2009 ANNUAL REPORT: BROADBAND TOWARDS 1MALAYSIA
High speed broadband is a key enabler to transform Malaysia as a middle-income nation to a high-income nation. It will make Malaysia a 21st century nation.

Yang Amat Berhormat Dato’ Sri Mohd Najib Bin Tun Haji Abdul Razak
Prime Minister of Malaysia
The bunga raya with fibre optics radiating upwards heralds an exciting new era – the birth and the proliferation of high speed broadband in Malaysia. Broadband is required for advanced and bandwidth services such as digital homes, medical imaging and multi-channel high-definition TV applications and services.

We are already well under way to ‘broadband’ the nation so that its rakyat can enjoy the benefits and uplift their lives through the use of broadband and communication technologies. Together we are building and creating a 1Malaysia nation with broadband.
National Policy Objectives

We shall endeavour to fulfill the 10 National Policy Objectives for the communications and multimedia industry as enunciated in the Communications and Multimedia Act 1998:

1. To establish Malaysia as a major global centre and hub for communications and multimedia information and content services
2. To promote a civil society where information-based services will provide the basis of continuing enhancement to quality of work and life
3. To grow and nurture local information resources and cultural representation that facilitate the national identity and global diversity
4. To regulate for the long-term benefit of the end-user
5. To promote a high level of consumer confidence in service delivery from the industry
6. To ensure an equitable provision of affordable services over ubiquitous national infrastructure
7. To create a robust application environment for end users
8. To facilitate the efficient allocation of resources such as skilled labour, capital, knowledge and national assets
9. To promote the development of capabilities and skills within Malaysia’s convergence industries
10. To ensure information security and network reliability and integrity

Vision
To become a globally competitive, efficient and increasingly self-regulating communications and multimedia industry generating growth to meet the economic and social needs of Malaysia.

Mission
We are committed to:
- Promoting access to communications and multimedia services;
- Ensuring consumers enjoy choice and a satisfactory level of services at affordable prices;
- Providing transparent regulatory processes to facilitate fair competition and efficiency in the industry;
- Ensuring best use of spectrum and number resources; and
- Consulting regularly with consumers and service providers and facilitating industry collaboration.

Core Values
- Authoritativeness
- Integrity
- Competence
General Consumers
- Recording all complaints received
- Acknowledgement to complainant within three working days
- Forward complaint received to relevant service provider within five working days
- Follow-up on status of complaint from service provider after 15 days

Assignment Applicants
Apparatus Assignment (AA)
- 60 days to process the AA application subject to the Licence Committee meeting, border co-ordination by FACSMAB, JTC and Trilateral (Malaysia, Singapore and Indonesia) meetings and approvals
Number Assignment
- 30 days to process normal assignment applications e.g. PSTN Numbering Application
- 45 days to process special assignments e.g. mobile, short codes

Licence Applicants
- 45 days from receipt of complete application to process NFP, NSP and CASP licence applications and to recommend to the Minister for approval
- 30 days from receipt of complete submission to process NFP and NSP class licence registrations
- 15 days from receipt of complete submission to process ASP class licence registration

Licensees
- Promote fair competition and market development through transparent regulatory processes as outlined in the CMA 1998
- Provide resolutions to disputes when necessary
- Promote effective regulation by monitoring all significant matters relating to the performance of its licensees and reporting to the Minister at the end of each financial year
- Review the Rules & Regulation every three years or as and when directed by the Minister. This is to ensure that the Rules & Regulation remain relevant

Clients’ Charter
Our undertaking to our clients are:
Foreword by the Minister

In the path towards transforming the nation into a high-value and developed nation, the communications and multimedia industry will indeed play an important role in many ways. The communications and multimedia industry not only contributes to the nation’s socio-economic growth but also to its cultural development as well.

Broadband is recognised as a catalyst in the drive towards transformation. We have embarked on an aggressive programme to provide broadband services to the people and accelerate the broadband penetration rate in this country. The 1Malaysia Netbook distribution to qualified students and families and the ‘Kampung WiFi’ are two of the more outstanding initiatives of the broadband programme. SKMM has been entrusted with the responsibility of implementing the National Broadband Plan and ensuring that the people receive adequate access to communication and broadband services at affordable prices and as an industry regulator, it functions in a transparent manner while facilitating fair competition and efficiency amongst the industry players. I envision that no one will be left out in the drive towards the nation’s transformation.

Malaysians are now more exposed to the various media platforms than before. As the authority and custodian of the Communications and Multimedia Act 1998, Postal Services Act 2001 and Digital Signature Act 1997, the Commission’s functions and responsibility are increasingly becoming more apparent and significant.

This Report presents the Commission’s achievements and activities, signifying various aspects of its governance and functions. I have every confidence that the Commission will continue its sterling performance with the support and participation of everyone involved.

DATO’ SERI UTAMA DR RAIS YATIM
Minister of Information Communications and Culture
Chairman’s Message

With the new leadership in Government, came the Prime Minister’s vision of ‘Malaysia that is encompased in the Government Transformation Programme (GTP) for the Government and a focus on 6 National Key Results Areas (NKRA) in which the Key Performance Indicator (KPI) of Government agencies is expected to play an essential role in improving the effectiveness of the Malaysian Government. The NKRA include crime prevention, reducing corruption, increased access to quality education, improvements in the standard of living for low income groups, enhancements to rural infrastructures and improvements to public transportation – areas which communication and multimedia had an active role to play. The Prime Minister did not waste any time further, the New Economic Model was introduced to be integrated into the 10th and 11th Malaysia Plans. The goal has been set for Malaysia to be a high value, high income developed nation by 2020.

In this regard, the Commission had a head start in that its goals had already been set in the Communications and Multimedia Act 1998 and implementation of the 10 National Policy Objectives for the communications and multimedia industry including achieving the objectives of the MyICMS886 and the National Broadband Plan that sought to ‘broadband’ the nation so as to enable the people and businesses to contribute to the economic and social growth of the nation. It is expected that 50 per cent household penetration of broadband is able to provide up to 1 per cent of the GDP and create up to 135,000 jobs in the market. At the end of 2009, there were 2.4 million subscribers of broadband representing a household penetration rate of 31.7 per cent.

With the instruments of change being put into place, the Commission as an implementation agency of Government indeed had to quickly take stock and reassess its raison d’être so as to be in line with the objectives of ‘Gagasan 1Malaysia’, the Government Transformation Programme and the New Economic Model initiatives. Fresh impetus and development for new focus areas and initiatives had to be put in place, and put in place quickly.

The Honourable Minister further enjoined the Commission to accelerate efforts at achieving the target penetration rate and in the spirit of ‘Malaysia to address the digital divide gap between urban and rural areas of the country so that the peoples of the country would be able to benefit from broadband services. New initiatives were identified that would broaden the scope and reach of broadband to the people. These new initiatives were set to be launched in early 2010 as the National Broadband Initiatives. These initiatives included the 1Malaysia Netbook programme, re-introduction of the Information Department regional offices into Mini Community Broadband Centres, the Broadband Awareness and Promotion Campaign and construction of new telecommunication towers and infrastructure across the country to add to existing ones.

The NBI initiatives brought about fresh impetus towards the basic tenets of Bridging the Digital Divide in Malaysia; together with the on-going Universal Service Provision programme, it enabled the ‘rakyat’ to leapfrog en masse in the race towards being a developed country. These enablers will also be the setting point of future planning and development of the communication and multimedia industry in Malaysia. Review and changes to the industry plans and regulations such as to the MyICMS886, National Broadband Plan, National Spectrum Plan, content development and regulation are certainly due and will indeed have the NKRA, the Government Transformation Plan and the New Economic Model in mind for the review.

Development of the communications and multimedia industry in 2009 was further characterized with a shift in focus from infrastructure development to an enhancement of content development and regulation and strengthening of enforcement and monitoring activities.

New development and changes also came in the regulatory and monitoring activities of the Commission as progress in technology brought about new areas to focus in for regulation especially in the area of consumer protection, on-line transaction and activities, cyber security as well as network security. Our Consumer Protection Monitoring System, the Consumer Forum and the Quality of Service mandates for the industry were improved to ensure that more effective consumer protection activities were put in place. Further, with broadband services being offered to the public and while the people enjoyed access to all forms of media, due regard and restraint had to be given to the political and cultural sensitivities of the Malaysian society. Hence, awareness, enforcement and monitoring of the new media took centre stage.

Organisational Transformation

Change is synonymous for the communications and multimedia industry, hence as the regulator and developer of the industry it is de rigueur for the Commission to keep pace with change, time and progress. As an organisation we are constantly seeking ways to improve and innovate.
The change management programmes that were initiated in 2008, continued and developed in 2009. With the changes in leadership and direction, the Commission has embarked on a journey in developing new strategies and initiatives that would align itself with the New Economic Model and Government Transformation Plan. No doubt, the Commission and the communications and multimedia industry has a leading and catalytic role to play in realizing the vision of “Malaysia as the ICT Regional Hub” and to promote the culture of innovation across all of society.

The Commission’s organisational transformation practices continued to focus on building a performance driven culture to ensure that the institution is able to deliver on its core mandate of effective regulation and development of the industry. The main areas that contribute to organisational change include organisational and human capital performance management planning, business process improvements and strategic ICT initiatives that would enable the Commission to function effectively as a regulator and industry developer.

These programmes gave attention to efforts at retaining, upgrading and improving the organisation’s Human Capital talent, skills, knowledge, capabilities and reward. In line with the Government Transformation initiative that gave focus on defining Key Result Areas (KRAs) and Key Performance Indicators (KPIs), the Commission also strengthened its organisational KRA and KPIs and its Performance Management System with emphasis on developing individual KPIs and KPIs that is aligned to organisational strategies. Combined with the process improvement project which began in 2009, improvements were reflected in better responses and performance of the targets set for the organisation.

In addition to strengthening the organisational KRA’s and KPI’s, the overall organisational structure was also restructured, so as to streamline the functional departments into two main clusters that cover the areas of Regulatory & Compliance Management and Development headed by capable senior management of the Commission.

As the Commission strategise and gears itself for the future, 2010 will see a further refinement and adjustment to both the organisational KRAs and KPIs as well as the organisational structure and human capital engine that drives it.

Broadband is the Enabler

At the height of the world economic downturn in 2009, the Malaysian communications and multimedia industry was able to achieve a market capitalisation of RM103.5 billion or 10.4 per cent of the total Bursa Malaysia market capitalisation from RM48.5 billion in 2008, a somewhat slight increase from RM48.0 billion in 2008 yet, overall, the communications and multimedia industry revenues was able to contribute and represented 6.2 per cent and 8.2 per cent of the country’s GDP and GMP respectively.

Since the implementation of the Communications and Multimedia Act 1998 licensing framework, the communications and multimedia industry has achieved marked progress in many different aspects. Among those developments include the proliferation of a number of private sector telecommunications, television and radio service providers. In the year 2000, 95 licenses have been issued forth where 20 licenses were network application service providers and 38 were application service providers. Since 2000 and until end of 2009, the number of license issued has multiplied many times over; 883 licenses have been issued whereby 98 are network facility provider, 102 network service provider, 38 content application service providers and 450 were application service providers.

The efforts to implement the National Broadband Plan intensified in 2009 with the implementation of the National Broadband Initiatives (NBI). Under the NBI, implementation was divided into three geographical areas, Zones 1, 2 and 3. Zone 1 which consists of high economic impact areas such as the Klang Valley, is expected to be completed within 2 years, Zone 2 focuses on areas such as Iskandar Development region in Johor, is expected to cover 75 per cent of the population of the country and the people’s needs are to be met. Zone 3 is where most of the population of the country are and the people’s needs are to be met.

As members of the industry and the public at large are well aware of, we are well underway in implementing the National Broadband Plan of achieving 4 per cent of per household penetration rate by end of 2010 or 3.2 million homes able to enjoy a wide range of Internet services or applications.

As at end of 2009, broadband connections recorded a subscription base of 2.2 million or 3.7 per cent penetration rate. The target was to meet at least 30 per cent of per household penetration by end of 2009, hence we met that target with room to spare. We look onwards now towards the target by end 2010.

In the drive towards achieving the target, I am happy to commend the unremitting efforts and collaboration with the industry to meet the target together. The Government and industry service providers have hand in hand worked hard on a number of measures including projects such as High Speed Broadband (HSSB), Broadband to the General Population (BBGP), Universal Services Provision (USP) programmes, tax incentives for broadband subscriptions, broadband product and low-cost package development as well as awareness and promotion campaigns on the benefits of broadband.

Along the way, an innovative by-product was created in the form of the SKMM Magic Map, an information mapping application service, to assist the Commission to plan, execute and monitor implementations under the Commission’s programmes. The Magic Map has since been used extensively not only for the NBI but also for other monitoring and enforcement activities by the regulator.

Further, with the population steadily shifting towards new media and online activities, SKMM has taken the lead in promoting a proactive, security platform to reduce any negative impact to the network and to raise awareness regarding cyber security threats and issues. In fact the opposition to this initiative was taken to the World Telecommunications and Information Society Day 2009 with the theme “Protecting Children in Cyberspace” where the Commission had an awareness campaign with the newly formed Ministry of Information, Communications and Culture and members of the communication and multimedia industry to raise awareness of not only the threats and dangers of the Internet, but also protective measures that can be taken as parents and guardians of children.

At the same time, the Commission had made preparations to expand the Malaysian Internet Exchange (MyIX) in a bid to keep traffic, local by promoting and encouraging direct peering among the local Internet Service Providers. The MyIX was established in 2008, also acts as a co-operative effort to keep Internet traffic local by promoting and encouraging direct peering among the local Internet Service Providers (ISPs). The effort is beneficial to many ISPs since this peering infrastructure assists to lower ISP costs for routing their traffic and ultimately make the broadband experience more enhanced for the users. At the end of 2009, the MyIX phase for Sabah and Sarawak was launched by the Honourable Minister, expanding the Exchange facilities for ISPs and ultimately users there.
The rollout of broadband in Zone 3 requires intervention by the relevant communication service providers to expand their coverage to 97 per cent of population by 2011. The main objective of the USP programme is to bridge the digital divide between the areas where there are easy access to communication technologies and areas with less access or underserved areas. The indirect objective of the USP programme is to facilitate the development of the CBCs and CBLs in the underserved areas which will stimulate the local community economic activities as well. At the behest of the Honourable Minister and with his strategic vision in mind to accelerate broadband efforts and bridge the digital divide, the Commission undertook a review of the USP and NBI programmes. Hence as can be observed, the National Broadband Plan is meant to include the provision of 1Malaysia Netbooks to secondary and university students in order to bridge that gap for the knowledge society, and to accelerate the development of the CBCs and CBLs in the underserved areas. The cellular coverage in these areas will be widened by building more communication towers funded through the USP programmes to facilitate the cellular service providers to expand their coverage to 97 per cent of population by 2011. The total cost of the HSBB project is RM1.3 billion for the period of ten years whilst Telekom Malaysia Berhad (TM) has undertaken to invest RMB 9 billion during the ten year duration. The scope of the project covers end-to-end deployment of the HSBB infrastructure and installation of new facilities. The project entails deployment of access, core and international connectivity infrastructure. The HSBB project will cover the Klang Valley, industrial areas nationwide and development areas such as the Iskandar Malaysia development area; in other words the high economic impact areas of the country.

By 2012, TM is expected to deploy high-speed broadband access to 1.3 million premises in the areas identified. Since the Public Private Partnership between the Government and TM was signed on 16 September 2008, we have seen the implementation of the HSBB network for the country. The HSBB groundbreaking ceremony was held in June 2009 in Taman Tun Dr Ismail and marked the laying of works of HSBB infrastructure by TM. By end of 2009 a total of 8,093 million premises within 41 exchanges located in Kuala Lumpur, Selangor and within the Multimedia SuperCorridor (MSC) areas. It is expected that with the uptake of High-Speed Broadband by more and more businesses and economic activities in the targeted areas, the high economic impact areas of the country will benefit from the high-speed broadband access. The New Economic Model, the 9th and 10th Malaysia Plan stressed ICT as one of the key catalysts of transforming the country and the content industry is certainly to take a more prominent role as the nation gears itself towards a developed nation status. Over the years the content market in Malaysia has expanded with growth especially in line with mobile subscriptions and broadband take-up.

The High Speed Broadband

Based on this realisation, the Government has taken various initiatives to develop local content. In the 2010 Budget speech, the Prime Minister announced the establishment of RM200 million fund to help stimulate the creative industry and launched on 30 December 2009. Added to this, the Government through the Multimedia Development Corporation (MDC) has set-up a fund with an initial allocation of RM77 million to assist local MISC-status companies co-produce animation and games with foreign partners.

In line with the Government’s effort to produce a vibrant local content industry, the Commission had launched the Networked Content Development Grant (NCDG) with an initial size of RM20 million was launched in July 2007. In 2009, the fund was increased to RM50 million. Apart from providing funding, the initiative also aims to facilitate and encourage Malaysian involvement in the creation, production and distribution of highly creative, original and marketable content for domestic and international markets. As at end of 2009 a total of about RM8 million of the funds had been approved to various content projects by content developers.

Apart from these, the Malaysian Government has taken various initiatives to produce a vibrant local content industry as one of the key catalysts of transforming the country and the content industry. The Government has been instrumental in developing the content industry in Malaysia and the creative sector in general in order to contribute to the nation’s currents of progress. The Malaysian population is served with their TV services from Channels 1 to 8, and Malaysia’s biggest national daily newspaper, The Star as well as a number of online newspapers. In order to integrate and co-ordinate content development activities in a more cohesive way thus leading the way for a wholesome development of the industry including development of national content policies. In 2009, the Commission played an active and integral role in drafting the Creative Industry Policy and the National Content Policy propounded by the Honourable Minister which seeks to further bring the local content industry to new heights as a whole. Further, Government-industry public collaboration on content development, regulation and awareness were carried out in 2009 in various forms such as the Mobile Content Challenge 2009, the NextGen Contentpreneurship 2009 organised by Astro, both in collaboration with the Commission and other Government agencies.

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amidst the difficult domestic economic climate, however, activities in upgrading the current analogue broadcasting-in-house facility to digital by a TV service provider are underway and to date almost 90 per cent of the broadcasters’ facilities are digital ready, that will enable 16 channels of TV programming and a host of other interactive applications.

Further, in the area of digital FTA TV receivers and Set-Box (STB) development, the manufacturers, industry stakeholders together with the Malaysian Technical Standards Forum are reviewing the current technical specifications, taking advantage of new technological developments such as DVB-T and STB middleware. These include Integrated Digital TV Receivers (IDTV) which will enable viewers to opt for a digital TV with a built-in STB. Further studies are also underway to ensure that the Malaysian consumer will be able to enjoy the facilities and services of Digital TV when it becomes available in the open market.

This is prepared with the switch over to the digital platform in Malaysia scheduled for 2015 in mind.

National Spectrum Plan

Another major strategic focal point for SKMM in 2009 was the review and development of the National Spectrum Plan which is expected to be completed in 2010. The current Spectrum Plan was issued on November 2006 under section 172 of the Communications and Multimedia Act 1998. Due to the rapid development in wireless communications and the demand for spectrum, the current Spectrum Plan is now being extensively reviewed. The National Spectrum Plan provides the Table of Frequency Allocation and policies on the current Spectrum Plan is now being extensively reviewed. The National Spectrum Plan which is expected to be completed for 2015 in mind. The Spectrum is and will be the buzzword of the industry as we embark on the review process. Spectrum is a national resource, however, availability is based on the country’s FTA television sector. The Ministry of Information, Communications and Multimedia is expected to manage the allocation of spectrums to the country’s FTA television sector. In order to ensure that Spectrum is put to the best use, understanding the ecosystem of the technology is essential, hence the Commission has paved the way with providing the necessary research and forums to better understanding such ecosystems.

As Malaysia embarks into its next stage of growth from resources-led economy to innovation-led economy, there is a wide variety of opportunity for Industry growth and development originating from the wireless industry. At the same time, we have to find a balance between economic growth and the need of spectrum to preserve public safety and security.

As with all plans that affect the industry and national resources, the Commission took on a consultative approach towards such review and development with the many stakeholder groups that affect the communications and multimedia industry.

The National Spectrum Consultative Committee (NSCC) was established in 2009, and expected to be launched in early 2010 by the Honourable Minister of Information, Communication and Multimedia, as a forum to facilitate consultation and receive focused advice on spectrum management strategic matters between SKMM, and different stakeholders or interest groups, whilst the Spectrum Research Collaboration with designated Institutions of Higher Learning have collaborated in various programmes on projects on spectrum management studies or research. Along with that, the Commission has also organised learning and discussion forums through Conferences, Seminars and Lecture Series throughout the year.

Postal Services in the 21st Century

The Post Office and Mail Delivery network is an essential infrastructure for socio-economic growth whilst the courier and express delivery service industry plays a major role in providing the domestic and international connections crucial for businesses to serve various markets around the globe and for transporting goods and services in the economy. It provides convenient access to various Government and commercial services. Even though competition is increasingly becoming intense for the postal office in the digital era as a result of on-line transaction facilities, it remains an important communication facility for the nation.

Very few sectors in Malaysia come close to the level of physical connectivity with households and retail network across the country like the post office sector. The Ministry of Information, Communication and Multimedia is expected to generate the annual revenue size of nearly RM3 billion, employs 34,000 people and serves more than 6.8 million addresses nationwide both in urban and rural areas.

The Commission is the regulator for postal and courier services in Malaysia. The Postal Services Act 1991 seeks SKMM to ensure the high quality conveyance of postal articles and to protect the consumers of postal services.

In 2009, the focus was improving access to post offices especially in rural areas of the country, where the Government through the Postal Industry USP Programme has allocated RM1 million for the development of mini post offices under the Project Usaha Pos Mini Luar Bandar and ‘Pekan Surat Komuniti’ for rural areas.

2009 also saw the Commission issuing a mandatory performance standard for domestic letter service as parts of its efforts to improve the quality of postal services whilst continuing to monitor the measures taken by Pos Malaysia Berhad to improve their performance levels.

2010 is set to bring the seeds of transformation of the postal sector in Malaysia as the Postal Transformation Plan comes into being and implemented.

The courier service industry is a highly competitive sub-sector with the companies vying to provide the best services to its customers. As at end 2009, there were 106 licenses compared to 113 in 2008. As the courier companies compete with each other for a bigger share of the market, at the same time new technologies are introduced to improve services. These technologies include radio frequency identification (RFID) track and trace, using automatic identification systems which assists in the storage, management and retrieval of items and documents to complement the records management services. The introduction of these technologies will eventually improve delivery of documents and parcels to the Malaysian consumers.

In terms of revenue, the postal services sector was mainly represented by Pos Malaysia Berhad, contributed an estimated RM0.9 billion or 2 per cent of the Malaysian consumers.

At the same time that the broadband infrastructure is built and deployed, the content and end-user applications are further developed and enhanced, we have also turned our attention towards the end-users, the consumers of broadband to ensure that their rights are not neglected. In fact, our focus and attention is on all communications and multimedia services to ensure that consumers have the opportunity and access to competitive prices, choice of products and services, quality of services, suitability of content and multimedia platforms.

Digital Certification to secure On-line and Electronic Transactions

The Commission has been promoting the use of the electronic media and on-line transactions. The Electronic Government Activities Act passed in 2007 gave recognition to electronic transactions as the equivalent of physical transactions and is expected to, over time, result in more use of the electronic media in the delivery of Government services. These transactions are expected to move from mere downloads to submissions of information and documents, hence increase the need for secured transactions and authentication of documents. For example, as shown by the implementation of e-Filing by the Internal Revenue Department, Government applications have the potential of initiatives to encourage for digital certificates. Further the Government has launched the ‘mySMS’ platform as the gateway for Government services via mobile phones which has the potential to progress from information based services to transaction type services requiring authentication.

The Commission continued in its efforts for the development of electronic banking in the country with research and testing using different technologies including NFC, web and mobile PKI ecosystems. With the ever increasing demands for mobile services, mobile commerce using PKI eco-system is set to be the next big wave as we move towards a cashless society.

The market for digital signature remains small. Both digital signature certifying companies, MSC Trustgate Sdn Bhd and Digicert Sdn Bhd, posted combined revenue of RM2.7 million in this market segment registered a negative growth of 22.8 per cent or RM7 million in revenues from the year 2008.

Protecting the Consumer

At the same time that the broadband infrastructure is built and deployed, the content and end-user applications are further developed and enhanced, we have also turned our attention towards the end-users, the consumers of broadband to ensure that their rights are not neglected. In fact, our focus and attention is on all communications and multimedia services to ensure that consumers have the opportunity and access to competitive prices, choice of products and services, quality of services, suitability of content and multimedia platforms.

Digital Certification to secure On-line and Electronic Transactions

The Commission has been promoting the use of the electronic media and on-line transactions. The Electronic Government Activities Act passed in 2007 gave recognition to electronic transactions as the equivalent of physical transactions and is expected to, over time, result in more use of the electronic media in the delivery of Government services. These transactions are expected to move from mere downloads to submissions of information and documents, hence increase the need for secured transactions and authentication of documents. For example, as shown by the implementation of e-Filing by the Internal Revenue Department, Government applications have the potential of initiatives to encourage for digital certificates. Further the Government has launched the ‘mySMS’ platform as the gateway for Government services via mobile phones which has the potential to progress from information based services to transaction type services requiring authentication.

The Commission continued in its efforts for the development of electronic transactions in the country with research and testing using different technologies including NFC, web and mobile PKI ecosystems. With the ever increasing demands for mobile services, mobile commerce using PKI eco-system is set to be the next big wave as we move towards a cashless society.

The market for digital signature remains small. Both digital signature certifying companies, MSC Trustgate Sdn Bhd and Digicert Sdn Bhd, posted combined revenue of RM2.7 million in this market segment registered a negative growth of 22.8 per cent or RM7 million in revenues from the year 2008.
In this regard the consumer protection provision in the CMA is designed to promote and protect consumer interests in the use of communications and multimedia services. Our aim is to promote industry responsiveness to consumer requirements, consumer confidence in service quality and deliverables and affordability of services.

In achieving these objectives, several mechanisms have been put in place to protect the consumer including mandatory standards of quality of services, required applications services, consumer and complaints dispute resolution, rate regulation and many more. For example, with the recent increase in wireless broadband subscriptions, the Government needed to impose quality standards on wireless broadband service to ensure consumers are protected and to impose high standards for service providers. Hence in 2009, the Commission issued a multi-sectoral public inquiry process to gather feedback and comments from the general public in developing the mandatory standards for quality of service for wireless broadband access.

The SKMM Consumer Complaints Bureau handles complaints ranging from communications services such as telephony, mobile services, broadcasting, Internet, postal and digital signature. In 2009, the Bureau received a total of 6,178 complaints, a 44 per cent increase from 2008. From the total of complaints received, it can be seen that 82 per cent were regarding the service provider delivery and quality of service. The remaining 12 per cent of complaints were related to content, spectrum interference, telecommunication structures and radiation, illegal installation of TV parasitic dish and cybercrime.

As surmised, with more and more consumers subscribing to broadband and 3G services, the most frequent complaints are relating to poor Internet connection/speed and cellular services, followed by Pay TV and 3G services, the most frequent complaints are relating to poor Internet connection/speed and cellular services, followed by Pay TV and 3G services, the most frequent complaints are relating to poor Internet connection/speed and cellular services, followed by Pay TV and 3G services, the most frequent complaints are relating to poor Internet connection/speed and cellular services, followed by Pay TV and 3G services, the most frequent complaints are relating to poor Internet connection/speed and cellular services, followed by Pay TV and 3G services, the most frequent complaints are relating to poor Internet connection/speed and cellular services, followed by Pay TV and 3G services, the most frequent complaints are relating to poor Internet connection/speed and cellular services, followed by Pay TV and 3G services, the most frequent complaints are relating to poor Internet connection/speed and cellular services, followed by Pay TV and 3G services.

Enforcement in the Age of the New Media

As the nation becomes more and more connected, and benefit from broadband and services, the Billboards and services are shared with the services providers who are required to implement perceived level of quality of the services offered by the various services providers. The results of the survey presents an insight into the consumers' issues. The SKMM Consumer Complaints Bureau handles complaints ranging from communications services such as telephony, mobile services, broadcasting, Internet, postal and digital signature. In 2009, the Bureau received a total of 6,178 complaints, a 44 per cent increase from 2008. From the total of complaints received, it can be seen that 82 per cent were regarding the service provider delivery and quality of service. The remaining 12 per cent of complaints were related to content, spectrum interference, telecommunication structures and radiation, illegal installation of TV parasitic dish and cybercrime.

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Tan Sri Khalid Ramli, was appointed Chairman of the Malaysian Communications and Multimedia Commission (SKMM) on 16 October 2009.

Tan Sri was previously the Director General of Implementation Coordination Unit (ICU) of the Prime Minister’s Department. Immediately before his appointment at the ICU, Tan Sri Khalid had served as the Secretary of the Penang State Government.

Tan Sri has served as a Public Administrator in various capacities since 1972. He was formerly a member of Pemudah and Co-Chairman of the Efficiency Working Group. He was also previously a Board Member of Petronas.

Tan Sri holds a Bachelor’s Degree (Honours) of Arts from University of Malaya and a Masters of Public Administration from the University of Southern California, United States of America.
Datuk Wira Kamaruddin Siaraf’s was appointed as a Commission Member on 10 April 2009 for a period of two years.

Datuk Wira Kamaruddin is the Secretary General of the Ministry of Information Communication and Culture Malaysia. Previously, he was the Secretary General of the Ministry of Information.

Datuk Mohd Zain holds a Bachelor’s degree in Sociology. He started his career in the diplomatic service in 1976 and has, amongst others, held the positions of Assistant Under Secretary and Principal Assistant Director of the International Trade Division, Assistant Permanent Malaysian Representative to Geneva and Deputy Permanent Representative to the United Nations, Geneva (International Trade Division). Other notable appointments include being the Minister Counsellor for Economic Affairs of both the Malaysian Permanent Representative Office to the European Union (EU), Brussels and the Malaysian Permanent Representative Office to the World Trade Organization (WTO), Geneva. He was the Lead Negotiator for the Malaysia-Australia Free Trade Agreement (FTA), the Malaysia-New Zealand FTA as well as the ASEAN Australia New Zealand FTA negotiations in 2005 and 2006. Datuk Mohd. Zain was appointed Secretary General of Ministry of Domestic Trade and Consumer Affairs on 6 February 2007.

He was appointed Chairman of the Companies Commission of Malaysia on 1 March 2007. He is a Member of MyIPO Board since 6 February 2007 and re-appointed as a Member of the Malaysian Communications and Multimedia Commission on 31 March 2010.
Dato' Madinah Mohamad was officially appointed as Secretary General, Ministry of Science, Technology and Innovation, Malaysia (MOSTI) on 22 April 2009. As the Secretary General of the Ministry, she is very much involved in the administration of MOSTI and directly in charge of the development of science, technology and innovation in Malaysia. The drafting and formation of new policies with respect to innovation is one of her main priorities. The implementation and progress of related policies which is already endorsed by the Government, such as Biotechnology Policy, IT Policy and National Science and Technology Policy are also within her purview.

She graduated with a Bachelor’s degree in Political Science from Universiti Sains Malaysia and a Master’s degree in Human Resource Development from Universiti Putra Malaysia. She began her career as an Administrative and Diplomatic Officer in 1981 with the Ministry of Foreign Affairs. Prior to her current position, Dato’ Madinah has had vast working experience in various Government agencies such as the Public Service Department, the Ministry of National and Rural Development, the Ministry of Works, and the National Unity and Integration Department.

Dato’ Madinah Mohamad was appointed as a Commission Member on 31 March 2010.

Dato’ Hj Md Afendi Hamdan was appointed as a Commission Member of the Malaysian Communications and Multimedia Commission (SKMM) effective from 29 December 2009 for a period of two years.

He graduated from the University of Wisconsin, Steven Point, USA in 1989 with a Bachelor of Science in Business Administration with a minor in Management Information System (Computer Science). Previously a banker, he subsequently ventured into the business world as an entrepreneur in 1992.

In 1995, he was appointed as the Deputy Chairman of Sabah Tourism by Yang Di-Pertua Negeri Sabah until 1998. In 1996, he succeeded in setting up the Dewan Perniagaan Melayu Negeri Sabah and was appointed as the Yang Di-Pertua for the first term to ensure the smooth running of the organisation until 1998.

Later in 2007, he was appointed as a Director of Borneo Aquaculture Berhad, a public-listed company on Mesdaq Kuala Lumpur, dealing in fish rearing and marine development. He is also an IT and film enthusiast who strongly believes in the development of content and technology. In 2008, he was appointed as one of the directors on the Board of Directors in FINAS (National Film Development Corporation Malaysia) and contributed substantially in the content development industry. He was later appointed as one of the Board Members for Universiti Teknikal MARA (UNITEN) in 2009.
**DATO’ DR. GAN KHUAN POH**

Dato’ Dr Gan Khuan Poh is currently the Chairman of Lintramax (M) Sdn Bhd and Silver Bird Group Berhad and sits on the Board of Directors of Prudential Assurance Malaysia Berhad, Time Engineering Berhad and Dapping Oil Technologies Sdn Bhd. He has also been a member of the Executive Council of the Malaysian Economic Association after being the immediate past President of the Association, a member of the Terengganu National Economic Economic Council and the Senior Economic Research Fellow of the Asian Strategic and Leadership Institute.

He served in the public service as an Administrative and Diplomatic Service Officer at various positions from the District level to the Federal Government, especially in the Prime Minister’s Department, at the Development Administration Unit, the Implementation Coordination Unit and the Economic Planning Unit (EPU) before rising to the Senior Director responsible for Macroeconomics in the EPU.

Then he became the Group Managing Director of the Pilecon Group of Companies. He joined Universiti Kebangsaan Malaysia as a Professor holding the post of a Senior Fellow at Institute Kajian Malaysia dan Antarabangsa (IKMAS). He holds a Ph.D.(Economics) and an M.A.(Economics) from Duke University, USA, a M.B.A.(Finance) from Cornell University, USA and a B.A.(Honours) in Business Economics from Universiti Malaya.

Dato’ Dr Gan Khuan Poh was reappointed as a Commission Member on 1 April 2008.

**DATUK IDRIS ABDULLAH**

Datuk Idris Abdullah, holds a First Class LLB (Hons) degree from the University of Malaya. He is a Senior Partner of Idris and Company Advocates since 1989, a Sarawak-based legal firm. He began his career in 1981 as a resident lawyer of Ting and Company Advocates in Kuching, Sarawak. Between 1982 and 1985, he served as an in-house Legal Advisor to a Sarawakian Group of Companies with diverse business interests. During his tenure, he was also involved in advising the group’s activities in human capital development, corporate affairs and corporate finance.

Datuk Idris Abdullah was also a shareholder of many Bumiputra companies based in Sibu, Sarawak. Currently, he is the Chairman/Director of Magnus Energy Group Ltd., which is listed in the Republic of Singapore, with interests in oil and gas in China and Australia, and development of coal mining activities in Indonesia. He was appointed a Director and the Chairman of Kuantan Flourmills Bhd, from October 2002 until September 2005 and acts as an advisor to some Sarawak companies involved in construction and building, motor vehicle trading, recreation club and education. Datuk Idris is also a Member of the Companies Commission, having been reappointed a third term on 16 April 2009. As an active Member of the Companies Commission, Datuk Idris has been appointed a Member of the Audit Committee and Member of the advisory panel of the Companies Commission Training Academy (COMTRAC).

Datuk Idris Abdullah was appointed as a Commission Member on 26 May 2008.
PUAN NURAFFIZA AHMAD

Nuraffiza Ahmad is the Secretary to the Commission. Prior to assuming this position in 2001, she was in legal practice before serving the Johor Corporation as a legal adviser at its investment office in Jakarta. She holds an Bachelor of Laws (Honours) degree and Masters in Law from the International Islamic University of Malaysia. She has been called to the Malaysian Bar and was admitted as a Syariah lawyer in the Federal Territory as well as Negeri Sembilan states.

DATO’ MOHAMED SHARIL MOHAMED TARMIZI

Dato’ Mohamed Sharil Mohamed Tarmizi was appointed as Chief Operating Officer (COO) of the Malaysian Communications and Multimedia Commission (SKMM) on 16 June 2008. Dato’ Mohamed Sharil brings with him a considerable number of years of experience in the legal field, communications and multimedia industry, as well as experience in the financial advisory and strategy consulting areas. Dato’ Mohamed Sharil was the Executive Director and Head of Strategy in BinaFikir Sdn Bhd, a financial advisory and strategy consulting firm, prior to being invited to join SKMM as the COO.

He first joined SKMM in May 2000 and left for BinaFikir after serving SKMM for a period of six years. His last position in SKMM was the General Manager and Senior Advisor in the Office of the Chairman. In the international arena, Dato’ Mohamed Sharil has worked closely with the main international organisations in the Internet field, such as the Internet Corporation of Assigned Names and Numbers (ICANN), where he was the immediate past Chairman of the Government Advisory Committee (GAC) and a board member of ICANN for four years. Dato’ Mohamed Sharil holds a Bachelor’s Degree in Law from University College of Wales, Aberystwyth and qualified as a Barrister from Gray’s Inn, England and Wales (UK).

In recognition of his in-depth knowledge of the communications and multimedia sector both locally and globally, he was re-appointed as a Commission Member of SKMM from 1 May 2008 and he continues to serve as a Commission Member to date.
1. Communications and Multimedia Revenue
Market Share by Sector 2009 (RM41 billion)

- Major Telcos RM35.5 billion (87%)
- Broadcasting RM3.8 billion (10%)
- Pos Malaysia RM0.9 billion (2%)
- Others RM0.6 billion (1%)

2. Fixed Line DEL Subscriptions and Penetration Rate

3. Penetration Rate and Cellular Mobile Subscribers (2001-2009)

4. Communications & Multimedia Industry Revenue vs GDP

5. Broadband penetration rate per 100 households by state

6. Internet access through handphone

7. Generational group among handphone users

8. Statistics on Communications & Multimedia as at end of 2009
Broadband Explained - What is Broadband?

The term "Broadband" is a short form for "broad bandwidth". This refers to faster and high capacity Internet access compared to the traditional dial-up access. With broadband transforming our lives today, this means that the era of slow Internet connections (dial-up) which made us wait for everything is now over.

Broadband is always on—there is no need to reconnect to the network after logging off and is automatically available when powered up.

Broadband provides access to the high quality Internet services such as streaming media, VoIP (Internet phone), gaming, and interactive services.

Broadband provides access to the high quality Internet services such as streaming media, VoIP (Internet phone), gaming, and interactive services.

The Bandwidth of Broadband takes up:
• increase competitiveness in all market segments
• stimulate economic growth by creating new jobs and opportunities,
• reduce unnecessary travel and carbon footprints,
• facilitate distance learning, and
• ultimately towards bridging the digital divide.

Broadband will bring major technical evolution that can influence and change the way we do our work and leisure entertainment. It is as if a huge information ‘pipeline’ is connected directly to our homes and workplace where it delivers unlimited information and services for our purposes.

Deciphering Broadband Speeds

*Speeds in reference to Internet usage is interpreted in simple terms 'how long you have to wait to get something downloaded'.

Internet Connection

Anyone accessing to the Internet is a two way communication. It is about receiving or sending data from or to the Internet.

Type of File

<table>
<thead>
<tr>
<th>Time to Download</th>
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</thead>
<tbody>
<tr>
<td>High-quality movie download</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Movie downloaded, game demo</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>A 30-second video clip</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>A high quality 5-minute MPEG music file</td>
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</tbody>
</table>

The download speed stated in technical terms is for example 200 Kbps (Kilobits per second)—the higher the speed means more data can be transmitted within a period of time. Sometimes government authorities such as the US Federal Communications Commission defines broadband services as data transmission with speeds exceeding 200 Kbps or 200,000 bps in at least one direction that is uploaded (from our computer to Internet) and download (from Internet to our computer).

Broadband provides access to new telecommunications technologies such as Voice Over Internet Protocol (VoIP) allowing voice communications using the Internet. Broadband permits users of Telecommunications Relay Services to use Video Relay Services to communicate more easily, quickly, and expressively with voice telephone users.

Mobile WiMAX
Mobile WorldWide Interoperability for Microwave Access
Fixed WiMAX
Fixed Worldwide Interoperability for Microwave Access
ADSL
Asymmetric Digital Subscriber Line
SDSL
Symmetric Digital Subscriber Line
VDSL2
Very-high-speed Digital Subscriber Line 2
HSPA
High-Speed Packet Access
HSPA+
High Speed Packet Access Plus
CDMA2000 1X EVDO
A telecommunications standard for the wireless transmission of data

Broadband provides information about government policies, procedures, benefits, and programs.

Why is Broadband Essential?

Broadband is a channel to overcome geographical and financial barriers to provide Internet access to unserved and underserved groups so that education, cultural and ICT knowledge are no longer separated by geographical and economic factors.

With broadband capability to access wide range of resources, services and products, it can ultimately enhance our lives in many ways.

Features Article:

Broadband user can do:
• Download & upload at high speed
• Video Streaming
• Social Networking
• Voice-over-Internet Protocol
• Email with rich features
• Web browsing at high speed

END USER

Broadband characteristic

Broadband provides information about government policies, procedures, benefits, and programs.

Broadband provides access to new telecommunications technologies such as Voice Over Internet Protocol (VoIP) allowing voice communications using the Internet.

BROADBAND vs DIAL-UP

Infrastructure

Internet Service Provider

Dial-up Infrastructure

Dial-up user can do:
• Web browsing at low speed
• Basic email

Broadband user can do:
• Web browsing at high speed
• Email with rich features
• Voice-over-Internet Protocol
• Social Networking
• Video Streaming

Broadband can do much more with faster and enhanced speed today.
The New Economic Model (NEM) emphasises on the aspects of creativity and innovation to generate a high income economy through broadband since it can support industries to compete regionally and internationally.
Deputy Prime Minister, YAB Tan Sri Muhyiddin Yassin. Under the new
Governance Structure
2007 to oversee the planning and implementation of the broadband
supply sides of delivering broadband.

The implementation of the broadband strategy that was developed based
on a two-pronged approach which focuses on both the demand and
range of Internet applications through broadband services.

The implementation of the initiatives was steered and monitored by the
National Broadband Initiative (NBI) and has since been
working on accelerating this important national agenda.

ACKNOWLEDGING THE POTENTIAL CONTRIBUTION OF BROADBAND TO THE SOCIAL AND ECONOMIC DEVELOPMENT OF THE COUNTRY AND ALSO TO MALAYSIA’S GROSS DOMESTIC PRODUCT (GDP), THE GOVERNMENT IN JULY 2007 VIA THE PREVIOUS MINISTRY OF ENERGY, WATER AND COMMUNICATIONS (KTAK) INTRODUCED THE NATIONAL BROADBAND INITIATIVE (NBI) AND HAS SINCE BEEN WORKING ON ACCELERATING THIS IMPORTANT NATIONAL AGENDA.

With the reshuffling of the Cabinet and the restructuring of the Ministry in April 2009, the target of 50% household broadband penetration rate by end of the year 2010 continues to be the Key Performance Indicator (KPI) for the Minister of Information Communication and Culture. This means that by the end of 2010, 3.2 million homes should enjoy a wide range of Internet applications through broadband services.

IMPLEMENTATION

The National Broadband Initiative (NBI)
The implementation of the broadband strategy that was developed based on a two-pronged approach which focuses on both the demand and supply sides of delivering broadband.

Governance Structure
The Cabinet Committee on Broadband (CCB), that was set up in July 2007 to oversee the planning and implementation of the broadband initiatives at the highest levels in the country is presently chaired by the Deputy Prime Minister, YAB Tan Sri Muhyiddin Yassin. Under the new
restructured Ministry, the Committee held its 9th (CCB9) meeting on 14 September 2009 which saw new faces as its members in view of the Cabinet reshuffle in April 2010. This meeting laid out the initiatives to be undertaken by the various stakeholders, which include:

- To consider the take-up of Personal Computer (PC) ownership and cellular phone subscription as supporting indicators for the broadband penetration in Malaysia.
- To expand the backhaul network coverage to other parts of the country as well as improving the quality of service (QoS) especially in the rural areas.
- To introduce an additional indicator to measure the broadband development in the country. One of the measures against other countries is through the Broadband Development Index (Indeks Kemajuan Jalur Lebar), whose parameters are based on the International Telecommunication Union (ITU)’s ICT Development Index (IDI). The target set for Malaysia on this ITU index is to be at the top 40 by 2011.
- To improve end-to-end broadband quality and speed as well as to review broadband costs for improved competitiveness;
- To make broadband a basic utility through amendments of the Uniform Building By-Laws Act (UBBL); and
- To create more broadband incentives to the public and service providers.

The implementation of the initiatives was steered and monitored by the Ministry’s Steering Committee (SC) which is chaired by the Chief Secretary to the Government (KPKK). The Committee met on 7 December 2009 to detail out the action plans in carrying out the decisions of CCB9.

The National Broadband Rollout
The National Broadband rollout is divided into three zones throughout the country, as illustrated in the diagram above:

- Zone 1 consists of high economic impact areas such as the inner Klang Valley and the Iskandar Development region in Johor;
- Zone 2 covers other urban and semi urban areas;
- Zone 3 covers the rural areas.

Zone 1 is likely to be featured by multiple broadband technologies such as fibre, ADSL, 3G/HSPA and WiMAX and served simultaneously by various operators. Telekom Malaysia (TM) 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 occupants may also opt to access other competitive broadband solutions from other service providers. This zone is aimed to contribute 23% to 25% of the total household penetration.

The National Broadband Implementation Envisions Private Initiatives bringing broadband to Zone 2 areas which cover urban areas outside High Speed Broadband (HSBB) and suburban areas. Zone 2 will be served by the Broadband to General Population (BBGP) multiple services with average speeds of up to 2 Mbps and is targeted to contribute 16% to 18% of the total penetration rate.

Zone 3 comprises rural areas where affordability is low. The rollout of broadband in Zone 3 requires intervention by SKMM using Universal Service Provision (USP) funds. Provision of broadband in these areas includes Basic Telephone (through fixed and mobile network), Community Broadband Libraries (CBL) and Community Broadband Centres (CBC). The cellular coverage in these areas will be widened by building more communication towers funded through the USP funds to facilitate cellular operators to expand their coverage to 97% of the population by 2011.

The above zoning covers the Supply side of the NBI. It is comprehensively illustrated in the following diagramme.

Coverage of National Broadband Implementation

<table>
<thead>
<tr>
<th>ZONE 1</th>
<th>ZONE 2</th>
<th>ZONE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>Suburban</td>
<td>Rural</td>
</tr>
</tbody>
</table>

BBGP (lastmile)

ZONE 1
- Basic Broadband Provision (uSP)
- Basic Utility (same as water and electricity)

ZONE 2
- Basic Utility

ZONE 3
- Basic Broadband to General Population (BBGP)
On the access network, 1.3 million premises passed will be rolled out involving 95 exchanges. The coverage areas are inner Klang Valley, industrial areas and islander Malaysia. The technologies that will be used for access network deployment are Fibre to the Home (FTTH), Multi Service Access Node with VDSL2 (MSAN with VDSL2) and MSAN with ADSL2+ and Ethernet-3-Two Home (ETTH).

The core network elements comprised Metro-E, Broadband Remote Access Server (BRAS), IP Core, Transmission and Control and Support Systems. The International Networks elements covers the submarine cables, the International Gateways (ISGM) located in Malaysia and the International IP Point of Presence (IP POP) at identified countries. The upgrading of submarine cable system Asia Pacific Cable Network (APCN) 2 was completed in March 2010. The upgrading works and implementation of new submarine cable system is in progress.

**BROADBAND FOR GENERAL POPULATION (BBGP)**

In ensuring BBGP rollout throughout the country, several initiatives have taken place.

- **State Tour- State Coordination Meeting with State Government**
  - SKMM works closely with State governments in boosting the broadband takeup in tandem with the ICT agenda and NBI strategy and planning. Since January 2009 SKMM has visited and briefed the State Government agencies and ICT Committee members on each state household penetration target and the implementation strategy for the state according to the State Broadband Framework. A coordination committee was formed to monitor the broadband implementation at state level. The committee also looked into identifying broadband requirement for the States, coordinate involvement with local authorities in infrastructure rollout and coordinate overall issues of telecommunication infrastructure.

- **BROADBAND DEMAND STIMULATION**
  - The demand stimulation addresses 3A levers which includes Awareness, Attractiveness and Affordability. These 3A factors must be able to answer the question “What’s in it for me?”. Thus, a list of initiatives was outlined for the year 2009 that included National Broadband Campaign, State Broadband Campaign, MyBroadband 2009, tax incentives, low cost PC Bundling Packages and more segmented efforts.

  - **Regional offices were also instrumental in pushing broadband takeup at state levels.** In 2009 a number of activities were implemented in the states by the regional offices. Those activities by state include awareness talk to government offices on broadband, road shows at districts as well as Community Broadband Centre (CBC) and Community Broadband Library (CBL) launches.

  - **The National Broadband Awareness and Promotion Campaign**

  - **Appointment of Communication Agencies**

  - **Low Cost PC Bundling**

  - **Innovative Packages - iDOLA Netbook**

  - **Guideline for Communication Infrastructure for Institute of Higher Learning**

In order to improve the broadband accessibility at the institutions of higher learning (IHL), SKMM approached the Malaysian Qualification Agency (MQA) and the Ministry of Higher Education (MOHE) to develop a standard guideline to be adopted by the IHL’s nationwide to complement and to enrich the communication networks infrastructure in IHLs, similar to the implementation at universities in other developed nation. It was also proposed that this guideline be embedded to the MQA’s accreditation criteria.
Broadband initiatives at Schools
To promote broadband at schools, TM has adopted a number of schools for their E-School programme. Under this programme, TM outlined a number of awareness programmes for each school to promote broadband usage among students, parents and teachers.

Content and Application
ICON or Integrated Content Development Task Force was created to develop content in a concerted manner. ICON is chaired by the Chief Secretary of the Government and members include both public and private entities. MAMPU and MDeC are joint secretariat to ICON.

Since its establishment, the Committee has been active in facilitating development of applications and monitoring content development for the country. Among the issues discussed and considered by ICON were online transaction safety, government online applications and the push for affordable Internet hosting for the business sector.

Proposals for Budget 2010
In addition to the public sector initiatives, a few proposals for Budget 2010 and for the Stimulus Package 2 have been forwarded to the Ministry of Finance (MOF). They were:

- Subsidised broadband bundled packages for low-income group
- Tax rebate/relief for broadband subscription
- Individual tax relief for purchase of Internet-enabled devices other than personal computers
- Sales tax abolition for Internet-enabled devices
- Free Internet access at public wi-fi hot spots funded by the government
- Tax relief for service providers who provide services in rural areas or areas without coverage
- Broadband access as a basic utility for housing developments projects

ACHIEVEMENTS FOR 2009
Measurement and Indicators for Broadband Take-up
The broadband take-up rate is being monitored on the weekly basis with the data supplied by the broadband service providers. It allows the service providers to closely assess their achievement with respect to the national penetration rate. This results in a sense of competition between the service providers to offer better and effective services.

In 2008, SKMM and the wireless broadband operators worked together under the Broadband Takeup Committee to undertake a survey on Broadband Takeup. With effect from Quarter 4, 2009, mobile broadband substitution on fixed lines for household had been factored at 56.8%. This means that more household subscribers are using mobile broadband as the only tool to access to Internet at home as compared to 39.4% in 2008.

For 2009, Malaysia has indeed exceeded the 30% household penetration target by achieving 31.7% household penetration rate as of 31 December 2009. The figure below illustrates the actual household penetration for the country compared to the target set.

HIGH SPEED BROADBAND (HSBB) INFRASTRUCTURE ROLLOUT
The nation has been witnessing efforts from TM on the HSBB infrastructure rollout that is closely monitored by SKMM. By end of Quarter 4, 2009, a total amount of RM1.89 billion has been invested to roll out fibre optic infrastructure for the Fibre-To-The-Home (FTTH) and Very High Speed Digital Subscriber Line 2 (VDSL2) services at the Klang Valley and Penang Industrial Zone. By end of 2009, a total of 8,093km optical fibre cable have been installed nationwide.

At the end of 2009, 22 exchanges have been installed with Metro-E nodes and the implementation in other areas are in progress. The Broadband Remote Access Servers (BRAS) were installed at five exchanges in order to serve HSBB customers and the capacity will be increased at end of 2010. The IP Care Core installation involves four super cores and eight (8) regional cores. All the super core and regional core networks have been installed and the capacity will be increased based on the network requirements.

The HSBB ground breaking ceremony was held on 29 June 2009 in Taman Tun Dr. Ismail. It marked the laying works of HSBB infrastructure by TM. On 24 March 2010, TM launched the HSBB services at four exchanges - Bangsar, Taman Tun Dr Ismail, Shah Alam and Subang Jaya.
Under the HSBB initiative, TM is to undertake several projects to stimulate demands for Broadband. Among others:

- Content Platform Development
- The elements comprised of Automation & Service Delivery, Content Technology Platform Media Centre, Content Management, Resource Directory, Content Aggregation, Online Content Development and Content Delivery & Distribution. The element of Automation & Service Delivery through MyAppSentral and MyBizpoint were completed in June 2009.
- To ensure that institutions of higher learning (IHLs) are within HSBB coverage areas. For IHLs which are outside the coverage area, the rollout is expected to complete by 2012.
- To ensure that government offices are within HSBB coverage areas.
- To formulate low cost broadband packaging
- To develop new telecentres in non-USP areas.
- To promote broadband awareness.
- To expose the public to the look-and-feel experience of living in high speed digital lifestyle.
- To formulate broadband bundle package with low cost internet access device. They are currently working with MIMOS to bundle in MIMOS’s PC with their services.
- To formulate a competitive broadband promotion package.
- To formulate a competitive bundle package for fixed broadband.
- To formulate a competitive bundle package for mobile broadband.
- To formulate a competitive bundle package for WiMAX.
- To formulate a competitive bundle package for EV-DO.
- To formulate a competitive bundle package for HSDPA.
- To formulate a competitive bundle package for 3G/HSDPA.
- To formulate a competitive bundle package for ADSL.
- To formulate a competitive bundle package for VDSL.
- To formulate a competitive bundle package for Fixed Wireless (FW).
- To formulate a competitive bundle package for WiMAX.

The following diagrams illustrate the rollout and take-up progress of ADSL, WiMax and mobile broadband services in the country:

**ENDORSEMENT OF INCENTIVES TO PROMOTE BROADBAND TAKE-UP**

Government Incentives

A number of proposals for tax incentives and initiatives which were forthcoming to MOF have been approved. Tax deductions may also be given to employers as benefits in the form of purchase of new computers and payment of broadband subscription fees for employees. Concurrently, this is a tax-exempt benefit on the part of the employees.

Notwithstanding to the current initiatives by individual service providers, the Government has taken a proactive effort to stimulate the broadband uptake among the public by announcing an individual tax relief for broadband subscription up to RM500 for 2010 - 2012 in the Budget 2010. The Government also announced that it is subsidizing the broadband and telecommunication packages which allows first year university students from low income family to subscribe to broadband with installation facility for as low as RM50 per month for two years starting from 1 January 2010.

**BROADBAND FOR GENERAL PUBLIC (BBGP)**

The general public may now enjoy broadband services such as FTTH, VDSL, Fixed Wireless (FW), WiMax, Broadcasting (BRO) (Revolution Data Only). Currently, the demand for fixed broadband surpasses wireless broadband with more than 57% of subscription going for ADSL technology. It is followed by mobile services of 3G/HSDPA which stands at 35% and WiMax services at 5%. The other technologies cover the rest of the total subscription.

**MOBILE BROADBAND ROLLOUT AND TAKEUP**

<table>
<thead>
<tr>
<th>Mobile BB Rollout</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>314,000</td>
<td>308,200</td>
</tr>
<tr>
<td>2009</td>
<td>604,800</td>
<td>579,900</td>
</tr>
<tr>
<td>2010</td>
<td>1,000,000</td>
<td>942,000</td>
</tr>
</tbody>
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<tr>
<td>2010</td>
<td>1,000,000</td>
<td>942,000</td>
</tr>
</tbody>
</table>

**BROADBAND**

**HSBB ROLLOUT, KLANG VALLEY AND NATIONWIDE**

<table>
<thead>
<tr>
<th>HSBB Rollout</th>
<th>Target vs Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>104,200</td>
</tr>
<tr>
<td>2009</td>
<td>254,900</td>
</tr>
<tr>
<td>2010</td>
<td>527,000*</td>
</tr>
</tbody>
</table>

**ADSL ROLLOUT AND TAKEUP**

<table>
<thead>
<tr>
<th>ADSL Rollout</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd HSSP</td>
<td>1,121,100</td>
<td>1,171,500</td>
</tr>
<tr>
<td>3rd HSSP</td>
<td>1,260,000</td>
<td>1,292,000</td>
</tr>
<tr>
<td>4th HSSP</td>
<td>1,361,100</td>
<td>1,403,100</td>
</tr>
</tbody>
</table>

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**ENDORSEMENT OF INCENTIVES TO PROMOTE BROADBAND TAKE-UP**

**Government Incentives**

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DIGITAL PEKAN

Digital Pekan that was launched on 30 January 2010 by YAB Prime Minister, is one of the initiatives under the National Broadband Implementation (NBI) strategy which aims to provide broadband services to the people by utilising digital technology to generate social and economic activities in the community.

The digital district approach that commenced with Digital Pekan follows in the development footsteps of other digital city initiatives adopted in Guru, South Korea; Kenniswijk, the Netherlands, and Stockholm, Sweden.

The broad focus of this initiative is to develop an information society at local level, whilst duplicating and aiming the spreading of its benefits to other districts, eventually covering all cities and states within Malaysia, hence creating a rippling effect towards the digitalisation of Malaysia.

Among other projects outlined for Digital Pekan include:

a) Broadband Experience Centre
   - The objective here is to create a one-stop centre that would serve the following purpose:
     i. Allow people to experience the benefits of the free service internet access and multimedia tools,
     ii. Provide information and training about new technologies/product,
     iii. Develop equal opportunity for access to technology and
     iv. Prevent social/financial exclusion generated by these new tools.

b) Computers@Home
   - The objective here is to enable a greater number of citizens to acquire computer equipment
   - An affordable package which includes a laptop and a connection to internet to be offered by the Broadband service providers

c) Wireless@Pekan
   - The objective is to provide free access to internet for a defined period to the citizens. This is based on the principle that the internet should be accessible to all and that financial cost does not constitute a barrier to the use of new technology in everyday life.

d) Virtual Pekan Memori
   - Encourage local content development that involves various activities that can create demand stimulation: Pekan Blogging Competition, Digital Story Telling and other activities.

e) In Town Portal-www.pekan.my
   - A comprehensive web portal containing information about everything in Pekan (including retail, arts, local attractions and other informations. Applications include public discussion forum, e-mail, personal ads, diary of local events and the like.

f) Awareness Campaigns
   - To create and increase awareness of broadband and its services amongst the community in Pekan

g) e-Pekan
   - Implementation of e-government services

The primary role of these SchoolNet Facilitators is to plan and conduct training organised by the Ministry of Human Resource.

This programme, nearly 1000 unemployed ICT graduates are recruited under the Economic Stimulus Package 2 to initiate this project. Under this programme, nearly 1000 unemployed ICT graduates are recruited as SchoolNet Facilitators. Prior to their posting, they would undergo an intensive training organised by the Ministry of Human Resource.

The target set for the ‘Big Wins’ is to be in top 40 in ICT Development Index (IDI) ranking by 2011. The Broadband Development Index was proposed as one of the key result areas under the Economic Stimulus Package 2 to initiate this project. Under this programme, nearly 1000 unemployed ICT graduates are recruited as SchoolNet Facilitators. Prior to their posting, they would undergo an intensive training organised by the Ministry of Human Resource.

The Ministry of Energy, Water and Communication, secured a fund allocation under the Economic Stimulus Package 2 to initiate this project. Under this programme, nearly 1000 unemployed ICT graduates are recruited as SchoolNet Facilitators. Prior to their posting, they would undergo an intensive training organised by the Ministry of Human Resource.

The Ministry of Human Resource has initiated a broadband awareness programme through the placement of SchoolNet Facilitators in schools nationwide. The Ministry of Information Communication and Culture (KPPK), formerly known as the Ministry of Energy, Water and Communication, secured a fund allocation under the Economic Stimulus Package 2 to initiate this project. Under this programme, nearly 1000 unemployed ICT graduates are recruited as SchoolNet Facilitators. Prior to their posting, they would undergo an intensive training organised by the Ministry of Human Resource.

The IKJ sub-indexes are as described in the table below.

**Schoolnet Facilitator Programme**

To enhance the ICT knowledge among school children, the Government has initiated a broadband awareness programme through the placement of SchoolNet Facilitators in schools nationwide. The Ministry of Information Communication and Culture (KPPK), formerly known as the Ministry of Energy, Water and Communication, secured a fund allocation under the Economic Stimulus Package 2 to initiate this project. Under this programme, nearly 1000 unemployed ICT graduates are recruited as SchoolNet Facilitators. Prior to their posting, they would undergo an intensive training organised by the Ministry of Human Resource.

The primary role of these SchoolNet Facilitators is to plan and conduct various activities, trainings and programmes that expose students, teachers, parents and the general community on the advantages of broadband. They are also custodians of the ICT equipment in their respective school.

**Broadband Development Index (Indeks Kemajuan Jualan Lebar (IKJ))**

The Broadband Development Index has been identified as one of the top benchmarks under the Key Result Area (KRA) for ‘Development and enhancement of communication infrastructure and facilities nationwide’. The target set for the ‘Big Wins’ is to be in top 40 in ICT Development Index (IDI) ranking by 2011. The Broadband Development Index was proposed to the Cabinet Committee on Broadband Meeting no. 5 (CCB5) as an additional measurement for broadband progress in the country.

**IDI Ranking for Malaysia**

<table>
<thead>
<tr>
<th>Rank</th>
<th>2002</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Score</td>
<td>2.74</td>
<td>3.68</td>
<td>3.98</td>
</tr>
</tbody>
</table>

Through IKJ, Malaysia is targeting to be in the Top 40 index values range from 5.29 to 7.85.

The IKJ sub-indexes are as described in the table below.

**IDI Component / Parameter**

<table>
<thead>
<tr>
<th>Agency/Ministry Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadband Access</td>
</tr>
<tr>
<td>Fixed telephone lines subscriptions</td>
</tr>
<tr>
<td>Mobile cellular telephone subscriptions</td>
</tr>
<tr>
<td>International Internet bandwidth per Internet user</td>
</tr>
<tr>
<td>Proportion of households with Internet access at home</td>
</tr>
<tr>
<td>Proportion of households with a computer</td>
</tr>
<tr>
<td>Broadband Use</td>
</tr>
<tr>
<td>Internet users</td>
</tr>
<tr>
<td>Fixed broadband Internet subscribers</td>
</tr>
<tr>
<td>Wireless broadband subscriptions</td>
</tr>
<tr>
<td>ICT Skills</td>
</tr>
<tr>
<td>Adult literacy rate</td>
</tr>
<tr>
<td>Secondary gross enrolment ratio</td>
</tr>
<tr>
<td>Tertiary gross enrolment ratio</td>
</tr>
</tbody>
</table>
Strategising IKJ

While strategising IKJ, a number of workshops with the stakeholders were conducted to decide the target for Malaysia. The stakeholders consist of ministries, agencies, and industry players:
- SKMM – Malaysian Communications and Multimedia
- KPKK – Ministry of Information, Communications and Culture
- MOSTI – Ministry of Science, Technology and Innovation
- KPM – Kementerian Pelajaran Malaysia
- KPT – Kementerian Pengajian Tinggi
- DOS – Department of Statistics
- Industry – CMA licensees

Based on the discussions held thus far, a target for IDI was set to the score of 4.90 which is benchmark to the 40th position in year 2007. The following diagram illustrates the achievement of the IKJ sub-indices as end of 2009.

**IKJ Component / Parameter**  |  **Status (2009)** |  **Target (2010)**
--- | --- | ---
**Broadband Access (Weight 40%)**  |  |  |
Fixed telephone lines  | 43,116,316 | 4,086,236
Mobile cellular telephone subscriptions  | 30,382,333 | 36,484,250
International Internet bandwidth  | 140,000 Mbps | 97,200 Mbps
Households with Internet access at home  | 3,298,730 | 4,251,315
Households with a computer  | 1,806,448 | 3,468,903

**Broadband Use (Weight 40%)**  |  |  |
Internet users  | 16,140,632 | 16,344,944
Fixed broadband Internet subscriptions  | 1,535,467 | 1,751,244
Wireless broadband subscriptions  | 1,084,970 | 1,751,244

**ICT Skills (Weight 20%)**  |  |  |
Adult literacy rate  | 90.7% | 95%
Secondary gross enrolment ratio  | 69.1% | 96%
Tertiary gross enrolment ratio  | 24.9% | 40%

In addition, with the Multimedia Development Corporation (MDeC) as custodian, the Government established a fund with the initial allocation of RM75 million to assist MSC-status companies co-produce animation and games with foreign partners.

2009 witnessed a jump in the content market due to developments such as growth in mobile subscriptions, high broadband takeup assisted by aggressive WiMax promotion and increase in 3G takeup. The number of mobile subscribers grew to more than 30 million in 2009 as compared to 27 million in 2008 which makes Malaysia having the second highest mobile penetration in South-East Asia after Singapore. Most importantly, advancement in the mobile sector continues throughout 2009, with a significant push into 3G services. Over the last few years, the broadband penetration has risen to a much healthier rate of 31% by the end of 2009. WiMAX takeup also grew exponentially to 125,000 last year compared to only 15,000 the previous year at only 15,000.

**Network Content Development Grant (NCDG)**

The Networked Content Development Grant (NCDG) with an initial size of RM20 million was launched in July 2007 by the former Minister of KTAK, YABhg Tun Dr. Lim Kang Yak. Realising that networked content will become an increasingly important component in the communication and multimedia sector, the fund size has been increased to RM50 million. The main objective of this scheme is to render funding assistance to content developers as outlined in the MyCMS@88 strategy. It aims to facilitate and encourage Malaysian to be involved in the creation, production and distribution of highly creative, original and marketable content for domestic and international markets.

The table below provides some facts and figures about the NCDG in 2009.

<table>
<thead>
<tr>
<th>Status</th>
<th>Number of applications received</th>
<th>Number of applications rejected</th>
<th>Number of applications approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total amount disbursed</td>
<td>RM3,796,844</td>
<td>56</td>
<td>29</td>
</tr>
<tr>
<td>Total amount approved</td>
<td>RM5,719,350</td>
<td>8</td>
<td>0</td>
</tr>
</tbody>
</table>

In recent 2010 Budget speech which was delivered by the Prime Minister on 23 October 2009, he announced the establishment of RM200 million fund to help stimulate the growth of creative industry-uncomprising filmmaking, musical production, animation and creative activities. The fund was launched on 30 December 2009 by YB Dato’ Seri Umar & Dr Rais Yatim.

10th Malaysian Plan (RMK-10)

To ensure the coverage of communication infrastructure for the country and preparing Malaysia to achieve a high income nation status by 2020, a proposal on the expansion of high speed backbone and backhaul network to the other parts of the country with the aim to reach the rural communities was submitted.

**CONTENT DEVELOPMENT**

**Overview**

Networked content is the most important ingredient in driving adoption of technology such as broadband, Internet, mobile and digital TV. This is evident with the recent rapid increase in mobile and broadband penetration due to the popularity of various user generated content such as social networking portal (for example Facebook, MySpace, Twitter, Plurk etc.) and content sharing platform like Youtube. It is in line with the 9th Malaysia Plan (RM9) which stressed that ICT is identified as one of the key transformation and new sources of growth for the country and networked content will be the crucial pull factor to ensure the growth of the ICT industry in coming years.

Based on this understanding, the Government has begun various initiatives to enhance the development of more local content. In recent 2010 Budget speech which was delivered by the Prime Minister on 23 October 2009, he announced the establishment of RM200 million fund to help stimulate the growth of creative industry-uncomprising filmmaking, musical production, animation and creative activities. The fund was launched on 30 December 2009 by YB Dato’ Seri Umar & Dr Rais Yatim.
More emphasis has been given to content which has the potential to be exploited on multiple platforms which is in line with the current trend of convergence and triple-play services globally. Although certain types of content have their primary platforms such as broadcast, mobile or online, the developers are strongly encouraged to prepare strategic plans to offer the same content on other platforms with the aim to generate more revenues from the content that they created under the NCDG.

Rigorous and transparent assessment procedures are carried out before approval same given. Two committees are responsible to evaluate and approve all the applications as stipulated in the NCDG evaluation process. The NCDG Business and Technical Committee (NBTC) is an expert committee consisting of content development senior officers representing nine organisations which are among the major stakeholders in the industry. The NCDG Management Committee (NMC) is the final approval body to evaluate and review all recommendations submitted by the NBTC to ensure that the award of grants to the approved applicants are in line with the objectives of the NCDG, National Policy Objectives of the NBTC to ensure that the award of grants to the approved applicants are in line with the objectives of the NCDG, National Policy Objectives and the NBTC to ensure that the award of grants to the approved applicants are in line with the objectives of the NCDG, National Policy Objectives and the NBTC to ensure that the award of grants to the approved applicants are in line with the objectives of the NCDG, National Policy Objectives.

Further details about the key achievements and recognitions are as follows:

**HCD GRANTEES ACHIEVEMENTS & RECOGNITIONS**

**Insprise Sdn Bhd**
- The company successfully co-produced an animation series, ‘Boo and Me’ with Kids Co., a UK-based children’s television network.
- Mustang Mama Diehard Sports Fan Season 2 has successfully penetrated global market namely, Japan, Singapore, Russia, Middle-East, Canada, and Italy.

**Finbus Maju Sdn Bhd**
- ‘Alexander Bukun Zulkarnain’ produced and aired on ASTRO in January 2009;
- Factual Book on similar title ‘Alexander Bukun Zulkarnain’ was published in 2009 and sold for more than 30,000 copies.

**Murau Systems Sdn Bhd**
- Collaborated with Berita Harian and Harian Metro to offer Jazz News on mobilephone;
- Successfully developed Mobile Jazz on iPhone and Blackberry.

**Just Mobile Sdn Bhd**
- Was selected as Finalist in the 360 Content contest in MIPTV, Cannes;
- The Interactive TV Game Show has been successfully aired on ASTRO in December 2009;
- They are currently working with Orange, the international mobile content aggregator in the Netherlands for World Cup mobile games.

**Bill Adair Sdn Bhd**
- Collaborated with Maxis, DGQ & Docomo to carry contents such as Telco-branded products;
- The Interactive TV Game Show has been successfully aired on ASTRO in December 2009;
- They are currently working with Orange, the international mobile content aggregator in the Netherlands for World Cup mobile games.

**Trinity Wizards Sdn Bhd**
- Created M4Petz, a virtual pet community that is also a social networking platform;
- M4Petz has close to 20,000 members and the community is constantly increasing;
- The same platform was exploited to reproduce a mobile games platform and mobile advertising platform that are currently being used by EA, the largest games developer and GLU, the third largest games developer.

Market Access to Content Development

One of the expected results of MyCMS886 for Content Development is stated as “content will be a sizeable export revenue contribution for Malaysia”. To realise this vision, SKMM collaborates with other Government agencies such as MDeC and FINAS to conduct market access programmes. In April 2009, SKMM became one of the co-organisers to bring Malaysian companies to sell their content and find production partners at MIPTV 2009 in Cannes, France.

**MIPTV 2009**
- The Malaysian Pavilion at MIPTV 2009 organised by Red Medieval in Cannes is the largest media trade market in the world for co-producing, buying, selling, financing and distributing content across all platforms. Attended by 13,000 participants and more than 4,500 companies/ agencies from 111 countries, MIPTV is a concentrated avenue for local producers to meet and strike deals with major foreign buyers from Europe, America and Asia.
- The Malaysian Pavilion at MIPTV 2009 that was produced by MDeC and SKMM resulted in various deals related to licensing rights and a co-production worth RM172 million formalised during the event compared to RM8 million the previous year. (Source: MDeC)

**MIPCOM 2009**
- Another programme SKMM participated in was the MIPCOM 2009 in Cannes, France. SKMM, as one of the co-organisers of MIPCOM 2009 collaborated with FINAS to bring local companies to sell content and seek co-production partners. MIPCOM is the global content event for co-producing, buying, selling, financing and distributing entertainment content across all platforms. The event was attended by over 12,000 visitors and 4,027 buyers from 102 countries. The Malaysian Pavilion at MIPCOM 2009 produced by FINAS and SKMM attracted deals worth RM1.51 million that were closed during the event. (Source: FINAS)
- Most notably, the Prime Minister, YAB Dato’ Sri Najib Tun Razak visited MIPCOM 2009 on 5 October 2009 during his official visit to France. The Prime Minister’s visit to launch the MSC Malaysia ‘creating content for the World’ at the MIPCOM 2009 has significantly enhanced the profile of the content industry in Malaysia.

**ATF 2009**
- SKMM also collaborated for the first time with MDeC and FINAS to have 1Malaysia Pavilion in Asia Television Forum (ATF) 2009 in Singapore. This event is one of the Asian film and television trade markets supported by the Media Development Authority (MDA) for co-producing, buying, selling, financing and distributing content. The event is attended by 254 international seller companies and 400 buyers from over 39 countries around the world. The 1Malaysia Pavilion at ATF 2009 has a joint initiative by MDeC, FINAS and SKMM and it was reported that RM5.2 million worth of deals closed during the ATF 2009. (Source: FINAS)

Policy Development

The Cabinet restructuring in April 2009 resulted in a significant shift in the content industry landscape. Almost all government agencies related to content development and regulation which were scattered under different ministries are now under the leadership of the Minister of Information, Communications and Culture, YB Dato’ Sri Utama Dr. Rais Yatim and under the governance of the Ministry of Information Communication and Culture (PKPP). Major players such as RTM, FINAS, ASWARA, Filem Negara Malaysia and SKMM are now overseen by a single Minister.

This development reinforces the efforts to integrate and coordinate content development activities in a systematic way which has been attempted by SKMM through the setting up of Working Committee 2 under the MyCMS886 initiative. The level of communication and cooperation between the agencies under PKPP increased significantly leading to a more wholesome thinking on developing the industry.

Among the major policy initiatives that took place in 2009 are the Creative Industry Policy and the National Content Policy. SKMM played an instrumental role in drafting the National Content Policy by organising a three-day workshop in August 2009 to gather valuable input towards finalising the policy. The policy is now being finalised at KPKK, and will also be one of the cornerstones in the Creative Industry Policy which covers a more extensive scope.

Capacity Building

Realising the important role of content development in shaping the economic and social development of the country, SKMM leverages on its strength as the regulator and developer of the communications industry to bring various parties together to conduct capacity building activities.

In 2009, SKMM continued to collaborate with Maxis to co-organise the Mobile Content Challenge 2009 (MCC). The MCC is a unique programme targeting students at institutions of higher learning (IPTs) that combines content and capacity building to develop creative and innovative mobile content. It was organised by Maxis in partnership with SKMM and KPKK.
DIGITAL MULTIMEDIA BROADCASTING

Digital TV

The initiative to introduce digital TV service is further strengthened following the integration of the information, communication and culture functions under a single Ministry. The assimilation of these related functions made possible a unified approach to implement digital TV services in line with the national agenda and the 10 National Policy Objectives for the communications and multimedia industry.

The Ministry of Information Communication and Culture and SKMM collaborated with other related Government agencies such as the Economic Planning Unit in the Prime Minister’s Department, the Ministry of Science and Technology and the Ministry of Finance to formulate and propose to the Cabinet, the most viable option to implement digital TV services in Malaysia. Among others, the proposal takes into consideration the economic, regulatory, technical and social aspects whilst enhancing the Government role and encouraging private sector participation. The proposal also promotes the sharing of common infrastructures among broadcasters and new content providers leveraging on cost optimisation, wider coverage and an integrated approach to roll out digital TV services for the population at large.

At the broadcaster’s level, the efforts to digitise the overall studio production and on-air facilities were intensified to enable the seamless migration towards digital broadcasting. To date, almost 90% of the broadcasters facilities are digital ready while the initiative to include high definition broadcasting are already in the pipeline.

SKMM together with the technical industry led by the Malaysian Telecommunication Corporation (MCC) and Multimedia Content Board (MTSB) completed its content certification process. The receiver technical specification to include integrated digital television (IDTV) as one of the multimedia receiver terminal. The technical forum also studied and formulated minimum specification for the middleware of the receiver terminal to enable interoperability applications.

In line with its efforts to protect the consumers and emulate countries that have successfully rolled out digital TV worldwide, SKMM joined forces with the industry to formulate a certification programme for the digital multimedia receivers including top set boxes to ensure only certified receivers being deployed to the market. The aim is to prevent illegal inflow of multimedia receivers that do not adhere to the Malaysian technical standard, thereby resulting in enormous complaints from the users. Other issues covering the architecture of the Electronic Programme Guide and middleware platform for the purpose of interoperability are also being discussed at the forum and Digital Switchover Group levels.

To enable the efficiency on spectrum usage, SKMM completed its spectrum planning for digital TV and engaged in public consultation by the end of 2009. The objective is to obtain feedback from the public, review and update the current spectrum plan taking into consideration the latest requirement from broadcasters. The plan, which includes digital sound broadcasting, covers the minimum requirement on the use of spectrum to enable the migration of analogue broadcasting from Band I, III and IV to Bands III and IV.

At the ASEAN level, Malaysia participated actively in the ASEAN Digital Broadcasting meetings and among others, agreed with member countries to adopt a common standard (DVB-T) for digital TV and implement a phased approach for the completion of the analogue shut off from 2015 to 2020.

Digital Radio

For a long time radio was the largest mass media especially during World War II where the usage of SW, MW and AM frequencies were employed. Besides delivering news updates and entertaining its listeners, the radio was an easy and cost effective means of information. In order to continue and compete effectively against the richer experiences of TV, the internet and mobile networks, radio must go digital. Consumer and advertiser expectations are changing and radio must now be more accountable, more interesting and engaging, particularly for younger audiences. Digital radio can deliver richer content and new business opportunities to the broadcasters whilst continuing the tradition of radio business, maintaining the variety and also enhancing the radio service by adding multimedia services.

Meanwhile, advertising spending on radio in the period between January and September 2009 registered an impressive growth of 21% to RM209.5 million, outperforming the total advertising market (excluding classified ads) which has taken a 6% decrease against the same period last year. The growth is driven by increased spending by food retail, bank/finance, fast food, automotive and medical. Each of these sectors has benefited from radio’s ability to attract an audience of 11.1% (8.17 million) of listeners in any given 15 minute time slot throughout the day and an average radio listener tunes in 20.4 hours a week.

The healthy growth of the radio industry in Malaysia has resulted in spectrum congestion of the FM band in most market centres. In 2008, RTM collaborated with MTSFB to conduct a digital radio broadcasting trial employing Digital Radio Mondiale (DRM) and T-DMB standards. RTM will be conducting another trial utilizing Digital Audio Broadcasting Plus (DAB+) standard targeted for October 2009.

Commercial Radio Malaysia (CRM) society/association proposed further studies on the establishment of a digital radio broadcasting eco-system for Malaysia encompassing among others, business models, infrastructure owners, multiplexer operators and receiver devices. Airtime Management & Programming (AMP) Sdn. Bhd. informed its joint collaboration with Austereo being one of the Commercial Radio Australia members. AMP will be interested to look at Australia which has successfully launched commercial radio digital services and learn from their experience. In consideration of this, SKMM set up a Digital Radio Work Group in July 2009 to revive the work on digital sound broadcasting which started in 2005. The earlier Work Group had proposed that Eureka 147 (DAB/T-DMB) and DRM be adopted as the standards to be adopted for Malaysia based on key features and requirements deemed important to radio broadcasters, radio listeners and advertisers.
Mobile TV
Digital TV technology enables TV viewers to watch content everywhere, anytime and anywhere on various devices ranging from hand phones, portable media players, and laptops. The TV viewing habits are transformed to become more personalized as compared to traditional viewing which is time and appointment-based.

SKMM has undertaken planning for the rollout of mobile TV in terms of spectrum allocation in the same band as Digital TV for fixed reception, which was ready by end of December 2009.

Media Prima implemented a mobile TV trial in Q1 and Q2 2009 to study its commercial, technical and feasible viability. The trial was conducted in collaboration with a Korean Radio Association employing the T-DMB standard, which was developed by the Koreans. The coverage area for the trial was 50-kilometer radius within Bukit sungai Besi and aired on several Media Prima radio and TV channels to an approximately 50 trial users. Following the trial service and based on the results of the study, a commercial launch is highly unlikely as mobile TV service was not widely welcomed by the sample group.

The tender exercise is expected to be published in early 2010.

Meanwhile, major telecommunication players such as Digi, Maxis and Celcom, other incumbent licensees namely Asia Media and Asia Space expressed keen interest to roll out mobile TV services in Malaysia. The effort to launch this service is pending the Government policy on the overall implementation and infrastructure rollout of digital TV for fixed and mobile service using Band III and Band IV. Alternatively the SKMM prepared a tender exercise to invite bidders to roll out mobile TV services using L-Band in urban centres focusing to serve people in transit. The deployment of digital TV broadcasting will also spur other related services such as mobile TV within the same frequency spectrum.

While spectrum may not be available for the deployment of Digital Radio services until after analogue shut off, digital radio broadcasting trials shall be conducted on the current available spectrum band to enable further studies on digital radio broadcasting and prepare the industry towards the imminent digital radio broadcasting implementation, in line with worldwide trends.

U-LIBRARY DEVELOPMENT

The congruence of infrastructure and infostructure development for knowledge integration and application in the multi-faceted economic sector warrant a special focus as it means that knowledge and information have become key to competitiveness and growth. Hence, the successful transformation of the nation into a knowledge-based society provides a good opportunity to ‘leap-frog’ to a higher level of growth and competitiveness.

Taking cognizance of the significant role of libraries in respect of access to knowledge, the Economic Planning Unit (EPU) of the Prime Minister’s Department sanctioned an allocation under the ‘Bridging Digital Divide Programme (BSD), in support of implementing the pilot project for the development of network infrastructure and infostructure underpinning broadband in seven libraries with essence of ubiquity, simply known as ‘Ubiquitous Library or ‘U-Library. In this connection, SKMM has been given the honour of presenting the U-Library initiative at a Luncheon Talk on 5 May 2009 to the Management and staff of EPU. The financial support for U-Library by EPU has been further strengthened by an endowment from Telekom Malaysia which was ready by end of December 2009.

The U-Library Pilot Project manifests the collaborative effort of KPKK and with the support of the National Library of Malaysia (PNM) and other U-Library Consortium members, comprising the State Library of Selangor (PPAS), State Library of Negri Sembilan (PPNS), State Library of Pahang (PPAP), Pustaka Negri Sarawak (Pustaka), Kuala Lumpur Library (PKL) and INTAN Library at Bukit Kiara. In this regard, the U-Library initiative represents potential mechanism of more than 12,000 libraries throughout the nation with a gamut of information resources and services that could be harnessed for knowledge resource sharing through the provision of the broadband infrastructure. In recapitulating the National Broadband Plan, the positioning of libraries as agents of knowledge content is depicted through ‘leveraging traditional information resources’ in invoking ‘attractiveness’ for the broadband demand uptake.

The U-Library Pilot Project acknowledges the collaborative effort of SKMM, with the support of the National Library of Malaysia (PNM) and other U-Library Consortium members, comprising the State Library of Selangor (PPAS), State Library of Negri Sembilan (PPNS), State Library of Pahang (PPAP), Pustaka Negri Sarawak (Pustaka), Kuala Lumpur Library (PKL) and INTAN Library at Bukit Kiara. In this regard, the U-Library initiative represents potential mechanism of more than 12,000 libraries throughout the nation with a gamut of information resources and services that could be harnessed for knowledge resource sharing through the provision of the broadband infrastructure. In recapitulating the National Broadband Plan, the positioning of libraries as agents of knowledge content is depicted through ‘leveraging traditional information resources’ in invoking ‘attractiveness’ for the broadband demand uptake.

U-Library has been identified by MAMPU as one of the projects that is being monitored progressively by the Integrated Task Force on Content Development (ICON) for the public sector. The progress of the U-Library project will be presented to ICON through the monthly ICON meetings at MAMPU with the public sector agencies. Aside from the monitoring effort by MAMPU, the U-Library Pilot Project has also been approved by the ICT Technical Committee at MAMPU on 13 August 2009. This represents a second step of approval in its journey through the tendering process.
Libraries for life – Knowledge for success’ or ‘Bringing knowledge to life’ are amongst the taglines afforded by libraries to manifest the significant function of handling knowledge acquisition, knowledge organisation, knowledge discovery and knowledge dissemination for an inclusive knowledge society with the global advancement of ICT. It is pertinent for libraries to explore the methodology for the information delivery service to be enhanced, in tandem with the technological trends and the sophistication of user information needs encompassing speed and efficiency in accessing information, anytime, anywhere and by anyone. U-Library shall landscape the convergence of technologies that include broadband, portal, RFID, smart card, cashless payment and delivery service gateway to unlock the knowledge resource seamlessly with an extension of delivery service to the doorstep.

The strategic alliance amongst members of the U-Library Consortium shall contribute to the increase in library membership registration through the activation of common membership or affiliated membership. U-Library empowers the use of MyKAD/MyKID/MyPR in supporting the Government’s endeavour in handling one identification across all forms of transactions, under the MyID initiative, in an effort to improve the quality of Government delivery service. Moreover, U-Library supports the national aspiration in the realisation of knowledge-based economy wherein its infrastructure is laden with content development; promotion of e-learning as well as life-long learning, whilst enriching the value of information in a knowledge repository that is familiarly known as the National Union Catalogue. Another feature within which U-Library is entrusted to coordinate is the integration of library and information resource management in the library consortium environment.

At the international scene, the IAP (International Advisory Panel) Meeting for MSC Malaysia in November 2009 has recognised U-Library as one of the projects to deliver innovative services to society with the use of ICT as depicted in the following literature.

U-Library As Propelling Mechanism for Broadband Penetration in A Knowledge Society

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Infrastructure</th>
<th>Delivery Mechanism</th>
<th>Target Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Broadband</td>
<td>• Hybrid Content</td>
<td>• U-Library Portal</td>
<td>• Pre-School Children</td>
</tr>
<tr>
<td>• RFID</td>
<td>• U-Library Portal</td>
<td>• National Union Catalogue</td>
<td>• School Children</td>
</tr>
<tr>
<td>• MyKAD/MyKID/MyPR</td>
<td>• Standards &amp; Policy</td>
<td>• Pos Malaysia</td>
<td>• HIL Students</td>
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<td></td>
<td></td>
<td>• Touch ‘n Go</td>
<td>• Researchers</td>
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<td></td>
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<td>• MEPS</td>
<td>• Senior Citizens</td>
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<td></td>
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<td>• E-Learners</td>
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<td></td>
<td></td>
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<td>• SMEs</td>
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<td></td>
<td></td>
<td></td>
<td>• Entrepreneurs</td>
</tr>
</tbody>
</table>

Figure 2: Information Representation on U-Library in the Yellow Page Content Hub of MAMPU

Figure 3: U-Library Depicted in the Literature of IAP
The overall system requirement for the implementation of the U-Library Project has been tabled and approved by the U-Library Steering Committee (ULSC) in February 2009. Henceforth, a series of technical discussions at the U-Library Technical Committee (ULTC) level resulted in tender technical specifications using RFID-enabled equipment and UHF RFID tags with conformance to the MCMC spectrum release viz. 919-923 MHz and EPC Global Class 1 Gen 2/ISO 18000-6C; software for the development of the U-Library portal for inter-lending service and a suite of web service components; networking and broadband services as well as requirements for services of data centre and disaster recovery centre. The tendering process which took place between October and November culminated with a Letter of Award in December 2009.

Critical Success Factors for U-Library

<table>
<thead>
<tr>
<th>Technology</th>
<th>U-Model</th>
<th>Consortium</th>
</tr>
</thead>
<tbody>
<tr>
<td>To ensure the sustainability of the Ubiquitous Library Network Exchange, there is a need to be supported by multi-faceted components</td>
<td></td>
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<tr>
<td>Connectivity to BB Service</td>
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<tr>
<td>Maintenance of U-Library Portal Service</td>
<td></td>
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<tr>
<td>Context for Physical and Digital Access</td>
<td></td>
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<tr>
<td>Process Compliance to 239.2, 239.3, &amp; 239.4C</td>
<td></td>
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<tr>
<td>People</td>
<td></td>
<td></td>
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<tr>
<td>Connected Communities ‘Common Membership’</td>
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</tbody>
</table>

The sustainability of U-Library, as a system that relies on the continuous support from a number of components such as the U-Library Model technical guidelines, U-Library Consortium as the U-Library Information Service Provider (ISP), continuous ULSC and ULTC governance, stability of the broadband network service, U-Library Portal service maintenance and provision of knowledge content for physical and digital access. This must be accompanied by three inter-related elements, technology, process and people. The critical success factors that have been identified are based on the observation throughout the duration of the U-Library Trial Run from January until July 2009. Measurement for the U-Library Trial Run is landscaped by five elements that include the concept of ‘Common Membership’; utilisation of the National Union Catalogue; delivery service via eParcel service of Pos Malaysia; broadband speed and the competency of library staff in handling the connected community amongst the U-Library consortium members.

These success factors need to be realised in order to achieve the U-Library objectives in the following sequence:

1. Making information accessible with the widening of broadband service, RFID, portal technology and content development;
2. Cooperative library network system to foster collaboration through inter-lending service, delivery service, e-payment service and virtual access to expand the capacity to innovate and create knowledge dividend for the nation; and
3. Creating, sharing and exchange knowledge in a knowledge society to keep communities connected; promote lifelong learning and deepen social network in the context of 1Malaysia.
High-speed broadband or HSBB is part of Malaysia’s National Broadband Implementation Strategy and the Government aims for the country to achieve 50% broadband penetration by 2010. This involves several strategies in terms of both supply and demand.

According to the Malaysian Communications and Multimedia Commission (SKKM), Malaysia’s broadband penetration was 17.5% of households at the end of the third quarter of 2008. That meant that there was still a large market to grow for many service providers. Also, the increased focus on high tech and knowledge based industries meant that broadband was going to become an essential utility. Not only was broadband a must in areas like high tech parks, it was also necessary in homes. Workers were beginning to work more from their homes. Just like electricity and water supply are standard features in homes, similar arrangements were going to be needed for broadband services in Malaysia.

High-speed broadband adds to the competitiveness of a nation in the global economy and it is imperative that the nation keeps up with other nations in the rollout of high-speed broadband. The HSBB project is thus a vital necessity that has to be implemented as quickly as practicable as the nation races to achieve the Malaysia Vision of a knowledge-based global economy and it is imperative that the nation keeps up with other countries. It needs to catch up fast.

The second is Broadband to the General Population (BR0GP) with speeds generally from 256 Kbps to 2 Mbps and all the way up to 10 Mbps.

High-speed broadband adds to the competitiveness of a nation in the global economy and it is imperative that the nation keeps up with other nations in the rollout of high-speed broadband. The HSBB project is thus a vital necessity that has to be implemented as quickly as practicable as the nation races to achieve the Malaysia Vision of a knowledge-based economy in 2020.

A two-pronged strategy is deemed to be necessary to meet the penetration rate target. One comes from the supply side whilst the other from the demand side of the broadband market.

The supply side

On the supply side of the broadband market, the Malaysian Government has defined two categories of broadband. The first in HSBB in selected geographic areas with spans ranging from 10 Mbps up to 100 Mbps for residential customers using fibre to the curb – namely, nadawe cabinets - with the final part of the connection provided via a wire pair into the premises and up to 1 Gbps using fibre directly into premises for businesses and high economic impact areas.

The second is Broadband to the General Population (BR0GP) with speeds generally from 256 Kbps to 2 Mbps and all the way up to 10 Mbps.

HSBB is required for advanced and bandwidth-intensive services such as digital homes, medical imaging and multi-channel high-definition TV applications and services. In Malaysia the implementation mainly in rural areas, cities, towns and the various development regions including cybercities and cyberspace, technology parks and the Iskandar Development Region in the southern part of Peninsular Malaysia will feature HSBB.

The Government’s strategy to achieve this is through collaborative effort in a public-private partnership. An agreement to that end was signed between the Ministry of Energy, Water and Communications (KTAK) and Telokom Malaysia (TM) in mid-September 2008 to roll out HSBB over a period of 10 years. Under its first phase, HSBB access will be provided to over 1.3 million premises by 2012.

Under this initiative, TM will provide last mile access to homes and businesses through three main technologies namely, fibre-to-the-home (FTTH), Ethernet-to-the-home (ETTH) and Very High Speed Digital Subscriber Line (VDSL2).

The Government will co-invest RM2.4 billion (US$686 million) towards the project, while TM will provide RM9.9 billion (US$2.64 billion). The Government’s portion is mostly to make up for the lower net presence compared to other countries. It needs to catch up fast. Efficient and speedy roll out is required. TM is the only service provider with an extensive network of fixed 39 line infrastructures and ducts in place nationwide, so it’s simpler, cheaper and faster for TM to do it.

New lifestyle with HSBB

Broadband has the potential to revolutionise the way we live and work, delivering real economic benefits. The demand for multimedia is the prime driver for high-speed broadband. The communications industry has moved to the stage where it focuses on broadband. There is a growing demand for faster Internet access that supports applications such as collaborative networking, video conferencing, telepresence, IPTV, Video on Demand and VoIP. To meet this demand for bandwidth, a growing number of service providers have begun offering high bandwidth to subscribers in key regions worldwide.

The increase in Internet access speeds can be directly linked to the type of services offered over the network. The provision of single plate services that were primarily data-only services were responsible for moving dialup users to ADSL which was mostly provided in Malaysia by TM through its Streamyx service. Most users basically used the Internet for browsing static content (graphics and text) and email with a little bit of music and video streaming.

Dual play came along and added voice with better quality of service (QoS) to existing data connections. This allowed cost effective voice over IP (VoIP) services along with other value-added services. Though these services were initially of poor quality, customers did not mind as they were provided at low prices.

The networked world has now moved on to triple play which combines Internet access, voice communication (telephone) and entertainment services such as video streaming. Quadruple play adds seamless mobile access to the equation. The growing popularity of social networking applications and personalised services are adding even greater bandwidth demand.

To provide an acceptable level of service for current and future Internet services and applications, HSBB becomes absolutely necessary. The speeds envisaged in the HSBB project along with the move to an all-IP network and improved bandwidth management will provide very high quality levels of services and promise subscribers with a TV-like (including high definition) or even better appearance.

Economic benefits

HSBB is important economically. According to an Economic Planning Unit study, broadband can deliver significant benefits to Malaysia. Achieving 50% household broadband penetration by 2010 can result in tangible contribution of 1% to the country’s gross domestic product (GDP) and create 135,000 new high-value jobs in 2010.

That will also create opportunities and markets for applications and content developers. It will also boost local industries and employment generation directly. The national broadband strategy will enhance human capital and allow for movement up the value chain. It will enable the K-economy and serve as a catalyst for overall national competitiveness.

Open Access to HSBB

To ensure there’s no unfair advantage to TM with regards to other service providers, HSBB will be an open network with open access and fair pricing that will allow other service providers fair and non-discriminatory access to provide their own services over it for a reasonable fee.

The existing Access Regulatory Framework will be further developed to ensure the network is open and that the pricing is fair. SKKM noted that it is very important to promote an open network without necessarily duplicating the costly last mile and backhaul connectivity to promote economic growth. Service providers would initially be able to seek and provide access from Bitstream services as well as Digital Subscriber Line Resale Service.

The regulatory framework is an open network access concept. Other industry players will be able to obtain network access on a commercial, non-discriminatory, fair and equitable basis.

For example the HSBB network will be open to all other industry players at the applications and network service level. Qualified service and application providers will be able to offer services such as VoIP and other multimedia services on TM’s HSBB network. Further, for connection services it will provide access to core and international networks.
Broadband to the General Population

BBGP is the second category in the supply push and it will be deployed in all areas including areas covered by HSBB. It will be provided by current licensees using fixed ADSL (asynchronous digital subscriber line), wireless HSPA (High-Speed Packet Access) or WiMAX (Wireless interoperability for Microwave Access) and this provides an alternative and competitive means of broadband access to many.

The vision for BBGP in 2010 is to ensure enough coverage by the multiple technologies and operating service providers. For example in high economic impact areas where HSBB is present, multiple infrastructure is likely to exist. HSBB and BBGP coverage will be available across the entire zone providing alternatives and choice, including backhauling support to wireless service providers.

In suburban areas the current coverage will be widened under various wired and wireless technologies as mentioned above.

Provision of BBGP in less profitable and rural areas will be funded through the SKMM’s Universal Service Provision (USP) fund. The BBGP programme in these areas includes Basic Telephony (through fixed and mobile network), Community Broadband Library (CBL) and Community Broadband Centre (CBC).

By 2010, 40% of the target of 3.2 million homes will be served by BBGP while the remainder will be served by HSBB.

The BBGP service providers are not left out as under the 2008 Malaysian budget, the Ministry of Finance approved tax allowances on expenditure incurred for capital expenditure incurred for broadband up to 31 December 2010.

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 deduction will 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 tax exempt.

This set of incentives will continue to be reviewed for its effectiveness to further push supply and demand.

The demand side

There is this famous saying which states that you can take a horse to the water but you cant make it drink, so while there is that entire broadband infrastructure in place, what will make people want to use it?

The Government will adopt a three-pronged strategy in three critical areas to create demand.

The first is to create public awareness of the benefits and availability of broadband.

The Government believes that while service providers will promote their broadband products, they may not promote its benefits; so the Government will have to do that together with the Industry.

Government and private sector initiatives will help create and communicate an icon or brand that encapsulates the benefits of broadband, organise Internet training courses for relevant target groups such as mothers and home-makers, encourage more urban cybercafes to be set up and set up broadband booths at community events.

Overall activities to promote broadband will be planned and coordinated with relevant stakeholders including the industry, while impact studies on the effectiveness of the programme will be conducted to provide feedback on its effectiveness.

The water in the pipe

The second strategy is to develop the attractiveness of having broadband in terms of good content and applications, i.e. the water that flows in the pipe. Here, the Government will focus on providing electronic-Government, distanceeducation and on promoting electronic-commerce.

Demand for, and the development of private content will be aided by the high quality broadband infrastructure.

Malaysians already spend on average –5% of their monthly household income on digital entertainment and info-communications services. The current high average revenue per user (ARRPU) for pay TV also indicates a high willingness to pay for content.

e-Government services

The Government is also taking actions to raise its capabilities to develop future offerings, such as building effective internal networks and systems integration and inter-operability among different Government agencies, improving coordination by strengthening the current IT governance and control framework. It is also enlarging the IT manpower pool through inter-agency knowledge sharing systems and human capital enhancement programmes.

HSBB and BBGP infrastructure will advance the Government’s efforts to reach citizens and businesses with quality online services and improved accessibility to broadband would create efficiency gains through increased usage of Government online services.

One of the e-Government initiatives is the ongoing eKL project covering the Klang Valley and it is currently offering nearly 600 online services. This number is targeted to grow by 2010 with more online services being developed and delivered through service internal delivery channels such as agencies’ online counters and web services, mobile phone’s Short Message Service (SMS), ioss and bank autoteller machines.

Affordable to all

The third strategy is to make broadband affordable to all. Broadband is currently too expensive for certain social segments which can’t afford PCs, broadband subscriptions, modern and other access devices.

Affordable to all

Coordination will be required with other Government agencies to facilitate PC ownership and broadband take up.

According to figures by SKMM and others, about 60% of middle income earners with annual income between RM18,000 and RM60,000 (US$514 and US$17,143) found current broadband prices in Malaysia to be unaffordable, while none of those earning under RM18,000 per annum found it affordable, while all of those earning above RM60,000 found it affordable.

A $12 512 Kbps DSL connection typically costs the equivalent of US$5 per month and it needs to be lower.

There also is an almost linear correlation between PC and broadband penetration, which needs to be addressed. Thus there is a need for action plans to find solutions especially for the above middle and lower income groups.

Community broadband

Telecentres offer a good platform for mass community broadband access and should be strengthened.

To achieve this, a single agency should be designated to coordinate efforts with State ICT agencies to build new telecentres and customise them to be relevant to the local population.

Telecentres should be opened at night and at weekends and IT graduates and students should be hired to operate them at these times. IT graduates should be hired as managers and all should be sent for training in best practice centre management sharing sessions.

It is hoped that Malaysia’s targeted approach will bring about results and that the HSBB network will help transform the nation into a knowledge society.
As Malaysia aspires to become a more competitive nation through innovation, high creativity and free flow of information, the drive to becoming a high-income nation by 2020 should also bring about home social and economic transformation.
SKMM also processed five applications for renewal of NFP and NSP individual licences, of which four were renewed by the Minister. One application for renewal was withdrawn. The renewed individual licences were for:

### Table 2 – Renewed Individual Licences

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Licensee</th>
<th>Type of Individual Licence</th>
<th>Issuance Date</th>
<th>Service Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maxis Mobile Sdn Bhd</td>
<td>NFP &amp; NSP</td>
<td>1 Oct 2009</td>
<td>Bandwidth services</td>
</tr>
<tr>
<td>2</td>
<td>Maxis Mobile Services Sdn Bhd</td>
<td>NFP &amp; NSP</td>
<td>1 Oct 2009</td>
<td>MVNO</td>
</tr>
<tr>
<td>3</td>
<td>Maxis International Sdn Bhd</td>
<td>NFP &amp; NSP</td>
<td>1 Oct 2009</td>
<td>Satellite &amp; terrestrial radio broadcasting</td>
</tr>
<tr>
<td>4</td>
<td>Maxis Broadband Sdn Bhd</td>
<td>NFP &amp; NSP</td>
<td>1 Oct 2009</td>
<td>Broadcasting services</td>
</tr>
</tbody>
</table>

There are four categories of licensable activities under the CMA:
- NFP – Network Facilities Providers;
- NSP – Network Services Providers;
- ASP – Applications Service Providers; and
- CASP – Content Applications Service Providers.

Specifically, there are three categories of individual licence activities:

### Network Facilities Provider ("NFP") Individual Licence

This licence would be required by those who own and or provide certain network facilities such as radio communication transmitters and links, fixed links and cables and towers which are used in conjunction with other network facilities.

### Network Service Provider ("NSP") Individual Licence

Services licensable under this type of licence include bandwidth services, broadcasting distribution services, cellular mobile services, access application services and space services.

### Content Applications Service Provider ("CASP") Individual Licence

This licence is required for the provisioning of content applications services such as satellite broadcasting, subscription broadcasting, terrestrial free-to-air TV and terrestrial radio broadcasting.

The new individual licences were issued to:

### Table 1 – New Individual Licences

<table>
<thead>
<tr>
<th>No.</th>
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<th>Type of Individual Licence</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Numix Engineering Sdn Bhd</td>
<td>NFP &amp; NSP</td>
<td>3 Sept 2009</td>
<td>Bandwidth services</td>
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<tr>
<td>2</td>
<td>Baraka Telecom Sdn Bhd</td>
<td>NSP</td>
<td>11 Nov 2009</td>
<td>MVNO</td>
</tr>
<tr>
<td>3</td>
<td>Star Crest Media Sdn Bhd</td>
<td>NFP &amp; NSP</td>
<td>15 Dec 2009</td>
<td>Facilities &amp; service provider for Media Prima</td>
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<tr>
<td>4</td>
<td>Pertubuhan Berita Nasional Malaysia (BERNAMA)</td>
<td>CASP</td>
<td>15 Dec 2009</td>
<td>Satellite &amp; terrestrial radio broadcasting</td>
</tr>
</tbody>
</table>

The lists of licencees are in the respective registers maintained by SKMM.

As the communications and multimedia industry evolves towards convergence, licences under the CMA are formulated to be both technology and service neutral. The licensing regime as provided for under the CMA enables a licencee to undertake activities that are market specific. This creates opportunities for expansion into the industry particularly in the area of Applications Service Provider and provides for a more effective utilisation of network infrastructure.

A total of 38 applications were received for registration in the NFP class licence category, 34 applications for the NSP class licence category, 419 applications for the ASP class licence category and 29 applications for the CASP class licence category. The number of registrations for the various class licences for 2009 is as follows:

### Application for Variation of Individual Licence Conditions / Transfer and Surrender of Individual Licences

In addition to new licence applications, SKMM also processed five applications for renewal of NFP and NSP individual licences, of which four were renewed by the Minister. One application for renewal was withdrawn. The renewed individual licences were for:

### Class Licence Issued under the CMA

Specifically, there are three categories of individual licence activities:
With regards to the NFP, individual licence category, applications to vary licences concerning the type of facilities that such licences are permitted to provide, and the percentage of foreign shareholding permitted.

Two licencees surrendered their licences due to failure to commercially deploy services and changes in business plans.

Quality of Service

The Commission Determination on Mandatory Standards (MS) for Quality of Service (QoS) are developed and implemented to ensure minimum standards of quality are offered to protect the rights of consumers. There are seven services currently covered under the MS for QoS which were registered in 2002 and 2003:

1. Public Switched Telephone Network
2. Public Cellular
3. Internet Dial-up
4. Content Applications
5. Public Payphone
6. Digital Leased Line (reviewed in 2009)
7. Broadband Access (reviewed in 2007)

All service providers are required under the MS QoS for submit reports on compliance with the standards and these reports are randomly audited by the Commission. In a snapshot, below are the overall compliances of the reports submitted by the service provider for the reports submitted from 2003 to 2009:

<table>
<thead>
<tr>
<th>Reporting Period</th>
<th>% of Compliance with the Standards</th>
<th>% of Non-compliance with the Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun 03</td>
<td>92.59%</td>
<td>7.41%</td>
</tr>
<tr>
<td>Dec 03</td>
<td>92.73%</td>
<td>7.27%</td>
</tr>
<tr>
<td>Dec 04</td>
<td>89.13%</td>
<td>10.87%</td>
</tr>
<tr>
<td>Dec 05</td>
<td>90.82%</td>
<td>9.18%</td>
</tr>
<tr>
<td>Jun 06</td>
<td>95.49%</td>
<td>4.51%</td>
</tr>
<tr>
<td>Dec 05</td>
<td>88.11%</td>
<td>11.89%</td>
</tr>
<tr>
<td>Jun 06</td>
<td>93.31%</td>
<td>6.69%</td>
</tr>
<tr>
<td>Dec 06</td>
<td>92.27%</td>
<td>7.73%</td>
</tr>
<tr>
<td>Jun 07</td>
<td>95.87%</td>
<td>4.13%</td>
</tr>
<tr>
<td>Dec 07</td>
<td>95.00%</td>
<td>5.00%</td>
</tr>
<tr>
<td>Jun 08</td>
<td>92.34%</td>
<td>7.66%</td>
</tr>
<tr>
<td>Dec 08</td>
<td>92.16%</td>
<td>7.84%</td>
</tr>
<tr>
<td>Jun 09</td>
<td>92.96%</td>
<td>7.04%</td>
</tr>
<tr>
<td>Dec 09</td>
<td>91.27%</td>
<td>8.73%</td>
</tr>
</tbody>
</table>

Rates Regulations

Rates regulations generally cover the rules and principles used in setting of retail price to end-users. Rate monitoring on the other hand will cover the compliance by service providers to any rules and principles, market rates being offered and in particular regulated under the rate rules.

Communications and Multimedia Act, 1998 (CMA)

<table>
<thead>
<tr>
<th>CMA</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 179</td>
<td>Rate setting by service providers:</td>
</tr>
<tr>
<td>a) service provider may set rates in accordance with the market rates</td>
<td></td>
</tr>
<tr>
<td>b) to publish the rates charged to customers for one or more services</td>
<td></td>
</tr>
</tbody>
</table>

Section 198 | Principles on rate setting: |
| a) rates must be fair and, for similarly situated persons, not unreasonably discriminatory; |
| b) rates should be oriented towards costs and, in general, cross-subsidies should be eliminated; |
| c) rates should not contain discounts that unreasonably prejudice the competitive opportunities of other providers; |
| d) rates should be structured and levels set to attract investment into the communications and multimedia industry; and |
| e) rates should take account of the regulations and recommendations of the international organisations of which Malaysia is a member. |

Section 201 | Rules regarding rates by Minister – Rates Rules 2002 |
Source: SKMM, CMA

Communications and Multimedia (Rates) Rules 2002

The Rates Rules 2002 sets out the prescribed level of rates to be charged for specified applications services. The rates covering the range of service charged and activities comes under the Rates Rules 2002:

1. Public Switched Telephone Network services – Charges for local call, national call and national calls through operator assistance.
2. Public Payphone Service – Charges local call, national call and national calls through operator assistance.
3. Service Charges for Internet service
4. Charge for Internet access service
5. Charge for authenticated hosting service
6. Rental on exchange line
7. Connection fee
8. Reconnection fee

Retail Price Control

Retail price control has an important part of the regulatory landscape in telecommunications as it is designed to protect consumers by reducing prices when competitive price alone is too weak. In markets that are characterised by monopolies of a few players (oligopoly), price tend to be high and the supply of services and facilities can be controlled easily resulting in bottlenecks in the upstream markets or downstream markets or both. As a result, service providers can price their products at above what would be set in a competitive market.

Telecommunications is a vital service for most organisations whether engaged in services or manufacturing. Fair and low prices are considered necessary to ensure the competitiveness of economic activities in these sectors. In globally competitive environment, it is therefore imperative that the cost of telecommunications services is competitively priced so that local providers of services and products can compete with those in other countries.

Rate control mechanism is normally employed in the above situations to ensure rates or tariffs are not artificially inflated or do not contain excessive economic rents (price is above the price that would be set in a competitive market) and that prices charged are fair and reflect underlying costs.

In short, the rate control mechanism is used in sectors that are exposed to monopolistic conditions and where regulations are required to promote national interest objectives and protect the consumer interest. It is also widely accepted theory that price regulation is a pro-competition measure necessary in the early stages of market liberalisation.

Assessment on Retail Price

1. Fixed Line Telephone
   SKMM found there was compliance with the specific rates in terms of the line rental (access charge) and the call charges as published in website and customer service centers.
2. Cellular Phone Service

To make services accessible to the cellular phone users in Malaysia, mobile network operators have introduced varied plans that conform to the national policies in the communication and multimedia industries. Mobile networks operators have introduced varied plans that conform to the

Based on SKMM's monitoring on compliance to section 197 of the CMA, that is, on the rate setting and the requirement to publish rates, SKMM found that the service providers have made available the rates charged to its customer, normally on the websites, media advertisements, brochure and also through their customer service hotlines.

3. Broadband Internet Access Service

Across the country, SKMM has witnessed growth in broadband adoption driven by greater price competition and increased consumer demand, as broadband-intensive activities such as pictures and video uploading, video streaming and peer-to-peer sharing continue to grow. In order to increase price competition within Internet service providers, SKMM has issued 3G and WiMAX licences to seven companies. In total, 22 companies are providing an internet access service to individual and organisations.

SKMM is currently developing a framework to determine required application services for disabled users and encourage their effective participation in normal activities. This addresses framework is an important document in that it is a statement of SKMM's commitment to and proposals for fulfilling the statutory obligations in compliance with Section 192 of the CMA.

ENHANCING ICT ETHICS AND EXCELLENCE

Consumer Forum's Activity

CIM was established in February 2001 and works on the basis of industry self-regulation with participation and representation from consumer associations, service providers and interested parties. The CMA provides the legislative framework for self-regulation by providing the following:

a) Power for the Commission to designate an industry body as an industry forum on condition that the industry body fulfils certain specific criteria - Sections 94(1) and 94(2);

b) The CMA also envisages the designation of four (4) industry forums in the areas of content, consumer, technical standards and access;

c) Power for the Commission to register voluntary industry codes;

d) Safeguards provided should self-regulation fail; both the failure of the forum and with regard to code compliance.

CfM was established in February 2001 and works on the basis of industry self-regulation with participation and representation from consumer associations, service providers and interested parties. The CMA provides the legislative framework for self-regulation by providing the following:

a) Power for the Commission to designate an industry body to be a consumer forum for the purpose of this Chapter.

b) “Chapter” here refers to Chapter 1 of Part VIIIA - Consumer Protection, that is, on the rate setting and the requirement to publish the rates charged to the user preference in terms of monthly commitment fee, voice call rate and Short Messaging service (SMS) rate between the types of operators (on network or off network).

Recently, many affordable packages have been offered, as below:

<table>
<thead>
<tr>
<th>Service Provider</th>
<th>Target Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Maxis</td>
<td>RM48 for 1.5G data</td>
</tr>
<tr>
<td>b) Celcom</td>
<td>RM58 for 3.5G data</td>
</tr>
<tr>
<td>c) Packet 1</td>
<td>RM49 for 5G data</td>
</tr>
<tr>
<td>d) TM</td>
<td>RM58 for 384kbps and RM80 at underserved area</td>
</tr>
</tbody>
</table>

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e) Section 189 provides that “The Commission may designate an industry body to be a consumer forum for the purpose of this Chapter”. f) “Chapter” here refers to Chapter 1 of Part VIIIA - Consumer Protection, containing 5 sections i.e. 187-191 which deal with consumer issues per se e.g. s.188 obliges service providers to deal reasonably with consumers and adequately address consumer complaints while sections 189-191 refer to the establishment of the consumer forum, matters for inclusion in the consumer code and the publication of the consumer code.

The Consumer Forum has been tasked with developing and managing the Consumer Code as provided for under Section 190 of the CMA. This provision states that the Consumer Code should include model procedures for:

a) Reasonably meeting consumer expectations;

b) The handling of consumer complaints and disputes including an inexpensive arbitration process other than a court, and procedures for the compensation of consumers in case of a breach of a consumer code; and

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The current office bearers of CIM are:
- Chairman: Tan Sri Dato' Khairuddin Yuna
- Deputy Chairperson: Puan Nor Esah Md Said
- Secretary: Enik Lim Kim Seng
- Treasurer: Puan Nor Mazzeni Abu Baker

In 2009, internet connection and poor speed top the chart followed by billing and poor service. In general, complaints by consumers were satisfied with the service provider’s response and most cases were resolved and closed. Whenever applicable, the working committee will take the necessary action and make recommendation on changes, amendments, insertions or omission to the GDC and respective sub code.

b. Set up of Complaints Portal (CoP)
- avenue for the public to lodge complaints to CIM and to get progress updates regarding their cases
- set up of Alternative Dispute Resolution (ADR) as part of consumer protection mechanism. Expected to be operationalised in Q2 2010

3) Council meetings/AGM/EGM

During the year, the following meetings were conducted, namely:
- Annual General Meeting (AGM)
- Council Meeting
- Extraordinary General Meeting (EGM)

a. CIM successfully conducted three Council Meetings which were held as follows:

i) 5 March 2009 (10th Council Meeting)
ii) 4 September 2009 (11th Council Meeting)
iii) 21 December 2009 (12th Council Meeting)

An AGM is held every year to inform CIM members of previous performance and future activities. Every two years, an election of council members for CIM will be undertaken in the AGM.

For 2009, the AGM was held on 20 October 2009 and was attended by 20 ordinary members and one associate member, of which, 12 were from the Supply Side while eight were from the demand side. A new set of Councilors were voted in, headed by Persatuan Penguara Negar Selangor.

CIM's activities in 2008 covered the following areas:

1) Education and awareness

a. CIM undertook 63 educational and promotional events

b. Creating awareness regarding:
   • The existence and its functions;
   • Rights of users as consumers;
   • Channels for complaints, disputes and grievances-handling;
   • The national policies in the communication and multimedia industry;
   • Eight GCC Awareness

2) Complaints handling

a. CIM received a total of 1,324 complaints in 2009 with 718 cases being referrals from SKMM. 267 cases were from complaints through CoP and 134 cases via the aduan@cfm.org.my.

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This represents an increase of 89% compared to only 141 complaints received in 2008.

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CIM has called for Extraordinary General Meeting, attended by 20 ordinary members. Previously, during the 11th Council Meeting, a resolution was raised to make amendments to Article 170 of the CIM Constitution.

As at 31 December 2009, CIM’s membership stands at 32, comprising 12 from demand side, 17 from supply side and three as associate members.
Overall key postings and activities of CFM:

i) Executive Director was appointed in May 2009 on secondment basis from SKMM.
ii) CFM was relocated from Wisma Glomac in Kelana Jaya to Straits Trading Building in Kuala Lumpur in June 2009;
iii) Online Complaints Portal (CoP) was introduced to service providers in July 2009;
iv) CFM website revamp exercise was completed in August 2009;
v) CFM Secretariat reorganisation was completed in October 2009 to give it more focus; and
vi) ConsumerInfo Services and CoP were officially launched in October 2009; and
vii) New Terms and conditions for CFM staff introduced in January 2010.

Enterprise PKI services and both DigiCert and MSC Trustgate were awarded the contracts to issue digital certificates. DigiCert has issued 532 digital certificates in total in the BNM-PKI Renault environment.

MARKET STRUCTURE FOR DIGITAL SIGNATURE MARKET IN MALAYSIA

DigiCert Sdn Bhd

DigiCert’s biggest certificate issuance has been for the Inland Revenue Boards’ e-filing services for income tax. The contribution of e-filing services towards total revenue is substantial and now accounts for 88% of its business. This is followed by e-Government services via e-procurement. In 2010, the Bank Negara Malaysia (BNM) launched DigiCert’s biggest certificate issuance was for the e-procurement services which forms 93.6% of their core business. This is followed by the corporate banking sectors. To date, Mac Trustgate has issued 666 digital certificates under BNM’s Enterprise PKI Services.

Current PKI Environment Sectors and Potential Market Growth

The Government sector is emphasising the use of electronic media. In 2007, the Electronic Government Activities Act was passed by Parliament. The Act gives recognition to electronic transactions as the equivalent of physical transactions and is expected to, over time, result in more use of the electronic media in the delivery of government services. It is envisaged that e-government transactions will progress from mere downloads to actual submission of documents. This will increase the need for secured transactions and authentication of documents. As shown by the implementation of e-filing by IRS, government applications have the potential of stimulating demand for digital certificates.

The Electronic Commerce Act that was enacted in 2007 is also expected to boost digital signatures. Although all forms of electronic signatures are recognised, where digital signatures are concerned, only digital signatures that are issued under the DSA are recognised. This again, should give an impetus to the domestic market for digital certificates.

The public sector has recently launched the ‘mysms’ platform as the gateway for government services via mobile phones. Currently, the services offered are mainly information based but could easily, given the right environment, progress to transaction type services requiring authentication.

Another factor that is expected to stimulate the demand for digital signatures is the implementation of High Speed Broadband (HSBB) and Broadband for the General Public (BBGP). The growth of broadband will stimulate electronic commerce including mobile commerce. The above factors can increase the demand for digital certificates.

MARKET SEGMENTATION FOR DIGITAL SIGNATURE MARKET IN MALAYSIA

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Market segmentation for DigiCert

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Development of Mobile Authentication Signing Services Platform (MAPP)

In December 2008, SKMM organised a mobile banking symposium to bring together industry players from telecommunication and financial sectors to deliberate on the future of mobile banking.

The establishments of mobile PKI in transaction eco-system were continued in 2009. The eco-system anticipates the participation of the mobile telephone service providers such as banks in M-PKI platform that will enable of PKI to authenticate M-transactions.

With the increased mobility of customers and their increased expectations for ubiquitous personalisation of services, mobile commerce seemed to be the next wave. Mobile phones in Malaysia will be provided with mobile identity through digital certificates provided onto its SIM Card.

The two-factor authentication and out-of-band will increase security and reduce phishing and man in the middle attacks. However, this can only be achieved if all parties such as banks, mobile operators and government participate in the eco-system.

SKMM and BNM are currently pursuing an on-going effort in this area in developing a common mobile banking platform for the banks. The working group will discuss the technology aspect for mobile banking, to identify new delivery protocol for the mobile banking (other than SMS and WAP) and explore a common authentication methodology for the banks to adopt. Mobile PKI has been mentioned as the preferred technology.
SKMM is the regulator for postal services in Malaysia. The Postal Services Act 1991 seeks SKMM to ensure the high quality conveyance of Postal articles and to protect the interest of users of postal services.
The postal and express service in the key to the socio-economic development of Malaysia

The postal and express service is essential to the efficient functioning of the economy and society as a whole. The industry is a multi-billion business with the annual revenue size of nearly RM3 billion, employs 34,000 people and serves more than 6.3 million addresses nationwide, both in urban and rural areas.

Each day postal and express service delivers more than 3 million pieces of items of various forms like letters, small packets, parcels and magazines. More than 10,000 postmen and couriers dedicated themselves for this cause.

Universal Postal Service

Universal Postal Service remains the most accessible and affordable means of communication with more than 1,000 post offices nationwide. In 2009, there were 1,050 post offices, of which 699 are post offices and 349 are post mini. The Post Office Network is important national infrastructure. It provides convenient access to various government and commercial services. Even though competition is getting intense for the postal and express sector, it remains an important facility for the nation.

The number of transactions at the post office nationwide continues to grow. In 2009, more than 100 million transactions occurred at the post offices valued at more than RM15 billion.

Accessibility of Post Offices

Accessibility is essential as it provides access to its services and promotes economic growth. Accessibility is measured by the average population for each post office and pos mini per state.

Postal Industry USP Programme

The Programme has allocated RM1 million under the RMK-9 budget for the Postal Industry USP Programme (Program USP Industri Pos) for the developments of post mini under the Projek Urahawan Pos Mini Luter Bandar (PUPLB) and Pos Surau Komuniti programme in rural areas.

The capital expenditure for the project is based on 50:50 basis between the government and Pos Malaysia.

The programme achievements under the Program USP Industri Pos RMK-9 in 2009 are:

a. Ten (10) new Pos Mini; and
b. One (1) Pos mini under the Projek Urahawan Pos Mini Luter Bandar (PUPLB) and Pos Surau Komuniti programme in rural areas.

The Government has allocated RM1 million under the RMK-9 budget for the Postal Industry USP Programme (Program USP Industri Pos) for the Postal Industry USP Programme (Program USP Industri Pos) for the Postal Industry USP Programme (Program USP Industri Pos).

Postal Service Performance Standards

The service standard is divided into local and national delivery. The area is divided into Zone A (major towns) and Zone B (minor towns).

Domestic Mail Service Standards

Quality of Service

Domestic Mail Service Standards

On 1 August 2008, SKMM issued a performance standard for domestic letter service as part of its efforts to improve the quality of service.

The domestic letter service standard and performance target are shown in Table 2 and Table 3 below.

The service standard is divided into local and national delivery. The area is divided into Zone A (major towns) and Zone B (minor towns).

All local delivery services have D+1 (within one day of posting date) delivery standard, while the national delivery service is divided into two zones, whereas Zone A has a D+2 (within two days of posting date) delivery standard while Zone B has a D+4 (within four days of posting date) delivery standard.
nine years. As the courier and express logistic markets are increasingly converging, many logistic operators have entered into the courier market segment and vice versa. Despite a competitive market, SKMM received 11 new applications and approved all of them.

The new courier licensees in 2009 are:
•  Quick & Sure Express Sdn Bhd
•  Bumi X (M) Sdn Bhd
•  A To Z Worldwide Express Sdn Bhd
•  Lettershop Sdn Bhd
•  Sagawa Custom Brokerage (M) Sdn Bhd
•  Fastrun Services Sdn Bhd
•  Hexmann Logistics (M) Sdn Bhd
•  Amber Courier Sdn Bhd
•  Simple Strength Sdn Bhd
•  AirAsia Berhad
•  Yamato Transport (M) Sdn Bhd

SKMM continues to monitor the measures taken by PMB in improving the service performance level. Among the improvement plans on the pipeline are:

a. The establishment of a new National Mail and Parcel Hub. The hub, which is expected to commence in early 2011, should improve the automation level of PMB;

b. Reviewing the sizing of the delivery area and postmen workload; and

c. Implementing system to strengthen the monitoring of mail collection from posting boxes.

**Courier and Express Delivery Services**

The Malaysian courier and express industry will be more competitive as the players expand their network and provide better services through business transformation exercises and higher utilisation of Information Technology such as ‘Track and Trace’ and RFID (radio frequency identification).

The sector is competitive as 105 operators were holding the licence as of 2009. The number of operators fluctuated between 100 to 120 over the last

---

**Table 3: Service Standard**

<table>
<thead>
<tr>
<th>Objective</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed</td>
<td>88.0%</td>
<td>88.0%</td>
<td>88.0%</td>
</tr>
<tr>
<td>Reliability</td>
<td>99.0%</td>
<td>99.2%</td>
<td>99.3%</td>
</tr>
</tbody>
</table>

**Note:**

a. Speed refers to the percentage of the total test letters that comply with the performance requirements as stated in Table 1.

b. Reliability refers to the percentage of the total test letters delivered within the delivery standard of D + 7.

**2009 Domestic Mail Performance below the Target**

PMB 2009 performance is shown in Table 4 below. The performance was 17% below the speed objective and 0.9% below the reliability objective.

**Table 4: Pos Malaysia 2009 performance**

**Objective** | **Pos Malaysia Performance 2009** | **Target 2009**
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed Objective</td>
<td>71.0%</td>
<td>88.0%</td>
</tr>
<tr>
<td>Reliability Objective</td>
<td>98.3%</td>
<td>99.2%</td>
</tr>
</tbody>
</table>

**Table 5: Stamp Themes Approved for 2009**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Date of Issuance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique Birds of Malaysia</td>
<td>21 Jan 09</td>
</tr>
<tr>
<td>Silver Jubilee of the Reign of DYMM Tuanku Sultan Perak</td>
<td>3 Feb 09</td>
</tr>
<tr>
<td>Traditional Wedding Costumes</td>
<td>23 Mar 09</td>
</tr>
<tr>
<td>World Heritage Sites</td>
<td>9 Apr 09</td>
</tr>
<tr>
<td>Engineering Excellence in Nation Building</td>
<td>20 Apr 09</td>
</tr>
<tr>
<td>Palm Trees</td>
<td>19 May 09</td>
</tr>
<tr>
<td>Conservation of Nature</td>
<td>18 Jun 09</td>
</tr>
<tr>
<td>Traditional Houses</td>
<td>9 Jul 09</td>
</tr>
<tr>
<td>Tuber Plants</td>
<td>23 Jul 09</td>
</tr>
<tr>
<td>Malaysian Unity Series II - 1Malaysia</td>
<td>31 Aug 09</td>
</tr>
<tr>
<td>Malaysia’s First Submarine - KD TAR</td>
<td>3 Sep 09</td>
</tr>
<tr>
<td>Energy Efficient Buildings</td>
<td>9 Sep 09</td>
</tr>
<tr>
<td>Caring Society</td>
<td>9 Oct 09</td>
</tr>
<tr>
<td>Installation of DYMM Tuanku Yang DiPertuan Besar Negeri Sembilan</td>
<td>26 Oct 09</td>
</tr>
<tr>
<td>State Definitive Series Collection – Garden Flowers</td>
<td>24 Nov 09</td>
</tr>
<tr>
<td>Arachnid – Stamp Week 2009</td>
<td>7 Dec 09</td>
</tr>
</tbody>
</table>
It is our social responsibility to ensure that everyone, be they rich or poor, young or old, is empowered with basic telephony and Internet services in any part of the country. The ultimate goal of USP is to ensure that communities living in underserved areas are connected to mainstream Information and Communications Technology (ICT).
INTRODUCTION

The Universal Service Provision (USP) programme’s main objective is to provide communication access to target underserved areas, localities, and groups within the identified community. The priorities are on collective access to basic telephony and Internet services followed by individual access for both services throughout Malaysia. It ensures that areas otherwise left behind in telecommunication development are given attention and enjoy the same facilities. Economic and social development can then take place if not on par at least not far behind the urban areas, thus ensuring the bridging the digital divide.

The ultimate goal of this programme is to ensure that communities living in underserved areas are connected to mainstream Information and Communications Technology (ICT) development thus enabling and empowering these ‘connected communities’ and bringing socio-economic development to various sectors such as agriculture, education, health, business, amongst others.

CBC Expansion Phase 2

In addition to the previous USP Broadband Community Projects which includes CBC pilot and Phase 1, it has been further expanded into Phase 2 which covers 89 locations comprises four major telcos - TM, Digi, Celcom and Maxis. It was awarded on 15 April 2009 and the implementation started two weeks after that. The designated service provider was given a 24-week timeline.

Taking into consideration on the positive comments made by stakeholders on the previous CBC projects (pilot and Phase 1) during the community impact study on CBC rollout by USPD, bigger sites were recommended and approved by SKMM on CBC under Phase 2 which includes 20 personal computers (PCs) as compared to 10 PCs before. However the IT requirements usually expected for the total population for each site.

The new specifications and concepts for collective and broadband access service in the universal service target for CBC were further imposed.

New specifications focus on:

i. Broadband individual lines services for surrounding population (100 lines)
ii. Central Monitoring System (CMS) – data transfer/integration and reporting
iii. ICT enrichment training programme for CBC users
iv. Local content development for CBC’s website
v. Strong ICT awareness, promotions and marketing on CBC

Status of CBC Rollout Phase 2 Expansion based on designated service provider as at 31 December 2009

<table>
<thead>
<tr>
<th>No.</th>
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The commencement date for the implementation began within the same state and was expected to complete within 16 weeks, i.e. by late first quarter 2010.

No. State Universal Service Target Location
1 Sabah Beluran Kg Bing lang Mas
2 Beluran Kg Conteh, Kuala Sapi
3 Beluran Telupid
4 Kinabalu Bingkor
5 Kinabalu Sook
6 Kunak Kg Kadazan
7 Kunak Kg Pungg Huang
8 Kunak Pekan Kunak
9 Ranau Kg Desa Aman
10 Ranau Kg Lohan
11 Tongod Pekan Tongad
12 Tongod Kg Linsapalan
13 Tongod Kg Sogo Sogo
14 Sarawak Kanzovit Rumah Benjamin
15 Kanzovit Kubu Emma

CBC in Felda Settlements

On 1 December 2009, SKMM has awarded six licensees on the designation of universal service providers to roll out new CBC within 72 Felda Settlements for newly notified 36 USP targets.

No. State Universal Service Target Felda Area Designated Service Provider
1 Johor Sedainak Bukit Batu Celcom
2 Sungai Tiram Bukit Permai Celcom
3 Tebrau Ulu Tebrau Danawa
4 Kluang Ayer Hitam Celcom
5 Kluang Barat Celcom
6 Kluang Timur Celcom
7 Rengam Bukit Tongkat Celcom
8 Bukit Kapong Mastik 1 eB Tech
9 Tangkak Parit Hj Isra Redtone
10 Garo Palong Timur 1 Redtone
11 Latis Chepilak Telekom
12 Sungai Segamat Kemelah Telekom

Maxis Communication Berhad

No. State Universal Service Target Location
1 Kelantan Tanah Merah Fe lsa Kemahang 3
2 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
3 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
4 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
5 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
6 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
7 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
8 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
9 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
10 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
11 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
12 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil
13 Kelantan Tanah Merah Kg Gua l Ipoh, Ulu Kusil

Digi Telecommunications Berhad

No. State Universal Service Target Location
1 Johor Masring Triang
2 Masring Padang Endau
3 Kuantan Pener
4 Kuantan Kuala Kuantan
5 Melaka Jaan Sg Rambai
6 Jaan Uthilat
7 Terengganu Kemaman Kg Ihek, Ulu Chukai
8 Terengganu Kemaman Bandar Cheneh
9 Hulun Tanah Terengganu Bukit Diman
10 Hulun Tanah Terengganu Kuala Berang
11 Karantan Tanah Merah Felda Kemahang 3
12 Karantan Tanah Merah Kg Guai Ipoh, Ulu Kusil
13 Sarawak Lundu Pekan Lundu

Celcom (M) Berhad

No. State Universal Service Target Location
1 Sabah Beluran Kg Bing lang Mas
2 Beluran Kg Conteh, Kuala Sapi
3 Beluran Telupid
4 Kinabalu Bingkor
5 Kinabalu Sook
6 Kunak Kg Kadazan
7 Kunak Kg Pungg Huang
8 Kunak Pekan Kunak
9 Ranau Kg Desa Aman
10 Ranau Kg Lohan
11 Tongod Pekan Tongad
12 Tongod Kg Linsapalan
13 Tongod Kg Sogo Sogo
14 Sarawak Kanzovit Rumah Benjamin
15 Kanzovit Kubu Emma

Note: The table contains details of the universal service providers across various states and targets, along with the designated service providers for each location. The implementation began with the expected completion within 16 weeks, as announced in late first quarter 2010.
Central Monitoring System

1. The objectives of the Central Monitoring System (CMS) are:
   i. To provide comprehensive monitoring of the site resources, users, usage, application used and human capital development;
   ii. To generate reports on all activities at the sites such as user reports, computer usage, computer and internet line condition and application used;
   iii. To centralise all the digital divide reporting structure for project research and development purpose;
   iv. To provide best system recovery solutions in order to manage computer resources at sites; and
   v. To provide day to day information and planning for all related activities in a digital divide programme such as central and on-site training and workshop through online project management features.

2. In 2007, SKMM has broadened the rollout of Internet service by introducing new projects under the USP programme to include the provision of collective Internet access service to community and libraries located in the designated underserved areas. The projects namely Community Broadband Centre (CBC) and Community Broadband Library (CBL).

3. SKMM managed to rollout 154 CBCs and 105 CBLs projects throughout Malaysia. Hence the total number of CBC and CBL currently stands at 259 sites.

4. Since the implementation of CBC and CBL projects, USP Division (USPD) manually monitors the operation of the telecentres, the utilisation of the facilities and the ICT training programme conducted in the telecentres assisted by Regional Offices.

5. Hence, CMS is seen as a tool which helps to simplify and assists the management on digital divide projects in monitoring, implementation and planning of the USP’s telecentres such as CBC and CBL programmes.

6. CMS is an integrated client-based and web-based solution that enables project management to facilitate swift dissemination of documents and reports across geographical boundaries via the Internet. The CMS ensures that all remote data are transmitted to enable reports to be generated by USPD on time.

7. In this system, all reports for monitoring purposes are divided into different parts with statistical reports. CMS installation progress, site ranking and programme progress are examples of the monitoring reports. The reporting tools will be the greatest facility for the operation management in monitoring each project effectively.

8. All monitoring system at service provider’s server will be integrated into one centralised server at SKMM HQ. This system is expected to complete within second quarter 2010.

USP Fund

The Universal Service Provision Fund (USP Fund) was established under the provision of Section 204 of the Communications and Multimedia Act 1998 (CMA) and is managed by SKMM.

USP Fund’s sole purpose is for the implementation of network facilities, network services and applications services in the underserved areas and communities.

The Communications and Multimedia (Universal Service Provision) Regulation 2002 (USP Regulations) stipulates that contributions from licensees shall be based on three factors:
1) The list of designated services;
2) Weightage factors; and
3) 6% of weighted net revenue

As per Regulation 27 of the USP Regulations, all licensees (except for Content Applications Service Provider (CASP) licence holders, whose weighted net revenue derived from the designated services exceeds the Minimum Revenue Threshold of RM2 million in a calendar year shall contribute 6% of its weighted net revenue to the USP Fund.

USP Fund’s projects’ claims in the form of Capital Expenditure (CAPEX) and Operational Expenditure (OPEX) from USP Fund are disbursed only to designated USP service providers upon approval from the Commission as provided in the USP Regulations.

USP Fund is presently placed in Fixed Deposits at licensed financial institutions. Interest received from the placement of USP Fund in Fixed Deposits is paid back to the USP Fund.
Creating a relevant talent pool has become necessary in achieving Malaysia’s goal to shift its economic focus from an industrial, to a knowledge economy. SKMM fully supports R&D across the communications and multimedia value chain in search for new ideas and in recognising the need to accelerate the transition from ideas and research to market of innovative services and products driving growth and value for the nation.
Standard Radio System Plan (SRSP)
The Standard Radio System Plan (SRSP) is a policy document describing regulatory and technical requirements in the use of a specific spectrum band by a particular wireless system or service. It is based on the allotment from the Spectrum Plan. SKMM has formed several working groups of which the members are from the Government sector, C&M industry and Institutions of Higher Learning (IHL), studying and reviewing the various SRSPs so that the documents are updated with current practices and methods. In 2009, SKMM revised and developed new SRSP documents as in Figure 1.0.

National Spectrum Consultative Committee (NSCC)
NSCC is a umbrella forum led by SKMM that aims to facilitate consultation and focused advice on spectrum management strategic matters between SKMM, and different stakeholders or interest groups. The establishment of the NSCC provides a consultative platform involving all key stakeholders to ensure that strategic spectrum issues receive robust consultation as well as to improve on and supplement the existing public consultative process.

INTRODUCTION
Activities in research and planning are focused on areas of spectrum management, opportunities in the communications and multimedia market and industry statistics where data are acquired and analysed for market performance and as input to policy and decision making.

New knowledge acquired through studies and researches as well as new plans is shared with the industry through various platforms of industry engagement such as the consultative committees and working or discussion groups, industry briefing sessions, seminars and lecture series.

SPECTRUM RESEARCH AND PLANNING
Spectrum research and planning provide the basis to create a predictable environment for the current and future use of spectrum resources to achieve the National Policy Objectives. This involves key activities in two areas:
• spectrum policy and planning; and
• spectrum research.

SPECTRUM POLICY AND PLANNING
Spectrum Plan (SP)
The Spectrum Plan provides the Table of Frequency Allocation and policies on how the spectrum is assigned, reassigned and used in Malaysia as well as how we plan to use it in the near future. The current plan is the November 2006 Spectrum Plan and is issued under Section 172 of the Communications and Multimedia Act 1998.

Due to rapid development in wireless communications and demand for spectrum, the current Spectrum Plan which is already three years old is reviewed.

The review of the current Spectrum Plan was done based on the considerations below: i) changes and updates of the ITU Radio Regulations based on the WRC-07 outcome; ii) review and updates to the Standard Radio System Plans (SRSPs); iii) usage of frequency to date including the AA database, Class Notifications, Spectrum Assignments; iv) introduction of new and development of technologies; v) international and border coordination; vi) policy updates arising from the Spectrum Management Strategic Review; and vii) current and future markets/industry development.

The Spectrum Plan review is expected to be completed in 2010 after going through the process of focused groups and public consultation.

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Existing industry group namely the Research Collaboration Panel (RCP), National Preparatory Working Group for World Radio Conference (NPWG) and the Industry Spectrum Consultative Group (ISCG) were re-organised on how the spectrum is assigned, reassigned and used in Malaysia as well as how we plan to use it in the near future. The current plan is the November 2006 Spectrum Plan and is issued under Section 172 of the Communications and Multimedia Act 1998.

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SKMM - New and Revised SRSP Documents

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Figure 1.0  New and Revised SRSP Documents

National Spectrum Consultative Committee (NSCC)
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Existing industry group namely the Research Collaboration Panel (RCP), National Preparatory Working Group for World Radio Conference (NPWG) and the Industry Spectrum Consultative Group (ISCG) were re-organised under the NSCC. The newly formed groups that act as focused groups consultations among the Government civil, Government defense police and industry users are shown in Figure 1.1 below:
National Preparatory Working Groups for World Radio Conference 2012 (NPWG-WRC-12) was formed to take all necessary steps to assemble information to provide advice, technical analyses, and specific proposals on matters relating to the 2012 World Radiocommunication Conference and future related conferences.

The objective of NPWG WRC-12 is to provide the Ministry of Information Communication and Culture (KPKK) with advice, technical support, and proposals for the 2012 World Radiocommunication Conference (WRC-2012).

NPWG-2012 is a closed / by invitation only committee and is chaired by Chairman of SKMM. Under the NPWG-2012, there are six NPWG-WRC-12 Working Parties (WPs). The WP is an open forum, and each WP is responsible for groups of WRC-12 Agenda Item as shown in the Table 1.2 below:

The objective of NPWG WRC-12 is to provide strategic direction, policy aspects, and determination of priorities, recommendations of collaboration projects to SKMM and to approve the annual operational plans of the SRCP.

SPECTRUM RESEARCH

Taking leadership in spectrum management includes building human capital and resources in the areas of spectrum management. Towards this end, SKMM and designated institutions of higher learning (IHLs) have collaborated in various programmes or projects on spectrum management studies or research the spectrum environment. The Spectrum Research Collaboration Programme (SRCP) covers this task, and aims to improve the administrative, regulatory and technical expertise in spectrum management. This is done through promoting and funding research on spectrum management in collaboration with IHLs and the industry.

The SRCP programme started in September 2006 with the establishment of the Research Collaboration Steering Committee (RCSC). The RCSC responsibility lies in providing strategic direction, policy aspects, and determination of priorities. Recommendations of collaboration projects to SKMM and to approve the annual operational plans of the SRCP.

The SRCP also promotes knowledge sharing and networking opportunities among collaborating members. This includes a web collaboration portal at www.spectrumresearch.com.my for sharing experiences, knowledge, research studies or findings among interested parties. The portal was operational in 2007.

The Objectives of SRCP

Serve as focal point of information, knowledge development and research and development activities related to spectrum management.

Develop SKMM knowledge resources; improve capability in spectrum management.

Serve as focal point of information, knowledge development and research and development activities related to spectrum management.

Develop SKMM knowledge resources; improve capability in spectrum management.

The SRCP governance structure is shown in Figure 1.3. A secretariat supports the two committees within the SRCP structure. Overall, the aim is to provide strong management and guidance in the research collaboration framework.

The Objectives of SRCP

Serve as focal point of information, knowledge development and research and development activities related to spectrum management.

Develop SKMM knowledge resources; improve capability in spectrum management.

Table 1.3

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<td>1.5, 1.8, 1.17, 1.20, 1.22</td>
<td>1.8, 1.11,</td>
<td>1.7, 1.13,</td>
<td>1.2, 1.19,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.12</td>
<td>1.18, 1.25, 7</td>
<td>2.4, 8.1, 8.2</td>
</tr>
</tbody>
</table>

Table 1.3

<table>
<thead>
<tr>
<th>Working Party</th>
<th>CPM Report Chapter</th>
<th>WRC-2011 agenda item</th>
<th>Desk Officers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maritime and aeronautical issues</td>
<td>1.3, 1.4, 1.9, 1.10</td>
<td>Abdul Mutin Mohd Zain</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mohamad Razif Azhari</td>
</tr>
<tr>
<td>2</td>
<td>Radiolocation and amateur issues</td>
<td>1.14, 1.15, 1.21, 1.23</td>
<td>Abdul Mutin Mohd Zain</td>
</tr>
<tr>
<td>3</td>
<td>Fixed, mobile and broadcasting issue</td>
<td>1.5, 1.8, 1.17, 1.20, 1.22</td>
<td>Ahmad Nauruddin</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘Abdul Fahudzah</td>
</tr>
<tr>
<td>4</td>
<td>Science issues</td>
<td>1.8, 1.11, 1.12</td>
<td>Mohd Redza Fahiawi</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mohd Abdullah</td>
</tr>
<tr>
<td>5</td>
<td>Satellite issues</td>
<td>1.7, 1.13, 1.18, 1.25, 7</td>
<td>Shamsul Najf Mohtar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rafieza Rahim</td>
</tr>
<tr>
<td>6</td>
<td>Future work and other issues</td>
<td>1.2, 1.19, 2.4, 8.1, 8.2</td>
<td>Syed Khasrul Alim</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Syed Khasrul Alim</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Helida Akashah Kamaruzaman</td>
</tr>
</tbody>
</table>

Table 1.3

| Source: SKMM – Spectrum Research Collaboration Programme (SRCP) |

Table 1.3

| Source: SKMM – SRCP Objectives | Source: SKMM – Committees Providing Guidance in Collaboration Programme |

The The Secretariat and Committees Providing Guidance in the Collaboration Programme:

<table>
<thead>
<tr>
<th>RCSC</th>
<th>RCP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governs the SRCP, and chaired by Chairman of SKMM. Members include SKMM, KPKK, representatives from the communications and multimedia industry, government agencies, various stakeholders and Deputy Vice-Chancellors of Universities (Research Centres).</td>
<td>Supports the RCSC. Members comprises IHTs and the industry who are elected by RCSC. The RCP advises, manages and monitors research programmes.</td>
</tr>
</tbody>
</table>

RCP responsibilities include to:

- Identify partnership programmes.
- Identify appropriate existing resources within the programme parameter (including subject matter experts).
- Develop programmes in collaboration with IHT.
- Identify research topics and evaluation proposals.
- Promote collaboration programme to achieve specified goals.
- Manage and administer the collaboration programme.
- Coordinate for optimal use of resources.
- Advice the RCSC and SKMM on research projects and their status.

The SRCP governance structure is shown in Figure 1.3. A secretariat supports the two committees within the SRCP structure. Overall, the aim is to provide strong management and guidance in the research collaboration framework.

Secretariat and Committees Providing Guidance in the Collaboration Programme

Research Collaboration Panel (RCP)

Supports the RCSC. Members comprises IHTs and the industry who are elected by RCSC. The RCP advises, manages and monitors research programmes.

Table 1.3

| The Two Committees RCSC and RCP |

| Secretariat and Committees Providing Guidance in the Collaboration Programme |

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- Identify research topics and evaluation proposals.
- Promote collaboration programme to achieve specified goals.
- Manage and administer the collaboration programme.
- Coordinate for optimal use of resources.
- Advice the RCSC and SKMM on research projects and their status.
Collaboration of Parties in the SRCP

Collaboration is emphasised and facilitated within the SRCP. For example, once SKMM awards the research project through tender process, the universities and the industry in the research areas can connect and collaborate through a SKMM-hosted web portal. Universities and industry participants can form Research Collaboration Clusters for interaction with each other and with the Research Collaboration Panel and the SRCP Secretariat. The collaborative relationships are both local and international that includes regional and international institutions or universities.

Management Process in Research Collaboration

1. Secretariat monitors progress of research projects by evaluating quarterly reports, conducting technical visits to University together with RCP and meeting research team, if necessary.
2. Research teams submit physical and financial progress report every quarter.
3. Secretariat compiles quarterly report and refers to RCP as well as any outstanding matters pertaining to the research.
4. RCP advises Secretariat on technical issues regarding the research. Also, reports research progress to RCP during Steering Committee Meetings.
5. Secretariat prepares papers and reports to SKMM on research project progress, including advice and recommendations from RCP (if any)
6. SKMM acknowledge report; provide feedback to Secretariat, including proposed action for implementation (if any).

Progress of SRCP Research Project 2007 & 2008 (based on earliest completion date)

<table>
<thead>
<tr>
<th>No. Research Topic</th>
<th>University</th>
<th>Duration (Months)</th>
<th>Completion Date</th>
<th>Current Status / Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Issue of Spectrum Cost Versus Network Cost</td>
<td>UNM</td>
<td>15 (13+2)</td>
<td>10 Dec 08</td>
<td>Project completed. Printed final report available at SKMM Knowledge Resource Centre (KRC). Discussion ongoing to engage University of Nottingham Malaysia Campus (UNM) to conduct study on opportunity cost. - Presented at Lecture Series 03/2009</td>
</tr>
<tr>
<td>2. Radio Frequency Radiation (RFR) Preliminary Study for WLAN Networks and Mobile Phone Base Stations in Malaysia</td>
<td>Unil</td>
<td>15 (9+6)</td>
<td>31 Dec 08</td>
<td>Project completed. Printed final report available at SKMM KRC. - Unil actively engaged by TEND for radiation awareness campaign. - Presented at Lecture Series 03/2009</td>
</tr>
<tr>
<td>3. Adoption, Appropriation and Impact of Wireless Technologies on Malaysia Society</td>
<td>UTM</td>
<td>22 (16+6)</td>
<td>30 June 09</td>
<td>Project completion approved by SKMM. - Final report in printing process. Work in progress to implement strategies recommended into 1Malaysia campaign. - Presented at Lecture Series 05/2009</td>
</tr>
<tr>
<td>5. Issues on Reliable Communications at Frequencies Bands Above 25 GHz in the Tropics</td>
<td>UPM</td>
<td>24 (15+9)</td>
<td>31 Aug 09</td>
<td>Project timeline reached, draft final report submitted and under evaluation.</td>
</tr>
<tr>
<td>7. Emerging Wireless Technology (Spectrum Needs for 5G - Advances in Malaysia)</td>
<td>UTM</td>
<td>24 (15+9)</td>
<td>3 Sept 09</td>
<td>Project timeline reached, draft final report submitted and under evaluation.</td>
</tr>
</tbody>
</table>

Trend of Funding for Research Projects

<table>
<thead>
<tr>
<th>Fund &amp; Project</th>
<th>2007 (RM Million)</th>
<th>2008 (RM Million)</th>
<th>2009 (RM Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fund Allocated</td>
<td>3.844</td>
<td>1.06</td>
<td>None</td>
</tr>
<tr>
<td>No. of project Approved</td>
<td>11</td>
<td>6</td>
<td>No new project. Efforts focused on project monitoring and facilitation.</td>
</tr>
</tbody>
</table>
Monitoring of Research Projects

Research projects are monitored closely. Each research team is required to submit a quarterly progress report to the SRCP Secretariat. The quarterly report (with detailed reporting) comprises physical progress of the project. This includes the financial report detailing expenses incurred.

In addition, RCP and SRCP Secretariats conduct monthly technical visits to each research university location on a rotational basis to check on progress of the projects. In this way, feedbacks are also obtained on the research work as well as audit on the research facilities or equipment acquired using the research fund. These activities ensure that research project is on course towards achieving intended objectives and provides an avenue for attending to any difficulties the researchers may encounter.

Research Monitoring Details

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Activity Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>23/01/09</td>
<td>RCP Meeting &amp; Technical Visit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RCP 01/09 Location: Universiti Malaya Progress presentation by UM Research Team</td>
</tr>
<tr>
<td>2</td>
<td>27/02/09</td>
<td>RCP Meeting RCP 02/09 Location: Digi HQ, Subang Hi-Tech, Shah Alam</td>
</tr>
<tr>
<td>3</td>
<td>27/03/09</td>
<td>RCP Meeting RCP 03/09 Location: SKMM Cyberjaya</td>
</tr>
<tr>
<td>4</td>
<td>03/04/09</td>
<td>Presentation Final Report Presentation by Uniten (0930am)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Final Report Presentation by UNIM (0230pm) Location: SKMM Cyberjaya</td>
</tr>
<tr>
<td>5</td>
<td>29/05/09</td>
<td>RCP Meeting RCP 04/09 Location: Telekom Malaysia Research &amp; Development Centre</td>
</tr>
<tr>
<td>6</td>
<td>17/09/09</td>
<td>Meeting Mobile Phone Strategy Workshop – UTM Research Team (Adoption, Appropriation and Impact of Wireless Technologies on Malaysia Society) Location: Kuala Lumpur</td>
</tr>
<tr>
<td>7</td>
<td>30/10/09</td>
<td>Presentation Final Report Presentation by UTM (Adoption, Appropriation and Impact of Wireless Technologies on Malaysian Society) Location: International Islamic University Malaysia</td>
</tr>
<tr>
<td>8</td>
<td>23/11/09</td>
<td>Meeting Research Collaboration Steering Committee (RCSC) Meeting Location: Marriott Putrajaya</td>
</tr>
<tr>
<td>9</td>
<td>23-25/11/09</td>
<td>Colloquium Spectrum Research Colloquium 2009 Location: Marriott Putrajaya</td>
</tr>
</tbody>
</table>

Key: Project Status
- Project on track
- Project progress slightly delayed
- Project on hold / suspended
- Project progress unknown

Figure 1.5 A Summary Status of all 17 SRCP Research Projects

No. Research Topic University Duration (Months) Completion Date Current Status / Remark

8. The Impact of Wireless Technology Among Malaysian UKM 24 (18+6) 3 Sept 09 • Project timeline reached, draft final report submitted and under evaluation. • Work in progress for UKM to Society present to broadband service providers. • Presented to Lecture Series 05/2009


10. Issue of Reliable Communications at Frequencies Bands above 25 GHz in the Tropics MMU 26 31 Nov 09 • Project timeline reached, awaiting draft final report for completion evaluation, reminder sent to submit draft report. • Due date: 28 Feb 2010

11. Collaborative Spectrum Management System UKM 12 31 Jan 10 • Project timeline reached, awaiting draft final report for completion evaluation, reminder sent to submit draft report. • Due date: 30 April 2010

12. A Strategic Model in Spectrum Demand Allocation and Spectrum Pricing UUM 12 31 Jan 10 • Project timeline reached, awaiting draft final report for completion evaluation, reminder sent to submit draft report. • Due date: 30 April 2010

13. The Use of Frequency HF system UTM 30 (24+6) 31 Mar 10 • No progress report received yet.

14. Sharing Studies between the Mobile Services and Other Services in 470-960MHz Frequency Band UTM 18 31 Jul 10 • Literature review completed, deterministic interference analysis in progress

15. The Possibilities of High Altitude Platform Station Gateway Links Deployment in the 5850-7075 MHz in Malaysia UTM 18 31 Jul 10 • Literature review and interference analysis completed, deployment possibilities analysis in progress.

16. The Effect of Emission Emission from Short Range Devices on Radio-Communication Services UPM 18 31 Jul 10 • No Payment report received. • SRCP Agreement has not been finalised yet.

17. The Regulatory Measures to enable introduction of Software-Defined Radio and Cognitive Radio Systems UTM 20 30 Sept 10 • Literature review completed development of demonstration prototype is in progress.

Source: SKMM

Research Monitoring Details

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<td>23-25/11/09</td>
<td>Colloquium Spectrum Research Colloquium 2009 Location: Marriott Putrajaya</td>
</tr>
</tbody>
</table>

Source: SKMM
The annual Spectrum Research Colloquium 2009 was held from 23 to 25 November 2009, at Putrajaya Marriott Hotel in Putrajaya. The event was officiated by SKMM Chairman. A total of 14 research teams presented their research projects, with participation from foreign speakers, industry players and local universities. The series is open to the public and attendance is free of charge.

In 2009, five lectures were conducted, with participations from foreign speakers, industry players and local universities. SRCP researchers who have completed their research projects presented their findings. This helped to enlighten the industry on a specific research issue or topic and created opportunity for further collaboration.

Market Research Reporting

Specifically, there is a newsletter highlighting the development of broadband in Malaysia including global trends that has been hopefully aptly named as MyBroadband. Overall, these report publications are done on regular basis, which may be annually, bi-annually, or quarterly.

In the year 2009, for market research reporting the industry developments in focus include as follows:

- Industry Research Reports
  - Advertising Development in Malaysia
  - Direct Mail – A New Area of Growth
  - Trunked Radio – Going Digital
  - DRM Development & Trends – An Ongoing Affair
  - Mobile Virtual Network Operators – The Redefining Game

Essentially, the respective reports feature a brief overview of the stated markets, including views on international and domestic development, and growth within that industry segment. The analysis also covers a comparison of these market developments worldwide, and a review of the Malaysian markets in the area concerned. Also featured are impact to value chain due to the changing industry landscape in digitisation and convergence.

MARKET RESEARCH

In the fast changing landscape of the communications and multimedia industry globally and in Malaysia, there is a need to understand industry developments for proactive reasons to garner opportunities arising.

From this perspective, the SKMM market research concentrates on topical areas of development in the communications and multimedia industry. These are realized through market research reporting, and the conduct of conferences such as Communications and Multimedia Market Trend Conference and Market Brief Series event to provide a neutral platform for sharing industry views and market trends or tips in collaborative mode.

<table>
<thead>
<tr>
<th>No.</th>
<th>Lecture Title</th>
<th>Presenter</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spectrum rules OK: Wireless Communications from Submarines to Satellite</td>
<td>UTHM</td>
<td>1 Dec 06</td>
</tr>
<tr>
<td>2</td>
<td>Smart Antennas and Location-Based Services</td>
<td>UTM</td>
<td>21 Mar 07</td>
</tr>
<tr>
<td>3</td>
<td>Wireless Broadband Access: An Overview on Standards and Systems Trials in Malaysia</td>
<td>Maxis and Digi</td>
<td>12 Jul 07</td>
</tr>
<tr>
<td>4</td>
<td>Evolution to Next Generation Mobile Network</td>
<td>Telier</td>
<td>16 Aug 07</td>
</tr>
<tr>
<td>5</td>
<td>Approaches in Re-farming of Spectrum and Spectrum Management</td>
<td>Qualcomm</td>
<td>4 Sept 07</td>
</tr>
<tr>
<td>6</td>
<td>Mobile TV</td>
<td>NTT DoCoMo</td>
<td>4 Oct 07</td>
</tr>
<tr>
<td>7</td>
<td>Current activities within ITU-R towards IMT-Advance or 4G Systems</td>
<td>RTM/M/TSFB, NDS AP, Telenor Broadcast Hldg AS</td>
<td>21 Feb 08</td>
</tr>
<tr>
<td>8</td>
<td>WiMAX Technology and the Strategic Importance of Interoperability for Large Scale Deployment</td>
<td>WICHORUS Inc</td>
<td>5 Jun 08</td>
</tr>
<tr>
<td>9</td>
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<td>The Sentinels: Technologies and Spectrum Occupancies of Radars</td>
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<td>11</td>
<td>Unmanned Aerial Vehicle (UAV) : The Integration of UAV’s Operation into Civil Airspace</td>
<td>USM</td>
<td>21 Nov 08</td>
</tr>
<tr>
<td>12</td>
<td>WiMAX Essentials: Technology, Interoperability, Deployment Challenges and Market Analysis Solutions, Inc</td>
<td>Awards</td>
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</tbody>
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<tr>
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<td>Mobile Broadband Evolution – HSPA+ and LTE</td>
<td>Qualcomm</td>
<td>21 Mar 09</td>
</tr>
<tr>
<td>15</td>
<td>Digital Audio Broadcasting (DAB)</td>
<td>MTS/FB</td>
<td>15 Jun 09</td>
</tr>
<tr>
<td>16</td>
<td>Wireless Technologies and US: The Impact of Wireless Technology Among Malaysian Society Adoption and Appropriation of Mobile Phone on Malaysian Society</td>
<td>UTM</td>
<td>21 Aug 09</td>
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</table>
A flavor of the SKMM Industry Research Report is as shown below:

Communications and Multimedia Market Trend Conference

Aside from independent market research reporting, the SKMM also conducted a Communications and Multimedia Market Trend Conference on 19 May 2009. The Conference saw active involvement from the captains of the industry, industry analysts and a participating audience comprising the communications and multimedia players and licensees, venture capitalists, investment bankers, various related ministries and agencies and other stakeholders.

All in all, the views on the communications and multimedia market development in Malaysia going forward in the year was effectively charted and shared in the progress of the event.

In the year 2009, a Market Brief Series event was held on 18 December 2009 in the SKMM auditorium. The event was an inaugural one conducted by SKMM. The objective of such an event is to provide the industry a platform for discussion of market trends and development on a specific area of interest.

This event focused on the topic of “Accelerating Mobile Ads in Malaysia”, with an audience comprising mobile service providers, content aggregators, industry analysts, advertising agencies and others with the same interest.

STATISTICS & KNOWLEDGE RESOURCE

The SKMM is the focal point of all Communications & Multimedia (C&M) statistics and indicators for the Commission, Industry and users at large. In addition to that, it stocks and maintains a Resource Centre with the latest resource in C&M be it in print, secondary storage media or online. The Knowledge Management initiative in SKMM is spearheaded through its five quick wins, knowledge sharing sessions and a world class C&M knowledge magazine.

Statistics has been acknowledged as the key input in evidence-based decision-making. The statistics and indicators collected and analysed by SKMM can be divided into two main categories viz Primary data and Secondary data & administrative records.

Primary data are data collected directly from end-users where such data pertaining to use, experience and opinions cannot be gleaned from administrative records of the licensees.

In 2009, the SKMM conducted its annual flagship surveys namely, the Hand Phone Users Survey, and the Household Use of Internet Survey. The former has an unbroken series since 2004, while the latter has an equally long run. The survey reports are a rich source of information and are eagerly awaited by Industry and other users and are published in a series called Statistical Briefs.

In addition to the two aforementioned surveys, the SKMM conducted two Mobile Broadband Surveys in 2009. These two surveys were instrumental in developing indicators of broadband penetration, where the national aspiration is to put broadband in 50% of all private households in the country.
Central to its success in carrying out scientific purpose-built surveys such as those mentioned above is the SKMM CATI Centre located in Kuala Lumpur. The centre was established in 2004. In 2009, the centre was expanded from its initial 20 booths to the present 50. With this expansion of capacity, the Consumer Satisfaction Survey which was formerly outsourced to market research firms was successfully brought home, resulting in considerable cost savings for SKMM.

The SKMM also boasts of a web survey capability and leveraged on it as the platform of the annual Licensees Survey in 2009. Valuable data is also planned regularly via administrative records of licenses as well as SKMM internal sources. Such secondary data are collected together in the form of two statistical bulletins, “Communications & Multimedia; Selected Facts and Figures” for the C&M industry and “Postal & Courier Services; Selected Facts and Figures” for the postal and courier industry. The former was made available on a quarterly basis in 2009 while the latter on a half-yearly basis.

SKMM’s statistical activities have gained recognition, internally, locally and internationally. Thus its advisory role is much sought after. In 2009, SKMM's statistical activities have gained recognition; internally, locally and internationally. Thus its advisory role is much sought after. In 2009, SKMM's statistical activities have gained recognition; internally, locally and internationally. Thus its advisory role is much sought after. In 2009, SKMM's statistical activities have gained recognition; internally, locally and internationally. Thus its advisory role is much sought after.

The flagship of the SKMM effort is the C&M knowledge magazine dotMyConvergence, published twice yearly, as was in 2009. This is a particularly significant effort as it shares contributors from both SKMM and industry in conveying tacit knowledge to explicit knowledge. It has come to be recognised as world class with a huge following, locally and abroad.

To cater to readers all over the globe an online version is also made available at http://www.myconvergence.com.my.

The Resource Centre is poised to be the knowledge repository for SKMM and for industry. In 2009 it leveraged on its resources to jumpstart a knowledge management program banking on five quick wins. These are:

i. Creating repositories of information,
ii. Setting up effective networks for sharing information between employees to interact among themselves as well as with stakeholders,
iii. Formalised procedures to ensure that lessons learnt get passed along to others doing similar tasks,
iv. Promoting informal networking/connections between those who need it and those who can provide,
v. Establish more focused career-development and succession-planning programmes.

The fourth “Promoting informal networking/connections between those who need it and those who can provide” took the form of a friendly series called Tea-talk @ 3, an immensely successful informal knowledge sharing sessions among peers over refreshments. In 2009, 24 such sessions were held.

The knowledge management program banking on five quick wins. These are:

i. Creating repositories of information,
ii. Setting up effective networks for sharing information between employees to interact among themselves as well as with stakeholders,
iii. Formalised procedures to ensure that lessons learnt get passed along to others doing similar tasks,
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The Ninth Malaysia Plan 2006-2010 emphasises ICT and its related economy. An extract of the key message is in the diagram below.

For the past 10 years, ever since SKMM was empowered to oversee the orderly growth of the Communications and Multimedia sectors as instituted under the Communications and Multimedia Act 1998 (CMA), the national regulatory policy has been towards liberalisation and the promotion of competition. This has led to the accelerated growth profile of the communications and multimedia industry in the last decade from RM41 billion revenue generated in 1999 to over RM84 billion in 2009. We have yet to experience the full impact of its spillover effects into other industries, especially in the case of the enabling effects of broadband as one of the key enablers to sectorial drivers of a nation’s competitiveness.

This direction is also one indicated in the Global Competitiveness Report 2009-2010 by the World Economic Forum, which prompts Malaysia to use ICT services to move into a knowledge-based and innovation-driven economy. An extract of the key message is in the diagram below.

The Malaysia’s Competitiveness

<table>
<thead>
<tr>
<th>Country/Economy</th>
<th>GCI 2009-2010 Rank</th>
<th>Score</th>
<th>GCI 2008-2009 Rank</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>1</td>
<td>5.60</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>2</td>
<td>5.99</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>3</td>
<td>5.55</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>8</td>
<td>5.37</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Hong Kong SAR</td>
<td>11</td>
<td>5.22</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Taiwan, China</td>
<td>12</td>
<td>5.20</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>13</td>
<td>5.19</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Korea, Rep.</td>
<td>10</td>
<td>5.00</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>24</td>
<td>4.87</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>29</td>
<td>4.74</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>36</td>
<td>4.56</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>49</td>
<td>4.30</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>50</td>
<td>4.17</td>
<td>70</td>
<td></td>
</tr>
</tbody>
</table>

* Out of 132 countries  
* The 2008-2009 rank is out of 130 countries

**Factors**

- Basic Requirements  
- Infrastructure  
- Efficiency Enrichers  
- Technological Readiness  
- Higher Education and Training  
- Innovation & Sophistication Factors  
- Innovation

**Score**

- 5.05  
- 4.51  
- 4.19  
- 4.06

The Ninth Malaysia Plan 2006-2010 emphasises ICT and its related services as enablers to grow businesses and individuals. For example, digitisation of content and networked business processes can provide benefits of labour and time savings, as well as become a conduit to entrepreneurial development and innovation. Therefore, the Government is working hard to increase access to and use of ICT services and facilities. There is parallel emphasis to further enhance e-Government services, and encourage ICT applications usage through e-Commerce.

In line with national objectives, the SKMM is tasked to work with the industry on a key target of achieving 50% household broadband penetration by the end of 2010. This is amongst the strategic direction and plans in its revised framework for industry development that includes development and roll-out of infrastructure and services, promoting communications and multimedia industry growth and bridging the digital divide.

While the Networked Content Development Grant (NCCD) programme supports the localized and local content development objective of the Ninth Plan, broadband development in terms of supply and demand follows a multipronged approach. This is seen from the policy of using multiple technologies or a technology agnostic approach for steady rollout of broadband. Fixed broadband rollout is exemplified through the public-private partnership project of high speed broadband network with Telekom Malaysia Bhd. Telekom is also obliged through the access regime under the CMA to open up its network to peers and third parties. Fixed broadband effectively serves the high impact and major economic areas to support high end uses.

For the larger base of the population in urban areas and those outside the high impact and major economic areas, wireless broadband is the key to access high speed broadband services as it provides speed of supply and requires lower cost. Examples of wireless broadband services available in Malaysia today are through 3G/HSPA and WiMAX.

Through these combinations of and of course, not forgetting the fixed wireless option in satellite and WiFi, and the collaboration of all stakeholders concerned can we see the national targets achieved therein.

In a holistic approach to “broadbanding” Malaysia, the National Strategic Framework for Bridging the Digital Divide as stipulated in the Ninth Plan is further promulgated through the set up of telecentres, promoting PC ownership, and increase in availability of more affordable ICT products and services. For the underserved areas, the Universal Service Provision programme kicks in.

Private Enterprise

The default broadband access level (that is, to the general population) being rolled out wherever possible aims to deliver broadband speeds of between 2 Mbps and 10 Mbps. Both wired and wireless broadband technologies are in use.

The fixed ADSL broadband technology is adopted by nearly 1.5 million subscribers by third quarter 2009; nearly double from 740,000 subscribers in 2006. ADSL is currently the most widespread broadband technology. At the beginning of 2007, the figure stood at 780,000 subscribers. This near doubling of subscribers in two years is a good gauge of the attractiveness of broadband. Most of ADSL connections are found in urban and semi urban areas as those are where copper telephony lines, which are required in ADSL, were already in place. ADSL subscribers numbered 1.5 million at the end of 2009.

Mobile broadband usage is increasing even more rapidly than wired access currently. There are two main wireless technologies that are bringing mobile broadband to the masses: 3G and its upgrades such as HSPA (and HSPA+) are offered by the 3G mobile service providers. The other emerging technology is WiMAX.

At the start of 2007, there were only 11,000 3G mobile broadband subscribers. By the end of 2009, the figure stood at 388,000 subscribers, premium prices. The sharp growth continued with 3G mobile broadband subscribers reaching 747,000 by the third quarter of 2009. WiMAX growth is still in early stages but
Content creation is also being addressed by service providers. Packet One sponsored the 15th anniversary of the Malaysian Film Festival in March this year, where a contest is being brought under the USP programme will receive the most suited content creators a platform to market their products. Celcom (M) Bhd (Celcom) has launched the League of Extraordinary Developers Challenge 2008 to encourage mobile developers in the country to develop innovative mobile solutions that are relevant in today’s telco industry. The contest is a collaborative effort of Celcom with Microsoft Malaysia and Cradle Fund Sdn Bhd. To date, Celcom is targeting to commercialise 24 new mobile applications that were winners of the contest in 2009.

Government Support

The Government has various initiatives to address both demand and supply of broadband.

On the supply side, SKMM is utilising USP funds to bring broadband infrastructure to areas where demand is low. A technology neutral approach in this area ensures that every area where broadband access is being brought under the USP programme will receive the most suited technology for that particular area. Both wired and wireless technologies which also include VSAT when available, are considered for USP projects. New spectrum allocation was also allocated to Wimax service providers. To assist services rollout in underserved areas, SKMM enlist the assistance of state government in land acquisition through state-backed licensees who can then install towers for service providers’ antenna.

In line with the national strategic plan to accelerate ICT services, recent national budgets saw the Government providing tax allowances for expenditure on last-mile broadband equipment. This includes the last mile network facilities providers being given an investment tax allowance of 100% on capital expenditure incurred for broadband. Import duty and sales tax exemptions are also given on broadband equipment and consumer access devices.

Home users too are being given incentives to install broadband. The current Budget of 2010 saw the Government proposing giving taxpayers tax relief on broadband subscription fees up to RM50 per month for 2 years. For a start, this package will be offered by Telokom Malaysia to 100,000 local university students, effective 1 January 2010.

On the demand side, SKMM administers a Networked Content Development Grant (NCDG) that assists in funding content projects. A total of RM50 million is available under the NCDG grant programme. The Government has announced that it will set aside RM30 million for content industry development. MDeC is administering the Integrated Content Development (ICON) funding programme that opens many more funding opportunities to content developers. These content projects are expected to spur demand for content.

Another key initiative is the provision of Skywise free WiFi in urban areas. Kuala Lumpur has a free WiFi programme that involves the setting up of access points on public buildings and popular spots. At the time of writing, the state government has launched Wireless @Penang project which is also aimed at giving Penangites free wireless broadband services. The Penang Project is coordinated by the state government but it involves no Government expenditure as private service providers are rolling out the infrastructure. Another development is that Minit Sdn Bhd is WiFi-enabled to provide high-speed Internet connection in support of personnel in multinational companies, for example, Shell, Petronas and others requiring such networked environment. Public safety is also enhanced through public safety agencies using this network.

At the same time, the digital divide is also not forgotten. SKMM is also mandated to work towards narrowing the inequalities of access that exists in underserved areas and populations. The USP programme is the key tool employed by SKMM in this regard. Household use of Internet is overwhelming prevalent in urban homes. SKMM is addressing this issue by rolling out infrastructure in underserved areas. Since this alone will not spur broadband penetration, the Government is addressing the issue of affordability in these areas as well by subsidising broadband costs where necessary. However in many cases, cost is not the only deciding factor in driving broadband penetration. Awareness of the advantages of broadband is also crucial.

To spur awareness and consequently drive demand, SKMM is using the community approach in these areas.

Under the USP programmes, community access programmes are seen as an important组成部分. Initially, these community access points will bring Internet access and user guidance to areas totally without Internet access, or where affordability of individual PCs or connections may be an issue. This will allow the population in the area to access services and applications that were previously not possible. Students are able to access education and information resources. Adults are exposed to work related material and applications. In area after area, where community broadband centres have been set up, tremendous response has been seen from the population, indicating that broadband is relevant to their lives.

This exposure to broadband is then expected to drive demand from the population where USP programmes have been implemented. Once they experience first hand the possibilities and convenience of broadband, citizens living in rural areas will be attracted to bring broadband to their homes thus addressing to some extent the issue of low broadband penetration in rural homes.

SKMM and other government agencies have various initiatives in enhancing community access in underserved areas. As of 2008, there are 45 Community Broadband Centres, 103 Library Broadband Centres, 42 Rural Internet Centres, and 58 Community Communications Development Programmes located all over the country with more planned to be set up.

Conclusion

There is still a lot to be done but broadband is clearly a part and parcel of Malaysian lifestyle already. Access is still a challenge for rural areas where infrastructure is still not fully available. Cost is another issue that will have to be addressed over time but history has shown that costs in the ICT sector fall sharply over time when the services are widely available. Therefore, cost is perhaps a self-solving problem as demand increases to a certain threshold level to allow economies of scale in subsidy to kick-in. Nevertheless, all stakeholders, including consumers, have to work very hard to ensure the threshold is reached fast.

With that, more Malaysians will bring broadband to their homes, especially this year, and in the next year. The only caveat is that service providers must maintain service quality so that these consumers get the right experience from the word "go".
SKMM’s role in resource management involves provision of responsive and regulated approach to meet the needs of the licensees, government agencies and public at large. The spectrum and numbering resources are managed within the regulatory frameworks and guidelines set forth nationally and internationally, to promote efficient usage of these resources.
RESOURCE ASSIGNMENT MANAGEMENT

This section provides a report on the works and activities carried out by Resource Assignment Management Department (RAD) in 2009. This report covers all matters related to Spectrum Assignment (SA), Apparatus Assignment (AA) and Class Assignment (CA) for the year 2009.

Types Of Assignment

1. Spectrum Assignment (SA)

IMT2000 Spectrum Assignment

The number of base stations for IMT2000 SA installed by all the operators in 2009 is 8,697. The number of base stations installed by Celcom, UMTS, U Mobile and Digi according to regions are listed below:

<table>
<thead>
<tr>
<th>Region/Operator</th>
<th>Celcom</th>
<th>UMTS</th>
<th>U Mobile</th>
<th>Digi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>531</td>
<td>686</td>
<td>64</td>
<td>160</td>
</tr>
<tr>
<td>Eastern</td>
<td>425</td>
<td>331</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Central</td>
<td>1326</td>
<td>1532</td>
<td>804</td>
<td>568</td>
</tr>
<tr>
<td>Southern</td>
<td>531</td>
<td>699</td>
<td>3</td>
<td>42</td>
</tr>
<tr>
<td>Sabah</td>
<td>257</td>
<td>81</td>
<td>-</td>
<td>89</td>
</tr>
<tr>
<td>Sarawak</td>
<td>330</td>
<td>101</td>
<td>-</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>3400</td>
<td>3430</td>
<td>961</td>
<td>906</td>
</tr>
</tbody>
</table>

Table 1: Total base stations for SA

Revenue collected from SA was RM 29.5 million from Celcom, UMTS, U Mobile and Digi in 2009. The collected fees are from Annual Maintenance Fee. Details of the collections are as shown in the table below:

<table>
<thead>
<tr>
<th>Operator</th>
<th>Maintenance Fee (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Celcom</td>
<td>13,805,360</td>
</tr>
<tr>
<td>UMTS</td>
<td>10,819,800</td>
</tr>
<tr>
<td>U Mobile</td>
<td>4,357,820</td>
</tr>
<tr>
<td>Digi</td>
<td>452,000</td>
</tr>
<tr>
<td>Total</td>
<td>29,536,080</td>
</tr>
</tbody>
</table>

Table 2: Fee collection

2. Apparatus Assignment (AA)

This section describes the applications, collections and activities related to AA in 2009.

AA Applications for year 2009

RAD processed 23,237 new applications in 2009. 74,451 applications for first renewals, and 78,937 second renewals were processed. A total of 11 Licensing Committee Meetings (LCM) papers were presented for approval in 2009.

The number of applications processed in 2009 is outlined below:

<table>
<thead>
<tr>
<th>Type of Application</th>
<th>Total of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Applications</td>
<td>23,237</td>
</tr>
<tr>
<td>1st Renewal</td>
<td>74,451</td>
</tr>
<tr>
<td>2nd Renewal</td>
<td>78,937</td>
</tr>
<tr>
<td>Total</td>
<td>176,625</td>
</tr>
</tbody>
</table>

Table 3: AA applications

RAD processed 10 types of AA. The table below gives the breakdown on the number and type of AA processed in 2009 while the pie chart shows the graphical distribution.

<table>
<thead>
<tr>
<th>Type of Application</th>
<th>Total of new applications</th>
<th>Total of 1st renewal</th>
<th>Total of 2nd renewal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ship Stations</td>
<td>759</td>
<td>200</td>
<td>396</td>
</tr>
<tr>
<td>Aeronautical Mobile Station</td>
<td>9</td>
<td>26</td>
<td>56</td>
</tr>
<tr>
<td>Land Mobile Station</td>
<td>128</td>
<td>486</td>
<td>256</td>
</tr>
<tr>
<td>Amateur Station</td>
<td>1,915</td>
<td>5</td>
<td>212</td>
</tr>
<tr>
<td>Broadcast Station</td>
<td>171</td>
<td>190</td>
<td>392</td>
</tr>
<tr>
<td>Astronautical Service Station</td>
<td>6</td>
<td>243</td>
<td>249</td>
</tr>
<tr>
<td>Cellular Base Station</td>
<td>35</td>
<td>21</td>
<td>87</td>
</tr>
<tr>
<td>Land Fixed Station</td>
<td>2,939</td>
<td>2,785</td>
<td>2,504</td>
</tr>
<tr>
<td>Terrestrial Microwave Station</td>
<td>15,997</td>
<td>44,578</td>
<td>47,916</td>
</tr>
<tr>
<td>Earth Station</td>
<td>1,278</td>
<td>4,061</td>
<td>5,339</td>
</tr>
<tr>
<td>Total</td>
<td>23,237</td>
<td>74,451</td>
<td>78,937</td>
</tr>
</tbody>
</table>

Table 4: AA applications by type of apparatus

Revenue from AA

A total of RM305.5 million was collected for AA processed in 2009. The collection increased by RM140.6 million compared to the previous year, 2008. In order to align the AA yearly expiry date to 31 December, renewal exercise was carried out twice in 2009 compared to 2008. As a result, the revenue collection increased two-fold. The AA income was included under Spectrum Fees in the Financial Statements. The recognition of income is based on accrual basis over the licensee periods granted. The monthly collections since early 2009 are as shown in table and graph below:

Table 5: AA fee collection
RAD performed the alignment of AA expiry date on 23 December 2008 for major renewal process. The first alignment batch contains 49,229 applications amounting to renewal fee of RM62,287,896. The purpose of alignment of expiry date is to standardise the SKMM’s year end financial statement as instructed by Licensing Committee (LC) on 31 July 2008 and recommended by Finance Management Committee.

The alignment process is shown below:

**Alignment of AA expiry date**

RAD performed the alignment of AA expiry date on 31 March 2009 for renewal of all AAs which expired on 31 March 2009 to a new expiry date, which is 31 December 2009 (nine months). The first batch of alignment covers 90% of AA applications and the majority of the AA holders are the Telcos. The first alignment batch contains 49,229 applications amounting to renewal fee of RM62,287,896.

**Fixed Wireless Access (FWA) 10.5GHz**

An invitation notice for FWA 10.5 GHz was published on 2 March 2010, which announced the opening of frequency band from 10.15 GHz to 10.30 GHz and 10.50 GHz to 10.65 GHz for Fixed Wireless Service.

There were six submissions received at the closing of the notice on 2 April 2010. Each successful bidder is allocated with 28 MHz x 2 at the selected geographical areas (GA) subject to certain term and conditions. The successful applicants and spectrum blocks allocated are as shown in the table shown on the next page.

**Trial Applications**

Trial Application on Broadband Wireless Access (BWA) in 3.3GHz

On 20 February 2009, RAD participated in station commissioning for BWA in 3.3 GHz conducted by Redtone-CNX Broadband Sdn Bhd at Menara Olympia, Kuala Lumpur. The objective of the trial was to evaluate the performance of BWA Base Station (BS) and Customer Premise Equipment (CPE). It was also to test the interference possibilities with other services as this frequency band is also used for radio-determination system.

The CPE locations for the trial are as shown in the figure below:

**Table 6: FWA 10.5GHz Allocation**

<table>
<thead>
<tr>
<th>Applicant</th>
<th>Blocks</th>
<th>GA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telenor Sdn Bhd</td>
<td>Block A</td>
<td>Nationwide</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>10.154 - 10.182 GHz</td>
</tr>
<tr>
<td></td>
<td>Upper</td>
<td>10.504 - 10.532 GHz</td>
</tr>
<tr>
<td>Maxis Sdn Bhd</td>
<td>Block B</td>
<td>Kuala Lumpur, Putrajaya, Selangor, Pulau Pinang &amp; Johor</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>10.182 - 10.210 GHz</td>
</tr>
<tr>
<td></td>
<td>Upper</td>
<td>10.532 - 10.560 GHz</td>
</tr>
<tr>
<td>Celcom Sdn Bhd</td>
<td>Block C</td>
<td>Nationwide</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>10.210 - 10.238 GHz</td>
</tr>
<tr>
<td></td>
<td>Upper</td>
<td>10.586 - 10.614 GHz</td>
</tr>
<tr>
<td>Digi Tele-Communications Sdn Bhd</td>
<td>Block D</td>
<td>Kuala Lumpur, Putrajaya, Selangor, Pulau Pinang &amp; Johor</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>10.238 - 10.266 GHz</td>
</tr>
<tr>
<td></td>
<td>Upper</td>
<td>10.586 - 10.614 GHz</td>
</tr>
<tr>
<td>U Mobile Sdn Bhd</td>
<td>Block E</td>
<td>Kuala Lumpur, Putrajaya, Selangor, Pulau Pinang, Johor, Perak &amp; Melaka</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>10.266 - 10.294 GHz</td>
</tr>
<tr>
<td></td>
<td>Upper</td>
<td>10.616 - 10.644 GHz</td>
</tr>
</tbody>
</table>

A total of 80 AAs were issued for FWA 10.5 GHz spectrum band at the end of 2009.

**Figure 3: Alignment of expiry date**

This alignment exercise involved all Telcos in which, all Telcos will experience two times renewal in the adjustment year 2009. Due to that, the Telcos will have to pay the renewal fee twice, which is before 31 March 2009 and before 31 Dec 2009.

For the year 2009, RAD has performed eight batches of AA expiry date alignment.

**Table 1: AAs collection in 2008 and 2009**

<table>
<thead>
<tr>
<th>Collection (RM)</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>160,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>140,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4: Base Station (Hub) and CPE Locations**
Redtone used equipment manufactured by Agitel Group of Companies. The frequency used was 3370 MHz using Time Division Duplex (TDD) with a 10 MHz bandwidth. The result of the trial at the CPE sites ranged from 12 Mbps to 26 Mbps. At the early stage, there was no interference complaint received pertaining to this trial.

Subsequent to this trial, Redtone submitted for a bigger scale trial application in August 2008. The trial plan was to install 31 base stations in Wilayah Persekutuan Kuala Lumpur & Selangor, Pulau Pinang, Johor, Pahang and Negeri Sembilan. The approvals of these new applications were put on hold due to the interference complaint with Fixed Satellite Service, which was received in September 2008.

Trial Application on Broadcasting Service

On 11 March 2009, RAD participated in a station commissioning for T-DMB trial conducted by Sistem Televisi Malaysia Barat (TV3) at Bukit Sungai Besi, Kuala Lumpur. The trial was conducted for six months and three programmes were fed into the transmission. The particulars are as follows:

<table>
<thead>
<tr>
<th>Station Name</th>
<th>Tx power (W)</th>
<th>Tx (MHz)</th>
<th>Rx (MHz)</th>
<th>BW (kHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menara Kuala Lumpur</td>
<td>1000</td>
<td>218.640</td>
<td>218.336</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: T-DMB trial details

Trial Application on Mobile Service

Two applications from Mal-Tol Communications Sdn Bhd to conduct a digital trunk radio trial were received. The trial was approved for six months period and details are shown below:

<table>
<thead>
<tr>
<th>Station Name</th>
<th>Tx power (W)</th>
<th>Tx (MHz)</th>
<th>Rx (MHz)</th>
<th>BW (kHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malayalam Radio Station</td>
<td>427.625</td>
<td>417.625</td>
<td>12.500</td>
<td></td>
</tr>
<tr>
<td>Sarawak Radio Station</td>
<td>427.675</td>
<td>417.675</td>
<td>12.500</td>
<td></td>
</tr>
<tr>
<td>Johor Radio Station</td>
<td>428.125</td>
<td>418.125</td>
<td>12.500</td>
<td></td>
</tr>
</tbody>
</table>

Table 9: Digital trunk radio trial details

RAD received five applications to conduct a trial using WCDMA 900 technology. The trial details are shown below:

<table>
<thead>
<tr>
<th>Applicant Station Name</th>
<th>Frequency (MHz)</th>
<th>Data Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia Airports (Sepang) Sdn Bhd</td>
<td>107.4</td>
<td>24 Feb 2009</td>
</tr>
<tr>
<td>Maxis Mobile</td>
<td>833.4</td>
<td>5000</td>
</tr>
<tr>
<td>Subang Hi-Tech</td>
<td>833.4</td>
<td>5000</td>
</tr>
</tbody>
</table>

Table 10: WCDMA 900 trial details

Besides the trials application mentioned above, several other trial applications were received. All trials were approved in accordance to Guidelines for Trial, Experimental and Demonstration Systems (SKMM/GTS/05/09). The table below shows the summary of the trial applications.

<table>
<thead>
<tr>
<th>Applicant Station Name</th>
<th>Tx (MHz)</th>
<th>Rx (MHz)</th>
<th>BW (kHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telekom Malaysia Sdn Bhd</td>
<td>867.2125</td>
<td>822.2125</td>
<td>25</td>
</tr>
<tr>
<td>System Consultancy Services Sdn Bhd</td>
<td>867.2125</td>
<td>822.2125</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 11: Other trial details

FM Radio Station Commissioning

Any newly approved FM radio application will be allowed to transmit under trial on ‘Non Interference Basis’ to the existing service for one year. Once the RAD deemed that there has been no interference to the existing service, a normal AA will be issued. In 2009, RAD was involved in the station commissioning twice before issuing the normal AA. The details of the activities are shown below:

<table>
<thead>
<tr>
<th>Licensee</th>
<th>Frequency (MHz)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia Airports</td>
<td>107.4</td>
<td>24 Feb 2009</td>
</tr>
<tr>
<td>Setar FM Sdn Bhd</td>
<td>833.4</td>
<td>5000</td>
</tr>
<tr>
<td>Maxis Mobile</td>
<td>833.4</td>
<td>5000</td>
</tr>
<tr>
<td>Subang Hi-Tech</td>
<td>833.4</td>
<td>5000</td>
</tr>
</tbody>
</table>

Table 12: Station commissioning

Issuance of new call sign and Maritime Mobile Service identification (MMIS)

RAD issued call sign to Aircraft, Airway and Ship services. For Ship station, RAD also issued MMIS numbers to be used for ship electronic identity. The new call signs and MMIS numbers issued in 2009 are shown in the table below:

<table>
<thead>
<tr>
<th>Service Number of Call sign issued</th>
<th>Number of MMIS issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine</td>
<td>973</td>
</tr>
<tr>
<td>Aircraft</td>
<td>124</td>
</tr>
<tr>
<td>Amatuer</td>
<td>695</td>
</tr>
<tr>
<td>Grand Total</td>
<td>1,792</td>
</tr>
</tbody>
</table>

Table 13: Total issuance of call sign & MMIS

Application by Government

RAD also received various types of AA applications from the government agencies. The table below provides the summary of the applications from the government agencies:

<table>
<thead>
<tr>
<th>Agency Service No. of AA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agenti Penguatkuasaan</td>
</tr>
<tr>
<td>Mantin Malaysia</td>
</tr>
<tr>
<td>Jabatan Laut Semenanjung</td>
</tr>
<tr>
<td>Malaysia Airports</td>
</tr>
<tr>
<td>Johor</td>
</tr>
<tr>
<td>Penerbangan Awan</td>
</tr>
<tr>
<td>Jabatan Laut Wilayah</td>
</tr>
<tr>
<td>Selatan</td>
</tr>
<tr>
<td>Jabatan Pelajar Malaysia</td>
</tr>
<tr>
<td>VHF Mobile</td>
</tr>
<tr>
<td>Aeronautical radionavigation</td>
</tr>
<tr>
<td>Nan Directional</td>
</tr>
<tr>
<td>Non Directional</td>
</tr>
<tr>
<td>Beacons (NDB)</td>
</tr>
<tr>
<td>Malaysia Airports</td>
</tr>
<tr>
<td>Analogue TV</td>
</tr>
<tr>
<td>FM Radio</td>
</tr>
<tr>
<td>Microwave Link</td>
</tr>
<tr>
<td>UHF Mobile</td>
</tr>
<tr>
<td>KNF</td>
</tr>
<tr>
<td>Digital Trunk Radio (GJR)</td>
</tr>
</tbody>
</table>

Table 14: Total application by government agencies
In 2009, RAD performed site verification exercises at 11 areas nationwide in order to ensure each AA holder complies with the radio transmitter stations in the area. RAD conducted periodical site inspections and frequency verifications at the radio transmitter stations in order to ensure each AA holder complies with the radio transmitter stations in the area. RAD conducted periodical site inspections and frequency verifications at the radio transmitter stations in order to ensure each AA holder complies with the radio transmitter stations in the area.

### Guideline for trial, experiment and demonstration

Updates and revisions made for the Guideline for Trial, Experiment and Demonstration Systems are necessary to provide information for experimental and demonstration application procedure to the public. A standard practice, guidelines are normally maintained and revised periodically from time to time. In December 2009, the guideline has been updated to reflect the changes periodically from time to time.

The objective was to have a focus and more flexible coaching method to ensure the efficiency and effectiveness of the session is maintained and revised periodically from time to time. The objective was to have a focus and more flexible coaching method to ensure the efficiency and effectiveness of the session is maintained and revised periodically from time to time.

### Training for regional officers on microwave and private network

Another coaching exercise that RAD conducted was on Maritime and Private Network application processing to Regional Offices. Another coaching exercise that RAD conducted was on Maritime and Private Network application processing to Regional Offices.

### Regional Offices

Beyond is the summary of coaching conducted in 2009:

**Table 15: Application by government agencies**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Service</th>
<th>No. of AA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universiti Teknologi Malaysia</td>
<td>UHF Mobile Radio</td>
<td>31</td>
</tr>
<tr>
<td>Universiti Teknologi MARA</td>
<td>UHF Mobile Radio</td>
<td>1</td>
</tr>
<tr>
<td>Universiti Teknologi MARA</td>
<td>UHF Mobile Radio</td>
<td>4</td>
</tr>
<tr>
<td>Universiti Utara Malaysia</td>
<td>UHF Mobile Radio</td>
<td>3</td>
</tr>
<tr>
<td>Universiti Utara Malaysia</td>
<td>Analogue TV</td>
<td>4</td>
</tr>
</tbody>
</table>

Total: 3,443

**Table 14: Application by government agencies**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Service</th>
<th>No. of AA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universiti Teknologi Malaysia</td>
<td>UHF Mobile Radio</td>
<td>31</td>
</tr>
<tr>
<td>Universiti Teknologi MARA</td>
<td>UHF Mobile Radio</td>
<td>1</td>
</tr>
<tr>
<td>Universiti Teknologi MARA</td>
<td>UHF Mobile Radio</td>
<td>4</td>
</tr>
<tr>
<td>Universiti Utara Malaysia</td>
<td>UHF Mobile Radio</td>
<td>3</td>
</tr>
<tr>
<td>Universiti Utara Malaysia</td>
<td>Analogue TV</td>
<td>4</td>
</tr>
</tbody>
</table>

Total: 3,443

**Table 15 : Radio inspection activities**

<table>
<thead>
<tr>
<th>Area</th>
<th>Date</th>
<th>No. of AA Verified</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA Verification and Site Inspection in Sabah</td>
<td>22-28 Jan</td>
<td>794</td>
</tr>
<tr>
<td>AA Verification and Site Inspection in Kelantan</td>
<td>13-17 Apr</td>
<td>154</td>
</tr>
<tr>
<td>AA Verification and Site Inspection in Sarawak</td>
<td>19-23 Jan</td>
<td>154</td>
</tr>
<tr>
<td>AA Verification and Site Inspection in Penang and Terengganu</td>
<td>13-16 Jan</td>
<td>181</td>
</tr>
<tr>
<td>AA Verification and Site Inspection in Sabah</td>
<td>27-30 Apr</td>
<td>127</td>
</tr>
<tr>
<td>AA Verification and Site Inspection in Kelantan</td>
<td>17-21 Aug</td>
<td>518</td>
</tr>
<tr>
<td>AA Verification and Site Inspection in Northern region</td>
<td>19-23 Oct</td>
<td>38</td>
</tr>
<tr>
<td>AA Verification and Site Inspection in Sarawak</td>
<td>23-26 Nov</td>
<td>86</td>
</tr>
<tr>
<td>AA Verification and Site Inspection in Central region</td>
<td>9-10 Dec</td>
<td>32</td>
</tr>
</tbody>
</table>

**TOTAL**: 2,802

**Guideline for application processing to Regional Offices**

Section 167 (1) Act 588 of the Communications and Multimedia (Spectrum) Regulations 2000 provide that an apparatus assignment holder may authorise a third party to operate its network facility. There are criteria, processes, document required and fee payable to enable TA to be operated. Generally, the criteria for the third party authorisation are as follows:

a) The AA holder must possess a valid Apparatus Assignment certificate.
b) The third party must possess a Network Facility Provider licence or is exempted from holding NFP licence as specified under Order 3 of Communication and Multimedia (Spectrum) Order 2000.
c) The third party must have never had its third party authorisation revoked in the last three years; and
d) The third party must have never had its apparatus assignment revoked in the last two years.

The AA holder shall notify SKMM in writing of its intention to authorise the third party and submit relevant documents and fee of RM20 will be payable for the variation of the apparatus assignment.

The TPA document has been in SKMM website since May 2009. It can be viewed at paragraph 5.2 in the Guideline for Apparatus Assignment as follows:


**Training for regional officers on microwave and private network**

Revised from the decision to decentralise microwave application processing to Regional Offices (RO), RAD has conducted series of meeting and coaching exercises in particular to all Regional Offices officers who are involved in processing AA at regional level. The meeting objectives were to discuss on microwave application processing and to develop the skills and knowledge required for RO officers to perform technical analysis using SPECTRArm tool.

The objective was to have a focus and more flexible coaching method to ensure the efficiency and effectiveness of the session is fulfilled.

**Table 16: Coaching series**

<table>
<thead>
<tr>
<th>Quarter Meeting</th>
<th>Agenda</th>
<th>Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Decentralising Microwave application processing to Regional Offices</td>
<td>Microwave Processing</td>
</tr>
<tr>
<td>Q2</td>
<td>Decentralising Microwave application processing to Regional Offices</td>
<td>Microwave Processing</td>
</tr>
</tbody>
</table>

Under the Malaysian Economic Stimulus announced by the Prime Minister YAB Dato' Sri Mohd Najib Bin Tun Haji Abdul Razak in 2009, there are four main distribution of fund allocated for the Government. One of the funds is allocated to reduce unemployment and initiate new employment opportunity for the amount of RM2 billion.

Through this fund, the Skim Perkhidmatan Singkat (SPS) was initiated by the Ministry of Information Communication & Culture. On 5 August 2009, ten officers under this scheme reported for duty in SKMM under RAD. All officers are working under contract until 31 December 2010. For the first three months, all the officers were given training on all aspects and scope of works of the department.

The scope of training included on principle knowledge, business rules and regulation on the following applications:

- Private Network
- Telemetry
- Radionavigation
- Amateur station

Below is the summary of coaching conducted in 2009:

**Quarter Meeting**

- **Q1**: Decentralising Microwave application processing to Regional Offices
- **Q2**: Decentralising Microwave application processing to Regional Offices

**Agenda**

- Microwave Processing
- Northern RO
- Sarawak RO
- Eastern RO
- Sarawak RO

**Participation**

- Microwave Processing
- Northern RO
- Sarawak RO
- Tawau Branch
All the SPS officers are also exposed to RAD application system mainly the Spectrum Management System (SpMS), e-spektrum online application submission and SpectraEMC technical analysis tool.

Cross Functional Process Review (CFPM)

In August 2009, SKMM through our Organisational Development Department had engaged with Motorola University to conduct Cross Functional Process Review (CFPM). The purpose was to optimise or improve the work processes in SKMM. RAD had been selected to participate in the study as to improve the processing of AA for approval.

One senior staff was nominated to represent RAD for the study and for Motorola University Green Belt Certification. The objective for RAD was to reduce its client charter from current 60 days to 45 days. To be more focused, a team of five staff had been created and decided that the scope of improvement was on the approval of new applications for Microwave Services as there was previous study conducted internally in May 2009 as reference.

The initiative had to go through five phases (Define, Measure, Analyse, Improve and Control). Initial findings for the month of September 2009 showed that the current processing time was around 72 days. With the number of applications received by the Microwave Unit and the limited number of staff handling the application, it was critical to make the process much leaner. Through the study, the team had identified and proposed the solutions for improvement are as follows:

a) The implementation of the applications developed internally by one of the staff to reduce the time required to verify an application;

b) Clearing of backlog by optimising the SPS staff;

c) Better supervision through close monitoring (appointment of a P5 staff for the unit);

d) Delegation of approval to a committee headed by RAMD instead of having to go to LCM; and

e) Absorption of SPS staff to ensure the sustainability of the improvement.

The first two solutions were accepted and implemented. For the third proposal, a tracking database had been created to monitor the processes as there were some difficulties in implementation of the original proposal. For the fourth solution, it was changed from having to go to LCM bi-monthly as there were difficulties in getting the delegation of authority. RAMD later formed a committee to expedite the process in December 2009. The new target as directed by the Chairman was all AA approvals to be completed in 20 working days.

The SPS officers had a significant impact as all backlog had been successfully cleared by mid-December 2009 as well as the lead time to process an application. This was something that had never been successfully achieved by RAD due to shortage of manpower. Their role is still important prior to the migration to SpectraPlus in order to sustain this achievement.
Migration of Spectrum Management System (SpMS)

The current SKMM’s Spectrum Management System (SpMS) known as Automated Frequency Management System (AFMS), has been in use since 1990, when spectrum management function was carried out by Jabatan Telekomunikasi Malaysia (JTM). In order to leverage and improve the spectrum applications processing, RAD has planned and started the Migration Project of SKMM’s SpMS to the Spectra Enterprise Solution system.

Most of the time reduction will be achieved through automated data entry and validation, done by the applicant via e-Spektrum (the online AA application we-portal). The new system will also increase efficiency in the technical analysis and information retrieval tasks. A more efficient SpMS system will increase customer satisfaction and increase SKMM’s annual collections.

Bilateral Meeting with Ministry of Defence (Markas Angkatan Tentera Malaysia)

Bilateral Meeting with Mindful was held periodically to discuss issues on spectrum utilisation and requirement for defense applications. For 2009, two meetings were held as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 - 9 April 2009</td>
<td>Tawau, Sabah</td>
</tr>
<tr>
<td>9 - 10 November 2009</td>
<td>Kuching, Sarawak</td>
</tr>
</tbody>
</table>

Table 17: Bilateral Meeting

Bilateral Meeting with Royal Malaysian Police (PDRM)

Bilateral meeting was also held with PDRM to coordinate the use of radio frequencies for the Police communications network.

Awareness Programme

RAD has scheduled work plan for Awareness programme throughout 2009.

Among the target audience are private network companies which are dealing with AA and Regional Offices office who involved in processing AA application.

<table>
<thead>
<tr>
<th>Date</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 2009</td>
<td>Psut Teknologi Pendidikan Kota Bahr</td>
</tr>
<tr>
<td>Mar 2009</td>
<td>Private network, Amateur and Ship Operator in Northern Region (Panang)</td>
</tr>
<tr>
<td>Apr 2009</td>
<td>SpMS, e-Spektrum application functional and technical briefing for SISD staff</td>
</tr>
<tr>
<td></td>
<td>Private network, Amateur and Ship Operator in Sabah Region (Kota Kinabalu)</td>
</tr>
<tr>
<td></td>
<td>Maritime and Private Network in Southern Region (Soher Port)</td>
</tr>
<tr>
<td>May 2009</td>
<td>Private network, Amateur and Ship Operator in Central region (Shah Alam)</td>
</tr>
<tr>
<td>Jun 2009</td>
<td>eSpektrum for Wimax operator</td>
</tr>
<tr>
<td>Jul 2009</td>
<td>Private network, Amateur and Ship Operator in Eastern Region (Kijal, Kemaman) &amp; Southern Region (Mersing)</td>
</tr>
</tbody>
</table>

Table 19: Awareness programmes
In preparation for the decentralising of microwave Apparatus Assignment (AA) processing to all Regional Offices (RO) in 2009, every RO requires a high-end computer with at least 1 GB of RAM to execute the usage of the SpectraEMC license in order to perform the technical analysis study.

RAD has purchased and delivered the installed one high-end PC and one Spectraemc dongle at each RO with the assistance of SISD in October and November 2009.

3. Class Assignment (CA)

The new Class Assignment was approved on 25 August 2009 and it consists of 25 schedules, of which eight were new schedules. The new schedules are as follows:

- Radio frequency identification device
- Active medical implant
- Aeronautical mobile telemetry access device
- Mobile satellite access device
- Satellite broadcasting receiver device
- Terrestrial television broadcasting receiver device
- Terrestrial radio broadcasting receiver device
- One-way radio pager broadcasting receiver device

To accommodate the additional requirements for the existing widely-used device, there are also amendments, additional frequency bands and update of technical parameters made for the existing schedules. The updated schedules are:

Updates Schedules
- Cellular mobile access device
- Short range communications device
- Personal radio Service Device
- Cordless Telephone Device
- Wireless access device
- Very small aperture terminal
- Security device
- Wireless microphone device

Table 21: Updated Schedules


SPECTRUM COORDINATION
International Technical Coordination

International Technical Coordination (ITC) activities involve coordinating assignments of radio frequency spectrum on space satellite systems and terrestrial systems with foreign authorities and the International Telecommunication Union (ITU). These activities comply with provisions in the Radio Regulations (RR) of ITU which is the international regulation that regulates use of frequencies across the world.

The ITC focused on managing the coordination of Malaysian space satellite networks under the MEASAT series with priority on completion of coordination for MEASAT filings at 5.7E and 46E, in line with MEASAT’s operations and launch plans.

1. Space Satellite Systems: Requests for Coordination Published by ITU International Weekly Circular

300 responses to requests for coordination for space satellite systems published in the ITU International Weekly Circular were processed during 2009 as shown below:

<table>
<thead>
<tr>
<th>Jan - Dec 2009</th>
<th>Total 2009</th>
<th>2009 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of networks processed</td>
<td>350</td>
<td>250</td>
</tr>
</tbody>
</table>

Table: Requests for Coordination

These responses were communicated to the countries concerned and thereafter, coordination was carried out on a bilateral basis to reach agreement that ensured the concerned satellite networks could co-exist without causing harmful interference to one another.

2. Inter-system Satellite Coordination Meetings

Inter-system Satellite Networks Coordination (ISNC) meetings were scheduled to resolve outstanding issues on harmful interference between affected satellite networks belonging to other countries and the MEASAT Satellite networks. A total of eight meetings were held in 2009 with the Administrations of Thailand, Indonesia, Japan, Iran, Russia, France and the United State of America. Coordination was also carried out through correspondence with Pakistan.

Detailed coordination was carried out for each of the frequency assignments of the affected satellite networks. Upon completion of coordination, ITU will be notified by both parties and the process of registration at the Master International Frequency Register will follow thereafter.

Details of the meetings that were held from January until December 2009 are shown in the table below:

<table>
<thead>
<tr>
<th>Date (2009)</th>
<th>Country</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 29 March</td>
<td>Thailand</td>
<td>Bangkok, Thailand</td>
</tr>
<tr>
<td>11 - 14 May</td>
<td>Indonesia</td>
<td>Cyberjaya</td>
</tr>
<tr>
<td>13 - 16 July</td>
<td>Japan</td>
<td>Cyberjaya</td>
</tr>
<tr>
<td>12 - 16 October</td>
<td>Iran</td>
<td>Cyberjaya</td>
</tr>
<tr>
<td>2 - 6 November</td>
<td>Russia/The Republic of Belarus</td>
<td>Moscow, Russia</td>
</tr>
<tr>
<td>16 - 19 November</td>
<td>France</td>
<td>Paris, France</td>
</tr>
<tr>
<td>7 - 10 December</td>
<td>USA</td>
<td>Cyberjaya</td>
</tr>
</tbody>
</table>

Table: Meetings Conducted and Participated

Through correspondence
3. Filings for Frequency Assignments Submitted to ITU for Government and MEASAT Satellite Networks

ITC processed and submitted 15 filings of MEASAT satellite networks to ITU in 2009.

Table: Filings Processed

<table>
<thead>
<tr>
<th>MEASAT Satellite networks</th>
<th>Total 2009</th>
<th>2009 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>

4. Registration Data at ITU for Maritime Mobile Service Identity (MMSI)

The Maritime Mobile Access and Retrieval system is an online information system with a ship station database that is accessible to the maritime community. The system is primarily intended to support the Global Maritime Distress and Safety System (GMDSS). It is used to identify ship stations in distress and additionally provide pertinent vessel information.

MMSI is a nine-digit number assignment system that uniquely identifies a maritime mobile service. For ship stations, the MMSI comprises 9 digits or MID followed by a 6 digit ship identity. The ITU has allocated a maritime mobile service. For ship stations, the MMSI comprises 9 digits or MID followed by a 6 digit ship identity. The ITU has allocated

Total filings processed and submitted for 2009:-

Table: Registered MMSI to ITU

<table>
<thead>
<tr>
<th>Registered MMSI to ITU</th>
<th>Total 2009</th>
<th>2009 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>320</td>
<td>250</td>
</tr>
</tbody>
</table>

5. Border Technical Coordination

Border Coordination ensures harmonised use of spectrum at border areas by efficiently coordinating the frequency spectrum among neighbouring countries. This is carried out in accordance with relevant national regulations and international conventions and regulations. These meetings discuss frequency related matters, policy and regulatory updates as well as other pertinent areas that could strengthen regional cooperation and interrelationship among the three countries. In addition, the nations share learning gained during implementation of new technologies in their countries.

SKMM is a member of four technical border coordination committees:

(i) Frequency Assignment Committee between Singapore, Malaysia and Brunei (FACSMAB);
(ii) Joint Technical Committee between Malaysia and Thailand (JTC);
(iii) Joint Committee on Communications (between Malaysia and Indonesia (JCC)); and
(iv) Trilateral Coordination Meeting among Indonesia, Malaysia and Singapore (Trivia).

These committees coordinate frequency coordination and registrations for stations along the designated border areas, resolve reported interference cases, carry out frequency planning for future services and harmonise existing band plans.

SKMM ensures that all Malaysia’s coordinated frequencies at the above committee meetings are notified to ITU’s Master International Frequency Register (MIFR). These frequencies will then be protected against interference cases, carry out frequency planning for future services and harmonise existing band plans. These frequencies will then be protected.

The data base can be accessed through a dedicated dial-up system and it is also accessible from the ITU website (www.itu.int).

6. Frequency Assignment Committee between Singapore, Malaysia and Brunei (FACSMAB)

a. FACSMAB held its meeting on a monthly basis, and during the period from January to December 2009, FACSMAB held 12 meetings. These meetings among Singapore, Malaysia and Brunei are to discuss on frequency related matters, policy and regulatory updates as well as other pertinent areas that could strengthen the regional cooperation and interrelationship among the three countries. In addition, these three countries share knowledge on the implementation of new technology in respective countries.

b. Total of 265 Malaysian frequencies was registered at FACSMAB from January 01 December 2009.

Summary of meetings held is shown below, including the Review Meeting.

Table: Frequency Registrations

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Venue</th>
<th>Date (2009)</th>
<th>Malaysia</th>
<th>Singapore</th>
<th>Brunei</th>
</tr>
</thead>
<tbody>
<tr>
<td>806</td>
<td>Brunei</td>
<td>19 Jan</td>
<td>1</td>
<td>5</td>
<td>54</td>
</tr>
<tr>
<td>807</td>
<td>Virtual Meeting (Malaysia)</td>
<td>19 Feb</td>
<td>2</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>808</td>
<td>Singapore</td>
<td>19 Mar</td>
<td>0</td>
<td>6</td>
<td>22</td>
</tr>
<tr>
<td>809</td>
<td>Virtual Meeting (Malaysia)</td>
<td>25 Apr</td>
<td>126</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>810</td>
<td>Malaysia</td>
<td>28 May</td>
<td>41</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>811</td>
<td>Singapore</td>
<td>17 June</td>
<td>31</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>812</td>
<td>Virtual Meeting (Brunei)</td>
<td>23 July</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>813</td>
<td>Virtual Meeting (Malaysia)</td>
<td>20 Aug</td>
<td>4</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>814</td>
<td>Virtual Meeting (Singapore)</td>
<td>19 Sept</td>
<td>5</td>
<td>53</td>
<td>8</td>
</tr>
<tr>
<td>815</td>
<td>Brunei</td>
<td>22 Oct</td>
<td>5</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>816</td>
<td>Malaysia</td>
<td>24 Nov</td>
<td>26</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>817</td>
<td>Singapore</td>
<td>28 Dec</td>
<td>19</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Sub total</td>
<td></td>
<td></td>
<td>265</td>
<td>85</td>
<td>162</td>
</tr>
</tbody>
</table>

The following matters were addressed by FACSMAB in 2009:

• IMT in 450 – 470 MHz Band
• Intelligently Transport System in the 5.9 GHz Band
• L-Band Spectrum Usage at the Border Areas
• Electronic News Gathering (ENG)

• Unmanned Aerial Vehicle (UAV)
• Amateur Radio in the 5 MHz Band (Secondary)
• Maximising the Benefits of Digital Dividend
• LTE in 2.5/20 GHz Band
• Broadcasting in the 28 MHz

d. The following items have been identified for future FACSMAB work items for 2010:

• Wireless PAN at 60 GHz
• Communication above 28 GHz
• Software Defined Radio and Cognitive Radio Systems

7. Joint Technical Committee (JTC) on Coordination and Assignment of Frequencies along Malaysia – Thailand Common Border Meeting

a. JTC convened twice yearly. The 17th JTC Meeting was successfully held from 22 - 24 December 2009, hosted by SKMM in Melaka, Malaysia.
b. JTC deliberated on policy and regulatory update, frequency related matters, interference issues as well as other significant areas that could strengthen the relationship and regional cooperation between the two countries. In addition, both countries share the knowledge on the implementation of the new emerging technology into their respective countries.

c. JTC had to defer issues pertaining to broadcasting specifically related to new band allocation for band I, II, III and IV to be utilised for Digital Terrestrial TV (DTT) until that’s National Broadcasting Committee (NBC) is formed.

d. JTC also escalated pending issues on the Cellular Service Area Coverage and International Roaming to the Joint Permanent Committee on the Coordination and Assignment of Frequencies along the Common Border Areas (JPC) for decision at the ministry level.

e. A Special Task Force (STF) was formed under the purview of JTC to focus on specific issues which require more time and detailed study before it could be presented at the JTC Meeting.

f. The next JTC meeting (18th JTC) is scheduled to be held in Thailand in Q2 2010.

g. Joint Committee on Communications between Malaysia and Indonesia (JCC)

a. JCC convenes once a year. The 7th JCC Meeting was successfully held from 6 - 7 October 2009, hosted by SKMM in Kuching, Sarawak.

b. JCC is the platform for the regulatory bodies of Indonesia, Malaysia and Singapore to discuss on frequency related matters as well as the implementation of new technologies which might not be discussed during bilateral meeting but has concerned to all three parties. The border areas covered by this committee is Johor-Singapore-Batam/Bintan/Karimun.

c. A Special Task Force (STF) was formed under the purview of JCC to study the feasibility of frequency re-use in the VHF/UHF Broadcast band at South Johor, Singapore and Batam/Bintan/ Karimun Island border areas.

d. Three STF meetings were conducted in 2009. It is expected to convene once more in Q2 2010 before the study could be concluded. The outcome of the STF Meeting will be reported to the 7th JTC Meeting scheduled to be held in Singapore in Q2 2010.

10. Notifications of Frequency Assignments submitted to ITU for Malaysia’s Terrestrial stations along border areas

ICT submitted 472 notifications for terrestrial frequency assignments to ITU for registration with Master International Frequency Register (MIFR) to obtain international recognition and protection, from January to December 2009.

SPECTRUM ENGINEERING AND INTERFERENCE RESOLUTION

1. International Events

The spectrum monitoring team has undertaken a task of ensuring zero interference during international events which was held throughout 2009. All of the events took place at the Sepang International Circuit (SIC). The first international event was the Formula 1 Grand Prix, held from 3 - 5 April 2009, followed by the Super GT Japan from 19 - 21 June 2009. The Moto Grand Prix event was held from 23 - 25 October 2009.

All spectrum applied or those to be utilised during all of the three events were scanned a week before via NASMOC remote monitoring station located at Empress Hotel, Sepang and supported by the Data Collection Mobile Unit (DCMU) parked at the Sepang International Circuit (SIC) during the event.

2. Measurements and monitoring made on Spectrum Bands

Using the National Spectrum Monitoring and Control (NASMOC) stations nationwide, a number of frequency bands were identified and monitored. These measurements were done for the purpose of assignments and planning. The monitoring activities were also exercised to monitor the level of usage by our licensees and also to monitor unused frequency channels. The bands that were selected were as follows:

Table 1: List of monitored frequency bands

<table>
<thead>
<tr>
<th>Services</th>
<th>Frequency band</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadcast (GE75)</td>
<td>526.5 - 1 605.5 kHz</td>
</tr>
<tr>
<td>Band I, II, III, IV, V</td>
<td>47 - 68 MHz</td>
</tr>
<tr>
<td></td>
<td>87.5 - 108 MHz</td>
</tr>
<tr>
<td></td>
<td>174 - 230 MHz</td>
</tr>
<tr>
<td></td>
<td>470 - 798 MHz</td>
</tr>
<tr>
<td>Aeronautical</td>
<td>3 025 - 18 030 kHz</td>
</tr>
<tr>
<td></td>
<td>108 - 118 MHz</td>
</tr>
<tr>
<td></td>
<td>118 - 137 MHz</td>
</tr>
<tr>
<td>Maritime</td>
<td>156 - 157.45 MHz</td>
</tr>
<tr>
<td>Trunk radio</td>
<td>380 - 400 MHz</td>
</tr>
<tr>
<td>Radio-location</td>
<td>1 215 - 1 300 MHz</td>
</tr>
<tr>
<td>Private network</td>
<td>138 - 139.4 MHz</td>
</tr>
<tr>
<td>Amateur radio</td>
<td>144 - 148 MHz</td>
</tr>
<tr>
<td>Maritime</td>
<td>156 - 157.45 MHz</td>
</tr>
</tbody>
</table>

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<td></td>
<td>174 - 230 MHz</td>
</tr>
<tr>
<td></td>
<td>470 - 798 MHz</td>
</tr>
<tr>
<td>Aeronautical</td>
<td>3 025 - 18 030 kHz</td>
</tr>
<tr>
<td></td>
<td>108 - 118 MHz</td>
</tr>
<tr>
<td></td>
<td>118 - 137 MHz</td>
</tr>
<tr>
<td>Maritime</td>
<td>156 - 157.45 MHz</td>
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<tr>
<td>Trunk radio</td>
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<tr>
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<td>Private network</td>
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</tr>
<tr>
<td>Amateur radio</td>
<td>144 - 148 MHz</td>
</tr>
<tr>
<td>Maritime</td>
<td>156 - 157.45 MHz</td>
</tr>
</tbody>
</table>

3. Radio Frequency Interference:

Throughout 2009, a total of 74 complaints were received from general public, licensees and other government agencies. These complaints encompass interference regarding aeronautical radio communications, amateur radio, cellular networks, broadband networks, satellite services and poor TV or FM radio coverage and reception. Out of the 74 complaints, 65 complaints had been resolved or closed. Meanwhile, nine complaints are still pending investigation and action from the respected parties. The nine complaints were carried over and addressed in 2010. Two out of the 74 cases highlighted and shared in this report in Figure 1.
Further investigation proved that the interference carrier was produced by a Broadband Wireless Access (BWA) base station which was currently on trial, by a BWA operator. The BWA trial was allowed to operate in the 3300-3400 MHz band, which is adjacent to the Fixed Satellite Service (FSS) band. The BWA base station was located at Menara Olympia (2.58 km from MDD) and a fixed Customer Premises Equipment (CPE) (2.27 km from MDD) in Maxisegar Building (5.27 km from MDD). Subsequent tests showed that MDD can only operate normally when BWA transmission cease.

The interference had caused serious degradation to GSM cellular service affecting GSM 900 uplink and downlink frequencies that resulted with bad quality calls and increased drop call rate. The Chief Administrative Director responsible within the building was advised to cease operation of the jammer with immediate effect.

**MOBILE NUMBERING PORTABILITY (MNP)**

### 1. Porting Activities

#### 1.1 Overall Porting Figures

The following is a report on key statistics based on the implementation of Mobile Number Portability (MNP) commencing from the nationwide launch up to 31 December 2009 (covering a period of about sixteen months). It includes:

- There have been 1,850,357 requests to port their numbers to a different operator; [these include multiple port request by recipient operator i.e. the same number may request for port more than once after the first request has been rejected by the donor];
- b) Out of the total requests 1,286,682 have been ported successfully; and
- c) A total of 536,862 port requests have been rejected for a number of reasons with the main reasons being the customer ID does not tally with the information contained in the donor’s database, unpaid outstanding bills and the existence of supplementary lines which were not ported together with the principal line.

The Table 1 below shows overall porting figures as at 31 December 2009:

<table>
<thead>
<tr>
<th>Date</th>
<th>NPR</th>
<th>Completed</th>
<th>Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Aug 2008 - 31 Aug 2008</td>
<td>4,851</td>
<td>3,008</td>
<td>1,702</td>
</tr>
<tr>
<td>01 Oct 2008 - 31 Oct 2008</td>
<td>48,916</td>
<td>30,847</td>
<td>16,216</td>
</tr>
<tr>
<td>01 Nov 2008 - 30 Nov 2008</td>
<td>123,058</td>
<td>80,120</td>
<td>40,938</td>
</tr>
<tr>
<td>01 Dec 2008 - 31 Dec 2008</td>
<td>147,816</td>
<td>87,717</td>
<td>44,886</td>
</tr>
<tr>
<td>01 Jan 2009 - 31 Jan 2009</td>
<td>117,863</td>
<td>77,458</td>
<td>40,708</td>
</tr>
<tr>
<td>01 Feb 2009 - 28 Feb 2009</td>
<td>138,942</td>
<td>94,154</td>
<td>41,814</td>
</tr>
<tr>
<td>01 Mar 2009 - 31 Mar 2009</td>
<td>182,505</td>
<td>130,265</td>
<td>21,047</td>
</tr>
<tr>
<td>01 Apr 2009 - 30 Apr 2009</td>
<td>185,050</td>
<td>130,265</td>
<td>54,787</td>
</tr>
<tr>
<td>01 May 2009 - 31 May 2009</td>
<td>142,973</td>
<td>101,219</td>
<td>47,754</td>
</tr>
<tr>
<td>01 Jun 2009 - 30 Jun 2009</td>
<td>129,350</td>
<td>89,104</td>
<td>36,322</td>
</tr>
<tr>
<td>01 Jul 2009 - 31 Jul 2009</td>
<td>125,015</td>
<td>90,127</td>
<td>33,888</td>
</tr>
<tr>
<td>01 Aug 2009 - 31 Aug 2009</td>
<td>101,818</td>
<td>72,564</td>
<td>28,454</td>
</tr>
<tr>
<td>01 Sep 2009 - 30 Sep 2009</td>
<td>95,677</td>
<td>68,195</td>
<td>27,482</td>
</tr>
<tr>
<td>01 Oct 2009 - 31 Oct 2009</td>
<td>105,147</td>
<td>77,932</td>
<td>28,454</td>
</tr>
<tr>
<td>01 Nov 2009 - 30 Nov 2009</td>
<td>100,193</td>
<td>74,504</td>
<td>24,999</td>
</tr>
<tr>
<td>Total</td>
<td>1,850,357</td>
<td>1,286,682</td>
<td>536,862</td>
</tr>
</tbody>
</table>

**Graph 1: Pattern of port requests (NPR), successful port or completed port, port cancelled & port rejects (monthly tabulation)**

**Table 2: Porting Activities – monthly (29 Aug 2008 to 31 Dec 2009)**

**Port Request Successful Port Port Rejected**

<table>
<thead>
<tr>
<th>NPR</th>
<th>Completed</th>
<th>Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,850,357</td>
<td>1,286,682</td>
<td>536,862</td>
</tr>
</tbody>
</table>

**Figure 1: Complaints status for 2009**

### Interference cases:

- a) Fixed Satellite Service
- b) Cellular Jammer
- c) A total of 536,862 port requests have been rejected for a number of reasons with the main reasons being the customer ID does not tally with the information contained in the donor’s database, unpaid outstanding bills and the existence of supplementary lines which were not ported together with the principal line.

The overall porting figures as at 31 December 2009 are as follows:

- a) There have been 1,850,357 requests to port their numbers to a different operator; [these include multiple port request by recipient operator i.e. the same number may request for port more than once after the first request has been rejected by the donor];
- b) Out of the total requests 1,286,682 have been ported successfully; and
- c) A total of 536,862 port requests have been rejected for a number of reasons with the main reasons being the customer ID does not tally with the information contained in the donor’s database, unpaid outstanding bills and the existence of supplementary lines which were not ported together with the principal line.

**Table 1: Overall Porting Figures**

<table>
<thead>
<tr>
<th>Date</th>
<th>Port Request</th>
<th>Successful Port</th>
<th>Port Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Oct 2008 - 31 Oct 2008</td>
<td>48,916</td>
<td>30,847</td>
<td>16,216</td>
</tr>
<tr>
<td>01 Nov 2008 - 30 Nov 2008</td>
<td>123,058</td>
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<td>536,862</td>
</tr>
</tbody>
</table>

**Table 2: Porting Activities – monthly (29 Aug 2008 to 31 Dec 2009)**

Further investigation proved that the interference carrier was produced by a Broadband Wireless Access (BWA) base station which was currently on trial, by a BWA operator. The BWA trial was allowed to operate in the 3300-3400 MHz band, which is adjacent to the Fixed Satellite Service (FSS) band. The BWA base station was located at Menara Olympia (2.58 km from MDD) and a fixed Customer Premises Equipment (CPE) in Meniway Building (2.27 km from MDD). Subsequent tests showed that, MDD can only operate normally when BWA transmission cease operation. Although the BWA’s antenna was not facing directly to MDD, the emission from terrestrial was still higher compared to the satellite signal and consequently failed to lock to the satellite signal.
Based on Table 3 above, 99.84% of all port requests for Consumer Ports (individuals) and also Non-Consumer Ports (corporate clients). The two categories are distinguished as the complexity in porting across the numbers between the two categories differs quite a bit.

### 2.1 Consumer Ports

With Consumer Ports, the porting process will take less time as the total numbers involved (including those with supplementary lines) usually are limited and therefore the maximum porting duration allowed by SKMM based on the Public Inquiry held early on was five days for the first year and this was leased to 2 days after October 14 2009.

The overall view of the time-frame taken by operators to process Consumer Ports throughout the duration of 29 August 2008 – 31 December 2009 are as follows:

<table>
<thead>
<tr>
<th>Date Activated within 5 days</th>
<th>Activated &gt; 5 days</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>From LLT to 14 Oct 2009</td>
<td>1,075,393</td>
<td>1,075,343</td>
</tr>
<tr>
<td>From 15 Oct 2009 to 31 Dec 2009</td>
<td>185,012</td>
<td>185,572</td>
</tr>
<tr>
<td>Note: * As of 15 October 2009, the porting timeframe was five working days.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 2.2 Non-consumer Ports

With Non-Consumer Ports (corporate clients), the porting process takes longer as it will involve a large amount of telephone numbers and therefore the maximum porting duration allowed under the MNP Industry Business Rules was 10 days for the first year and this was reduced to 5 days beginning 15 October 2009.

The time-frame taken by operators to process Non-Consumer Ports throughout the duration of 29 August – 31 December 2009 can be seen from Table 4 below :

<table>
<thead>
<tr>
<th>Date Activated within 10 days</th>
<th>Activated &gt; 10 days</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>From LLT to 14 Oct 2009</td>
<td>20,217</td>
<td>20,233</td>
</tr>
<tr>
<td>From 15 Oct 2009 to 31 Dec 2009</td>
<td>5,633</td>
<td>5,634</td>
</tr>
</tbody>
</table>

### 3. Cost Of Porting To Consumers

SKMM did not dictate the industry the amount of porting fees that may be charged to customers who wish to port. However, SKMM did decide that any porting fee charged should not be too exorbitant and should be capped at RM50.00.

To date, none of the operators are imposing any porting fees to their port-in customers.

### 4. Tariff Transparency

**Solution For Tariff Transparency**

Tariff Transparency refers to the ability of a user to know the price of a call prior to making it.

During the pre-MNP era, the user would be able to ascertain which operator is being called by looking at the prefix at the dialed number (e.g. 012, 016, 018 etc.). However, MNP takes away the users’ ability to differentiate between calls to specific operators.

To rectify the problem associated with tariff transparency, SKMM recommended:

a. All mobile operators to implement SMS Information Service which will enable the users to obtain information on whether the call to be made is On-Net or Off-Net; and
b. SKMM set up its own Online Information Service to enable user and the general public to enquire if the mobile numbers to be called are On-Net or Off-Net. SKMM’s online portal called ‘Mobile Number Check’ is available via mnpcheck.gov.my.

To date, all the mobile operators i.e. Celcom, Digi, Maxis and U Mobile have successfully implemented and launched their own SMS Information Service.

### 5. Time For Porting

**Porting Process Timer**

As set out in the MNP PI report, the porting process time is five working days for the first year of the launch. This was to allow the operators to familiarise themselves with the processes and reduce any errors that are inevitable when a new service is introduced on a national scale.

After one year of the launch, 15 October 2009, the porting process timer was reduced to two working days for consumer port. Several meetings and discussions were held with the industry to identify current workflows of the MNP system that could be impacted by the exercise. Various timers involved in the porting process were reviewed as duration of messages between the operators and the clearinghouse has to be changed. Processes and timers were then modified to cater for this shorter processing time and the changes took effect on 15 October 2009 without a glitch.
In line with the 10 policy objectives set out in CMA 1998, efficient management of numbering resources plays an important role in order to facilitate network roll-out and service offerings to the consumers.

### Cellular Mobile Number Expansion

In order to have enough capacity of cellular mobile numbers kept as reserve to meet future requirements, MCMC has decided to facilitate the industry to explore on numbering expansion for future usage.

SKMM has formed industry consultative group called Consultative Group on Numbering (CGON) and working group (WG) consisting representatives from the licensees, content providers, vendors and other related parties to study on implementation of cellular mobile number expansion namely, 3+8 numbering scheme. This Committee is responsible on the technical, consumer and awareness aspects to ensure smooth migration process and to avoid interruption of service.

### Recovery of prefix ‘011’

The recovery of prefix ‘011’ from TM is a primary measure in order to start the industry to use the 3+8 numbering scheme. Moreover with the development of future application services such as MVNO, the country require further planning for numbering management.

### Prefixes for Public Cellular Service Providers

In 2009, SKMM made a decision that the new public cellular players including the MVNO players will share the same numbering format as the existing cellular service providers within the ‘010’ and ‘018’ prefix.

The Table below provides the list of licensees who have been given public cellular mobile numbers assignments as at 2009:

<table>
<thead>
<tr>
<th>Service Providers</th>
<th>Prefix</th>
<th>Numbering Range</th>
<th>Total Subscribers Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Celcom Axiata Berhad</td>
<td>010</td>
<td>200 0000 – 999 9999</td>
<td>8,000,000</td>
</tr>
<tr>
<td></td>
<td>014</td>
<td>500 0000 – 599 9999</td>
<td>1,000,000</td>
</tr>
<tr>
<td></td>
<td>800 0000 – 899 9999</td>
<td>1,000,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>019</td>
<td>200 0000 – 999 9999</td>
<td>8,000,000</td>
</tr>
<tr>
<td>Digi Telecommunications</td>
<td>010</td>
<td>200 0000 – 299 9999</td>
<td>1,000,000</td>
</tr>
<tr>
<td></td>
<td>360 0000 – 399 9999</td>
<td>400,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>460 0000 – 489 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>580 0000 – 589 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>660 0000 – 669 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>760 0000 – 769 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>820 0000 – 829 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>880 0000 – 889 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>900 0000 – 989 9999</td>
<td>900,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>014</td>
<td>300 0000 – 399 9999</td>
<td>1,000,000</td>
</tr>
<tr>
<td></td>
<td>600 0000 – 699 9999</td>
<td>1,000,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>900 0000 – 999 9999</td>
<td>1,000,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>016</td>
<td>200 0000 – 299 9999</td>
<td>8,000,000</td>
</tr>
<tr>
<td>Maxis Mobile Services Sdn Bhd</td>
<td>012</td>
<td>200 0000 – 999 9999</td>
<td>8,000,000</td>
</tr>
<tr>
<td></td>
<td>014</td>
<td>200 0000 – 299 9999</td>
<td>1,000,000</td>
</tr>
<tr>
<td></td>
<td>700 0000 – 799 9999</td>
<td>1,000,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>017</td>
<td>200 0000 – 999 9999</td>
<td>8,000,000</td>
</tr>
</tbody>
</table>

### Prefix 0156

SKMM has opened new numbering prefixes for Digital Public Mobile Radio (DPMR) services using 4 + 7 numbering scheme in 2009 in order to facilitate introduction of new services such as shown below:

<table>
<thead>
<tr>
<th>Service Providers</th>
<th>Prefix</th>
<th>Numbering Range</th>
<th>Total Subscribers Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tune Talk Sdn Bhd</td>
<td>010</td>
<td>500 0000 – 549 9999</td>
<td>500,000</td>
</tr>
<tr>
<td></td>
<td>014</td>
<td>400 0000 – 409 9999</td>
<td>10,000</td>
</tr>
<tr>
<td>U Mobile Sdn Bhd</td>
<td>018</td>
<td>200 0000 – 299 9999</td>
<td>1,000,000</td>
</tr>
<tr>
<td></td>
<td>350 0000 – 399 9999</td>
<td>500,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400 0000 – 409 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>460 0000 – 474 9999</td>
<td>150,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>570 0000 – 579 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>660 0000 – 669 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>780 0000 – 799 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>770 0000 – 779 9999</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>780 0000 – 794 9999</td>
<td>150,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>870 0000 – 874 9999</td>
<td>50,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>900 0000 – 989 9999</td>
<td>900,000</td>
<td></td>
</tr>
</tbody>
</table>

To ensure efficient use of subscriber numbers, SKMM has decided that any new assignment of the numbers under new prefix is not exclusive to any public cellular service provider.

### Other Numbering Assignments

The Table below described all the assignments for numbering that has been issued in 2009.

<table>
<thead>
<tr>
<th>Numbering No.</th>
<th>Type assignments</th>
<th>Licensees</th>
</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td>5</td>
<td>TM 8</td>
</tr>
<tr>
<td>Signalling Point Code</td>
<td>1</td>
<td>YTL</td>
</tr>
<tr>
<td>National Signalling Point code</td>
<td>17</td>
<td>Tune Talk 22</td>
</tr>
<tr>
<td>International Mobile Subscriber Identity</td>
<td>1</td>
<td>Segi Maju 1 Consortium</td>
</tr>
<tr>
<td>Independent Short Code</td>
<td>7</td>
<td>Tune Talk 9</td>
</tr>
<tr>
<td>Public Switch Telephone Network (PSTN)</td>
<td>2</td>
<td>Celcom</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>TM 82</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>P1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Maxis</td>
</tr>
</tbody>
</table>
Events Participated/Organised

**Malaysia IPv6 Action Plan**

In ensuring for achievable target, the Government has charted out the following action plan based on the inputs from related Government agencies and industry as shown below:

<table>
<thead>
<tr>
<th>Action</th>
<th>Agencies</th>
<th>‘07</th>
<th>‘08</th>
<th>‘09</th>
<th>‘10</th>
<th>‘11</th>
<th>‘12</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISP Compliance Audit</td>
<td>SKMM</td>
<td>Ph. 1 (Done)</td>
<td>Ph. 2 (Done)</td>
<td>Ph. 3 (Done)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cont.Agencies migration</td>
<td>MAMPU</td>
<td>KPKN &amp; all gov't dept, MAMPU (Done)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D on IPv6 application</td>
<td>MOSTI</td>
<td>R &amp; D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness</td>
<td>MICC &amp; Stakeholder</td>
<td>Continuous awareness programme and roadshow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaysia IPv6 Ready</td>
<td>MICC &amp; Stakeholder</td>
<td>Malaysia IPv6 ready 2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ENUM Closed Test Bed**

In 24 November 2009 to 25 February 2010, SKMM, in collaboration with .my DOMAIN REGISTRY conducted a trial on ‘ENUM Closed Test Bed’ for ENUM implementation in Malaysia.

This trial period involved ENUM to Voice over Internet Protocol (VoIP) and ENUM to email. Testing numbers provided for the trial were 0154 300 0000 to 0154 300 9999 (10 000 numbers).

The purpose of conducting the ENUM Trial was to test the architectural, technical, operational, and user aspects related to the provision of ENUM capabilities for the Malaysia under Country Code 60.

The other objective of the trial was to initiate ENUM introduction in Malaysia.

**Seminar and Workshop**

SKMM, in collaboration with .my DOMAIN REGISTRY (formerly known as MYNIC) jointly organised a three day seminar on ‘ENUM (Electronic Numbering) Implementation in Malaysia’ from 8 to 20 May 2009 in Kuala Lumpur.

This ENUM Seminar is a platform for sharing of experience and knowledge pertaining to the implementation of ENUM, and establish a bridge between telephony and the Internet. By using ENUM, multiple addresses can now be attached to a single individual that promotes for “One person, One number, Multi services” application.

Target groups for this ENUM seminar comprised of telecommunication service providers, internet service providers, IP telephone service providers, network device vendors, network solution providers, relevant government agencies and professionals from universities/academia.

This seminar covered all aspects of innovation, with emphasis on vision, implementation strategy and business. Experts from organizations such as ENUM.at (Austria), international ENUM Vendors, regulators and academicians were present and shared their experiences and knowledge.

**IPv6 Challenges**

In general, there are many challenges faced worldwide due to the infancy stage of IPv6 implementation. Issues and challenges that are facing Malaysia are as follows:

- **a)** Unavailability or lacking of end-users devices that failed to trigger consumer at large.
- **b)** Weak market demand for IPv6 service applications.
- **c)** High broadband traffic access on content that is still running on IPv4.
- **d)** Cost of migration to IPv6 will slow down the adoption to IPv6.

IPv6 Challenges

In general, there are many challenges faced worldwide due to the infancy stage of IPv6 implementation. Issues and challenges that are facing Malaysia are as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Internet Service Provider (ISP)</th>
<th>IPv6 Forum Logo</th>
<th>IPv6 Compliance Audit - Phase 3</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jaring</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>2</td>
<td>NTT MSC</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>3</td>
<td>Maxis</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>4</td>
<td>TM</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>5</td>
<td>Time Dotcom</td>
<td>No</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>6</td>
<td>DiGi</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>7</td>
<td>Global Transit Communication</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>8</td>
<td>GITN</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>9</td>
<td>V Telecoms</td>
<td>No</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>10</td>
<td>Packet One Network</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>11</td>
<td>VADS</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>12</td>
<td>Calcom</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>13</td>
<td>U Mobile</td>
<td>No</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>14</td>
<td>Bizsurf MSC</td>
<td>No</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>15</td>
<td>OCE</td>
<td>Yes</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>16</td>
<td>Extreme BB</td>
<td>No</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
<tr>
<td>17</td>
<td>YTL Communications</td>
<td>No</td>
<td>IPv6 Forum Logo</td>
<td>International Peering Test</td>
</tr>
</tbody>
</table>

**IPv6 Challenges – Phase 3**

Phase 3 exercise will involve IPv6 users. It will consist:

- a) Registration of V6 domain name by web hosting company for 2010.
- b) Basic internet application to end users for 2011.

**IPv6 Challenges – Phase 2**

Phase 2 Global Inter-ISP connectivity Dec 2009 - Completed

**Phase 3**

- a) Registration of IPv4 domains to IPv6 domains by web hosting company IPv4 domains Q4 2010 - 10% of 100K IPv4 domains
- b) Basic internet application to the end users Q2 2011

**IPv6 Compliance Audit – Phase 1**

IPv6 Compliance Audit – Phase 1 was carried out in March 2007. The phase 1 audit exercise was performed by the National Advanced IPv6 (IPv6) Centre which was appointed as an auditor by MCMC to analyze the readiness of ISPs in Malaysia.

**IPv6 Compliance Audit – Phase 2**

For the second phase audit, Numbering Planning Department was mandated to lead the ISPs in ensuring the development of IPv6 in the country. This was different from the Phase 1 Audit where the ISP were required to carry out the testing by self declaration which was agreed by IPv6 Working Group members.

The exercise was carried out on 7 December and completed on 21 December 2009, it was participated by 17 ISPs.

**IPv6 Compliance Audit – Phase 3**

IPv6 Compliance Audit was to ensure the IPv6 global and local ISP inter connectivity.

**Malaysia IPv6 Action Plan**

The objective of IPv6 the second phase Compliance Audit was to ensure the IPv6 global and local ISP inter connectivity.

**IPv6 Challenges**

In general, there are many challenges faced worldwide due to the infancy stage of IPv6 implementation. Issues and challenges that are facing Malaysia are as follows:

- **a)** Unavailability or lacking of end-users devices that failed to trigger consumer at large.
- **b)** Weak market demand for IPv6 service applications.
- **c)** Unavailability or lacking of end-users devices that failed to trigger consumer at large.
- **d)** Cost of migration to IPv6 will slow down the adoption to IPv6.
The Public-Private Partnership agreement between the Government and Telekom Malaysia (TM), which was signed on 16 September 2008, aimed to take Malaysia’s competitiveness to a higher level based on the fact that the nation’s broadband connectivity needs to be improved with an Internet-protocol-based high speed broadband network. TSND focuses on all aspects of technology development for the Commission in carrying out its regulatory and development functions.
BACKGROUND
It was an exciting year for the division, firstly with the formation of the new division comprising- the former Infrastructure Development Division (IDD) and the Technology and Standards Department, which was under the then MyICMS, Technology and Standards Division (MTSD).

The new division, now known as Technology Standards and Network Division (TSND), was created in February 2009. While the TSND focuses on all aspects of technology developments including broadcasting and IPTV, 3G and beyond, multimedia terminal, short range & low powered devices, the division is also responsible for the monitoring of network performance under the mandatory standards for Public Switched Telephone Network (PSTN), Public Cellular Services, Dial-up Access Services and recently for broadband access services. The TSND is also tasked to manage the proof of concept of Amateur Examination, which is a public examination held twice a year certifying agency monitoring, communications tower Electro-Magnetic Compatibility (EMC) and the Technology and Standards Department, which was under the then MyICMS, Technology and Standards Division (MTSD).

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Amateur Examination, which is a public examination held twice a year certifying agency monitoring, communications tower Electro-Magnetic Compatibility (EMC) and the Technology and Standards Department, which was under the then MyICMS, Technology and Standards Division (MTSD).
As can be seen from the above, about 67% of the investments are in the core network where TM installed or upgraded new backbone capacity. This includes Metro-E, Broadband Remote Access Servers (BRAS), Transmission, Control and support system. About 30% of the investments were made to improve on international connectivity where TM built the Asia-America Gateway cable system with its consortium members. The remaining 5% was invested in various civil works, fiber optic installation and mini rollout for access projects in various areas in Klang Valley. In total, TM had installed 8,093 fibre kilometer (fkm), which included 6,153 fkm for access network and 1,940fkm for domestic core network.

The Asia-America Gateway (AAG) cable system, which has a designed capacity of up to 2 Terabits per second (Tbps), was fully operational on 10 November 2009. With the AAG system, TM was able to ‘complement the ‘broadband highway’ and connecting all of Malaysia and countries through a number of submarine cables.

The link between Malaysia and the world serving the ‘broadband highway’ and connecting all of Malaysia’s domestic backbone are submarine cables.

TM’s HSBB access networks are designed to accommodate four access technologies. Depending on the level of access, users can use normal browser with internet access and Google Earth. Depending on the type of building, users can use different platforms for planning, monitoring, accuracy and information retrieval system that gathers information from various multimedia infrastructure in the country. MagicMap is an easy-to-use information retrieval system that gathers information from various databases across SKMM, including fixed, wireless, broadcast and postal and courier.

The information on MagicMap is divided into two categories, namely sensitive and non-sensitive information. Non-sensitive information is available via Google Map, while sensitive and non-sensitive information is available via MAGICMAP. Non-sensitive information such as location site, owner etc, is available via Google Earth and will not be made available to the general public.

How detailed is the information in MagicMap?

The information available to the general public using Google Map, while sensitive information related to communications infrastructure such as fibre optic, microwave stations, earth stations, switch stations, free standing towers, roof top structures and Post Office information. Additionally, MagicMap also provides information on Parliamentary and State seats, including administrative areas, as well as population density in specific areas.

Site Testing Visit at the Taman Tun Dr. Ismail Exchange on December 31 2009 to gain better understanding of the implementation of HSBB in the access network.

The SKMM Chairman, Y.Bhg. Tan Sri Khaidi Ramli was invited to an HSBB Site Testing Visit at the Taman Tun Dr. Ismail Exchange on December 31 2009 to gain better understanding of the implementation of HSBB in the access network.

Diagram 1: HSBB Elements (Source: TM)

Access is by registration at mapserve.skmm.gov.my. Upon approval, users can directly access the MagicMap via the internet. How do I access MagicMap?

What is MagicMap?

MagicMap is a tool that displays information on communications and multimedia infrastructure in the country. MagicMap is an easy-to-use information retrieval system that gathers information from various databases across SKMM, including fixed, wireless, broadcast and postal and courier.

What is MagicMap?

MagicMap was developed to utilise the available information on a different platform used for planning, monitoring, accuracy and further, easy reference for strategic decision-making. It is designed to meet the literally ‘helicopter view’ requirement whereby decision-makers can understand the situation on the ground at an instant. Previously, the information was available in disparate databases, in technical language that was difficult to digest. Additionally, we also want accuracy in the information provided by service providers and stakeholders. For example, when service providers submit application for Apparatus Assignment (AA), we would be able to see whether the information submitted is accurate in MagicMap upon data update. Previously, we were not able to ascertain whether the information provided is accurate.

Premises passed

TM’s HSBB access networks are designed to accommodate four access technologies. Depending on the type of building, users can access HSBB services via Fibre-to-the-Home (FTTH), Ethernet-to-the-Home (ETTH), VDSL2 and ADSL2+. This would allow subscribers to enjoy high bandwidths, with a minimum of 10Mbps.

As at 31 December 2009, TM had successfully passed 151,780 premises covering 41 exchanges in Klang Lumpur, Selangor Batu, Selangor Timur and MSC area, with 37% of the premises passed new using FTTH technology and the remaining 63% VDSL2/ADSL2+ technology.

Promises passed

Avail of the updated and claims at 31 December 2009

As at 31 December 2009, TM had invested approximately RM1.801 billion for its HSBB infrastructure deployment. This includes its investment for 2008 amounting to RM 516 million. The breakdown of the investment are as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
<th>RM (’000 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>Access</td>
<td>314</td>
</tr>
<tr>
<td>Domestic</td>
<td>Core</td>
<td>1,283</td>
</tr>
<tr>
<td>Domestic</td>
<td>International</td>
<td>294</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,891</td>
</tr>
</tbody>
</table>

In accordance to the PPP Agreement, the Government had, up until 31 December 2009, paid a total of RM990 million (including 2008 payments). In accordance to the PPP Agreement, the Government had, up until 31 December 2009, paid a total of RM990 million (including 2008 payments). The payments were made after the Government had verified the quarterly claims submitted by TM.

How do I access MagicMap?

What information can I get from MagicMap?

The information on MagicMap is divided into two categories, namely sensitive and non-sensitive information. Non-sensitive information is information available to the general public using Google Map, while sensitive information such as location site, owner etc, is available via Google Earth and will not be made available to the general public.

In addition to the above, TM also undertook to complete the upgrade of four (4) exchanges, i.e. Taman Tun Dr. Ismail, Shah Alam, Subang Jaya and Bangsar to be HSBB-ready. With the upgrade, TM selected 123 of its staff as trial subscribers for its HSBB service in around these exchanges.

What is MagicMap?

MagicMap is a tool that displays information on communications infrastructure in the country. MagicMap is an easy-to-use information retrieval system that gathers information from various databases across SKMM, including fixed, wireless, broadcast and postal and courier.

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MagicMap was presented to the Cabinet Committee on Broadband. In September 2009, MagicMap was migrated from its test bed for internal online test in June 2009. Mobile version using Blackberry for remote access was tested in July 2009. The Beta version for comprehensive testing was released in September 2009. In all, it took about six (6) months from application and system development to Beta testing. On 14 September 2009, MagicMap was presented to the Cabinet Committee on Broadband.

How current is the information?

At the moment, the required information is provided and updated by respective departments such as Resource Assignment and Management Division (RAMD), Postal Department (PD), Universal Service Provision Division (USP), Statistical and Knowledge Resource Department (SKRD) etc and also from service providers themselves. This information is updated at the most, on quarterly basis. In the future, the information will be updated as and when they are available. Information available in Spectrum Management System (SpMS) is extracted and updated onto MagicMap on a monthly basis.

What is the structure of MagicMap?

All information gathered will be based on the Geographical Information (GIS) format. Data is then converted or imported into MapInfo format and updating of the relevant database.

MagicMap was developed back in 2008. By early 2009, the concept was further refined with the use of Google Map and Google Earth, taking advantage of the freeware to test the reliability, security and scalability of the database. Active development of the system started in March 2009 by collating all the databases available in SKMM and updating of the relevant database.

MagicMap was an online application with a user interface designed for use on a Web browser. The application was designed to be used by all service providers as well as the public. The interface was designed to be used in various platforms such as Windows, Apple and Blackberry.

In September 2009, MagicMap was released for public use. The technology was licensed to Packet One Networks (Malaysia) Sdn Bhd (571389-H) for commercial use.

Service delivery improvement in the public sector

The One Stop Centre (OSC) launched by the YAB Prime Minister on 13 April 2007 was aimed at streamlining and expediting the development approvals process as part of PEMANDU’s initiatives in improving service delivery in the public sector. In line with this, SKMM was appointed as one of the Technical Agencies responsible for providing feedback to the OSC in approving development proposals at the PBT on 2 September 2008. SKMM took this role and prepared a checklist to be used by all development proposals on matters related to the development of communications infrastructure and facilities within development areas/projects.
Malaysians have clearly shifted to the new media. A study in 2007 revealed that 70% of Malaysian online users read blogs, 35% were bloggers and 80% watched video clips online. The statistic implies that it is not impossible that the new media could replace the conventional media one day. It is crucial for the public to be aware of both positive and negative impact of the new media, so that information is handled responsibly.
SKMM, in supporting the Government’s national policy objectives as set out in the Communications and Multimedia Act 1998 (CMA), is imperative that online contents convey the rich heritage of Malaysian culture, identity and values. In this respect, SKMM oversees the regulatory framework for the converging industries of telecommunications, broadcasting and on-line activities in ensuring that the services and content provided are suitable, of commendable quality and is considerate of the needs of all segments of Malaysian community by making the recommendation for any necessary changes in policy and codes.

SKMM realises that in order to achieve its objective in content regulation, the general public must get involved. As such, SKMM operates to generate and enhance public awareness and to provide education and information on content policies, codes and standards. With this fundamental strategy, SKMM also assists the Content Forum in the implementation of its numerous activities in promoting self-regulation amongst the industry and public.

SKMM acknowledges the importance of public complaints on broadcasting content including advertisements, online content, and mobile content. It will respond by doing further monitoring, evaluating, and taking the necessary action on the matter, including providing reports on the public concern about standards and effectiveness of content policies, codes and standards as well as enforcement action.

SKMM also embraces the responsibility to monitor compliance with content standards and codes by Content Applications Service Providers (CASP), relevant Applications Service Providers (ASP) including traditional broadcast services and newer services such as online publishing and information services.

Content Regulation: Complaints Received

SKMM received a total number of 476 complaints in 2009. This is an exponential increase of complaints compared to 2008 (217 complaints).

SKMM has observed that there is a change in the types of complaints lodged in which the complaints were shifting towards the internet and online-related complaints rather than the conventional media in previous years.

Based on the graph, 2009 shows a visible difference in the number of complaints for Internet content which is 437, compared to the previous year which recorded 216 complaints, and 45 complaints in 2007. This indicates the growing concern among the public regarding internet content. For television content, the graph shows a decline from the previous year which is from 18 compared to 29 complaints in 2009. The graph for radio content shows a decline from nine complaints in 2008 to two complaints in 2009. The complaints for General Complaints (CASPs) remain static as in previous years. While complaints for others shows an increase from five complaints in 2008 to 19 complaints in 2009.

The year 2009 shows a decline in the number of complaints for television content which is 11 compared to 16 complaints in 2008. The number of complaints for ASTRO, which is numbered at six complaints compared to the previous year - 16 complaints. The number of complaints for General TV, 8TV and NTV7 are identical with one complaint respectively, while the number of complaints for TV3 increases to nine in 2009 compared to four complaints in 2008.

For 2009, it is clear that the complaints received are mostly centred on internet content, which amounted to 437 complaints. For FTA TV, 11 complaints were received and for ASTRO the number of complaints stood at six. While for radio, General TV and others, the numbers of complaints received were two, one and 19 respectively.

SKMM specifically provides advice on any matters concerning Section 211 and 223 under the CMA in relation to the provisioning of prohibited content on the networked environment.

Together in implementing and ensuring its function to regulate the networked content industry, SKMM collaborate with various Ministries and government agencies including the Ministry of Information, Communication and Culture (KPKK), Ministry of Home Affairs (MoHA), Ministry of Health (MoH), the Censorship Board, the Content Forum, JAKIM (Department of Islamic Development Malaysia) and FINAS (National Film Development Corporation Malaysia).

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Based on the graph, the year 2009 shows a large decrease in the number of complaints received on radio stations which recorded only one station compared to five stations in 2008 and eight stations in 2007. The number of complaints also decreases from 13 in 2007 to nine complaints in 2008 and only two complaints received in 2009.

For television content, the graph shows a decline from the previous year which is from 18 compared to 29 complaints in 2009. The graph for radio content shows a decline from nine complaints in 2008 to two complaints in 2009. The complaints for General Complaints (CASPs) remain static as in previous years. While complaints for others shows an increase from five complaints in 2008 to 19 complaints in 2009.

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The number of complaints received by month in 2009 indicates a steady decline from January till November. However, a slight increase was recorded in December with 37 complaints. The highest number of complaints received was in April at 73 complaints and the lowest amount of complaints received was in September with seven complaints.

### Number of Complaints by Area in 2009

Most of the complaints received were regarding offensive content where out of 476 complaints, 56% contained offensive contents, mostly from websites. There has been a decrease in the number of complaints regarding websites that contain obscene contents compared to 2008.

### Compliant Resolution

In managing the increasing number of incoming complaints, SKMM has developed an internal Standard Operation Procedure (SOP), a guideline to process and evaluate the complaints.

It is noted that most of the complaints came from the public through the Consumer Complaints Bureau. Complaints were also forwarded to SKMM by Ministries and other regulatory bodies or government agencies. SKMM will refer to the Communications and Multimedia Act 1998 (CMA), relevant license conditions, Content Code, and other regulations to evaluate the complaints.

In the case of internet complaints, the complaints would be reviewed according to Section 211 and 233 under the CMA based on the nature of the content, evidence of intent, and whether there are local elements in the content.

### Monitoring Activities

SKMM supervises the Content Applications Service Providers (CASP) and relevant Applications Service Providers (ASP) licensees to ensure compliance to licence conditions as well as other content requirements under the CMA. Monitoring is based on a fee focused areas such as, Public Service Announcements (PSA), live programmes, language requirements, commercial airtime as well as general monitoring of programme content. Based on these monitoring activities, SKMM would take enforcement actions against CASPs or service providers found to have breached any content requirements.

In 2009, the majority of PSAs aired by private television stations are focused on the ideas of ‘1 Malaysia’ and health issues such as AH1N1, dengue and Aedes. In addition, it has been noted that several private television stations have started the initiatives to publish their own PSA in an effort to help the government to deliver a positive message and with the hope to attract the audience or the Malaysian society through creative PSA content format in accordance to their market segmentation. This can be seen through 8TV’s PSA titled ‘Go Green with 8TV’ and ‘1 Malaysia’.

Apart from licence compliance assessments, SKMM also performs monitoring on all forms of networked content including the Internet and mobile content based on complaints and feedback from external parties. Additionally, SKMM participates in inter-agency committees relating to content monitoring and regulation led by various Ministries including the Ministry of Information Communication and Culture (KPKK), Ministry of Home Affairs (MoHA) and Ministry of Health (MoH).

Besides monitoring content, SKMM also provides advices and guidance to various ministries, government bodies, industry players and international organisations on issues relating to regulation and policies concerning the content industry in Malaysia.

### Research Collaboration on Networked Media Content between SKMM and Institutions of Higher Learning

Throughout the years, the media landscape has been changing dramatically along with the development in technology which, in turn, has started new trends of perceptions and attitudes of the public towards media and its content. The rate that the new media content is being consumed is overwhelming. Fueled by the popularity of user-generated content and social media networks, these trends have greatly changed the way messages are shared and how information is organised and disseminated.

Malaysians have clearly shifted to the new media. A study in 2007 revealed that 70% of Malaysian online users read blogs, 35% were bloggers and 80% watched video clips online. The statistic implies that it is not impossible that the new media could replace the conventional media one day.
With these changes taking place in the media landscape, the public now has the ability to access, find and share information almost instantly. These innovative ways even enable them to interact with each other in finding unbiased and reliable sources of information. It is clear that the main reason of the acceptance of these new media by the public is because of the convenience of mobility and sharing that the new media can offer while others cannot. However, it is very crucial for the public to be aware of the negative consequences that the new media can cause if the information is not handled responsibly. Confusion and anxieties will take its toll on the society if false information is transmitted.

As the influence of the new media is growing, its benefits as well as its impacts are becoming immense. This has attracted serious attention by the government, regarding negative outcomes such as pornography, false information and online gambling. Special precaution by the government is needed to enhance consumer protection as well as promoting content development.

To acknowledge such concerns, SKMM has embarked on a research collaboration programme with a number of private and public institutions of higher learning to establish knowledge resources on the usage of new media outlets by Malaysians. The initiative is aimed at assisting the universities to establish knowledge resources on the usage of new media outlets by Malaysians. The initiative is aimed at assisting the universities to establish knowledge resources on the usage of new media outlets by Malaysians. The initiative is aimed at assisting the universities to establish knowledge resources on the usage of new media outlets by Malaysians.

Four universities were selected from 12 proposals involving eight universities in response to Call for Proposal in 2008. The process of selection was a result of careful consideration by a panel represented by members of the academic community, industry and the SKMM. The four universities that were awarded with the research grant are as follows:

University | Title
--- | ---
Universiti Utara Malaysia (UUM) | Ascertaining the influences of Weblogs and their User Created Content in the Blogosphere Community of Malaysia
Universiti Tunu Abdul Rahman (UTAR) | Social Impacts of blogging on young adults: How it shapes individual opinions
Universiti Sains Malaysia (USM) | Young People and New Media - Social Uses, Social Shaping & Social Consequences
Universiti Putra Malaysia (UPM) | ‘Self-regulatory’ framework and mechanism in the Malaysian Media Environment

This one-year project is hoped to produce findings that could be used to develop practical practices and policies for managing both the positive and negative aspects of new media more effectively for long term period.

The public will be able to 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.

Capacity Building
As part of its capacity building initiatives, SKMM organises several training programmes for its licensees. In 2009, three training programmes were conducted:-

1. Content Regulation Workshop (30 March 2009)
   The purpose of this workshop is to provide a refresher course on content requirements to production and programming staff of the broadcasting stations. It is also to clarify the content regulatory environment to the broadcasters as well as to provide information on new development or issues affecting the broadcasting environment.

2. Bengkel Kawsasalan Berkena Kandungan Prematur (29 November, 2009)
   The workshop was aimed to provide information on new developments in SMS-based content requirements. It is also to clarify the regulatory environment to the broadcasters.

   The language workshop is important to give thorough explanation on the proper usage of Bahasa Malaysia to the broadcasters.

Public Relations and Awareness Activities
SKMM continued to promote, educate/advocate the proper use of networked media and develop self-regulation through the following initiatives and activities:

- Media Interview/Panellist for Talk Show Programme and Seminars
  In 2009, SKMM appeared on RTM talk show programmes and also participated in a number of media-related seminars in Malaysia and abroad. Details of the interview are as follows:-

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Communications and Multimedia Content Forum of Malaysia
The Communications and Multimedia Content Forum of Malaysia (CMCF) has been designated as a content forum under Section 212 of the Communications and Multimedia Act, 1998. CMCF was established in February 2001, as a society under the aegis of the SKMM to content and address content related issues disseminated by way of electronic networked medium.
The management of the CMCF rests with its Council, which comprises a Chairman and 18 council members elected from the six Ordinary member categories. The CMCF’s Executive Office is in charge of the day-to-day running of its operations and is headed by an Executive Director, and assisted by a full time Secretariat.

In 2009, CMCF has undertaken 50 external activities that are in line with the spirit of CMCF for the purposes of publicity and creating greater awareness of its role and functions. Among major activities were Dialogue on Child Protection with UNICEF Malaysia and Pacific and Asian Communication Association (PACA) Conference at Universiti Putra Malaysia (UPM), Selangor. Other than that, CMCF has also submitted articles to daily newspapers, conducted several media interviews and road shows, distributed brochures and flyers as well as improved the organisation’s website to help better the public’s understanding about media content and their rights as consumers.

2009 was a challenging year for CMCF’s Complaints Bureau as it had recorded the highest number of complaints which stood at 98 as at 31 December 2009. Overall, CMCF received and resolved 81 complaints, attended to 17 requests for content advisory, two cases of mediation or arbitration and 67 cases. The percentage of cases resolved by the Complaints Bureau for the year 2009 amounted to 68.4% as opposed to 86.4% in 2008. The difficulty of CMCF for not having extra territorial jurisdiction played a large part as a number of complaints were on content hosted overseas. Effectively however, the CMCF’s Extra-territorial jurisdiction played a large part as a number of complaints were resolved by the Complaints Bureau in every effort to complete the deliberation of legal action against crime against children.

As a self regulatory body under the SKMM, CMCF has set a line of improvements and initiatives for the year 2010 to better monitor and handle complaints. These improvements and initiatives for the year 2010 to better monitor and handle complaints are as follows:

- Internet Banking Task Force (IBTF), an industry task force looking at cybersecurity. Started in early 2009, the SKMM Cybersecurity Portal is designed to:
  - Raise awareness and provide invaluable network security related information to home users, organisations and service providers
  - Engage and empower both the public and private sectors on cyber security issues.

The portal contains information on network security issues for both technical and non-technical audiences. The information provided is in simple terms. It has articles that are easy to understand so as to empower non-technical users in taking appropriate steps towards securing themselves against cyber threats.

Cyber Security Activities

- SKMM is active in campaigns to create awareness on network security among the public. Such campaigns inform on how the public can ensure their own safety when online, as well as enlist assistance should they experience cyber attack.

- In 2009, SKMM conducted and participated in many events and talks organised through the SKMM Regional Offices.

- SKMM works closely with other Malaysian enforcement agencies to prevent misuse of network facilities, network service, application service and content application service. To date, SKMM has taken enforcement actions under sections 211 and 233 of the CMA. These involve the dissemination of offensive content and misuse of network services or application services.

- At ASEAN level, SKMM participated in the ASEAN Cyber Drill (ACID 3) exercise to enhance coordination among ASEAN member states in mitigating cyber attacks. SKMM collaborates with its counterparts in ASEAN and APEC on various network security capacity building and information sharing initiatives. In 2009, SKMM was part of the X-Maya 2 cyber drill. The exercise was organised by the National Security Council to gauge national preparedness in dealing with cyber incidents. Other participants in this cyber drill exercise were Telekom Malaysia and Jaring.
CONSUMER COMPLAINTS

How to Make a Complaint

The SKMM Consumer Complaints Bureau handles types of complaints ranging from those on telecommunications services to broadcasting, Internet, postal and signature. All these are within the purview of the SKMM in respect of the CMA, the Postal Services Act and the Digital Signature Act.

Nevertheless, the first avenue to complain is to the service providers. If the complaint is unresolved, consumers can lodge complaint to the Communications and Multimedia Consumer Forum of Malaysia. The consumer may lodge a complaint to SKMM Consumer Complaints Bureau if the consumer is still not satisfied with the resolution of the complaint by the Forum.

In the year 2009, the SKMM Consumer Complaints Bureau received a total of 6,178 complaints compared with 4,289 complaints in 2008. This represents an increase of 44%. Overall, the number of complaints received is on a significantly trend over the last eight years as shown.

For the Consumer - How to Make a Complaint

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>NO. OF COMPLAINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TELECOMMUNICATION SERVICES</td>
<td>4,975</td>
</tr>
<tr>
<td>TV/RADIO PROGRAMMES</td>
<td>1,500</td>
</tr>
<tr>
<td>INTERNET SERVICES</td>
<td>1,030</td>
</tr>
<tr>
<td>POSTAL SERVICES</td>
<td>700</td>
</tr>
<tr>
<td>MISCELLANEOUS</td>
<td>1,468</td>
</tr>
</tbody>
</table>

Number of Complaints Received by Month in 2009

<table>
<thead>
<tr>
<th>MONTH</th>
<th>NO. OF REPORTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAN</td>
<td>461</td>
</tr>
<tr>
<td>FEB</td>
<td>468</td>
</tr>
<tr>
<td>MAR</td>
<td>487</td>
</tr>
<tr>
<td>APR</td>
<td>529</td>
</tr>
<tr>
<td>MAY</td>
<td>613</td>
</tr>
<tr>
<td>JUN</td>
<td>431</td>
</tr>
<tr>
<td>JUL</td>
<td>566</td>
</tr>
<tr>
<td>AUG</td>
<td>536</td>
</tr>
<tr>
<td>SEPT</td>
<td>613</td>
</tr>
<tr>
<td>OCT</td>
<td>482</td>
</tr>
<tr>
<td>NOV</td>
<td>538</td>
</tr>
<tr>
<td>DEC</td>
<td>538</td>
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</tbody>
</table>

Type of Complaints Received in 2009

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>NO. OF COMPLAINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV Dishes</td>
<td>52</td>
</tr>
<tr>
<td>Top-up Radiation</td>
<td>69</td>
</tr>
<tr>
<td>Spectrum Interference</td>
<td>71</td>
</tr>
<tr>
<td>Post Office/Courier Service</td>
<td>72</td>
</tr>
<tr>
<td>Cybercrime</td>
<td>82</td>
</tr>
<tr>
<td>Non SKMM Jurisdiction</td>
<td>115</td>
</tr>
<tr>
<td>Unfair Registration</td>
<td>117</td>
</tr>
<tr>
<td>Misrepresentation of Service</td>
<td>146</td>
</tr>
<tr>
<td>Weakeness</td>
<td>149</td>
</tr>
<tr>
<td>Urgent Priority</td>
<td>253</td>
</tr>
<tr>
<td>No/ Poor Service Coverage</td>
<td>377</td>
</tr>
<tr>
<td>SMS</td>
<td>407</td>
</tr>
<tr>
<td>Content</td>
<td>690</td>
</tr>
<tr>
<td>Bills &amp; Charges</td>
<td>773</td>
</tr>
<tr>
<td>Poor Service</td>
<td>2,846</td>
</tr>
</tbody>
</table>

From the total 6,178 complaints received in 2009, 82% were regarding service provisioning and service performance. The remaining 12% of complaints were related to content (Internet, SMS, TV and radio), spectrum interference, telecommunication structure and radiation, illegal installation of TV parabolic dish, cybercrime such as phishing, and other miscellaneous complaints. There were also complaints received that are not under SKMM jurisdiction.

The highest complaints received regarding poor service relate to the broadband/3G services. The most frequent complaints relate to poor Internet connection/speed. Customers complained about slow broadband connection, unstable connection or speed did not meet the promised speed in the package subscribed. Other main complaints are on billing and charging, service disruption or downtime, unsuccessful or delay in installation or activation of service and lack of coverage.
As a regulatory measure to control industry’s standards and quality of service, SKMM has initiated its review on its Quality Standard on Quality of Service for Wired Broadband. SKMM also is in the process of formulating the Mandatory Standard on Quality of Service for wireless broadband due to the increase in wireless broadband subscription.

The Fair Usage Policy imposed by the service providers created dissatisfaction among the customers who are heavy users when their usage volume been capped and their speed been throttle to a lower speed. The service providers must made known this condition to the customer upfront and clearly explained in the Terms and Conditions of the service. SKMM recognized that there are issues that need more bandwidth than others (heavy users). The service providers have been asked to look into this and offer other packages to cater these users.

Billing problems and charging

Billing disputes is the most type of complaint received among the service providers. Customers claimed being billed for service not used i.e. GPRS. The finding shows the usage are valid and may due to customer’s setting which trigger the internet connection without customer awareness. Service provider on goodwill basis will refund the charges on case by case basis. From our observation, the lack of awareness of the user about the features of the phone particularly smart phone and the service contribute to the high bills.

There are also billing dispute cases on overcharging due technical problem and being billed for unused service due to service termination not processed which service provider will rectify and refund to the customer.

Issue on credit limit continues to be highlighted. Customers complained that their lines not barred after exceeding the credit limit set by the service provider. From the finding, there are customers whereby their line was not stated upfront by the service providers such as no barring during weekend or public holidays, while roaming, during system maintenance. However, there are also cases whereby the lines were not barred due to technical problem. Service providers have been asked to educate their customers about the credit limit.

SKMM also received complaints relating to service provider’s poor billing system whereby the bill issued is not timely, billing charging delay and payment made not updated/captured in the system. First Information Report (FIR) has been raised for cases with possible breach of the billing provision in the General Consumer Code (GCC).

Celcom revised terms and conditions for Celcom 1+5 plan

SKMM received complaints pertaining to the practice of Celcom to revise terms and conditions for Celcom 1+5 prepaid plan. The existing plan which offers free 40 hours of voice and video calls were reduced to 20 hours with effective from 1 September 2009. The service providers have been auto migrated to the new revised plan without being given any option to opt in for the new plan or remain with the existing plan.

According to Celcom, due to overwhelming response to the said package, an excessive call made by the customers has led to congestion of the network and reduction in the quality of service which made it necessary for them to revise the package accordingly. As there is no penalty clause for service termination, customers can choose to terminate the service if the new offering is no longer attractive.

Astro price increase for Sports package

In August 2009, Astro has notified all its customers that the price for sports package will be increased by RM 12.00 starting from the September billing cycle. Following this notification, SKMM received complaints from customers who are not happy with the price increase.

According to Astro, the price increase on Astro Sports package is applied to all ASTRO subscribers due to the high cost of sports content. The price increase is not due to the increased expenditure in the football sports arena only, but to all sports events around the world.

In addressing the customer complaints, Astro agreed to allow customers who do not wish to continue with the subscription of the sports package to downgrade the package and the switching fees are also waived.

Most of these main consumer issues are on the unfair practice by the service providers. The issue of unfair practice by the service providers is currently being looked into by the Consumer Forum as they are in the midst of reviewing the General Consumer Code. The relevant provision will be included to ensure consumers are protected of their right and interest.
The non-compliance offences committed by the licensees were mostly preventable cases and if positive steps had been taken, these cases would not have recurred. Some licensees had taken the initiative of organising compliance seminars for their staff with the objectives of educating their staff on compliance issues, CMA 1998 and the relevant Regulations and to ensure all the compliance issues are adhered to. Speakers from SKMM were invited to give presentations on all aspects of compliance during these seminars. About 700 staff of the licensees have attended these seminars.

In 2010, SKMM will organise Compliance Seminars to all licensees to educate them on compliance issues with the purpose of reducing cases of non compliances and to improve self-regulation.

From the total of 352 cases investigated, 48 were non-compliance cases committed by the licensees. The cases were as follows:-

<table>
<thead>
<tr>
<th>No. Type of Offenses</th>
<th>No. of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Breach of licence conditions</td>
<td>5</td>
</tr>
<tr>
<td>i) Non Compliance to Mandatory Standard on Quality Service</td>
<td></td>
</tr>
<tr>
<td>ii) Non Compliance to General Consumer Code</td>
<td></td>
</tr>
<tr>
<td>iii) Non Compliance on Prepaid Registration (35 cases)</td>
<td></td>
</tr>
<tr>
<td>iv) Others</td>
<td></td>
</tr>
<tr>
<td>2 Failure to deal reasonably with consumer complaints</td>
<td>8</td>
</tr>
<tr>
<td>3 Failure to submit audited account</td>
<td>0</td>
</tr>
<tr>
<td>4 Failure to submit RONR</td>
<td>10</td>
</tr>
<tr>
<td>5 Failure to contribute to USP Fund</td>
<td>0</td>
</tr>
<tr>
<td>6 Non Compliance to a Direction of the Commission</td>
<td>12</td>
</tr>
<tr>
<td>7 Use Apparatus Assignment without AA</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>48</strong></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>No. Compounding of cases</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Compound Offered</td>
<td>480,000</td>
</tr>
<tr>
<td>2 Compound Paid</td>
<td>200,000</td>
</tr>
<tr>
<td>3 Compound Pending Appeal</td>
<td>200,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. Cases Charged in Court</th>
<th>No. of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Licensees</td>
<td>1</td>
</tr>
<tr>
<td>i) Breach of License Condition</td>
<td>1</td>
</tr>
<tr>
<td>ii) Failure to submit RONR</td>
<td>1</td>
</tr>
<tr>
<td>iii) Service without license</td>
<td>1</td>
</tr>
<tr>
<td>2 Other Offenders</td>
<td>7</td>
</tr>
<tr>
<td>i) Offensive Comments</td>
<td>2</td>
</tr>
<tr>
<td>ii) Unlawful use, possession or supply of non-standard equipment</td>
<td>1</td>
</tr>
<tr>
<td>iii) Unlicensed Network Facility, Network Services and Application Services</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. Status of Cases Charged in Court</th>
<th>No. of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pending Trial</td>
<td>5</td>
</tr>
<tr>
<td>2 Found Guilty</td>
<td>6</td>
</tr>
<tr>
<td>3 Discharged Not Amounting to Acquittal (DNA)</td>
<td>2</td>
</tr>
</tbody>
</table>
It is the quality of the human capital that will determine if we can meet our aspirations of achieving a high value, and high income, economy by 2020. As we progress towards a new phase of ICT development, we must do our part to equip fellow Malaysians with the skills and knowledge they require to succeed as a productive member of the knowledge-led economy. Such initiatives are crucial to the development of the local ICT industry.

Human Capital Management and Strategic Information System
HUMAN CAPITAL DEVELOPMENT

The Human Capital Management Division began 2009 with a focus on replenishing staff members for the coming years, foreshadowing the challenges of existing staff members in the strategic job grade who would soon become eligible for compulsory retirement. In addition, the Division set out to retain the knowledge of longer serving staff members while continuing to recruit younger, more diverse staff members, at the same time continuing to promote a performance-based culture. However, the challenge did not stop at just recruiting new staff; instead it is imperative that the Division has a strong workforce to support strategies and maintains an exciting work culture that attracts and retains the highest quality staff, both now and in the future.

In this context, the Human Capital Division implemented programmes which were designed to provide challenges to meet Key Result Areas (KRAs) and individual Key Performance Indicators (KPIs).

In October 2009, SKMM welcomed Y.Bhg. Tan Sri Khalid Ramli as the new SKMM Chairman. SKMM then embarked on a journey to develop new forward-looking initiatives and strategies towards achieving a high-income and knowledge-based nation. The multimedia industry plays a crucial role towards realising this “Malaysia as the ICT Regional Hub” vision and SKMM is at the centre of it all.

While there is still much to be done to emerge as a leaner and stronger organisation, SKMM is well positioned to realign current staff members around its key priorities and to begin to successfully recruit talent with the necessary skills and diverse backgrounds needed for a better and brighter future.

PREPARING FOR THE NEXT GENERATION

The need to attract and retain high-calibre employees remains focused in the SKMM people management agenda.

Recruitment

- There were 67 vacancies in 2009 with breakdowns as follows: New Hires/Graduates – 42
- Resignation / Retirement – 25

- There were 67 recruitments for the year of which 70% were for executive grade level (graduates).

Resignation

- There were 25 resignations recorded in 2009.

Employee Attrition Rate is at 6%.

Promotion

There were no promotion exercises conducted in 2009.

PLANNING FOR THE FUTURE

Mission

The Human Capital Management Division is committed to ensuring availability, productivity and sustainability of suitably motivated and engaged talents to realise SKMM’s mission and aspirations in line with the national policy objectives.

In 2009, the Human Capital Management Division developed strategic plans that included several multi-year priorities in the areas of performance excellence and organisational development. Achievements in these priority areas are noted below:

Performance Excellence

A multi-year effort to deliver technical and business skill programmes to all staff members continued throughout 2009. People development is both a value and the cornerstone for the “Growing our own timber” programme.

<table>
<thead>
<tr>
<th>Positions</th>
<th>Grade</th>
<th>Number Of Staff</th>
<th>Sub Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Operating Officer</td>
<td>P12</td>
<td>1</td>
<td>Executive</td>
</tr>
<tr>
<td>Senior Director</td>
<td>P9</td>
<td>9</td>
<td>275</td>
</tr>
<tr>
<td>Director</td>
<td>P7</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Director</td>
<td>P6</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Deputy Director / Senior Engineer / Executive</td>
<td>P5</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>Assistant Director / Executive / Engineer</td>
<td>P4</td>
<td>156</td>
<td></td>
</tr>
<tr>
<td>Executive Secretary / Assistant Executive</td>
<td>S3</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Assistant Executive / Secretary</td>
<td>S2</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>Driver / General Worker</td>
<td>S1</td>
<td>27</td>
<td>137</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>412</td>
<td></td>
</tr>
</tbody>
</table>

Talent strength as at 31 December 2009
In the context of creating a performance-based culture, SKMM has redesigned and further strengthened the Performance Management Systems, known as ACHIEVE. It has been initiated in the first quarter of 2009 with a briefing to the Senior Management team, followed by a series of communication sessions and in-house workshops attended by staff members to develop individual KPIs. The year-end performance review has shown better correlation between staff performance and SKMM’s achievements.

In terms of enhancing skills and knowledge, SKMM has invested approximately RM1.2 million in training, which is about 5% of payroll in various skills development initiatives.

In-house trainings and selected skills building workshops and certificate programmes were well attended. The SKMM Academy organised a total of 132 programmes attended by 1,069 participants. The SKMM Academy organised a total of 132 programmes attended by 1,069 participants and training days attended by staff members totalled 535 days with an average of eight days per staff.

Organisational Development

SKMM’s organisational development practices continued to focus on building a performance driven culture to ensure that the deliverables of its core mandate of ensuring effective Communication and Multimedia regulation and market development. The year 2009 saw focused reassessment and development on Value Chain 2008–2011 (FID 3). Initiatives were undertaken to enhance SKMM’s intended strategic thrusts, deliverables and tasks associated with it, apart from taking stock of all undelivered initiatives from FID 1 and 2. SKMM has also engaged with all licensees in high-level industry consultation sessions to help establish greater clarity, alignment and consensus on the strategic objectives, focus and tasks in the context of the organisational goals. This has also created greater awareness of interdependencies and opportunities for more collaborative alliances. The programmes implemented in relation to the desired strategic thrusts included the artification of more specific strategic results, development of performance indicators and establishing a systematic process for reviewing performance at mid-term and year-end. For 2009, the SKMM organisational report card marked an improvement from the previous year.

The organisational development strategies and practices to support SKMM’s role have yielded demonstrable results. Business process improvement, a kick-off project undertaken in 2009, was a visible initiative across the organisation, reflected by greater capacity to respond to the higher performance expectations and achievements of goals set. Lean Sigma and Cross Functional Process Mapping (CFPM) was chosen as the process improvement/engineering methodologies.

A collaborative working relationship was established with Motorola University Asia Pacific (MUAP) on the knowledge and skill transfer of the trademarked methodologies by introducing interactive action learning and Six Sigma Green Belt certification. It is an ongoing effort and is expected to spur improvement in our delivery system.

STRATEGIC INFORMATION SYSTEM DIVISION (SISD)

The year 2009 witnessed SISD continuing its pursuit to transform an IT department into a strategic partnership within SKMM, as well as the industry. It started the ball-rolling by focusing on its operational excellence as the main “ingredient” in positioning IT as a strategic division within SKMM. It made its way through providing efficient and integrated IT service delivery based on best practices such as ITIL, CoBIT and PRINCE2. SISD aspires to become one of SKMM’s core competitive capabilities by providing effective solutions and deliver the best IT services.

We ensured that IT connectivity remained to be our topmost priority. Therefore, SISD team has taken several initiatives to provide better IT facilities for SKMM staffs. SKMM data centre has been upgraded accordingly to the industry’s best practice. SISD has also upgraded SKMM’s Wide Area Network Connectivity for its Headquarter offices located in Cyberjaya as well as other Regional Offices (nationwide). This is to ensure SKMM benefitted high availability from a sophisticated and interconnected infrastructure in line with its rapid growth.

IT Helpdesk team has shown significant improvement since its debut in June 2008 in customer responsiveness, providing effective solutions and supporting SKMM staffs’ productivity.

The year 2009 also shown SISD proactively spearheading several initiatives to consolidate and streamline its IT resources in an effort to reduce costs and simplify management. On top of that, SISD has also started integrating all strategic operational and support applications in order to simplify and automate business processes to the greatest extent possible.

In the next three years, SISD has pledged to focus upgrading its IT infrastructure and systems to support SKMM’s operations. The team has conducted a thorough study and several assessments with the objective to provide a flexible responsive IT architecture framework to improve the delivery of service to SKMM’s clients.

Internally, SISD team is focusing on maintaining its excellent operational efficiency by increasing IT agility, enhancing on IT resource planning and project management skills while continuously improving its end-to-end Service Level Agreement (SLA).

In closing, SISD expects its high-calibre workforce, systems and infrastructure will all assist in the making of a prosperous 2010.
Mobility, fast speed and bigger bandwidth services are pushing greater usage of spectrum. Hence, several spectrum bands have been identified to be re-farmed in the near future. However, the standards and spectrum owned by a country where ICT is concerned should not be commercial interests but to serve humanity.
INTRODUCTION

SKMM continues to participate actively in international fora to promote Malaysia’s interest in the communications and multimedia industry. Working in close partnership with the Ministry of Information Communication and Culture (KPKK), SKMM represents Malaysia as the regulatory authority in communications and multimedia and at the same time builds and coordinates the nation’s international profile and activities in this industry. SKMM’s presence at such fora ensures that the country is able to:

- participate actively in influencing outcomes and developments in international fora;
- manage progressive market liberalisation in communications and multimedia sector;
- manage progressive market liberalisation in communications and multimedia sector;
- engage local communications and multimedia industry players to participate actively in influencing outcomes and developments in the communications and multimedia sector.

SKMM’s international activities are guided by the Communications and Multimedia Act 1998, particularly the first National Policy Objective in facilitating Malaysia’s transformation into an industry global hub. Consequently SKMM engages with various international organisations as listed in the Ministerial Direction issued under Section 269 of the Communications and Multimedia Act 1998.

SKMM works with its various counterparts in the region and internationally to enhance understanding of regulatory measures and best practices. This has the effect of enhancing mutual industry competitiveness and growth, facilitate inbound and outbound investments and trade as well as develop network and human resource capabilities in communications and multimedia hardware manufacturing and the creation of applications and transactions. Towards this end, SKMM is also involved as the sector expert in various bilateral and multilateral negotiations such as the Free Trade Agreements or Economic Partnership Arrangements and the Management of frequency, numbering and internet addressing.

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SKMM’s presence at such fora ensures that the country is able to:

- participate actively in influencing outcomes and developments in international fora;
- manage progressive market liberalisation and developments in the communications and multimedia sector;
- engage local communications and multimedia industry players to identify opportunities in foreign markets; and
- keep abreast of the latest international developments and trends in the communications and multimedia sector.

Currently Malaysia holds several appointments with regional and international organisations which serve to strengthen the country’s sphere of influence in the respective fora:

1. ASEAN ICT Center Director (founding director) - Puan Nur Sulyna Abdullah, Director, International Affairs
2. APT Policy and Regulatory Forum Vice Chair - Puan Nur Sulyna Abdullah, Director, International Affairs
3. Chairperson of the APT Preparatory Group for the World Telecommunication Development Conference 2010 – Puan Nur Sulyna Abdullah, Director, International Affairs
4. Asia Pacific Internet Research Alliance Board Member - Mr. Koay Hock Eng, Director, Statistical and Knowledge Resource Department

Functional Focus Areas

- Management of frequency, numbering and internet addressing
- Standards and Interoperability
- Mutual Recognition Arrangements
- Trade and Liberalisation
- Security and Harmonisation of e-commerce activities
- Tariffs and accounting rates
- Content
- Cooperation and information exchange

Sectoral Focus Areas

Sectorally, SKMM’s activities can viewed through the following focus areas:

ASEAN Region

SKMM participates actively in the following ASEAN fora: - ASEAN Telecommunication Regulators’ Council (ATRIC)
- ASEAN Telecommunications and IT Senior Officials Meeting (TELSOM)
- ASEAN Telecommunications and IT Ministers’ Meeting (TELMIN)
- Border Coordination Meetings to manage and resolve any frequency interference and allocation matters with Malaysia’s neighbours:
  - Frequency Allocation Committee of Singapore, Malaysia and Brunei Darussalam (FACISAMB)
  - Joint Technical Committee on Coordination and Assignment of Frequencies along the Malaysia-Thailand Common Border (JTC)
  - Joint Communications Committee between Malaysia and Indonesia (JCC)
- Trilateral coordination involving Indonesia, Malaysia and Singapore

ASEAN ICT Masterplan

The ASEAN TELSONM is currently developing the ASEAN ICT Masterplan in response to the rapid changes in technology and industry convergence as well as to increase ASEAN’s competitiveness in ICT. The ASEAN TELSONM is of the view that the Masterplan will enhance ASEAN’s attractiveness for investment as well as augment current efforts to bridge the digital divide within ASEAN.

The Masterplan is expected to be completed, adopted and endorsed by TELMIN at the 10th ASEAN TELMIN which will be hosted by Malaysia in 2010. While originally proposed by Singapore, TELSOM has agreed for the ASEAN ICT Center to come onboard as the co-lead for this crucial ASEAN project.

Consequently the ASEAN ICT Centre’s Directorship under Puan Nur Sulyna Abdullah, has been extended till the 10th TELMIN in order for her to oversee the development and completion of the Masterplan as co-proponent of this project.

Asia Pacific Region

SKMM is actively involved in the following fora in the Asia Pacific Region:

- Asia Pacific Telecommunity (APT)
- APEC Telecommunications Working Group (APEC TEL)
- Asia Pacific Postal Union (APPU)
- Asia Pacific Broadcast Regulator’s Roundtable

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PTDC-10 will be held in Hyderabad, India and discussion on the global development of telecommunications will be made by the General Secretariat of the ITU. The Plenipotentiary Conference is the top policy-making body of the ITU. The Conference, also held every four years, sets the ITU policies, members of the Council and Radio Regulations Board are elected. Plenipotentiary Conference that the Senior Management team of the ITU, members of the Council and Radio Regulations Board are elected. SKMM actively participates in the activities of the following:

- International Telecommunication Union (ITU)
- Universal Postal Union (UPU)
- World Trade Organisation (WTO)
- Internet Corporation for Assigned Names and Numbers (ICANN)
- International Multilateral Partnership Against Cyber Threats (IMPACT)

The Malaysia Pavilion At The ITU Telecom World 2009

SKMM organised the Malaysia pavilion at the ITU Telecom World 2009 which was held in Geneva from 5 – 9 October 2009. The ITU Telecom World is an international conference and exhibition held once every three years for the global telecommunication and ICT sector by the International Telecommunication Union. It brings together the world’s leading ICT companies, decision-makers, organisations and governments for a major exhibition and a high-level Forum to address shared global challenges in today’s information society and showcases best practices worldwide.

Among the reasons for Malaysia’s participation in the event were:

1. to provide a platform for the Malaysian industry to showcase convergence and developments in Malaysia;
2. to indicate Malaysia’s high level of commitment to the ITU and reciprocate ITU’s support for Malaysia as a key partner in their developmental agenda e.g. through the hosting of their Center of Excellence for Rural ICT Development at the Universiti Utara Malaysia;
3. to discuss and explore future projects for their respective regions.

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International Meetings Statistics 2009

As at 31 December 2009, towards the functional focus areas, SKMM participated in 109 international meetings categorised as follows:

ASEAN – 16 meetings
APT – 10 meetings
ITU – 26 meetings
Border Coordination – 17 meetings
Poteil – 2 meetings
Apaciel – 4 meetings
Satellite Coordination – 8 meetings
Internet related – 4 meetings
Exhibitions – 2 meetings
Study Visits – 3 meetings
Others – 20 meetings

International Visitors Programme

SKMM continues to welcome various foreign delegations on study visits in response to requests to share our experiences in a converged environment. In 2009, we received a total of 6 delegations as listed below:

1. Ministry of Transportation and Telecommunications, Chile
2. Department of Communication and Information, Papua New Guinea
3. Department of Communication and Information, Papua New Guinea and Papua New Guinea Radiocommunications and Telecommunications Technical Authority (PANGTEL)
4. Tanzania Communications Regulatory Authority (TCTA)
5. Papua New Guinea Radiocommunications and Telecommunications Technical Authority (PANGTEL)
6. Delegation from France comprising of representatives from government bodies and industry in conjunction with Seminar on Digital TV organised by the Embassy of France with the collaboration of the General Directorate for Competitiveness, Industry and Services, France

Around the world, SKMM actively participates in the activities of the following:

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4. Tanzania Communications Regulatory Authority (TCTA)
5. Papua New Guinea Radiocommunications and Telecommunications Technical Authority (PANGTEL)
6. Delegation from France comprising of representatives from government bodies and industry in conjunction with Seminar on Digital TV organised by the Embassy of France with the collaboration of the General Directorate for Competitiveness, Industry and Services, France
Malaysians are now more exposed to the various media platforms than in previous years. As the authority and custodian of the Communications and Multimedia Act 1998, Postal Services Act 2001 and Digital Signature Act 1997, the Commission’s functions and responsibility are increasingly becoming more apparent and significant.
**CORPORATE HIGHLIGHTS 2009**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 JAN</td>
<td>Launching of Community Broadband Centre (CBC) Besut, Terengganu</td>
</tr>
<tr>
<td>2 JAN</td>
<td>U-Library Trial Run, Kuala Lumpur</td>
</tr>
<tr>
<td>5 JAN</td>
<td>Briefing on Use of Spectrum for video surveillance in public places. Cyberjaya</td>
</tr>
<tr>
<td>6 JAN</td>
<td>Handover of Ministerial duties between Dato’ Shaziman Abu Mansor and Dato’ Seri Utama Dr Rais Yatim as the new Minister of Information Communications and Culture, Putrajaya</td>
</tr>
<tr>
<td>7 JAN</td>
<td>Developing of the New Media - Corporate Highlights 2009 Briefing on Use of Spectrum for video surveillance in public places, Cyberjaya</td>
</tr>
<tr>
<td>8 JAN</td>
<td>Monthly Assembly of the Ministry of Information Communication &amp; Culture, Bangunan Abdul Samad, Kuala Lumpur</td>
</tr>
<tr>
<td>9 JAN</td>
<td>Handover of Ministerial duties between Dato’ Shaziman Abu Mansor and Dato’ Seri Utama Dr Rais Yatim as the new Minister of Information Communications and Culture, Putrajaya</td>
</tr>
<tr>
<td>10 JAN</td>
<td>SKMM 10th Anniversary Lecture Series Dinner, Kuala Lumpur</td>
</tr>
<tr>
<td>11 JAN</td>
<td>YB Dato’ Seri Utama Dr Rais Yatim inaugural visit to SKMM, Cyberjaya</td>
</tr>
<tr>
<td>12 JAN</td>
<td>World Telecommunication and Information Society Day 2009, campaign on Protecting Children in Cyber Space, Nationwide</td>
</tr>
<tr>
<td>13 JAN</td>
<td>Communications and Multimedia (C&amp;M) Conference “New Era of Cross Industry”, Cyberjaya</td>
</tr>
<tr>
<td>14 JAN</td>
<td>Anam Seri 1 Malaysia at Dataran Merdeka, Kuala Lumpur</td>
</tr>
<tr>
<td>15 JAN</td>
<td>Malam Jasaini Kenang - YBhg. Datuk Dr Hamid Shafie, outgoing Chairman of SKMM, Kuala Lumpur</td>
</tr>
<tr>
<td>16 JAN</td>
<td>Nationwide Information Society Day 2009, campaign on Protecting Children in Cyber Space, Nationwide</td>
</tr>
</tbody>
</table>
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2 JUL Seminar on React of The Economic Downturn To The Domestic Express Industry: The Impact & Opportunities, Cyberjaya

25 JUL CBC Open Day / Broadband Awareness Talk, Bandar Pasir Jenaka, Pahang

3 JUL YB Datuk Joseph Salang visit toJulau, Sarawak

11 AUG Seminar on Telecommunications Standards & Practice, Cyberjaya

13 - 14 AUG IDA Singapore – SKMM Bilateral Exchange Treasure Hunt activity, Melaka

15 AUG Seminar Maritime Frequency and Private Networks in Sandakan, Sabah

5 - 9 OCT ITU Telecom World in Geneva, Switzerland

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8 OCT Launching of ‘Generasi Digital’ campaign in Port Dickson, Negeri Sembilan

18 OCT SKMM Exhibition at the KPJK Exhibition on Malaysia, Ipoh, Perak

21 OCT Welcoming ceremony for Tan Sri Khalid Ramli as the new Chairman of SKMM, Cyberjaya

23 OCT ITU Telecom World in Geneva, Switzerland

24 OCT IDA Singapore – SKMM Bilateral Exchange Treasure Hunt activity, Melaka

26 DEC The Broadband Push to Rural Communities - Award Ceremony for the successful Universal Service Providers Tenderers, Cyberjaya

28 DEC Launching of MyIX and Community Broadband Centre, Kota Kinabalu, Sabah

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11 AUG Seminar on Telecommunications Standards & Practice, Cyberjaya

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28 DEC Launching of MyIX and Community Broadband Centre, Kota Kinabalu, Sabah
ICTs have been instrumental in paving the way for a better future, increasing dictating lifestyles and behaviour patterns, contributing to the growth of trade and commerce, improving governance and municipal services, and revolutionising entertainment through the development of rapid communications.
GOVERNANCE AND AUDITED FINANCIAL STATEMENTS

SKMM considers governance as fundamental to its operations as its actions and decisions would have a significant impact on the stakeholders. The principles of good governance enshrined in the Malaysian Communications and Multimedia Commission Act 1998 (MCMCA) as well as the Communication and Multimedia Act 1998 (CMA), where the powers and functions of SKMM are defined, SKMM, primarily, is required to play a dual role, as an industry developer and industry regulator. As an industry developer, it recommends regulatory policies and implements policy decisions contained in the legislations and Ministerial Directions provided for under the CMA.

The CMA establishes the framework for regulating the communications and multimedia sector. A significant feature of the CMA is the identification of the Government’s national policy objectives (NPO) for the communications and multimedia sector. The ten national policy objectives provide the basis and rationale for policy formulation and regulatory intervention. The communications and multimedia sector is a constantly evolving sector, dictated by technology changes and the NPO gives the direction for the communications and multimedia industry.

SKMM is committed to transparency and public disclosure within the confidential boundary stipulated under the MCMCA and CMA. The principle of transparency which underpins good corporate governance is very much a significant feature of the regulatory framework in the CMA. The principle of transparency is ingrained in the Malaysian Communications and Multimedia Act 1998 (CMA). where the principle of openness is clearly embedded in the CMA wherein SKMM is committed to transparency and public disclosure within the communications and multimedia sector. The 10 national policy objectives provide the policy decisions contained in the legislations and Ministerial Directions on specific licensees.

Another feature of transparency which is uniquely provided for in the CMA is the requirement for SKMM to provide reasons for the decisions made by SKMM and the day to day affairs and have general control of the employees of the Commission. In discharging its duties, the Chief Executive acts under the general authority and directions of the Commission. He chairs the Executive Committee which comprised the senior management team responsible for the operations and management of the strategy and overall direction of the organization. The Executive Committee meets on a weekly basis.

Meetings

In 2009, the Members of the Commission met 14 times, 10 of which were the monthly meetings and four special meetings.

The Commission has oversight over the fulfilment of SKMM’s general duties and specific statutory responsibilities as specified under the MCMCA and CMA while the Chairman who is also Chief Executive is responsible for the overall direction of the Commission. As an industry developer, SKMM works on the recommendations of the NBTC. The Networked Content Development Grant Management Committee (NMC) is authorised by the Commission to consider and approve the recommendations by the Networked Content Development Grant Management Committee (NFTC) for award of grants to the successful applicants. In 2009, the NMC met three times and deliberated on the recommendations of the NFTC. Three applications for grants were approved in 2009, the details of which are elaborated in the section on the Networked Content Development Grant Management Committee (NMC). The NMC consists of the following members:

Chairman:
Datuk Wira Kamaruddin Siaraf
Members:
• Chairman of the Commission
• A member of the Commission
• Director General of FINAS

The Audit Committee comprises three members of the Commission. During 2009, the Audit Committee was chaired by YBhg. Dato’ Dr. Abdol Samad Hj. Alaks and the two other Members were YBhg. Tan Sri C. Rajandran and YBhg. Dato’ Mohd. Rashid Bin Mohd. Noor. The Audit Committee’s primary function is to assist the Commission in fulfilling its responsibilities with respect to:

a) approval of the audited Statement of Accounts of the Commission which shall include a balance sheet and an account of income and expenditure of SKMM Fund and USP Fund for that financial year;

b) oversight in respect of the adequacy of the system of internal control that management has established; and

c) oversight of the internal and external audit processes.

The Audit Committee is granted with the authority to investigate any matter or activity upon which it has reasonable grounds to believe that it is in the best interests of the Commission. The Audit Committee is also required to submit its reports to the Minister on a regular basis.

The Networked Content Development Grant Management Committee (NMC) is authorised by the Commission to consider and approve the recommendations by the Networked Content Development Grant Management Committee (NFTC) for award of grants to the successful applicants. In 2009, the NMC met three times and deliberated on the recommendations of the Networked Content Development Grant Management Committee (NMC). The NMC consists of the following members:

Chairman:
Datuk Wira Kamaruddin Siaraf
Members:
• Chairman of the Commission
• Dato’ Mohd. Rashid Bin Mohd. Noor

The Human Resource Committee consists of the following members:

Chairman:
Dato’ Wira Kamaruddin Siaraf
Members:
• Chairman of the Commission
• A member of the Commission

The Human Resource Committee has oversight in respect of the adequacy of the system of internal control that management has established; and

c) oversight of the internal and external audit processes.

The Human Resource Committee is granted with the authority to investigate any matter or activity upon which it has reasonable grounds to believe that it is in the best interests of the Commission. The Human Resource Committee is also required to submit its reports to the Minister on a regular basis.

The Financial Statements for the year ended 31 December 2009 are presented on the following pages.
Stamp Advisory Committee
The Stamp Advisory Committee of SKMM is entrusted with the responsibility to consider and recommend the annual stamp themes and the number of themes appropriate to be issued in the year for the Minister’s approval. The Stamp Advisory Committee consists of the following members:

Chairman:
Chairman of the Commission

Members:
• Representative of the Ministry of Information Communications and Culture
• Director General of Museum Department
• Director General of Balai Seni Lukis Negara
• CEO of Pos Malaysia Bhd. or nominated senior official as alternate
• Representative from Artists Association of Malaysia

In 2009, the Stamp Advisory Committee met once and approved 18 stamp themes. The detailed list of the stamp themes issued in 2009 is as reported in the Postal section of the Annual Report.

Universal Service Provision Fund Committee
The Universal Service Provision (USP) Fund Committee met once in 2009 and approved the claims for USP projects with disbursement from the USP Fund. In addition, the USP Fund Committee approved the Notification For Contribution to The Universal Service Provision (USP) Fund For Year 2007 (Batch 6) & Year 2008 (Batch 2) besides endorsing the revised Standard Operating Procedures Manual for the management of the USP Fund.

In 2009, the Stamp Advisory Committee met once and approved 18 stamp themes. The detailed list of the stamp themes issued in 2009 is as reported in the Postal section of the Annual Report.

Governance Committee
The Governance Committee is a newly established committee by the Members of the Commission pursuant to section 15 of the SKMMA. The Governance Committee came into effect on 10 August 2009. The Terms of Reference of the Governance Committee includes facilitating the Members of the Commission in the establishment of a Corporate Governance Framework and the following:

Chairman:
Datuk Dr. Abdul Samad b. Hj. Alias (until 30 September 2009)

Members:
• Datuk Mohd. Zain Mohd. Dom
• Dato’ Dr. Gan Khuan Poh
• Dato’ Mohamed Sharil Tarmidi

Ministerial Direction
Currently, the Committee is being reviewed pursuant to the direction of the Minister of Information Communications and Culture issued on 9 September 2009.

Chairman:
Dato’ Dr. Gan Khuan Poh

Members:
• Datuk Idris Abdullah
• Dato’ Mohamed Sharil Tarmidi
• Representative from the Ministry of Information Communications and Culture

Malaysian Communications and Multimedia Commission
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Cash flow statement for the year ended 31 December 2009
### Balance sheet as at 31 December 2009

<table>
<thead>
<tr>
<th>Note</th>
<th>2009 RM'000</th>
<th>2008 RM'000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>3</td>
<td>110,000</td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fees and other receivables</td>
<td>4</td>
<td>27,178</td>
</tr>
<tr>
<td>Current tax asset</td>
<td>320</td>
<td>-</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>5</td>
<td>1,462,574</td>
</tr>
<tr>
<td>Total current assets</td>
<td></td>
<td>1,490,072</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td></td>
<td>1,600,072</td>
</tr>
<tr>
<td><strong>Represented by:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accumulated fund</td>
<td>6</td>
<td>1,228,407</td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-current liability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deferred income</td>
<td>7</td>
<td>113,956</td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deferred income</td>
<td>7</td>
<td>229,267</td>
</tr>
<tr>
<td>Other payables and accrued expense</td>
<td>8</td>
<td>28,442</td>
</tr>
<tr>
<td>Provision for taxation</td>
<td>-</td>
<td>1,234</td>
</tr>
<tr>
<td>Federal consolidated fund</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td></td>
<td>257,709</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td></td>
<td>371,665</td>
</tr>
<tr>
<td>Total equity and liabilities</td>
<td></td>
<td>1,600,072</td>
</tr>
</tbody>
</table>

The notes on pages 184 to 196 are an integral part of these financial statements.

### Income and expenditure statement for the year ended 31 December 2009

<table>
<thead>
<tr>
<th>Note</th>
<th>2009 RM'000</th>
<th>2008 RM'000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating license fees</td>
<td></td>
<td>89,193</td>
</tr>
<tr>
<td>Spectrum fees</td>
<td></td>
<td>250,633</td>
</tr>
<tr>
<td>Interest income</td>
<td></td>
<td>35,921</td>
</tr>
<tr>
<td>Gain on disposal of property, plant and equipment</td>
<td></td>
<td>112</td>
</tr>
<tr>
<td>Reversal of allowance for doubtful debts</td>
<td></td>
<td>240</td>
</tr>
<tr>
<td>Other income</td>
<td></td>
<td>8,886</td>
</tr>
<tr>
<td><strong>Excess of income over expenditure before tax</strong></td>
<td></td>
<td>384,795</td>
</tr>
<tr>
<td><strong>Tax expense</strong></td>
<td>10</td>
<td>(8,981)</td>
</tr>
<tr>
<td><strong>Excess of income over expenditure after tax</strong></td>
<td></td>
<td>353,814</td>
</tr>
</tbody>
</table>

The notes on pages 184 to 196 are an integral part of these financial statements.
The Commission’s Members have not recognised gains and losses other than the net surplus for the current financial year and the previous financial year.

The notes on pages 184 to 196 are an integral part of these financial statements.

Statement of total recognised gains and losses for the year ended 31 December 2009

Cash flow statement for the year ended 31 December 2009

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash flows from operating activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess of income over expenditure before tax</td>
<td>262,904</td>
<td>240,022</td>
</tr>
<tr>
<td>Adjustments for:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation of property, plant and equipment</td>
<td>33,344</td>
<td>25,542</td>
</tr>
<tr>
<td>Gain on disposal of plant and equipment</td>
<td>(111)</td>
<td>(99)</td>
</tr>
<tr>
<td>Interest income</td>
<td>(35,921)</td>
<td>(30,747)</td>
</tr>
<tr>
<td><strong>Operating surplus before changes in working capital</strong></td>
<td>259,816</td>
<td>226,391</td>
</tr>
<tr>
<td><strong>Changes in working capital:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deferred income</td>
<td>144,178</td>
<td>11,624</td>
</tr>
<tr>
<td>Fees and other receivables</td>
<td>(2,950)</td>
<td>15,593</td>
</tr>
<tr>
<td>Federal consolidated fund</td>
<td>(512)</td>
<td>(603)</td>
</tr>
<tr>
<td>Other payables and accrued expenses</td>
<td>(17,220)</td>
<td>12,447</td>
</tr>
<tr>
<td><strong>Cash generated from operations</strong></td>
<td>383,312</td>
<td>268,452</td>
</tr>
<tr>
<td>Tax paid</td>
<td>(10,535)</td>
<td>(5,937)</td>
</tr>
<tr>
<td><strong>Net cash from operating activities</strong></td>
<td>372,777</td>
<td>259,415</td>
</tr>
<tr>
<td><strong>Cash flows from investing activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition of plant and equipment</td>
<td>(7,956)</td>
<td>(56,948)</td>
</tr>
<tr>
<td>Interest received</td>
<td>40,699</td>
<td>35,044</td>
</tr>
<tr>
<td>Proceeds from disposal of plant and equipment</td>
<td>256</td>
<td>99</td>
</tr>
<tr>
<td><strong>Net cash from/(used in) investing activities</strong></td>
<td>32,999</td>
<td>(21,805)</td>
</tr>
<tr>
<td><strong>Net cash used in financing activities</strong></td>
<td>(116,480)</td>
<td>(55,000)</td>
</tr>
<tr>
<td><strong>Net increase in cash and cash equivalents</strong></td>
<td>289,296</td>
<td>182,610</td>
</tr>
<tr>
<td>Cash and cash equivalents at 31 January</td>
<td>1,173,278</td>
<td>990,668</td>
</tr>
<tr>
<td>Cash and cash equivalents at 31 December</td>
<td>1,462,574</td>
<td>1,173,278</td>
</tr>
</tbody>
</table>

The notes on pages 184 to 196 are an integral part of these financial statements.
Notes to the financial statements

Principal activities

The principal activities of the Malaysian Communications and Multimedia Commission are to implement and to enforce the provisions of the communications and multimedia laws as stipulated in the Communications and Multimedia Act (CMA) 1998 and the Malaysian Communications and Multimedia Commission Act (MCMACA) 1998.

The address of the principal place of business is as follow:

Principal place of business
63000 Cyberjaya
Selangor Darul Ehsan
The financial statements were approved by the Commission’s Members on 29 July 2010.

1. Basis of preparation

(a) Statement of compliance

These financial statements have been prepared in accordance with Financial Reporting Standards (FRS) and accounting principles generally accepted in Malaysia.

The Commission has not applied the following accounting standards, amendments and interpretations that have been issued by the Malaysian Accounting Standards Board (MASB) but are not yet effective for the Commission:

- Amendments to FRS 132, Financial Instruments: Presentation – Classification of Rights Issues
- Amendments to FRS 138, Consolidated and Separate Financial Statements; Cost of Investment of a Subsidiary, Jointly Controlled Entity or Associate
- Amendments to FRS 139, Reassessment of Embedded Derivatives
- Amendments to FRS 127, Concentrated and Separate Financial Statements (revised)
- Amendments to FRS 2, Share-based Payment
- Amendments to FRS 5, Non-current Assets Held for Sale and Discontinued Operations
- Amendments to FRS 138, Intangible Assets
- IC Interpretation 12, Service Concession Agreements
- IC Interpretation 15, Agreements for the Construction of Real Estate
- IC Interpretation 16, Hedges of a Net Investment in a Foreign Operation
- IC Interpretation 17, Distribution of Non-cash Assets to Owners
- Amendments to IC Interpretation 9, Reassessment of Embedded Derivatives

The Commission plans to apply the abovementioned standards, amendments and interpretations:

- Amendments to FRS 1, First-time Adoption of Financial Reporting Standards (revised)
- FRS 8, Operating Segments
- FRS 9, Financial Instruments: Disclosures
- FRS 101, Presentation of Financial Statements (revised)
- FRS 123, Borrowing Costs (revised)
- Amendments to FRS 7, Financial Instruments: Recognition and Measurement
- Amendments to FRS 2, Share-based Payment: Vesting Conditions and Cancellations
- Amendments to FRS 101, Presentation of Financial Instruments: Disclosures
- Amendments to FRS 101, Presentation of Financial Statements – Includes Financial Instruments and Obligations Airing on Liquidation
- Amendments to FRS 127, Consolidated and Separate Financial Statements: Cost of Investment of a Subsidiary, Jointly Controlled Entity or Associate
- Amendments to FRS 132, Financial Instruments: Presentation – Includes Financial Instruments and Obligations Airing on Liquidation
- Separation of Compound Instrument
- Amendments to FRS 139, Financial Instruments: Recognition and Measurement,
- - Reclassification of Financial Assets
- - Collective Assessment of Impairment for Banking Institutions
- Amendments to FRS 119, First-time Adoption of Financial Reporting Standards
- FRS 127, Consolidated and Separate Financial Statements (revised)
- Amendments to FRS 2, Share-based Payment
- Amendments to FRS 7, Financial Instruments: Disclosures – Improving Disclosures about Financial Instruments

The Commission will refer to the above mentioned standards, amendments and interpretations:

- Amendments to FRS 4, Insurance Contracts
- Amendments to FRS 127, Consolidated and Separate Financial Statements: Cost of Investment of a Subsidiary, Jointly Controlled Entity or Associate
- Amendments to FRS 2, Share-based Payment
- Amendments to FRS 132, Financial Instruments: Presentation – Includes Financial Instruments and Obligations Airing on Liquidation
- Separation of Compound Instrument

1. Basis of preparation (continued)

(a) Statement of compliance (continued)

FRSs, Interpretations and amendments effective for annual periods beginning on or after 1 January 2010 (continued)
- Improvements to FRSs (2009)
- IC Interpretation 9, Reassessment of Embedded Derivatives
- IC Interpretation 10, Interim Financial Reporting and Impairment
- IC Interpretation 11, FRS 2 - Group and Treasury Share Transactions
- IC Interpretation 13, Customer Loyalty Programmes
- IC Interpretation 14, FRS 119 - The Limit on a Defined Benefit Asset, Minimum Funding Requirements and Their Interaction

FRSs, Interpretations and amendments effective for annual periods beginning on or after 1 March 2010
- Amendments to FRS 132, Financial Instruments: Presentation – Classification of Rights Issues

FRSs, Interpretations and amendments effective for annual periods beginning on or after 1 July 2010
- FRS 1, First-time Adoption of Financial Reporting Standards (revised)
- FRS 5, Business Combinations (revised)
- FRS 127, Consolidated and Separate Financial Statements (revised)
- Amendments to FRS 2, Share-based Payment
- Amendments to FRS 5, Non-current Assets Held for Sale and Discontinued Operations
- Amendments to FRS 138, Intangible Assets
- IC Interpretation 12, Service Concession Agreements
- IC Interpretation 15, Agreements for the Construction of Real Estate
- IC Interpretation 16, Hedges of a Net Investment in a Foreign Operation
- IC Interpretation 17, Distribution of Non-cash Assets to Owners
- Amendments to IC Interpretation 9, Reassessment of Embedded Derivatives

FRSs, Interpretations and amendments effective for annual periods beginning on or after 1 January 2011
- Amendments to FRS 1, First-time Adoption of Financial Reporting Standards – Limited Exemption from Comparative FRS 7 Disclosures for First-Time Adopters
- Amendments to FRS 7, Financial Instruments: Disclosures – Improving Disclosures about Financial Instruments

The Commission plans to apply the abovementioned standards, amendments and interpretations:
- From the annual period beginning 1 January 2010 for those standards, amendments or interpretations that will be effective for annual periods beginning on or after 1 July 2009 or 1 January 2010, except for:
- FRS 4, Insurance Contracts
- Amendments to FRS 127, Consolidated and Separate Financial Statements: Cost of Investment of a Subsidiary, Jointly Controlled Entity or Associate
- Amendments to FRS 2, Share-based Payment
- Amendments to FRS 132, Financial Instruments: Presentation – Includes Financial Instruments and Obligations Airing on Liquidation
- Separation of Compound Instrument

The Commission will refer to the above mentioned standards, amendments and interpretations:
- From the annual period beginning 1 January 2010 for those standards, amendments or interpretations that will be effective for annual periods beginning on or after 1 July 2009 or 1 January 2010, except for:
- FRS 4, Insurance Contracts
- Amendments to FRS 127, Consolidated and Separate Financial Statements: Cost of Investment of a Subsidiary, Jointly Controlled Entity or Associate
- Amendments to FRS 2, Share-based Payment
- Amendments to FRS 132, Financial Instruments: Presentation – Includes Financial Instruments and Obligations Airing on Liquidation
- Separation of Compound Instrument
Notes to the financial statements (continued)

1. Basis of preparation (continued)

(a) Statement of compliance (continued)

- Amendments to FRS 139, Financial Instruments: Recognition and Measurement,
- Collective Assessment of Impairment for Banking Institutions
- IC Interpretation 9, Reassessment of Embedded Derivative
- IC Interpretation 10, Interim Financial Reporting and Impairment
- IC Interpretation 11, FRS 2 - Group and Treasury Share Transactions
- IC Interpretation 13, Customer Loyalty Programmes
- IC Interpretation 14, FRS 119 - The Limit on a Defined Benefit Asset, Minimum Funding Requirements and Their Interaction
- IC Interpretation 15, Agreements for the Construction of Real Estate
- IC Interpretation 12, Service Concession Agreements
- Amendments to FRS 5, Non-current Assets Held for Sale and Discontinued Operations
- Amendments to FRS 139, Financial Instruments: Recognition and Measurement,
- Reassessment of Embedded Derivative
- Amendments to FRS 1, Share-based Payment
- Amendments to FRS 9, Non-current Assets Held for Sale and Discontinued Operations
- Amendments to FRS 12, Service Concession Agreements
- Amendments to FRS 15, Agreements for the Construction of Real Estate
- IC Interpretation 16, Hedges of a Net Investment in a Foreign Operation
- IC Interpretation 17, Distribution of Non-cash Assets to Owners

(b) Basis of measurement (continued)

The financial statements have been prepared on the historical cost basis.

(c) Functional and presentation currency

The financial statements are presented in Ringgit Malaysia (RM), which is the Commission’s functional currency. All financial information presented in RM has been rounded to the nearest thousand, unless otherwise stated.

(d) Use of estimates and judgements (continued)

The preparation of financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

2. Significant accounting policies

The accounting policies set out below have been applied consistently to the periods presented in these financial statements, and have been applied consistently by the Commission.

(a) Property, plant and equipment

(i) Recognition and measurement

Items of property, plant and equipment are stated at cost less any accumulated depreciation and any accumulated impairment losses.

Cost includes expenditures that are directly attributable to the acquisition of the asset and any other costs directly attributable to bringing the asset to working condition for its intended use, and the costs of dismantling and removing the items and restoring the site on which they are located. The cost of self-constructed assets also includes the cost of materials and direct labour. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When significant parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment.

(b) Depreciation

Depreciation is recognised in the income and expenditure statement on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Freehold land is not depreciated. Property, plant and equipment under construction are not depreciated until the assets are ready for their intended use.
Notes to the financial statements (continued)

2. Significant accounting policies (continued)

(a) Property, plant and equipment (continued)

(ii) Depreciation (continued)

The estimated useful lives for the current and comparative periods are as follows:

- Office and communication equipment: 6 – 7 years
- Computer equipment: 3 – 5 years
- Furniture and fittings: 6 – 7 years
- Motor vehicles: 5 years
- Building: 50 years

Depreciation methods, useful lives and residual values are reassessed at the balance sheet date.

(b) Fees and other receivables

Fees and other receivables are initially recognised at their cost when the contractual right to receive cash or another financial asset from another entity is established.

Subsequent to initial recognition, receivables are stated at cost less allowance for doubtful debts.

Receivables are not held for the purpose of trading.

(c) Cash and cash equivalents

Cash and cash equivalents consist of cash on hand, balances and deposits with banks and highly liquid investments which have an insignificant risk of changes in value.

(d) Provisions

A provision is recognised when it is probable that an outflow of resources embodying economic benefits will be required to settle a present obligation (legal or constructive) as a result of a past event and a reliable estimate can be made of the amount.

(ii) Payables

Payables are measured initially and subsequently at cost. Payables are recognised when there is a contractual obligation to deliver cash or another financial asset to another entity.

(f) Impairment of assets

The carrying amounts of assets except for financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset’s recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less cost to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the “cash-generating units”).

An impairment loss is recognised if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in the income and expenditure statement.

Impairment losses recognised in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset’s carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised. Reversals of impairment losses are credited to the income and expenditure statement in the year in which the reversals are recognised.

(h) Tax expense

Tax expense is in respect of tax on interest income received during the financial year. All other income is exempted from taxation as the Commission is tax exempt under Section 127(3) of the Income Tax, 1967.

Tax expense comprises current and deferred tax. Tax expense is recognised in the income and expenditure statement except to the extent that it relates to items recognised directly in equity, in which case it is recognised in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised using the balance sheet method, providing for temporary differences between the carrying amounts of assets and liabilities for reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for temporary differences that affects neither accounting nor taxable profit (tax loss). Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax liability is recognised for all taxable temporary differences.

A deferred tax asset is recognised to the extent that it is probable that future taxable profits will be available against which temporary difference can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

(i) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currency of the Commission at exchange rates at the dates of the transaction.

Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are restated to the functional currency at the exchange rate at that date. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are restated to the functional currency at the exchange rate at the date that the fair value was determined. Foreign currency differences arising on retranslation are recognised in the income and expenditure statement.
Notes to the financial statements (continued)

2. Significant accounting policies (continued)

(i) Recognition of income

(i) Operating license fees

Operating license fees are recognised on the following basis:-

a) a minimum RM50,000 or a maximum license fees of 0.50% of Gross Annual Turnover is recognised on an accrual basis upon the anniversary of the license and annually thereafter.

b) the difference between the minimum and the maximum refers to maximum rebates of 0.35% given to licensees only upon meeting the criteria set and approved by the Commission.

(ii) Spectrum fees

Spectrum fees consist of apparatus and spectrum assignment fees. Renewal notifications are sent to the assignment holders before the expiry of the assignment. Upon receiving the notification, the assignment holders are required to make a fresh application for new assignment. Spectrum fees are recognised on accrual basis over the licensee periods granted.

(iii) Interest income

Interest income is recognised in the income and expenditure statement as it accrues, taking into account the effective yield on the asset.

(j) Employee benefits

Short term employee benefits

Short-term employee benefit obligations in respect of salaries, annual bonuses, paid annual leave and sick leave are measured on an undiscounted basis and are expensed as the related service is provided.

A provision is recognised for the amount expected to be paid under short-term cash bonus if the Commission has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

The Commission’s contributions to statutory pension funds are charged to the income and expenditure statement in the year to which they relate. Once the contributions have been paid, the Commission has no further payment obligations.

3. Property, plants and equipment

<table>
<thead>
<tr>
<th>Office and communication equipment</th>
<th>Computer equipment</th>
<th>Furniture and fittings</th>
<th>Motor vehicles</th>
<th>Freehold land</th>
<th>Building</th>
<th>Capital work-in-progress</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM'000</td>
<td>RM'000</td>
<td>RM'000</td>
<td>RM'000</td>
<td>RM'000</td>
<td>RM'000</td>
<td>RM'000</td>
<td>RM'000</td>
</tr>
<tr>
<td>Cost</td>
<td>4,971</td>
<td>48,128</td>
<td>2,967</td>
<td>5,636</td>
<td>10,873</td>
<td>36,729</td>
<td>50,652</td>
</tr>
<tr>
<td>Additions</td>
<td>355</td>
<td>49,493</td>
<td>291</td>
<td>1,133</td>
<td></td>
<td>-</td>
<td>56,948</td>
</tr>
<tr>
<td>Disposals</td>
<td>-</td>
<td>-</td>
<td>(444)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Reclassification</td>
<td>-</td>
<td>56,118</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(56,118)</td>
<td></td>
</tr>
<tr>
<td>At 31 December 2008</td>
<td>5,326</td>
<td>153,739</td>
<td>3,258</td>
<td>6,325</td>
<td>10,873</td>
<td>36,729</td>
<td>210,160</td>
</tr>
<tr>
<td>Additions</td>
<td>686</td>
<td>4,612</td>
<td>303</td>
<td>811</td>
<td>-</td>
<td>1,544</td>
<td>7,956</td>
</tr>
<tr>
<td>Disposals</td>
<td>(1)</td>
<td>(22)</td>
<td>(312)</td>
<td>-</td>
<td>-</td>
<td>(335)</td>
<td>-</td>
</tr>
<tr>
<td>At 31 December 2009</td>
<td>6,011</td>
<td>158,329</td>
<td>3,561</td>
<td>6,824</td>
<td>10,873</td>
<td>36,729</td>
<td>224,081</td>
</tr>
<tr>
<td>Accumulated depreciation</td>
<td>2,484</td>
<td>46,290</td>
<td>1,356</td>
<td>3,250</td>
<td>-</td>
<td>2,449</td>
<td>55,829</td>
</tr>
<tr>
<td>Charge for the year</td>
<td>728</td>
<td>22,864</td>
<td>458</td>
<td>757</td>
<td>735</td>
<td>-</td>
<td>25,542</td>
</tr>
<tr>
<td>Disposals</td>
<td>-</td>
<td>-</td>
<td>(444)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(444)</td>
</tr>
<tr>
<td>At 31 December 2008</td>
<td>3,212</td>
<td>69,154</td>
<td>1,814</td>
<td>3,563</td>
<td>-</td>
<td>3,184</td>
<td>80,927</td>
</tr>
<tr>
<td>Charge for the year</td>
<td>780</td>
<td>30,485</td>
<td>474</td>
<td>871</td>
<td>-</td>
<td>734</td>
<td>33,344</td>
</tr>
<tr>
<td>Disposals</td>
<td>(1)</td>
<td>(17)</td>
<td>(172)</td>
<td>-</td>
<td>-</td>
<td>(190)</td>
<td>-</td>
</tr>
<tr>
<td>At 31 December 2009</td>
<td>3,991</td>
<td>99,622</td>
<td>2,288</td>
<td>4,262</td>
<td>-</td>
<td>3,918</td>
<td>114,081</td>
</tr>
<tr>
<td>Net book value</td>
<td>2,487</td>
<td>1,828</td>
<td>1,611</td>
<td>2,386</td>
<td>10,873</td>
<td>34,280</td>
<td>50,652</td>
</tr>
<tr>
<td>At 31 December 2008</td>
<td>2,114</td>
<td>84,585</td>
<td>1,444</td>
<td>2,762</td>
<td>10,873</td>
<td>33,545</td>
<td>210,135</td>
</tr>
<tr>
<td>At 31 December 2009</td>
<td>2,020</td>
<td>58,707</td>
<td>1,273</td>
<td>2,562</td>
<td>10,873</td>
<td>32,811</td>
<td>110,000</td>
</tr>
</tbody>
</table>
4. Fees and other receivables

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RM'000</td>
<td>RM'000</td>
</tr>
<tr>
<td>Fees receivables</td>
<td>9,944</td>
<td>8,684</td>
</tr>
<tr>
<td>Less: Allowance for doubtful debts</td>
<td>(8,579)</td>
<td>(5,933)</td>
</tr>
<tr>
<td></td>
<td>3,365</td>
<td>2,751</td>
</tr>
<tr>
<td>Interest income receivables</td>
<td>20,550</td>
<td>25,328</td>
</tr>
<tr>
<td>Advances to staff</td>
<td>189</td>
<td>154</td>
</tr>
<tr>
<td>Other deposits</td>
<td>433</td>
<td>387</td>
</tr>
<tr>
<td>Other receivables</td>
<td>2,188</td>
<td>76</td>
</tr>
<tr>
<td>Staff loans</td>
<td>453</td>
<td>310</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>27,178</td>
<td>29,006</td>
</tr>
</tbody>
</table>

5. Cash and cash equivalents

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RM'000</td>
<td>RM'000</td>
</tr>
<tr>
<td>Cash and bank balances</td>
<td>6,840</td>
<td>1,017</td>
</tr>
<tr>
<td>Deposits placed with licensed banks</td>
<td>1,450,734</td>
<td>1,172,281</td>
</tr>
<tr>
<td></td>
<td>1,462,574</td>
<td>1,173,278</td>
</tr>
</tbody>
</table>

6. Accumulated fund

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RM'000</td>
<td>RM'000</td>
</tr>
<tr>
<td>Initial fund</td>
<td>60,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Accumulated surplus brought forward</td>
<td>1,031,364</td>
<td>856,565</td>
</tr>
<tr>
<td>Payments made to the consolidated trust fund</td>
<td>(116,440)</td>
<td>(45,000)</td>
</tr>
<tr>
<td>Contribution to the Sarawak Rural Broadband Initiative Project</td>
<td>-</td>
<td>(10,000)</td>
</tr>
<tr>
<td>Excess of income over expenditure after tax</td>
<td>914,884</td>
<td>801,565</td>
</tr>
<tr>
<td></td>
<td>253,523</td>
<td>229,799</td>
</tr>
<tr>
<td>Accumulated surplus carried forward</td>
<td>1,288,407</td>
<td>1,091,364</td>
</tr>
</tbody>
</table>

The initial fund has been utilised to finance the working capital of the Commission.

7. Deferred income

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RM'000</td>
<td>RM'000</td>
</tr>
<tr>
<td>Current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spectrum fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3G spectrum assignment fees</td>
<td>22,839</td>
<td>21,506</td>
</tr>
<tr>
<td>Apparatus assignment fees</td>
<td>205,798</td>
<td>47,540</td>
</tr>
<tr>
<td>Operating license fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class license fees</td>
<td>629</td>
<td>589</td>
</tr>
<tr>
<td>Individual license fees</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>Courier license fees</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>229,267</td>
<td>69,735</td>
</tr>
<tr>
<td>Non-current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spectrum fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3G spectrum assignment fees</td>
<td>113,339</td>
<td>128,794</td>
</tr>
<tr>
<td>Apparatus assignment fees</td>
<td>617</td>
<td>516</td>
</tr>
<tr>
<td></td>
<td>113,956</td>
<td>129,310</td>
</tr>
</tbody>
</table>

Deferred income relates to the amount of unearned income from advance payment by licensees for future financial period’s.

8. Other payables and accrued expense

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RM'000</td>
<td>RM'000</td>
</tr>
<tr>
<td>Other payables</td>
<td>8,095</td>
<td>8,588</td>
</tr>
<tr>
<td>Accrued expenses</td>
<td>20,347</td>
<td>37,074</td>
</tr>
<tr>
<td></td>
<td>28,442</td>
<td>45,662</td>
</tr>
</tbody>
</table>

9. Federal consolidated fund

Compounds paid by offenders to the Commission due to non-compliance with the Communications and Multimedia Act 1998 or its regulations and is payable to the Federal Consolidated Fund.
10. Tax expense

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income tax expense</td>
<td>RM’000</td>
<td>RM’000</td>
</tr>
<tr>
<td>- current year</td>
<td>8,981</td>
<td>10,159</td>
</tr>
<tr>
<td>- prior year</td>
<td>-</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>8,981</td>
<td>10,223</td>
</tr>
</tbody>
</table>

Reconciliation of tax expense

<table>
<thead>
<tr>
<th>Excess of income over expenditure before taxation</th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax at statutory tax rate of 25% (2008: 26%)</td>
<td>65,626</td>
<td>62,406</td>
</tr>
<tr>
<td>Tax exempt income</td>
<td>(97,218)</td>
<td>(76,406)</td>
</tr>
<tr>
<td>Non-deductible expenses</td>
<td>30,573</td>
<td>26,162</td>
</tr>
<tr>
<td>Under provision in prior year</td>
<td>8,981</td>
<td>10,159</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>64</td>
</tr>
<tr>
<td>Tax expense</td>
<td>8,981</td>
<td>10,223</td>
</tr>
</tbody>
</table>

The Commission has been granted tax exemption from Year of Assessment 2000 onwards by the Ministry of Finance under Section 127(3)(b) of the Income Tax Act, 1967. The current tax expense is in respect of interest income not exempted from tax.

11. Key management personnel compensation

The key management personnel compensation is as follow:

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commission and Executive Committee members’ remuneration</td>
<td>3,760</td>
<td>3,507</td>
</tr>
</tbody>
</table>

12. Capital commitment

<table>
<thead>
<tr>
<th>Property, plant and equipment</th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorised but not contracted for</td>
<td>24,500</td>
<td>15,000</td>
</tr>
<tr>
<td>Contracted but not provided for and payables</td>
<td>1,356</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>25,856</td>
<td>15,000</td>
</tr>
</tbody>
</table>

13. Related parties

Identity of related parties

For the purposes of these financial statements, parties are considered to be related to the Commission if the Commission has the ability, directly or indirectly, to control the party or exercise significant influence over the party in making financial and operating decisions, or vice versa, or where the Commission and the party are subject to common control or common significant influence. Related parties may be individuals or other entities.

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Commission either directly or indirectly. The key management personnel includes all the Members of the Commission, and certain members of senior management of the Commission.

The Commission has a related party relationship with its Members and key management personnel.

Transactions with key management personnel

There are no other transactions with key management personnel other than key management personnel compensation as disclosed in Note 11.

Other related party transactions

There are no significant related party transactions other than those disclosed in Note 11 in the financial statements.

14. Financial instruments

Financial risk management objectives and policies

The Commission’s activities are exposed to a variety of financial risks, including liquidity risks, cash flow risks, credit risk and interest rate risk.
14. Financial instruments (continued)

The Commission’s overall financial risk management objective is to ascertain, to address and to control the risks to which the Commission is exposed so as to minimise the financial downside risks at reasonable costs.

The Commission Members are primarily responsible for the management of these risks and to formulate policies and procedures for the management thereof. The management regularly reviews and assesses the financial risk management policies to ensure that the policy guidelines are adhered to.

Liquidity risk
The Commission monitors and maintains a level of cash and cash equivalents deemed adequate by management to finance the Commission’s operation and to mitigate the effects of fluctuation in cash flows.

Credit risk
Credit risk is the potential exposure of the Commission to losses in the event of non-repayment of license fees from licensees.

At the balance sheet date, there was no significant concentration of credit risk. The maximum exposure to credit risk for the Commission is represented by the carrying amount of each financial asset in the balance sheet.

Interest rate risk
The Commission is exposed to interest rate risk on fixed deposits. The Commission does not transact in any interest rate swaps.

Effective interest rates and repricing analysis
In respect of interest-earning financial assets, the following table indicates their average effective interest rates at the balance sheet date and the periods in which they mature, or if earlier, reprice.

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Effective</td>
<td>Effective</td>
</tr>
<tr>
<td></td>
<td>interest rate</td>
<td>interest rate</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Within 1 year</td>
<td>RM'000</td>
<td>RM'000</td>
</tr>
<tr>
<td>Within 1 - 5 years</td>
<td>RM'000</td>
<td>RM'000</td>
</tr>
<tr>
<td>Fixed rate instruments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits</td>
<td>2.55</td>
<td>3.39</td>
</tr>
<tr>
<td>Fair values</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognised financial instruments</td>
<td>1,455,734</td>
<td>1,154,378</td>
</tr>
</tbody>
</table>

Recognised financial instruments
The carrying amounts of cash and cash equivalents, fees and other receivables and payables approximate fair values due to the relatively short term nature of these financial instruments.

Statement by the Members of the Malaysian Communications and Multimedia Commission

We, Tan Sri Khalid Ramli and Datuk Md Afendi Bin Hamdan, being two of the Members of the Malaysian Communications and Multimedia Commission, do hereby state that in the opinion of the Members of the Commission, the financial statements set out on pages 180 to 196 are drawn up in accordance with Financial Reporting Standards in Malaysia so as to give a true and fair view of the financial position of the Commission as at 31 December 2009 and of its income and expenditure and cash flows for the year then ended.

On behalf of Members of the Malaysian Communications and Multimedia Commission:

Tan Sri Khalid Ramli
Chairman

Datuk Md Afendi Hamdan
Commission Member

Kuala Lumpur,
Date: 29 July 2010
Statutory declaration

I, Hj Ruzlan Zabidi, the officer primarily responsible for the financial management of Malaysian Communications and Multimedia Commission, do solemnly and sincerely declare that the financial statements set out on pages 180 to 196 are, to the best of my knowledge and belief, correct and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declarations Act, 1960.

Subscribed and solemnly declared by the abovenamed in Kuala Lumpur on 29 July 2010.

Hj Ruzlan Zabidi

Before me:

Independent auditors’ report to the members of
Malaysian Communications and Multimedia Commission

We have audited the financial statements of Malaysian Communications and Multimedia Commission (Commission), which comprise the balance sheet as at 31 December 2009, and the income and expenditure statement, statement of total recognised gains and losses and cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory notes, as set out on pages 180 to 196.

Commission Members’ Responsibility for the Financial Statements

The members of the Commission are responsible for the preparation and fair presentation of these financial statements in accordance with Financial Reporting Standards in Malaysia. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditors’ Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with approved standards on auditing in Malaysia. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Commission’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Commission’s internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Commission Members, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements have been properly drawn up in accordance with Financial Reporting Standards in Malaysia so as to give a true and fair view of the financial position of the Commission as of 31 December 2009 and of its financial performance and cash flows for the year then ended.

Other Matters

This report is made solely to the members of the Commission, as a body, in accordance with Section 41(2) of the Malaysian Communications and Multimedia Commission Act 1998 and for no other purpose. We do not assume responsibility to any other person for the content of this report.

KPMG
Firm Number: FAF 0758
Chartered Accountants

Ahmad Nasri Abdul Wahab
Approval Number: 2919/03/12(J)
Chartered Accountant

Petaling Jaya,
Date: 29 July 2010