhance consumer protection and promote localised content at the same time.

Media Literacy as a Sustainable Regulatory Function

Evidently, the patterns of consumption and the ways of engaging with communications services as are their preferences and attitudes, vary from one consumer group to another.

Going forward, it is vital that decision and policy makers have a clear understanding of markets and peoples' attitudes and how they – the market and people - are changing. For example, there is also growing concern on issues of public interest such as accuracy and reliability of information acquired through online means and also why the public increasingly seek information from such alternative online sources.

In acknowledgement of such concerns and more, SKMM has embarked on a research collaboration programme with local private and public higher institutions of learning to establish knowledge resources on the use of new media

outlets by Malaysians. The initiative is aimed at assisting SKMM and the Government to achieve national interest objectives such as promoting not just an online environment with quality content, but also adept and responsible users who are able to articulate the benefits of new media to their advantage. This is part of the regulatory strategy to encourage an industry that is self-regulated and to engage civil society to regulate content themselves through education and awareness so that they are empowered to manage their relationship to content.

In late 2008, four grants were awarded. Universiti Utara Malaysia received a grant to carry out research on the topic: 'Ascertaining the influences of Weblogs and their User Created Content in Blogosphere Community of Malaysia'. University Sains Malaysia was tasked to research on 'Young People and New Media – Social Uses, Social Shaping and Social Consequences'. Universiti Tunku Abdul Rahman received a grant for their topic titled: 'Social Impacts of blogging on young adults: how it shapes individual opinions' while Universiti Putra Malaysia will do research on 'Self-regulatory framework and mechanism in the Malaysian media environment'

It is envisaged that the programme will produce findings that could be used to develop sustainable practices and policies for managing both the positive and negative aspects of new media more effectively and for the long term. The findings would contribute towards the basis for developing strategies aimed at not only to promote greater levels of media literacy among the public but to generate awareness of the advantages and benefits of a media literate society.

The public will be able to have access to the findings of the studies through seminars and publications of the SKMM. In addition to this, the SKMM will conduct programmes designed to raise awareness and educate segments of the society beginning with schools within the Klang Valley.

Conclusion

Clearly, we will continue to face challenges and opportunities in media and communications in the future and we will have to be ready to face any emerging issues. The collaboration with research institutions is an initiative that will provide a means for SKMM not only to remain circumspect of the regulatory issues surrounding content on media of the times and to be forward-thinking in identifying future issues for policy and regulation. **smy**

For more information about the Research Collaboration on New Media Content between SKMM and Institutions of Higher Learning, you may contact contentresearch@cmc.gov.my or visit www.skmm.gov.my .

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Mobile content and applications
the next area of growth?

The rise of high speed mobile networks is creating a momentum that will transform the mobile industry into a delivery channel for mobile contents and applications. Albern Murthy looks at the possibilities being opened by this phenomenon.

With all the gloom and pessimism surrounding the world economy, one area still shines brightly. Mobile Internet growth patterns continue to grow rapidly all over the world. In the United States, operators Verizon and AT&T reported data revenue growth of 41% and 51%, year-over-year revenue in the fourth quarter of 2008. The analysts, Consultancy Accenture estimates that the western European mobile data market is worth 29 billion euros ($36.5 billion) and forecasts it will grow 21 percent a year until 2011.

The picture is equally rosy on our side of the world. Frost & Sullivan reported that mobile broadband adoption and usage are experiencing explosive growth in Asia. It said that mobile data revenues for the Asia-Pacific region in 2008 totaled US$65.1 billion, compared to US$21.9 billion in 2003. Mobile penetration rates in Asia have crossed the 50 percent mark. By the end of 2008, 25 percent of the region's mobile devices were Internet-enabled, with 14 percent being 2.5G enabled and 9.0 percent 3G enabled. Frost & Sullivan expects growth to continue. "Going forward, we expect this number to increase dramatically by 2014 when 47 percent of the region's device will be able to receive an Internet connection," said Nitin Bhat, senior vice president for information and communications technology (ICT) practice of Frost & Sullivan at the Mobile Broadband Asia Pacific Summit 2009.

Clearly the continued robust performance of the mobile industry is due to the growth of mobile Internet as voice revenues have been flat or declining for years now. Even first generation data revenue streams such as ringtones and wallpapers are past their glory times.

Mobile data now is synonymous with mobile Internet. As more and more mobile users switch to smart mobile devices and begin experiencing mobile Internet, the demand for mobile content and applications will show the same growth patterns, opening up excellent opportunities for mobile content and application creators. It is without doubt, the next area of growth.

Fulfilling 3G's Promise

What the industry is witnessing now is the result of investment in 3G networks. Admittedly it has taken some time - 3G has been around for three to four years now. The focus initially was about video calls but that alone is not sustainable. 3G networks were always designed to be more than just a conduit for video calls. The main premise of 3G has been about bringing a better Internet experience to users and about content and sharing.

At the same time, one must acknowledge the role of the latest generations of mobile devices. Mobile phones have become highly sophisticated devices. As new and better devices are made available at better prices; more Malaysians can now afford these media rich phones. Even the web has adapted to the trend towards accessing the Internet on mobile devices. It was just yesterday when not many websites were accessible to mobile devices. Even the ones that were did not provide that good a visual experience to users. Today, a large number of sites can be used on mobile devices.

Within this rollout of technologies and advances of devices, another factor has been instrumental in bringing this new paradigm and that is the change in consumer behaviour.

When consumers discovered that they can download content at acceptable speeds on mobile, mobile Internet took off. To a certain extent, in the initial days, while networks were being built, the experience may not have been perfect. Streaming was not that good an experience.

Gen Y and Gen X Use The Mobile Internet Most

"How often do you browse the Internet from your cell/mobile phone?"

(percent answering "At least monthly, " At least weekly," or "At least daily")

31% — Gen Y (18-28)
27% — Gen X (29-42)
17% — Younger Boomers (43-52)
13% — Older Boomers (53-63)
4% — Senior (64+)
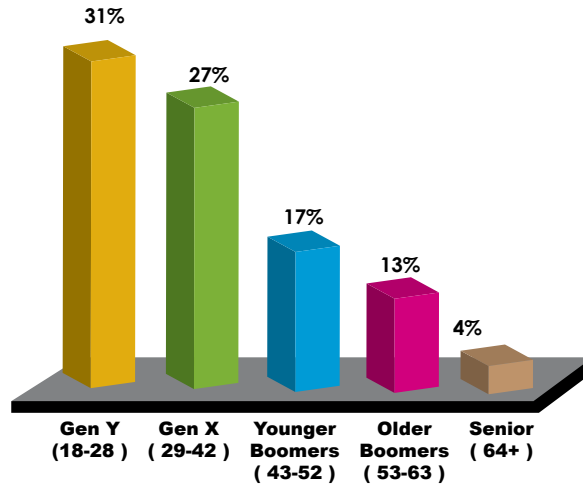
Base : US consumers with a cell/mobile phone

Source : North American Technographics Marketing And Mobile Internet Online Survey, Q3 2008
Source : Forrester Research, Inc.

Not surprisingly consumer take-up was slow. The mobile consumer today has a far better experience and the results speak for themselves.

What we are witnessing in this country is not unique; it is a worldwide trend. Other regions have gone through the same path or are somewhere behind this region. By and large, Europe has led the 3G charge and there are some very good examples there to emulate.

Although this region has excellent mobile data adoption rates, it can be said that it is around where Europe was 2 years ago. We have progressed from the stages of WAP, GPRS and later EDGE technology to the point now where more have access to high speed broadband Internet. And every day, more mobile phones are connecting online.

Where the operators fit in

Mobile operators too have gone through an evolution in their approach to generating revenue from mobile data. The boom in mobile Internet has changed the industry. The old approach was to launch GPRS services and then offer content within a walled garden. Today, it is in general based on an open garden concept. Of course, revenue from sales of downloads and ringtones will not go away for the next few years but the main action will be in serving the current lifestyle of sharing and connecting. This lifestyle has become the main driver of the PC environment and it will also dominate the mobile Internet soon.

To thrive in this new environment, mobile operators may best succeed by focusing on becoming platform providers. Again, the European experience bears emulating. After initial hiccups, there is a lot they have done right. The T-Mobile Group is an excellent case study. They have focused on becoming a pure platform provider. They do not aim to host exclusive content. Instead they take a very open approach.

By doing so, it is not important for operators to focus just on developing the content. Instead they have to work on finding the right partnerships. The content and mobile industries have to work together rather than as two separate entities. There will need to be more collaboration between them. The focus has to be on the end users.

Working out the right model

Just like how mobile operators have to rethink their strategies, the content industry too has to modify its approach towards making money on mobile. The good news is that the right kind of change is happening. The music industry is a good example of this phenomenon. It is starting to change to the right direction though they could have done that a lot sooner. It is moving away from the license model where, for example, every truetone download is RM5 no matter how many truetones are downloaded. Consumers have consistently proven that they will not change their habit of downloading from other sources if the cost of downloading multiple truetones on mobile is still expensive. They will just go for the other option that is available from just about everywhere on the Internet.

The content industry is finally accepting that they cannot control people but they have discovered that if they make it affordable, people will definitely do a lot more original downloading of games and songs. Together with affordable price packing from the operator's perspective, that will drive the mobile content industry a lot faster. It took the industry some time to understand this.

The key is pricing and packaging. Affordability is an industry responsibility and here the content and mobile industries have to work as one. It is not possible to have separate agendas in terms of acquiring the same customers. Mindsets have to change and both parties will have to come round to the idea that volumes will compensate for

Source: AC Neilsen

lost margins. The content and application industries will deliver compelling content and innovative applications while mobile operators will work on getting more people to take up the contents and applications through creative packaging. One good stating point for this partnership would be to answer this question: How can my customers experience your application on my network?

Successful Mobile Content and Applications

When the right mindset is reached, it becomes easy to move on to determining what types of content and applications will be desired by mobile users. Getting mobile content

applications right too was a lesson learnt after many wrong turns. A lot of resources initially went towards developing innovative solutions and applications that were either ahead of time or required intensive consumer education.

The mobile industry created various innovative solutions but the lesson learnt was that people take time to adopt. Too many resources then have to be spent on educating the users. The easier path is to simply deliver what works on the big screen albeit with a twist; mobile content and applications have to look and work easily on mobile.

The right approach then is to go back to traditional stuff and create things that people want. Results all over the world show that it pays to follow the Internet trends rather than innovative trends. The trick it appears is to simply deliver what's hot at any time. In the mobile industry it pays to keep things simple and to also just emulate what works on the Internet.
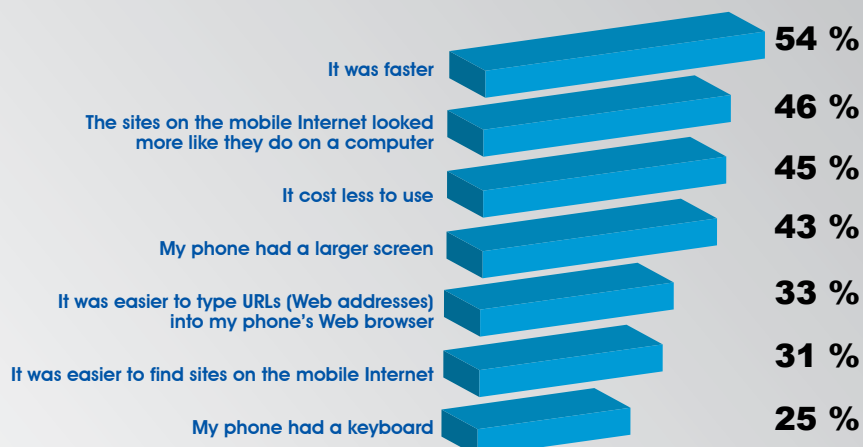
The growing prevalence of Internet enabled mobile devices is moving the online content world towards getting their products onto mobile devices as fast as possible. This strategy is sound because customers who have been using these applications or downloading content from laptops and PCs want to continue their love affairs on their mobile devices. They want a simple logon process and in essence, the same experience on mobile devices.

The mobile operators will provide their expertise in ensuring that the Internet experience is as good on mobile as it is on larger screens. The mobile industry's role then will be in facilitating that experience. The operators that succeed in creating the best experience of popular Internet applications in their networks will do well. They will focus too on ease of use.

At the same time, the Internet content industries can learn a lot from the mobile industry in terms of customer profiling and customer management. On mobile, operators

**Slow Networks Hinder Younger Generations;
Device Issues Hold Back Older Users**

**I would use the mobile Internet on my
cell/mobile phone more frequently if..."**

It was faster	54 %
The sites on the mobile Internet looked more like they do on a computer	46 %
It cost less to use	45 %
My phone had a larger screen	43 %
It was easier to type URLs (Web addresses) into my phone's Web browser	33 %
It was easier to find sites on the mobile Internet	31 %
My phone had a keyboard	25 %

Source: Forrester Research Inc

All Generations Favour Search Sites;
Gen Y Dominates Mobile Social Networks

" Have you used the following types of mobile Internet sites? "
(percentage of mobile Internet users answering "yes")

Category	Percentage
Search (e.g., Google, Yahoo!)	75 %
Media (e.g., New York Times, CNN)	65 %
Retail (e.g., Amazon.com, eBay)	51 %
Social networking (e.g., Facebook, Myspace.com)	50 %
Travel (e.g., airline sites, Orbitz, Kayak)	46 %
Banking (e.g., Bank of America, Citibank)	41 %

Source: Forrester Research Inc

can assist by profiling customer based on mobile content & applications.

Since it knows its customers intimately, mobile operators are ideally placed to deliver this edge. They can work out what a customer wants. Concerns like privacy will have to be given due attention but with a proper permission based process in place; mobile operators can help content and application makers fine tune their products and deliver even better mobile experiences. Customer profiling will be a key element driving mobile Internet adoption and it is likely to be the next stage towards the creation of ultimate mobile Internet applications.

What to focus on

The point made earlier is the best guide towards creating mobile applications and content that are relevant to mobile users: follow hot Internet trends and work towards making the mobile experience as delightful as possible. Consumers will not be abandoning their desktops totally but instead will become increasingly more mobile. They will expect to have access to similar applications and content when on the move.

One excellent approach is that which is taken by Google. It has worked hard to create the same experience on mobile. Users of their applications get an immaculate experience when they access their favourite applications on mobile devices.

Following hot Internet trends is likely to make it easy to get consumers to take up newly developed content and applications. Currently, the Internet is all about sharing. The Internet space is filled with communities creating and sharing their own content. The mobile industry must focus on these hot topics. For example, consumers are demanding better ways to experience applications like Facebook,

Tweeter, mySpace, email, navigation and maps on their mobile devices.

Another related hot trend to watch out for is that of delivering information and opinions. These days, consumers are increasingly searching for tips and opinions on lifestyles. It can range from opinions on where to eat, what clothes to wear and what gadgets to buy. Consumers are keen to get these types of information on their mobile. The technologies to create these applications and services are available now.

Consumers are also looking for applications and services that simplify life. An Ericsson ConsumerLab study undertaken in 2007 in US, UK, Italy and China revealed a list of mobile services the respondents were willing to adopt. The top 10 services that consumers were most looking forward to are listed below.

1. Paying Public Transport
2. Buying From A Vending Machine
3. Using Mobile Phone As An ID/To Gain Entry
4. Getting Product Info On Your Mobile Phone
5. Recharging Phone With E-Money (Online)
6. Automatic Mobile Phone Backup Service
7. Positioning Service (Like GPS)
8. Buying Product In Store
9. Downloading Coupons And Maps From PC
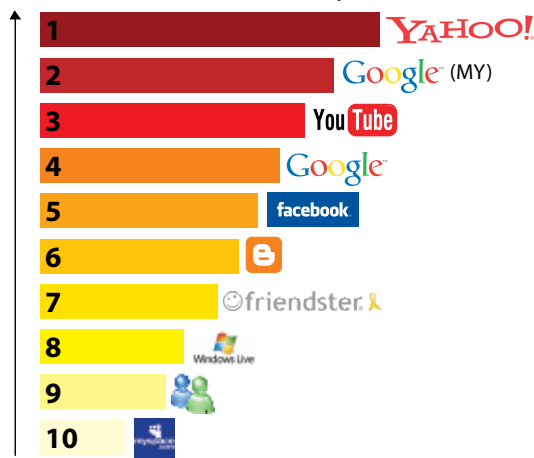10. Sharing A Picture

Local Content

There is a huge role for local content in the mobile ecosphere. Profiling consumers is another word for creating local content. DiGi for example has created a website that is all about creating a customised view of the Internet. The website, located at MyInternet.com.my, is a fresh approach that seeks to bring established applications like Facebook

Digital Malaysia

There is an estimated total of 15 million Malaysians online

TOP 10 SITES SURFED by MALAYSIANS ONLINE

1. YAHOO!
2. Google (MY)
3. YouTube
4. Google
5. facebook
6. Blogger
7. friendster
8. Windows Live
9. (MSN Messenger)
10. MySpace

Myinternet.com.my screenshot

and Friendster together with local content. Approaches such as these are likely to do well.

It is everyone's role to help get local content going. The mobile operators have a corporate responsibility to do this but it also makes great business sense. Local content is becoming very popular these days especially for independent music labels, references to vacation spots and restaurant guides in Malaysia.

Another approach can be to create platforms on which users come and create their own content. These platforms must be creative and relevant to the local community; not aimed at simply creating another version of say, Friendster. Mobile operators can motivate local content developers by highlighting to them what the trends are, what people are willing to pay for, by giving them focus areas.

Some parties are also doing well by taking international content and making it relevant to local users. Good examples are localised maps that can be uploaded to GPS solutions. The opposite is also viable as there certainly are local applications and content that can be exported to the world. Malaysian companies for example have developed great traffic solutions and home monitoring applications that would be relevant anywhere else in the world.

Mobile operators can also help to jointly educate customers. Local content will have a boost when everyone is geared towards promoting the same themes. For example, if the industry believes that online communities and email are the big topics now, all events and road shows can push these themes, creating a reason for content company to go and develop into these trends and market. Other approaches could be through competitions or funding or sponsorship that are focussed on specific hot themes.

Creating the Right Ecosystem

Attention will also have to be paid to getting a complete ecosystem ready for a new age of mobile Internet. One area

that would need to be addressed is that of payment. Mobile Internet will involve online shopping, confirmations of purchase. Transactions will require the use of credit cards.

When mobile content and applications take off, financial institutions will have to be involved. Areas like credit card transactions and online banking will have to be stream-lined. In fact, exhaustive precautionary measures will have to be in place to avoid fraud.

Also, it will be important to ensure the regulatory and monitoring processes stay up to date. If bad apples get into the act and start delivering damaging content, consumers are likely to stay away. The industry has seen the damage that can be caused in the text messaging areas when some scams scared away consumers from genuine value providers.

The Content Age is Here

It will require effort and education by all parties to reap the Malaysian market which is poised for a huge explosion in mobile content and applications. It will be important, in terms of mobile Internet, banking industry, mobile operators, content provider and regulatory monitoring, to ensure that the quality of content is what the customer wants.

Do that right and everyone will benefit. In fact, the saying that 'Content is King' will never be truer. **smy**

Albern Murthy is Head of Products and Segment Marketing, DiGi.

The
Malaysian
Internet User

The series of Household Use of the Internet Surveys carried out by SKMM over the last few years enabled a profile of web surfers in Malaysia to be developed. Ng Wai Mun reveals what the Malaysian Surfer looks like.

The Household Use of the Internet Surveys (HUIS), conducted in 2005, 2006 and 2008, revealed that more and more Malaysian Internet users are acquiring information from the Internet. Back in 2005, only 41% of the Internet users were accessing the Internet for information. Then in 2006, it rose to 85% and jumped to over 94% in 2008. These figures mirror the worldwide trend that has seen the world turning to the Internet as a primary source of information and which also turned Google into a noun. In the United States, for example, 96% of people conduct searches on their computers.

The interesting figures above are the fruits of surveys carried out through SKMM's Computer Assisted Telephone Interview (CATI) Centre. SKMM regularly commissions surveys and industry reports on areas that it regulates to obtain a better picture of trends and patterns of the industry.

Methodology

The main objective of the HUIS was to collect data pertaining to access and use of the Internet in Malaysia. In the context of the HUIS, an Internet user is defined as someone who accessed the Internet at least once in the past month at his/her own home. Other means of access such as through hotspots or at work were not considered in this survey. Randomly generated PSTN numbers were then dialled and if it is an Internet-equipped household, a randomly selected user was sampled.

Penetration

From the responses received during HUIS 2008, on average, one household Internet account is shared by 2.26 users in Malaysia. This translated to 1.9 million Internet users in Malaysia as at the end of March 2008. In terms of household broadband penetration, Malaysia's penetration stood at 17.6% as at end-September 2008. For comparison, one of the most connected countries in the world, Iceland, has 76%.
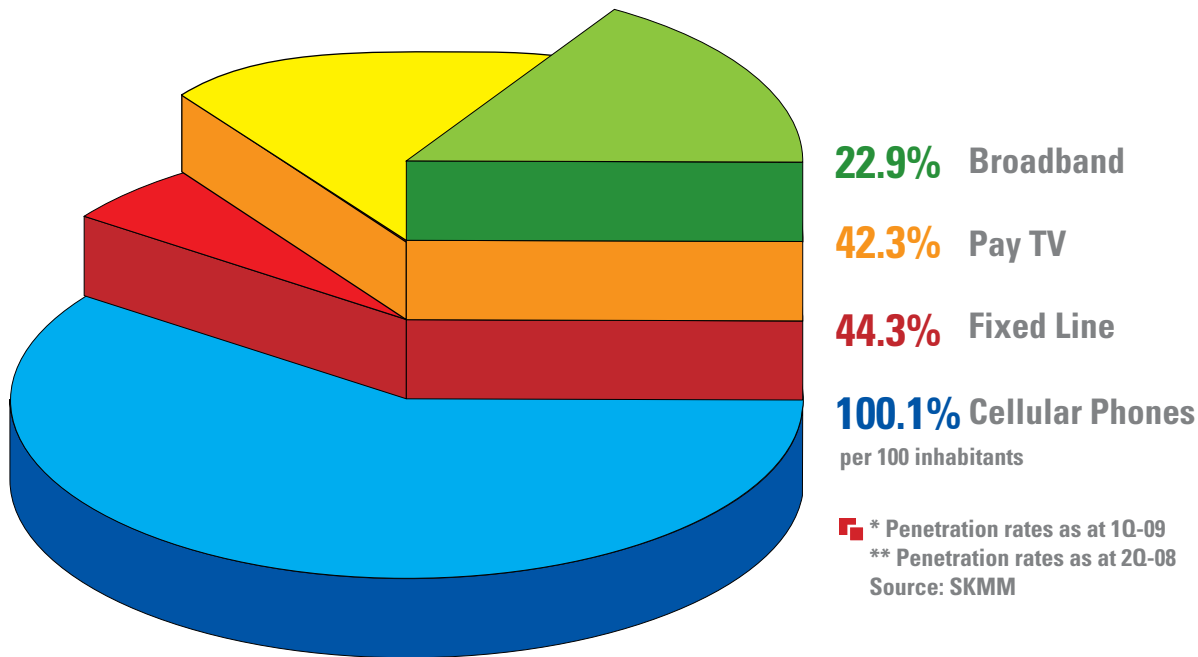
Access trends

Just four years ago, the main mode of Internet access in this country was through dialup and up to 81% said then that they had no plans to migrate to broadband. Only 19% said that they intended to migrate to broadband. Since then, the mindsets of these Internet users have become much more receptive to broadband. In 2008, 74% of these users were already accessing the Internet via a broadband connection. Dialup users accounted for a low 25% with the remaining 1% users using both connections. Awareness issue however remained a problem. In 2008, among the dialup users, only 64% knew of broadband's existence.

Over the past few years, the workplace remained as the main place where users accessed the Internet apart from their homes. So much so, some quarters held the opinion that the fact that workplace offers Internet access to its staff may itself indirectly retards the growth of Internet broadband subscribers in the country. Most would have done all the Internet related chores in the office and thus there is no need for personal Internet access at home. Moreover, the Internet access in the office would be free.

This may however change in the near future. In most developed countries, access trends are heading towards mobile. In the United States, 20% - 40% of the Internet users make use of smartphones to read news online, search and visit websites. In South Korea, the situation is similar where most Internet traffic are derived from mobile phones. In a survey done by the National Internet Development Agency of Korea, wireless Internet for mobile phones ranks highest at

Communications and Multimedia Connections in Malaysia

22.9% Broadband

42.3% Pay TV

44.3% Fixed Line

100.1% Cellular Phones

per 100 inhabitants

* Penetration rates as at 1Q-09
** Penetration rates as at 2Q-08
Source: SKMM

51% followed by wireless LAN at 8% and usage of broadband wireless Internet at 3%.

The Korean survey revealed the reason behind wireless Internet's popularity in Korea was because it allows users to access Internet from anywhere i.e. immediate access when it is needed. However, should not this also be the main form of Internet surfing in other countries as well? This is currently not the case. Perhaps the issue of smartphone pricing (relative to the cost of living) forms a major factor in determining the popularity of wireless Internet access via smart phones in a particular country.

Who's surfing?

There is not a big gender gap among the Internet users. In 2008, 52% of users were male and 48% were female. Internet usage however is highly driven by the young generation. 53% of Internet users were below 30 years old and a huge 75% were below 40 years of age. Even though younger people were the ones accessing the Internet the most, this appeared to start only after users had reached 15 years of age. The survey found that only 7% of Internet users were below 15 with that figure rising to 18% for those between 15 to 19 years of age.

These figures would be interesting reading for those involved in delivering rich media services and applications because a study in the United States showed that younger users were driving media consumption there. High bandwidth activities such as watching or uploading videos and photos, listening to music and so on were primary activities of the younger generation in the United States.

The digital divide remained wide in Malaysia. Location wise, urban users outnumber rural users 6 to 1. Most house-holds accessing the Internet are found in urban areas. In 2008, Selangor and Kuala Lumpur hold 39% of these households. Not surprisingly, education is linked to Internet usage. 66% of Malaysia Internet users hold a degree or diploma.

Average use per week

Back in 2005, as high as 43% spent less than 4 hours online per week and only 9% spent 28 hours and more online. In 2006, the HUIS revealed that usage has increased. 16% of the users now are spending 28 hours and more online per week while only 26% spent less than 4 hours online. The numbers are even more telling in 2008 where 28% spent 28 hours and more online.

In a survey conducted by Goldman Sachs, in the United States, the overall time spent online is approximately 22.5 hours per user per week. Usage however has been flattish over the last few years. Internet usage over the computers has been stable. Mobile Internet usage however is on the rise, with 5% of those surveyed accessing the Internet through mobile devices compared to 3% in 2008 and a mere 1% in 2007. This seems to mirror the trend of the Korean users as well. The higher usage merely reflects the more mature markets of the Internet users.

Americans are spending a lot of their online time on media content such as watching movies and TV, blogging and creating/uploading video content. And for the younger demographics, they are spending a lot of time on social networking sites and instant messaging.

One would not be able to pin down any one particular reason to explain the increasing usage in Malaysia as compared to the US's flattish but high usage. Some would attribute the increasing usage as being the trends of usage

in developing countries. Others would claimed that the services offered in this country are improving, thus worthwhile to spend more time online.

On the contrary, some may even be bold enough to claim the longer usage time reflects the slower speeds available to the Internet users. A user may need to spend more time online to perform its tasks as compared to users in other countries. At this juncture, data linked to the speed available to the users in the various countries is not available to substantiate this claim.

So what do Malaysians do online?

In 2005, the Internet was primarily used for communications, accounting for up to 99.6%. Searching for information grew strongly the following year where 85% of users reported that they were getting information online. The trend continued in 2008 where getting information and communications were the main reasons users went online. In South Korea, usage of the Internet, for communications, account for a lower 70%.

Moving forward, percentage wise, we expect these percentages to decline as more and more new applications are available to those that surfs the Internet. The time online will be spread between communications and these other new applications.

In HUIS 2008, participants were asked if they had carried out Government transactions online or engaged in online stock trading. 20% were using e-Government transactions and 6% used online stock trading. Other usage included education, leisure, financial activities and public services. As awareness increases and Internet transactions made safer, we expect e-transaction related activities to increase tremendously.

Of those visiting Government websites, an overwhelming 92% searched for information; 64% went to download information while 53% downloaded forms. Those who lodged complaints or got advice through the websites accounted for 20% and 19% respectively.

On e-Government, an internationally accepted benchmark can help one understand this country's e-Government readiness and adoption. The United Nations conducted an annual e-Government survey which included a section titled e-Government Readiness. This survey ranks countries according to two primary indicators. The survey assesses the state of e-Government readiness and the extent of e-participation. This survey assessed the 191 member states of the UN according to a quantitative composite index of e-Government readiness based on website assessment, telecommunication infrastructure and human resource endowment. Malaysia ranked 34 in the 2008 e-Government
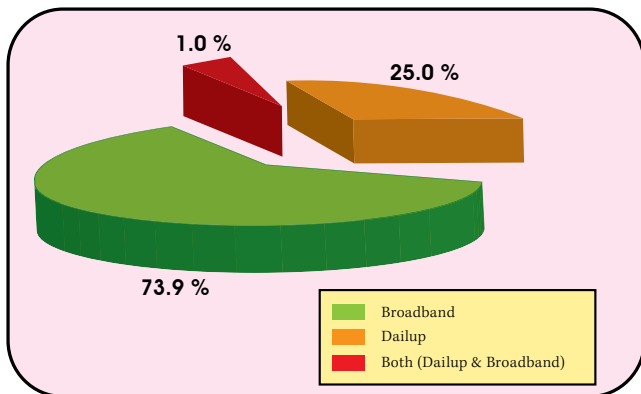
Malaysian Users of Internet By Age Category

Age Category	Percentage share of household user base		
	2005	2006	2008
Pre-teens & Teens (up to 19)	25.1	26.0	24.7
Adults (20-49)	66.5	67.0	65.8
Seniors (50+)	8.4	7.1	9.4

Activity on the Internet

Internet usage	Percentage share of household user base		
	2005	2006	2008
Getting information	40.5	84.5	94.4
Communication by text	99.6	80.7	84.7
Leisure	47.1	52.7	63.5
Education	46.8	45.9	64.5
Financial activities	14.6	23.6	31.8
Public services	12.7	12.0	29.2
e-Government transaction	-	-	19.8
Online stock trading	-	-	5.9
Others	1.3	0.2	0.7

Source: SKMM

Methods of Internet Connection

- 1.0 %
- 25.0 %
- 73.9 %

Broadband
Dailup
Both (Dailup & Broadband)

Source: SKMM, HUIS 2008

Type of Blogs Frequently Visited

	Percentage
Others	17.5
Media blog	47.2
Business blog	19.6
Blog search engines	42.8
Blogging communities and directories	63.5
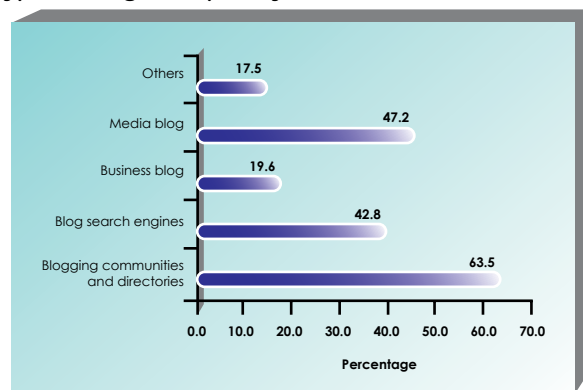
Source: SKMM, HUIS 2008

Readiness Index with a rating of 0.6063. Sweden was number one with a rating of 0.9157. The United States ranked fourth with 0.8644; Singapore came in 23rd with 0.7009.

Looking at other Internet usage habits, over in the United States, users aged from 18 to 29 used the Internet mostly for social networking and communicating with others, mainly in the form of emails. However, older users allocate more of their online time playing casual games and researching on health related content.

E-commerce

Throughout 2005 and 2006, airline ticket purchases were the most popular items bought online in Malaysia, 43.8% and 58.5% respectively. The second most popular item was

books. In both years, most users spent less than RM500 over the same three months.

On the contrary, where e-commerce is concerned, online purchases in the United States have flattened out to 20 purchases over the past year. Whilst "airline ticket" was the most popular item purchased online in Malaysia, clothes takes the top spot in the United States with travel related purchases lingering in third spot only.

Although e-commerce is getting big in Malaysia, the United States reported that e-commerce spending slowed down in 2008. Amazon.com continues to lead the pack in this segment. Americans bought apparel, books, travels and consumer electronics online, similar to Malaysia in terms of

items. 71% of Americans cited that item prices were the key driver that affected their purchasing decision.

Others

Among other areas covered in HUIS 2008 were the peer-to-peer (P2P) usage, blogs, instant messaging, phishing and digital signatures.

Most P2P users primarily used the Internet to stream media followed by file sharing.

Awareness of Broadband

Percentage of dial-up users still not aware of broadband

35%

Instant messaging is also gaining momentum in terms of usage. Over 58% users used it.
Source: SKMM, HUIS 2008

64% of the respondents knew what blogs are, with 10% of them having their own blogs. 44% users who knew about blogs, accessed them at home.

Instant messaging is also gaining momentum in terms of usage. Over 58% users used it. The most popular being Yahoo and Windows Messenger followed by GoogleTalk and Skype. The majority used instant messaging to communicate with family and friends.

As services improve into the medium term, instant messaging services may no longer be just anciliary services used for casual social conversations but could become part of the main communications mode for the public. Whether such messaging systems will overrun SMS as the main mode for short messaging remains to be seen. Undoubtedly this will be closely tracked by the mobile phone service providers. Currently the SMS segment accounts for approximately 30% of their earnings. The loss of this 30% would have a huge impact on the mobile service providers. If these other messaging systems do encroach into the SMS market share, the mobile phone service providers will probably be re-strategising its business models to counter new challenges to their businesses and bottom lines.

Despite reports saying phishing is a huge problem, 72% of home users admitted to not knowing what it is but 85% of this group were savvy enough not to click on any links that is in their emails.

As for digital signature, only 27.6% of the users knew about it while only 28.8% knew how to get one. **.my**

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Human capital development

through SKMM Academy

SKMM Academy was established in late 2007 and commenced operation in April 2008. It is currently part of Human Capital Management Division of SKMM.

The establishment of SKMM Academy is in line with the 10 National Policy objectives for Communications and Multimedia Industry. We shall endeavour to support and fulfill the objectives for this industry as enunciated in the Communications and Multimedia Act 1998.

One of the objectives is to support the strategic thrust in capacity building by developing industry capabilities.

Therefore, the mission of SKMM Academy is to develop competent human capital for SKMM and support the industry through competency identification and development in line with market and industry requirements.

The SKMM Academy will be a centre of excellence for SKMM and the industry

Since SKMM Academy is still in its infancy stage, capacity and capability building for SKMM staff will be the main focus in order to build a concrete foundation that will support the industry.

The aspiration of SKMM Academy is to become Centre of Excellence and Reference in this region to support the telecommunication and multimedia industry.

Adding Value

Basing on its core values on authoritativeness, competency and integrity, the Academy focuses on both internal staff and industry players to share knowledge, experience, learning including updates on the latest developments in this industry.

Initiatives by SKMM Academy are in line with the following strategies:-

- To inculcate & align SKMM Core Values in the programs
- To adopt "CRM – Customer Relationship Management" approach to serve our STAKEHOLDERS
- To partner with STAKEHOLDERS & achieve "Collaborative Efficiency" for mutual benefits
- To promote self-actualization, lifelong learning and knowledge sharing

SKMM Academy has developed a list of training programmes for the year to be conducted that will benefit both SKMM and industry players.

In the near future, SKMM Academy plans to organize flagship programmes and collaborate with local & international universities and organizations in promoting initiatives on research and development programmes.

To promote self regulating mentality and enhance learning environment among our licensees, SKMM Academy intends to strengthen its programmes in subject matters that are related to compliance, regulatory acts, spectrum management and economic regulations among others.

In line with the above, SKMM Academy has initiated the process of signing MOU with local universities and joint efforts with industry players to have collaboration programmes and initiatives to enhance skills and knowledge of SKMM staff as well as industry players.

What Has Been Hapenning?

Although still at its infancy, SKMM Academy has been busy with a number of in-house and external programmes. Over 300 SKMM staff and 340 industry personnel have so far benefited from the programmes. Among the notable programmes are the workshop in collaboration with University Malaya on 'Digital Convergence and the Regulatory Space' and content regulation workshops covering 'Recent Fatwa and Medicinal Products Advertisement Guidelines' and 'SMS, Contests and Sponsorship'. Of course more are in store in the coming months.

Conclusion

The way forward for SKMM Academy is to keep abreast with the key challenges and critical success factor that includes:-

- Understanding the critical skills required and competency gaps for current and future trends
- Building collaboration and strategic alliances with technical experts in this industry (i.e ITU, ABU, APT etc.)
- Working with experts on program designing that add value , impact and accelerate the learning curve of SKMM staff as well as the industry
- Capitalized on technology enablers to enhance learning management system and create a conducive learning environment for SKMM staff and industry players.

With these priorities, we will be able to achieve our objectives and turn our aspiration into reality. .my

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FELDA Chini
A Connected Community

Rural communities are being empowered by the setting up of Community Broadband Centres. Md Rusli has the story of how one such community is being introduced to the possibilities of a connected world.

About 86 km from Kuantan on the way to beautiful Tasik (Lake) Chini, Malaysia's second largest freshwater lake on the east coast of Peninsular Malaysia, is a Community Broadband Centre (CBC) or Pusat Jalur Lebar Komuniti (PJK). This CBC serves a 22,800 strong community of mostly smallholder oil palm growers in the Federal Land Development Authority's (FELDA) cluster of development schemes in Chini, Pekan, Pahang.

Located in the village of FELDA Chini 1, the centre established in January 2009 also serves settlers in Chini 1 and those in the neighbouring Chini 2, 3, 4 and 5, Chini Timur 1, Timur 2, Timur 3 schemes, as well as outsiders.

The air-conditioned centre which is open from 9am to 6pm, seven days a week has two rooms, with nine networked PCs each and a 3 Mbps fibre connection to the Internet provided by Telekom Malaysia (TM) and WiFi access for those who bring their own notebook. Telekom Malaysia also pays for the electricity and water bills, and Internet access charges.

Centre manager Wan Safie bin Wan Omar and his assistant manager Mohd. Redzuan bin Abu Ghaffar each take different sets of two rest days during the week but are there in full force during the weekends.

The centre charges non-members RM1.50 per hour for use of the PCs, while members who pay a one-time fee of RM5 for life get two hours free usage per day for the first three months, after which they pay RM1 per hour. The system monitors their logon time and automatically logs them off after the free two hour limit, after which they pay to log on again if they need to.

Casual users usually stop after two hours, while students doing their research assignments and others using the PCs for business or other work usually extend the usage.

More PCs needed

Still demand is overwhelming and Ahmad Hamidi, the Tok Empat or village chief of FELDA Chini 1, himself also an oil palm grower, feels there is a need for more PCs to meet the demand.

"The centre is great as it provides settlers with an opportunity to benefit from the use of information and communications technology and it's a great convenience for them. While the children can learn about ICT and primary and secondary school students can use this facility to obtain information, to conduct research, their parents can come in to gain knowledge and most parents are delighted to have this ICT facility here," said Ahmad Hamidi.

"However, there aren't enough PCs to meet the demand and I hope there could be more," the village chief added.

The first room is for people to use to access the Internet, write letters, create spreadsheets, presentation slides and so on using Internet Explorer, Mozilla Firefox and Microsoft Office 2007 on the PCs running Windows XP. It also has a networked colour and black and white laser printer, document binding and laminating equipment for public use.

The centre charges 20 sen for each black and white print-out and RM1 per colour print-out plus other fees for binding and lamination.

The second room is used to conduct training about PCs and their use, though when there are no training sessions, it is also available for those who want to surf the Web or do other work when PCs in the first room are all occupied and it often fills up quickly too.

Rather interestingly, the language used on the PCs and applications is English. Even though few settlers, who are all ethnic Malay and not that fluent in English they are more comfortable with using English on the PCs since they find Bahasa Malaysia translations by the software more difficult to understand, according to Wan Safie.

"Most Web surfers use the PCs to access social networking sites such as mySpace and Friendster, use Yahoo! Messenger to chat and to read the online editions of the Berita Harian, Metro and Kosmo newspapers," he said.

Secondary school students use electronic-learning websites such as Guru.Net.My for trial examinations, Microsoft Excel spreadsheets and PowerPoint presentations for their school work. They also use the Internet to do their school assignments, while diploma students use the Internet to conduct research, and school leavers use them to find a job.

Primary school students access electronic-learning sites such as Edufunclub.com and CyberMelayu.com. Small business owners use Microsoft Word to create price lists for their produce, while senior citizens use the PCs to chat online with their children in other states.

While most people in the FELDA Chini schemes are oil palm growers, there are small business owners, teachers and Government clinic nurses there.

However most cannot do Internet banking because they need to obtain a PIN from their bank in Kuantan, some of which give them only two hours to activate it and by the time they get back to Chini, a journey of about one hour, the PIN has already expired.

As most of the settlers have no PCs in their homes, the training centre conducts training to familiarise them in the functions of different parts of the PCs, how to use the Internet to obtain knowledge and information, how to use e-mail and how to use office applications.

"Whilst most primary school children start without even knowing how to use a mouse, they soon become very adept at electronic-learning and at playing online games," Wan Safie added.

To resettle the landless poor

FELDA was established on 1 July 1956, just over a year before Malaysia's independence, with the mission to carry out and implement development projects.

One of its objectives was to resettle the landless poor and provide them with opportunities and today 813,313 hectares of land are under FELDA and 530,000 persons benefited from it. Its new generation programmes include skills training for youth up to diploma level.

It also implements activities which can help modernise the agricultural sector in areas where FELDA has administrative authority, especially in activities related to the production, processing and the marketing of agriculture and livestock product, as well as to assist, guide, advise, manage and coordinate social, settlement, agriculture, industrial and commercial activities in FELDA areas.

Since April 2004, FELDA was placed under the Prime Minister's Department and the minister responsible for it is Y.A.B. Dato' Sri Mohd Najib Tun Haji Abdul Razak, Malaysia's Prime Minister, whose father, Tun Haji Abdul Razak (Malaysia's second Prime Minister) conceived the idea of FELDA.

Connecting communities

Community Broadband Centres such as the one at FELDA Chini 1 are the result of the Connected Communities

approach under the Universal Service Provision (USP) Broadband Community project initiated by SKMM, with the aim to provide collective access to broadband services for rural and remote communities living in the rural or underserved areas, which most privatised telecommunications service providers find not profitable to provide service to.

Compared to urban dwellers who can almost take the availability of telephones, computers and broadband Internet access for granted, people living in rural and remote areas lack such information and communications technology (ICT) facilities, services, and applications resulting in there being a digital divide between the ICT "haves" in the urban areas and the ICT "have-nots" in the rural areas, in terms of their access to telephones, computers, Internet and related services.

The main goal of the Connected Communities project is to have Community Broadband Centres (CBC) and Community Broadband Libraries (CBL) in rural and remote areas.

In addition, the Connected Communities project also includes providing individual broadband access to the households within the community of the rural areas with the aim to increase broadband penetration rate per household in accordance with the National Broadband Plan (NBP).

These will ensure that communities living in underserved areas are connected to mainstream ICT development to enable and empower them and bring about socio-economic development for these communities in the various sectors such as agriculture, education, health, business, amongst others.

The Connected Community approach will enable the communities to access new knowledge and information that can be incorporated into their local knowledge and context, such as, provisions of information on employment opportunities, educational resources, government services (for example, providing links to e-Government, e-Learning, e-Commerce, e-Health, e-Agriculture, etc.) and technical information on agriculture for their daily lives, such as information on new varieties, planting techniques, and disease prevention.

The CBC initiative was developed by SKMM to develop and to implement a collaborative programme that has a positive social and economic impact to the community in terms of human capital development and capacity building through dissemination of knowledge via communications services.

It also provides the platform to raise awareness, enable the promotion, marketing and point-of-sales for individual broadband access service.

The facilities provided for the CBC project may also be used as training centres for local people to learn computer and ICT skills, to provide access to distance education, employment opportunities, human resource training and business ventures amongst others.

So that the CBCs can realise their full functionality in terms of building capacity whilst taking advantage of the socio-economic impact of the communities, several enhanced features have been incorporated into these centres to achieve their goals. These are :-

a) The CBC as e-transaction centre where it supports various applications for e-Government, e-Learning, e-Commerce, employment opportunities, online banking transaction and so on;

b) In lifelong learning, the CBC will function as a learning

⬢ Not enough PCs says Ahmad Hamidi - the Tok Empat or Village Chief of FELDA Chini 1

academy, which is owned and operated by the community, where multiple capacity building activities and enrichment training programmes can take place, and also continuously promote and raise awareness for education;

c) In social networking, the CBC will enable social collaboration with other connected community within the ecosystem, provide opportunities to learn about services and techniques used in other e-communities, which are then adapted for use in one's own centre;

d) To enable the monitoring and evaluation of e-community activities and the sharing of lessons learned across e-community centres and across networks;

e) To enable advocacy and policy related activities to support the growth of the connected community movement;

f) The CBCs will enable value creation through access to knowledge and information which include the development of local content such as Internet portal applications, the creation of digital opportunities through ubiquitous, affordable, equitable, and quality access to ICT, research and documentation, as well as a repository for education materials;

g) The CBCs will also serve as a catalyst to moot broadband access service adoption in USP target areas and enable the promotional, awareness, and marketing activities for individual broadband subscription by the designated universal service providers.

On 8 May 2009, SKMM issued an invitation to interested parties to register their interest in becoming universal service providers of the Connected Community project.

SKMM wants to deploy CBCs in FELDA settlements throughout Malaysia and the SKMM hopes that through Connected Communities project, it will be able to synergise its objectives with those of FELDA. It also hopes the community will benefit from the provision of broadband within the 1Malaysia concept.

The current Prime Minister who introduced the 1Malaysia concept wrote in his blog which is found at www.1malaysia.com.my:-

1Malaysia is intended to provide a free and open forum to discuss the things that matter deeply to us as a Nation. It provides a chance to express and explore the many perspectives of our fellow citizens. What makes Malaysia unique is the diversity of our peoples. 1Malaysia's goal is to preserve and enhance this unity in diversity which has always been our strength and remains our best hope for the future. I hope this Website will initiate an open and vital dialogue exploring our Malaysian identity, purpose, and direction. I encourage each of you to join me in defining our Malaysia and the role we must play in its future. Each of us — despite our differences — shares a desire for a better tomorrow. Each of us wants opportunity, respect, friendship, and understanding.

As such, SKMM wants the Connected Communities project to provide benefits for Malaysia's various ethnic communities, including the Malays, Chinese, Indians, indigenous and others.

FELDA Chini 1 is one example of a CBC which has already been implemented.

However, while the CBCs enable community members to appreciate the value of Broadband Internet, it is still not enough until they start to use broadband for the fulfilment

▗ The classroom is used to accommodate excess demand for Internet access at FELDA Chini 1 Community Broadband Centre when not used for training

🔲 **Users working on own notebooks with WiFi connection at FELDA Chini 1 Community Broadband Centre**

of their daily routines such as to market their produce, their handicraft or to create websites such as the Chini 1 website http://chini1.pjk.com.my and in the 1Malaysia spirit of "People first, Performance now," the supervisors' key performance indicators (KPIs) will be based on how well they achieve these objectives.

MSD Technology Sdn Bhd, a training service provider which specialises in community-based development was contracted by Telekom Malaysia Berhad (TM) to manage all of the CBCs which were awarded to the latter by SKMM. The pilot CBC projects which were tasked to TM comprised 12 CBCs in 2007 and the project was further expanded to include new 73 CBCs under the first phase of expansion in 2008 including FELDA Chini 1. The second phase of expansion followed suit later in Q1 2009 comprising new 89 CBCs with the involvement of other USP operators such as Celcom, DiGi and Maxis.

One of the key challenges in implementing the CBC lies in the operational management which tantamount to its effectiveness. Previous experiences from other telecentres have demonstrated for instance, in the absence of proper and scheduled operational handling, the PCs will end up being left idle after a while.

As such, specific development programmes have to cater for the training of supervisors (or train-the-trainer) to implement programmes for different groups within the community's user-bases and their different types of content requirement. For instance, programmes for children to create their own websites using currently available applications as well as usage of core applications such as electronic government, in making applications to local universities, how to use the Lelong.com, e-Perolehan and e-Commerce sites.

In addition, the children can use the PCs for their folios, to do their homework, play games – which is the easiest to get them to do on PCs.

As for the senior citizens, it takes more time for them to use the facilities, since they are quite resistant to change. Senior citizens in rural areas tend to describe use of the Internet as 'main Internet' in Malay, which means to play the Internet, and one of the option to bring them onboard is by getting them to read newspapers online. The CBC subscribes to online newspapers available through Streamyx, TM's ADSL service, which users can read for free.

In summary, there is no limit in terms of creativity and innovativeness in pushing the community to acquire basic ICT skills rather the CBC (or telecentre) provides the ideal platform to validate novel approach in training people on desktop publishing and other computer skills in response to the communities' needs and expectations. **.my**

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Television
then and now

According to recent figures, 6 million households in Malaysia have TV of some kind, or 95% penetration. There were an estimated 1.43 billion households with analogue or digital TV of all types worldwide as of the end of 2008, which would be almost 100% penetration of the estimated 6.7 billion persons at about that time.

TV is 126 years old and comprises a complex combination of the works of many inventors and engineers in several countries who designed and developed many of its parts over that long period.

Nipkow disk (Source: Wikipedia)

Until today, TV pictures which we see on our traditional cathode ray tube (CRT) TV screen and more modern plasma and liquid crystal displays (LCDs) still involve the slicing up – or rasterisation - of parts of an image as seen by the camera into multiple parallel lines, the conversion of the light intensity at points in the line into corresponding electrical voltage levels, the transmission of these voltages over wires or as modulated radio frequencies to a receiver which converts the voltages back into varying light intensities and the reproduction of a facsimile of the original image on a display surface.

Early development efforts of TV took two paths. First was the combination of mechanical and electronic principles and second came the all-electronic TV.
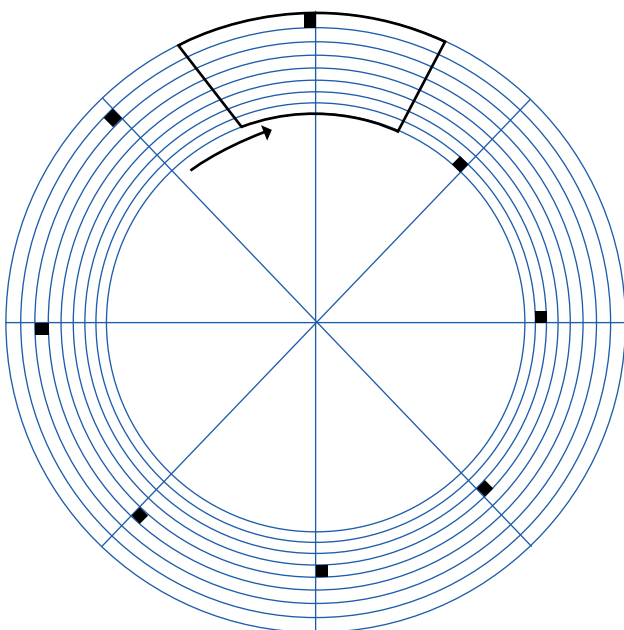
Mechanical TV

Modern TV systems have their roots in the discovery of the photoconductivity of the element selenium by Willoughby Smith in 1873, the invention of a mechanical scanning disk by Paul Gottlieb Nipkow in 1884, the demonstration of televised moving images by John Logie Baird in 1926 and Philo Farnsworth's Image Dissector in 1927.

Mechanical television principles were initially used to transmit a type or line art and in 1881 Shelford Bidwell demonstrated its use in the transmission of facsimile of still photographs.

Japanese inventor Yasujiro Niwa invented a simple device for phototelegraphic transmission through cable and later through radio. American inventor Charles Francis Jenkins developed mechanical television systems in the 1920s and early 1930s.

In 1923, Jenkins transmitted the first moving silhouette images, and on June 13, 1925 he publicly demonstrated the synchronised transmission of images and sound.

On 26 January, 1926, British inventor John Logie Baird used mechanical TV to transmit a live, moving image with tone gradations (i.e. greyscale), though with only 30 scan lines, its resolution was just enough to produce a recognisable human face, and this was the limitation of mechanical TV systems.

Mechanical TV was used in broadcast TV from 1928 to 1929 and was succeeded by the all-electronic TV era which began around 1926 and never quite went away.

Field-sequential techniques were also used in the Apollo moon missions in the late 1960s and early 1970s to send colour TV signals back to earth, where mechanical equipment at the receiving station converted them into standard TV formats.

All-electronic

Several experiments into using CRT's in all-electronic TV were undertaken by several inventors very early last century and while several experiments in using CRTs in the receiver had been conducted, the idea of using them in the transmitter was rather novel at the time.

By the late 1920s, several inventors including Kálmán Tihanyi in Hungary, and Philo Farnsworth and Vladimir Zworykin in the United States were already working separately on their versions of all-electronic transmitting tubes.

The decisive solution, the accumulation and storage of electrical charges within the transmitting tube throughout each scanning cycle, was first described by Tihanyi in March 1926, who called his invention the Radioskop in his patent application in Hungary.

The U.S. company RCA acquired the rights to Tihani's Radioskop and his earlier design of a receiver tubes even before their patents were approved and in 1931, RCA incorporated aspects of Radioskop technology into its Iconoscope, and the RCA research group headed by Vladimir Zworykin introduced the Iconoscope in 1934.

The Iconoscope contained a plate containing a mosaic of photosensitive granules with an insulating layer which separated them from a shared common plate and when the light from an image was projected onto this plate each granule constituted a tiny capacity which stored an electrical charge proportional to the intensity of the light falling on it.

Earlier in 1922, Philo Farnsworth, a teenage farmboy in Utah, discovered that a CRT could be used to generate an electrical TV signal without the need for mechanical scanning. Farnsworth successfully demonstrated his image dissector in 1927 and this was the first successful demonstration of a fully electronic television system. By 1929, Farnsworth had improved the image clarity of his Image Disector beyond that of mechanical TV systems.

However, the Image Disector was not very efficient since most of the electrons produced did not pass through the aperture, so it required very bright lighting for use as a TV camera and it was eventually superseded by the Iconoscope but Farnworth still earned some income from the Iconoscope, since it used several of his patents.

In Britain, Isaac Shoenberg employed Zworykin's design to develop Marconi-EMI's own Emitron tube used in cameras designed for the BBC. On 2 November, 1936 a 405 line service was started from studios at London's Alexandra Palace and while it co-existed with Baird's mechanical TV system in adjoining studios, the Emitron was more reliable and visibly superior.

That same year, Tihanyi described the principle of plasma television and designed the first flat-panel receiver, while later in 1941, the United States implemented 525-line television.

The world's first 625-line TV standard was designed in the Soviet Union in 1944 and became a national standard in 1946. The first 625-line broadcast occurred in 1948 in Moscow and the concept of 625 lines per frame was subsequently implemented in the European CCIR standard.

The CCIR (Consultative Committee on International Radio) was founded in 1927 to define international standards for radio communications and was subsequently merged into the International Telecommunication Union Radiocommunication Sector (ITU-R).

Monochrome TV transmissions were launched in Malaysia in December, 1963 by Radio Televisyen Malaysia (RTM), Malaysia's public service broadcaster. It was a PAL-B (Phase Alternating Line version B) system using 625 horizontal scan lines transmitted in VHF Band I.

Colour TV

A colour TV broadcast can be created from three separate monochrome (black and white) broadcasts, one in red, one in green and one in blue, which when viewed in rapid succession would appear as natural colour by the human eye. This concept had been experimented with almost as soon as black and white televisions had first been built.

Polish inventor Jan Szczepanik patented a colour TV system in 1897. He used a selenium photoelectric cell at the transmitter and an electromagnet controlling an oscillating mirror and a moving prism at the receiver. However, his system had no means of analysing the spectrum of colours
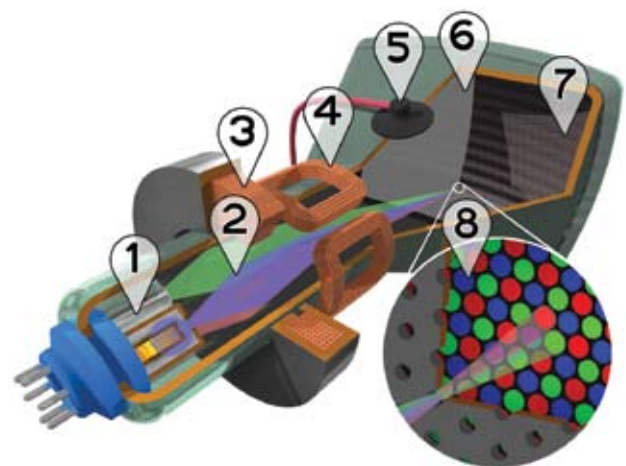
CRT colour enhanced tube (Source: Wikipedia)

at the transmitting end, so it could not have worked as he described it.

Baird made the world's first colour broadcast in Britain on 4 February, 1938, sending a mechanically scanned 120-line image from his studios in Crystal Palace to a projection screen at London's Dominion Theatre.

The shadow mask colour television was patented in 1938 by Werner Flechsig in Germany, and was demonstrated at the International radio exhibition Berlin in 1939. Most CRT colour televisions used today are based on this technology.

His solution used three separate electron guns which were aimed at the holes in a metal plate from slightly different angles and when their beams passed through the holes this slight angle caused them to separate again and hit the individual red, green and blue spots a short distance away on the back of the screen to produce different shades and intensities of colour.

The following year, Hungarian engineer Peter Carl Goldmark also introduced a mechanical system while at CBS (Columbia Broadcasting System), which contained an Iconoscope sensor. It was first demonstrated to the FCC (Federal Communications Commission) on 29 August, 1940, and shown to the press on 4 September.

However, three separate colour broadcasts required three times the bandwidth of monochrome transmissions, so the National Television System Committee (NTSC) in the United States introduced a system which encoded the colour information separately from the brightness, which greatly reduced the resolution of the colour information to conserve scarce bandwidth and this was a major technical achievement.

The brightness image in NTSC colour broadcasts was backward compatible with black and white TV sets at slightly lower resolution, while colour TV sets could decode the additional colour information.

However, while colour TV was introduced in the United States in the 1950s, they were very expensive and there were not many programmes in colour. It did not gain wide acceptance until the late 1960s and colour TV sets became standard in the US in the 1970s.

While the NTSC provides the colour TV standard in North America the other two main colour TV standards in use worldwide are PAL and SECAM (Séquentiel Couleur à Mémoire—Sequential Colour with Memory).

NTSC was widely perceived to suffer from hue error problems, especially after the introduction of videotape recorders in the late 1950s, so the Germans unveiled PAL in 1963, which was technically similar to NTSC but incorporated some ideas from SECAM as well.

Eastern Europe used SECAM but has since switched to PAL following the collapse of the Soviet Union, though France and Russia continue to use SECAM.

PAL was originally used in Western Europe. Colour broadcasts in Asia began in Australia (1967), then in Hong Kong (1970), China (1971), New Zealand (1973), Singapore (1974), Thailand (1975), Indonesia (1978) and India (1982). PAl is the most widely used colour TV format today. RTM began colour broadcasts using the PAL-B standard in VHF Band III in 1978.

There are over eight different PAL versions in use in different countries and their common feature is the use of 625 horizontal scan lines and 50 vertical fields per second,

A Ku-Band TV antenna

with the exception of PAL-M used in Brazil which uses 525 scan lines and 60 vertical fields per second.

Other variations in PAL are their transmission band (VHF, UHF or both), video bandwidth, sound carrier and channel bandwidth.

Today, the six free-to-air TV stations in Malaysia broadcast in VHF Band I and Band III. The free-to-air TV using PAL-G in UHF Bands IV and V was introduced in 1995.

Seven remaining transmitters still operate over VHF Band I but under SKMM's spectrum re-allocation programme, all transmitters will cease operation in VHF Band 1 as frequencies in UHF Bands IV and V have been made available for them, while VHF Band I frequencies will be re-farmed for other uses.

Cable TV

Cable television is believed to have begun as community antenna TV (CATV), whereby TV signals are piped to TV sets in homes within a local community through cable, especially when they are out of reach of terrestrial free-to-air signals, such as in valleys between mountains.

In such places, the TV antenna would be mounted on a mountain or at an elevation where it can receive the signals clearly and the signals are channeled to an amplifier through coaxial cables, from which they are redistributed to antenna sockets in individual apartments also through cable.

CATV is still available, especially in apartment blocks to provide all apartment owners with clear TV reception, especially when their apartment does not face the TV station. It also helps an unsightly mass of TV antennas in front of each apartment.

With these systems, each apartment block has a master antenna mounted on top and pointed towards the TV transmitter and the signal was amplified by a head amplifier and channelled to all apartments through coaxial cable.

The origins of CATV are debatable. One account credits the British company Rediffusion which introduced a limited CATV service called Pipe TV in London shortly after the British Broadcasting Corporation (BBC) began TV transmissions there in 1932 but further development of this service was cut short by World War II.

Rediffusion earlier provided re-broadcast wired radio service to loudspeakers in homes in the U.K., and in British colonies and former colonies. Many older Malaysians will fondly remember Rediffusion's two Gold and Silver services, which ended in the 1990s after Rediffusion obtained an FM licence.

On the other hand, the U.S. Congress and National Cable Television Association recognised John Walson as the founder of cable TV.

The Service Electric Company owned by John and his wife Margaret sold electrical appliances and TV sets in the Mahanoy City, Pennsylvania area in the 1940s but some of their customers were unable to receive good TV reception in that mountainous region, so John installed a master antenna on a pole on top of a mountain, connected it to a booster in his store and retransmitted it to his customers' homes using cable.

Cable TV is like CATV but on a much larger scale, such as city wide or nationwide.

Today, large cable TV operators provide nationwide subscription services mostly in developed countries all over the world.

One great thing about cable TV is the consistency of the signal quality received. Another big advantage is that the cable can also be used to provide non-TV services such as FM radio, broadband Internet and cable telephony services over the remaining bandwidth, which has also enabled cable TV operators to provide competition to incumbent players.

Satellite TV

Most Malaysians are familiar with satellite TV since MEASAT Broadcast Satellite Systems launched its ASTRO subscription direct-to-home satellite TV service here in 1996. The broadcasts are via its MEASAT satellites using DVB-S (Digital Video Broadcast – Satellite) technology in the 12GHz (Ku Band) and are received through inexpensive parabolic dish antennas and set-top boxes in the homes.

In 1926, the first satellite television signal was relayed from Europe by the Telstar satellite over North America and the first national network of satellite television, called Orbita, was created in Soviet Union in 1967, while the first domestic North American satellite to carry television was Canada's geostationary Anik 1 launched in 1972.

With satellite TV, communications begin with a transmitting antenna located at an uplink facility. These uplink satellite dishes are as large as 9 to 12 metres in diameter for more accurate aiming and greater signal strength at the satellite.

The uplink frequency is in a different frequency band from downlink and is converted in the satellite typically to

🔻 **DVB-H Mobile TV**

C-band (4–8 GHz) or Ku-band (12–18 GHz) or both in the downlink to viewers on earth.

A typical satellite has up to 32 Ku-Band transponders and up to 24 C-band transponders, or more for hybrid satellites.

C-band transmission is susceptible to terrestrial interference while Ku-band transmission is affected by rain as water easily absorbs microwaves at this frequency.

The large C-Band receiving antennas are typically a few metres across and can be seen in on the rooftops of houses in countries like Thailand and Taiwan.

Owning a C-Band satellite dish requires an Apparatus Assignment in Malaysia whereas the 60cm KU dish and decoder are available on a Class Assignment. This is done as the programmes relayed to Ku-Band dishes and decoder come from ASTRO, a licenced local broadcaster, whereas C-Band reception comes direct from foreign broadcasters.

Digital TV

Malaysia already has digital TV services in the form of satellite TV (DVB-S) from ASTRO and digital streaming mobile TV by several operators such as Maxis, DiGi, Celcom which is accessible on suitably enabled cellular phones.

In 2004, the Malaysian Government endorsed and allocated funds for a pilot project of free-to-air digital terrestrial TV broadcasts based on the DVB-Terrestrial (DVB-T) standard. In 2005, SKMM allocated spectrum in the UHF band trial broadcast of digital terrestrial TV in the Klang Valley.

Between September 2006 and March 2007, RTM commenced pilot trials of digital TV broadcasts to 2,000 set-top boxes.

The digital broadcasts from transmitters in Menara KL (KL Tower) and Ulu Kali comprise simultaneous broadcasts of RTM's two FTA analogue TV channels, RTM1, RTM2, and new digital channels Arena and Muzik Aktif daily from 7.00pm to 12.00 midnight during the trials.

Due to positive feedback received during the trials, RTM continued with its digital broadcasts, while using it as an opportunity to test various video and audio codecs. From February 2008, RTM broadcasts at 674 MHz RTM1, RTM2, RTMi, Muzik Aktif, Arena, a demo channel called EPG (electronic programme guide) and Radio Aktif, this last one comprising a simulcast of RTM's seven analogue radio stations in the Klang Valley.

Malaysia plans to phase out all analogue TV transmissions by 31 December, 2015 and go fully digital. SKMM will be allocating the UHF 470–742 megahertz spectrum for digital terrestrial TV towards the end of 2009. The industry has decided on the DVB-T (Digital Video Broadcast – Terrestrial) standard.

The spectrum holder will have to build a common free-to-air digital terrestrial television broadcast (DTTB) transmission and broadcast infrastructure which all broadcasters can use to transmit their TV programmes and have it ready in time for the switch to digital in 2015.

Luxembourg was the first country to totally switch over to fully digital over-the-air terrestrial broadcasting in 2006,

followed by the Netherlands later that year, by Finland, Andorra, Sweden, Norway and Switzerland in 2007, Belgium (Flanders) and Germany in 2008, and the United States in 2009.

Japan and Canada plan to go fully digital in 2011 and China in 2015. Different parts of the United Kingdom will go fully digital in phases until the whole country is digital in 2010. Major cities in Brazil went digital on 2 December, 2007 and it's estimated that it will take seven years to complete the whole switch over exercise. Brazil opted for ISDB-T to replace its PAL-M analogue system and other Latin American countries including Argentina, Chile and Venezuela have expressed interest in adopting it.

The Japanese ISDB-T (Integrated Services Digital Broadcast – Terrestrial) standard for digital TV and radio broadcast was adopted for commercial transmission in Japan in December 2003 and as of the end of April 2005 it had 10 million subscribers.

China developed its Digital Terrestrial Multimedia Broadcast (DTMB) technology, formerly known as Digital Multimedia Broadcast – Terrestrial/Handheld (DMB – T/H). It employs a single or dual carrier modulation technology called Time Domain Synchronous Orthogonal Frequency Division Multiplexing (TDM-OFDM) capable of transmitting data which can be received with acceptable signal qualities on a HDTV receiver travelling at 200 km/h, such as on a high-speed train. Unlike its European and North American counterparts, DTMB also supports mobile digital TV on handheld devices.

Yet another way to receive digital TV is as an Internet protocol TV (IPTV) transmission over DSL (Digital Subscriber Line) or optical cable. The Internet can also be used to receive digital TV signals, for example by using the many peer-to-peer Internet TV software to watch TV on a computer.

As for drawbacks of digital TV, there is a significant delay when changing channels compared to analogue due to different buffering and preload delays of different viewing devices. Multi-path interference affects digital TV more badly than analogue and affects reception, especially when using simple antennas, such as rabbit ear antennas. What appears as multiple images known as "ghosting" with analogue TV will cause image corruption with digital TV due to inter-symbol interference. It is often worse in wet weather due to increased reflection or re-polarisation of the digital TV signal arriving from multiple paths and in the worst case, the signal is lost completely.

Engineers with the Institute of Electrical and Electronic Engineers (IEEE) recommend the use of outdoor or attic antennas with digital TV, rather than indoor antennas as reflections and other interactions of the signal with objects – including human bodies in the room will increase multipath interference.

One of the key benefits of digital TV is the consistency of the digital picture quality. With an analogue signal, if its shape is distorted during transmission it will produce a degraded image when received, even after amplification

but since a digital signal is a stream of ones and naughts, the receiver can still distinguish between them even if their modulated carrier suffers some distortion within certain limits along the way and can restore the signal to its original form.

Its other benefits include the option to transmit high-definition TV images (HDTV), its use for mobile TV, the carriage of supplementary data services, the enablement of user interactivity, its ability for the system to support more programme channels thanks to the greater spectral efficiency of digital TV over analogue and multi-language capabilities subject to availability of content.

High definition TV (HDTV) can be transmitted over DTT in a 16:9 aspect ratio compared to the familiar 4:3 resolution used in Standard Definition TV (SDTV) and computer monitors. HDTV cannot be transmitted over current analog channels.

Each commercial DTT channel in North America can broadcast at a data rate up to 19 megabits per second but the broadcaster subdivides this bandwidth into several video subchannels of different quality and compression rates. This will allow for the broadcast of several SDTV programmes over one DTT system. At the viewer's end, DTT uses an antenna to receive whatever channels it picks up.

Market research firm Informa Telecoms and Media forecast in the eighth edition of its Global Digital TV report that 343 million of homes with TV or 24% would have digital TV at the end of 2008. North American homes would lead with 90 million homes or 77% penetration at the end of 2008, followed by Western Europe with 63%.

While every region will see a growth over the next five years, the Asia Pacific region will more than double its digital total over that period. By 2013, Asia Pacific will account for 39% of the world's homes with digital TV, followed by North America at 21% and Western Europe 25%. China will be the largest digital TV nation by 2013 with 123 million homes with digital TV by that year. 𝖘𝖒𝖞

Launch of Community Broadband Centre (CBC), Kg Merchang, Marang, Terengganu *5 January 2009*

YB Minister launched the Marang CBC witnessed by the young future masters of the Internet

Excited users of the centre.

The Kg Merchang community came in full force to the CBC Launch which was officiated by YB Dato' Shaziman, and witnessed by SKMM Chairman at that time, Datuk Dr. Halim Shafie and other dignitaries from KTAK, SKMM, TM and the Terengganu State Government. In total there was a 500 strong crowd from Kg Merchang and nearby communities including the local area youth groups, students and a group of orphans from the local orphanage who stood to benefit from the use of the CBC facilities.

Datuk Dr. Halim Shafie was especially moved by all the efforts put in for the CBC Launch and thanked everyone including the Kg Merchang JKK for their efforts and contribution.

Yang Berhormat Dato' Shaziman Abu Mansor advised the Kg Merchang folks to make full use of the CBC facilities that include use of PC's, Internet access, centre administrators and facilitators as well as training programmes. He further added that he hoped to hear of success stories from the community on the use of Internet from the CBC in the future.

Launch of Community Broadband Library (CBL) Sg Tiang, Kedah *21 February 2009*

Datuk Dr Halim Shafie offering a traditional Thai greeting

The Community Broadband Library (CBL) at Perpustakaan Desa (PD) Kg. Titi Akar, Sg Tiang, Kedah was launched by the then SKMM Chairman, Datuk Dr. Halim Shafie. Also at the launch was YB Suraya Yaakob, the assemblyperson for Sg Tiang.

The community library serves a community of Malaysian Thais and is one of four such libraries serving the Malaysian Thai community throughout the country. The CBL is equipped with 4 computers connected to the Internet via a 1Mbps broadband connection.

Radio Amateur Workshop, Sarawak *21 March 2009*

YB Lee delivering his speech

Yang Berhormat Encik Lee Kim Shin, Sarawak Assistant Minister of Infrastructure Development and Communications cum First Vice-Chairman of Miri Red Crescent (MRC) was in the MRC centre to officiate the first and ever Amateur Radio Workshop jointly held by SKMM's Sarawak Regional Office and the MRC.

The workshop was held to introduce amateur radio to MRC members and members of the general public. Participants were also educated on the policies and regulations governing the use of amateur radios. In all, a total number of 150 benefitted from the workshop. The volunteer speakers and instructors included Johnny Tan 9M8DB, Bong Wee Lee 9M8WB and Steve Telenius Lowe 9M8Z, all senior and enthusiastic amateur radio operators.

More than 140 participants attended the workshop at the MRC training centre

Launch of Lubok Antu, Sarawak, USP Programme *7 March 2009*

Yang Berhormat Dato' Joseph Salang, Deputy Minister of Energy, Water and Communications was in Rumah Jangan, Lubok Antu Sarawak for the Meet-the-People Session and the launching of Lubok Antu USP (Universal Service Provision) Programme.

The function was also attended by Lubok Antu MP William Nyalau, Balai Ringin Assemblyman Snowdan Lawan, Lubok Antu District Officer Nelson Mujah Girie, SKMM Senior Director Dato' Jailani Johari, Director of Sarawak Regional Office Zulkarnain bin Yasin, Penghulu Jaul anak Lutau and Tuai Rumah Jangan ak Ningkan.

Nearly 150 Rumah Jangan villagers giving the Deputy Minister a warm welcome upon his arrival

The Deputy Minister and Lubok Antu MP William Nyalau launch the USP project while Dato' Jailani Johari and others look on

Launch of NextGen Contentpreneur Awards, KLPac *9 April 2009*

L-R, Kamil Othman, Zainir Aminullah, and Zamani Zakariah

To create pools of talented content developers that will address the lack of sufficient local skill and capacity, SKMM has worked with industry player such as Astro in organizing content competition such as the NextGen Contentpreneur Awards. This competition focuses on students from the Institutions of Higher Learnings (IHLs) who are the next generation of contentpreneurs.

ASTRO, is proud to lend its support to the Nextgen Content-preneur Awards. This collaborative effort with the Malaysian Communications and Multimedia Commission and MSC Malaysia rewards deserving tertiary students who have produced excellent short content, documentaries, music videos, websites and animation.

Symbolic gesture of the launch

Briefing on Curbing Dissemination of Pornographic Videos, Kota Kinabalu, Sabah *2 April 2009*

A briefing on curbing dissemination of pornographic videos through mobile phones was organized in Kota Kinabalu, Sabah at the police headquarters. SKMM officers, En Abdul Halim Ahmad (Enforcement Dept), En Ahmad Nor Hisham and Encik Irwan Ahmad Sabtu from the Sabah Regional Office attended the session. All officers from Special Branch, Kota Kinabalu Police HQ and also a representative from Commercial Crime Investigation Department attended the briefing.

The briefing was mainly aimed to educate and exchange information between the police force and SKMM on mobile phone pornographic videos.

En Abdul Halim Ahmad (Enforcement Dept) giving his speech

Handover of Duties, Putrajaya
17 April 2009

Dato' Seri Utama Dr. Rais Yatim was in KTAK for the official handover of duties from Dato' Shaziman Abu Mansor.

Luncheon with Broadcasters and Radio Station Operators *12 May 2009*

A luncheon was held at the KL Pan Pacific Hotel to enable YB Minister Dato' Seri Utama Dr Rais to get acquainted with Broadcasters & Radio Station Operators. SKMM COO En. Sharil also attended the luncheon.

Communications and Multimedia Conference 2009, Cyberjaya *19 May 2009*

◤ Members of the second session together with Encik Sharil.

The Communications and Multimedia (C&M) Conference returned this year with a tremendous line up of great speakers and notable topics.

Into its second year, the C&M Conference is an annual dialogue organised by SKMM where the regulator, industry analysts, market leaders, ventures capitalists and Government agencies discuss key communications and multimedia trends and developments and at a working level delve into the nuts and bolts of the needs of the communications and multimedia sector.

This year's Conference assembled all stakeholders of the industry to address the key theme - "New Era of Cross Industry Collaboration" with various topics being presented by experts. The subject was approached through 3 sub themes namely: "Sustaining the New Communications Ecosystems", "Transforming and Monetizing Products and Services" and "The Great Convergence of Content, Telecommunications and Business, Unleashing the New Communications Ecosystem".

Seminar on Guidelines on The Provision of Basic Civil Works for Communications Infrastructure in New Development Area, Penang
22 June 2009

SKMM's Northern Regional Office conducted a Seminar on Guidelines on The Provision of Basic Civil Works for Communications Infrastructure in New Development Area at Traders Hotel Penang. The seminar included presentations by En. Mohd Ali Hanafiah, Senior Director of Technology, Standards & Network, SKMM, Pn. Aminah bt. Abdul Rahman, Pengarah Penyelidikan & Perundangan Teknikal Jabatan Kerajaan Tempatan, KPKT, and En. Mohd. Yusairi Abu Hasan from Malaysian Technical Standards Forum Bhd. This seminar involved consultants, developers, architects, telecommunication companies and also local authority organizations from Penang.

◤ Top: Opening Speech by Director Northern Regional Office
   Bottom: Participants of the seminar

ITU Africa regional meeting agrees on ICT development strategies

● **The International Telecommunication Union's (ITU's) African Regional Preparatory Meeting for the World Telecommunication Development Conference 2010 (WTDC)** agreed in Kampala, Uganda on 16 July on regional strategies to foster the development of information and communication technologies (ICTs) throughout Africa and these strategies and priorities form the basis of next year's WTDC.

On the first day, a high-level panel discussed the impact of the global financial crisis on ICT development in Africa, and considered how ICT could be used to jump-start growth and development going forward.

Taking actions to stimulate investment in the ICT sector emerged as a key theme, especially in broadband networks needed to support the key government and business applications which underpin the entire economy. To this end, panellists emphasised the importance of continued ICT policy and regulatory reform and innovative public-private partnerships.

An agreement was sealed between the ITU and the Minister of Transports, Posts et Telecommunications of Burundi for the development of national ICT broadband networks to deliver free or low cost digital access for schools and hospitals, and for underserved populations in rural and remote areas. This agreement is the first in a series and forms part of a large-scale project for the region launched by ITU as follow up to the Connect Africa Summit in 2007.

The ITU is currently negotiating agreements with additional countries and is working with potential funding partners, including the African Development Bank, to help meet the growing demand for broadband network investment.

The meeting also identified topics to be the subject of study over the next four years – namely, Information and Communication Infrastructure, Cybersecurity and ICT applications, Enabling environment, Capacity building and other initiatives, Least Developed Countries and Small Island Developing States.

StarHub selected for next gen broadband operator

● **Singapore communications regulator, the Infocomm Development Authority (IDA)** announced its selection of StarHub's proposal for the Next Generation National Broadband Network (NGN BN) operating company.

Singapore's NGN BN comprises three key industry layers – namely the NGN BN network company, NGN BN operating company and the retail service providers (RSPs).

The network company is responsible for the design, construction and operation of the passive infrastructure layer, the operating company for the design, construction and operation of the active infrastructure to provide wholesale broadband connectivity to RSPs, the downstream operators.

The three companies will ensure that downstream operators have effective open access to the NGN BN and enable competition.

Starhub's wholly owned subsidiary, Nucleus Connect, will deploy advanced technologies to support and enable a comprehensive range of ultra-high speed wholesale broadband services to retail service providers at competitive prices which will be regulated by the IDA.

For example, Nucleus Connect will offer a wholesale price of SGD 21 per month for a 100 Mbps home and SGD 121 for a 1Gbps connection, while it will charge offices and schools SGD 75 per month for a 100 Mbps connection, while enterprise users with more demanding requirements can opt for a 1Gbps connection at SGD 860 per month.

Nucleus Connect will work with OpenNet, on a coordinated nationwide network rollout and it's expected to offer commercial services by the first half of 2010, and to be ready to fulfil its Universal Service obligations and meet all reasonable requests for service from 2013.

Thailand's regulator publishes MNP plans

● **While the buzz has been about mobile number portability, on 31 October,** Thailand's communications regulator, the National Telecommunications Commission published the final details of its plans for mobile number portability (MNP) in that country in July. The new regulations would be effective from August, though operators have up to three months to comply.

The fee to port the number is capped at that for a new prepaid SIM card, while it is left to operators to decide on how they would handle the remaining balance in a porting subscriber's remaining prepaid credit.

About 90% of Thailand's 60 million mobile subscribers use prepaid SIM cards. The churn rate is high and demand to port numbers is limited. One of its largest cellular operators, Advanced Info Service (AIS) believes it would cost around US$14 million to set up a clearing house to port numbers.

India issues draft of MNP regulations

● **India's telecommunications regulator, the Telecom Regulatory Authority of India (TRAI)** issued draft regulation which would facilitate mobile number portability in phases starting from September 2009 to March 2010. The first phase will see mobile users in larger cities and the biggest states being able to retain their mobile number.

Based on a steering committee's report and TRAI's decision, a draft request for proposal (RFP) was prepared and submitted to the DoT to initiate the process of selection of MNP operator and subsequently, the DOT issued guidelines for MNP service licence on 1 August 2008.

Its guidelines envisage geographic division of the country into two Number Portability Zones (zone 1 & zone 2) and each operator in each zone was selected. Syniverse Technologies was granted the licence to operate in Zone 1 (Northern and Western India) and MNP Interconnection Telecom Solutions was granted licence for MNP Service Zone 2 (Eastern and Southern India).

OFTA completes 1800MHz radio spectrum auction

● **The Office of the Telecommunications Authority (OFTA)** the executive arm of Hong Kong's Telecommunications Authority (TA) concluded the auction of radio spectrum at 1800MHz for the expansion of the public mobile telecommunications service there.

Three mobile network operators had successfully bid for a total of 9.6MHz spectrum in that frequency band at a total of upfront spectrum utilisation fee of HK$ 46.1 million.

Demand for public mobile communications services had grown continuously and the number of mobile users had reached 11.58 million by March 2009 or 165% penetration rate and this new spectrum will allow operators to meet increased demand.

The provisional successful bidders are China Mobile Hong Kong, 3.2 MHz; Hong Kong Telecommunications, 3.2 MHz; and SmarTone Mobile Communications, 3.2 MHz.

Fixed-mobile number portability allowed in Hong Kong

● **Hong Kong telecommunications regulator, the Telecommunications Authority (TA) announced on 10 July, 2009** that telecommunications operators there may provide fixed-mobile number portability (FMNP) on a voluntary basis.

Until then, mobile subscribers could only port their mobile number to another mobile operator, while fixed line subscribers could port to another fixed line operator but now they can port their number between mobile and fixed line services.

The TA believes this move will provide a level playing field for both types of operators, promote cross-platform competition, and satisfy subscriber's need for such portability. However, it is up to individual operators to decide when to collaborate with other operators to provide this service commercially.

In arriving at this decision, the TA had duly considered public demand for the FMNP service, overseas experience in similar services and the feedback received in response to a public consultation on the subject.

Canada considers empowering access to personal information online

● **Two new bills introduced in Canada in June seek to empower its police and national security agency, the Canadian Security Intelligence Service (CSIS)** -- Canada's equivalent of the U.S. Central Intelligence Agency and Britain's MI5 -- to access the online communications and personal information of Internet service provider's subscribers.

"We must ensure that law enforcement has the necessary tools to catch up to the bad guys and ultimately bring them to justice. Twenty-first century technology calls for 21st-century tools," Justice Minister Rob Nicholson said while he announced the two bills at a press conference in Ottawa, the Canadian Broadcasting Corporation (CBC) reported.

The Technical Assistance for Law Enforcement in the 21st Century Act would require ISPs to install interception equipment on their networks and provide police with access to subscribers' personal information, including names, street addresses, and IP addresses.

The Canadian Government said that this new law would not give the police and CSIS additional interception powers, as they would still need warrants permitting their interception but would not require warrants when requesting a subscriber's personal information.

Some ISPs currently won't provide personal information without a warrant, which slows down investigations into crimes like child sexual exploitation or online theft.

The ISPs will have to pay for the new intercept equipment but that the Canadian Government may compensate them if they are forced to retrofit existing hardware.

ISPs would have 18 months to make these changes but those with fewer than 100,000 subscribers will have a three-year exemption.

At the same time, amendments to the Criminal Code, the Mutual Legal Assistance in Criminal Matters Act (MLACMA), and the Competition Act would let police obtain both telephone and Internet transmissions with a warrant for live data or a production order in the case of historical data, force telcos to retain data related to particular investigations, and allow law enforcement to remotely activate existing tracking devices in cell phones and other devices.

KL Heritage Walk

The next time you have a bit of time, gather your family or friends together and go on a heritage walk in the city centre. There are, of course, various tours you can map out. The following is a walk that will take a half day. It's best to start early in the morning. Remember to bring along a camera!

Masjid Jamek
From the Masjid Jamek LRT Station, walk to the old Masjid Jamek which is at the confluence of Sungai Gombak and Sungai Klang and where this lovely city began.

Sessions Court Building
Walk along Jalan Tun Perak and you will come to the heritage buildings that house the Sessions & Magistrates Courts.

Panggung Bandaraya Building
Next up is Panggung Bandaraya, the city theatre at the junction between Jalan Tun Perak and Jalan Raja. Turn left and look for the old City Hall building.

Old High Court Building
Flanking to Panggung Bandaraya is the Old High Court located along the banks of Sungai Gombak.

Sultan Abdul Samad Building
Cross the bridge over Sungai Gombak, and you can see the iconic Sultan Abdul Samad Building which has been featured in millions of photographs of Kuala Lumpur. The building was completed in 1897.

Industrial Court Building
At the junction of Jalan Mahkamah Perse-kutuan and Jalan Mahkamah Tinggi is the Mahkamah Perusahaan / Industrial Court. A long time ago, the Loh Chow Kit Emporium was located here. Keep an eye out for the Loke Yew building too.

Old Post Office Building
Next, check out the Old Post Office which is where Jalan Mahkamah Tinggi meets Jalan Raja.

Textile Museum
Walk along Jalan Raja until you reach the junction with Lebuh Pasar Besar. Right in front of you, on the left side of the road, is the Textile Museum.

Dataran Merdeka
At Dataran Merdeka, check out the huge flag pole. Also make your way to the Dataran Merdeka Fountain. This fountain was brought all the way from England and installed here.

National History Museum
In front of the old fountain is the National History Museum. The building was built in 1888 and was once used by the Standard Chartered Bank.

Kuala Lumpur Memorial Library
Next to that is the Kuala Lumpur Memorial Library. As it once served as a Government printing centre, it was built to hold large printing press machines and there are no columns in this building.

Royal Selangor Club
The Royal Selangor Club is on your left. From here, expatriates once used to watch history unfold in Kuala Lumpur. Although most members are now Malaysians, this club retains a very colonial atmosphere.

Cathedral of St Mary
After the club, you can see the Cathedral of St Mary, one of the oldest Anglican churches in Kuala Lumpur.

Masjid India
Finally walk across Jalan Tunku Abdul Rahman and make your way to Masjid India. Till this day, this mosque is used mainly by the Indian Muslims who live and run businesses around it.

End your tour by eating at one of the many Nasi Kandar that can be found along Jalan Tunku Abdul Rahman.

Protecting Yourself Against the H1N1 virus.

At time of writing, no vaccine is available to protect against the A(H1N1) virus. There are however steps that you can take to protect your self (and others) from getting sick.

Start by ensuring that you cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue into a trash bin after you use it. Wash your hands often with soap and water especially after you have touched surfaces. Do not share towels with others. Do not rub your eyes or touch your nose and mouth with your hands as germs can enter your body that way. Ensure that there is ventilation in your living and work spaces. Keep windows open so that air is circulated well. Keep your distance from people as much as possible – at least 1 metre distance from someone who is not well.

Prepare for the possibility that someone in the house may fall ill by stocking over the counter medicine for fever, cough and cold and items such tissues, face masks and other related items.

If you do fall ill, make sure that you take lots of liquids such as water, fruit juices and isotonic drinks to prevent dehydration.

Stay at home if you come down with flu like symptoms and isolate yourself as much as possible from others in your house. These include fever, headaches and running nose. The vast majority of people will recover from H1N1 influenza on their own without seeking medical assistance. If you must go out, use a face mask.

If symptoms become serious, seek medical assistance immediately. Watch out for fever that does not go away after three days or returns after three days, body aches, runny or stuffy nose, sore throat, nausea, or vomiting or diarrhea, Those in the high risk category include children below five years old; those aged 65 years and above; children and adolescents (below 18 years) on long-term aspirin therapy; pregnant women; adults and children with asthma, chronic obstructive pulmonary disease, organ failure, cardiovascular disease, hepatic, heamatological, neurologic, neuromuscular or metabolic disorders such as diabetes mellitus; adults and children who have immunosuppressant; and residents of nursing homes and other chronic care facilities.

Dipping into steamboat

Malaysians are no doubt bound by food, with their various cuisines influenced by individual cultures from all across Asia. Prominent in this list is the well-known steamboat, which involves the dipping of food into a pot of boiling water or soup.

Also referred to some as the hot pot and lesser known as the Chinese fondue, the steamboat has a thousand-year old history, and was generally eaten during the winter in China. Spread to this country by migrant Chinese groups during the colonial period, the steamboat has evolved to a cuisine of its own, adapting to local influences.

A steamboat session usually consists of a pot in the middle of a table with two sections, containing either a soup and curry base, though the latter can be substituted for tom yam kung. As the pot is left to boil, you are usually served with a number of platters that are filled with all sorts of foods, ranging from prawns to beef strips, fishballs to meatballs, eggs to squids and even noodles to mushrooms. When the soup is ready, all you have to do is merely drop those pieces in and let it cook before serving.

There are two schools of thought involving standard steamboat fare, where some would prefer to have it at a leisurely pace, dipping their food into the heated broth as they go along, whilst others prefer to dump everything in and wait for it to cook. Another type of hot pot involves a circular hot plate surrounding a single pot, where patrons who don't want to boil their food can fry them instead.

One of the most famous variations of this cuisine is Lok-Lok. Normally served in open-air restaurants involving a table with a hole in the middle, some traders have taken to a more mobile version, by using their vans. Much like the standard steamboat, you dip your food into a pot of boiling soup before lathering them with peanut sauce, except that instead of scooping them out, your food is skewered on a stick. Lok-Lok choices are more diverse, with choices involving cockles, quail's eggs and even Taiwanese sausage, and you are charged according to the number of sticks you use.

A known delicacy in Malacca is satay celup. Substituting the usual broth, satay celup makes use of a steaming pot filled to the brim with a thick and aromatic spicy peanut sauce, and is sometimes referred to as steamboat satay.

There is one primary rule when it comes

● Assorted *steamboat*

to enjoying steamboat, and that is to never dip your food into the cooking pot twice, for hygiene reasons. Also, to avoid food poisoning, stick your chopsticks into the boiling soup after using them to handle raw meat. Like almost all Malaysian cuisine, steamboat sessions can get quite messy towards the end, and like all messy food, your mouth is filled with satisfaction.

Get Creative, Enhance Your Productivity

One way to enhance your personal productivity is to tap into a quality all humans are born with – creativity. Everything else we have is limited. We have only two hands to do things with. But the mind is limited only by choice. The power of creativity is truly unlimited and when put to use, man has always been able to solve seemingly insurmountable challenges,

Creative thinking can be applied to problem solving, brainstorming, or finding new ways to do tasks. Here are some ways to improve your creative powers.

Stimulate Your mind
The more you are exposed to innovative ideas, fresh thinking and new experiences, the better your mind becomes at unleashing creativity. Consciously look out for new sounds and sights. Meet new people and listen to new ideas. Eat new stuff and travel to broaden your vision.

Books are a great way to start your project to enhance your creativity. The

television is another; take special interest in documentaries and programmes on travel and living.

Allow time for your mind to reflect.
If you make yourself busy handling tasks all the time, you probably won't have time to focus your mind on problems or new ideas. Set aside time every day to give yourself space to simply sit down and think.

A day of complete rest from work at least once a week also refreshes the mind. Life is pretty hectic and it pays to take a break weekly. That seeming free time will allow your mind to recharge and also get creative. In a year, do also plan for a longer break when you can travel, participate in some new activities or read that book you have been meaning to.

Get Variety Into Your Environment
Explore how you can make your day interesting. Spending your whole day in front of a computer, for instance, may be hindering
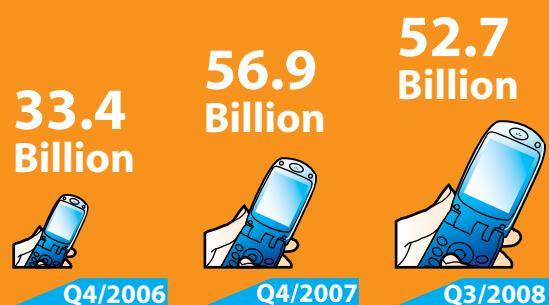
your creativity. Plan to switch environments by meeting people, going out on an assignment and so on. You'll learn to recognize when you are most creative and it's likely to be in an environment that is not your usual one.

Record Your Ideas
We all have brainwaves; the trouble is that we don't record them. Start writing down an idea or solution that comes to you, no matter how crazy or impossible it may appear. You could do it by simply carrying a notebook around or using Post-It notes. Or you could harness technology using the various devices that are around you. All phones have memo recording capabilities. Most phones also allow you to carry out voice recording. Your computer is another powerful tool to leverage on for recording your ideas.
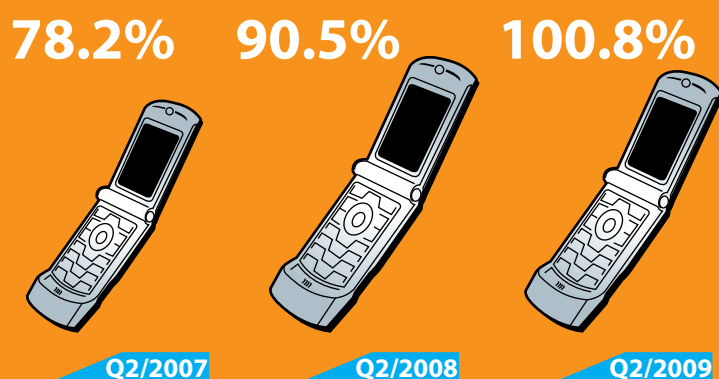
Whichever way or activity you choose, work on unleashing creativity and you will no doubt find that your mind is a lot more powerful than you believe it to be.
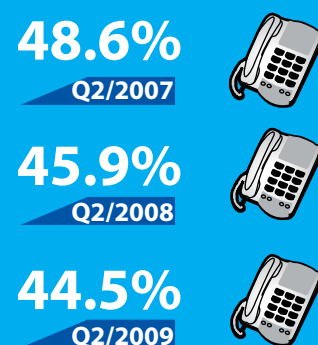
Number of
Post Offices

915	947	997	1040
2005	2006	2007	2008

33.4 Billion Q4/2006
56.9 Billion Q4/2007
52.7 Billion Q3/2008

Number of
SMS text messages

Penetration rates:
Cellular Phones
by persons

78.2%	90.5%	100.8%
Q2/2007	Q2/2008	Q2/2009

Penetration Rates:
Fixed Lines
by household

48.6% Q2/2007

45.9% Q2/2008

44.5% Q2/2009

114 2006

109 2007

114 2008

Number of
Courier Companies

Penetration rates:
Broadband
by household

Q2/2007 **12.7%**

Q2/2008 **18.0%**

Q2/2009 **24.8%**
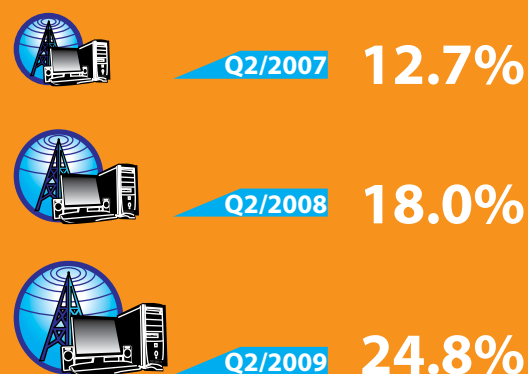
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Working Towards A Connected

1 Malaysia