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Session 7: Plenary Session

Introduction to
"Brunei Darussalam Information Society – the Strategy"

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DEVELOPMENT OF BRUNEI e-STRATEGY PAPER

Background History

The idea to develop Brunei e-Strategy Paper was first conceived around the middle of 2003 intended to serve as reference when attending the various regional and preparatory meetings leading towards the first phase of WSIS. The development of Brunei e-Strategy Paper then underwent the following process:

- An initial draft was prepared by the Ministry of Communications.
- The draft was subsequently sent to all known stakeholders including non-government entities for comments. Not many comments were received.
- A drafting group was formed represented by organizations who did respond to the initial draft. The group with members of less than 10 members was led by the Ministry of Communications and had a few meetings to incorporate the input into the draft.
- In the beginning of 2004 i.e. right after the first WSIS, a new idea was conceived to organize NASIS which is modeled from WSIS in which all stakeholders are invited to attend to voice out issues considered important.
- The Brunei e-Strategy Paper was considered best debated in NASIS. A concept paper on NASIS was produced and eventually submitted to the Prime Minister's Office in late 2004. Since NASIS is a multi-stakeholders forum, it represents the best platform for initial endorsement of the e-strategy paper.
- Having obtained the approval to organize NASIS, an e-strategy committee led by the Ministry of Communications was created represented by selected stakeholders to further work on the draft. Three meetings were held. The final draft of the paper was sent to all government ministries for comments.
- The final draft will be tabled as a paper during NASIS conference on 7-8 September 2005 to give opportunity to all stakeholders to comment on it. In addition, input and recommendations put up during the NASIS conference will also be compiled and incorporated into the e-Strategy Paper.

To complete the above process an ad-hoc group, the members of which come from both the public and private sector including individuals and civil societies will be created to further polish the draft paper. The size of the adh-hoc group shall be less than 30 members and evenly represented by the government and non-government sectors. The final agreed version of the paper will be submitted to the Honourable Minister of Communications.

SKELETAL STRUCTURE OF
BRUNEI DARUSSALAM INFORMATION SOCIETY – THE STRATEGY PAPER

1.   **INTRODUCTION**

In the Plan of Action of the World Summit of Information Society (WSIS) held in Geneva in December 2003, all countries are encouraged to develop their own respective e-strategies by initiating at the national level a structured dialogue involving all relevant stakeholders.

As a follow-up, a National Summit on Information Society (NASIS) was held in Brunei Darussalam on 7-8 September 2005 and participated by all relevant local stakeholders to discuss many issues concerning the creation of an Information Society in Brunei Darussalam.

The purpose of this paper is to set the vision and strategy of Brunei Darussalam towards creating an Information Society. This paper was initially developed by selected stakeholders and further developed by incorporating comments made by other stakeholders during NASIS.

2.   **BACKGROUND**

The global information society is evolving at breakneck speed. The accelerating convergence between telecommunications, broadcasting multimedia and information and communication technologies (ICTs) is driving new products and services, as well as ways of conducting business and commerce. At the same time, commercial, social and professional opportunities are exploding as new markets open to competition and foreign investment and participation. The modern world is undergoing a fundamental transformation as the industrial society that marked the 20th century rapidly gives way to the information society of the 21st century. This dynamic process promises a fundamental change in all aspects of our lives, including knowledge dissemination, social interaction, economic and business practices, political engagement, media, education, health, leisure and entertainment. We are indeed in the midst of a revolution, perhaps the greatest that humanity has ever experienced.

3.   **KNOWLEDGE ECONOMY IS THE FUTURE**

There was a time when land was the most fundamental basis of prosperity and wealth. Then, came the second wave, the age of industrialization. Now, increasingly, knowledge will not only be the basis of power but also prosperity. In the pursuit towards developing the knowledge economy, knowledge has to replace labour and capital as the key factors of production in our economy. A knowledge economy is therefore where information and communication technology (ICT) is one of the components playing an important role.

4.   **NATIONAL VISION ON INFORMATION SOCIETY**

The vision of Brunei Darussalam on Information Society is to create a people-centered, inclusive and development-centered Information Society where everyone can create, access, utilize and share information and knowledge.

This shall be supported by a ubiquitous access to highly-developed ICT networks to enable individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life and transform Brunei Darussalam into a knowledge-economy.

5.   **OBJECTIVES**

To meet the challenges of making sure that everyone can benefit from the opportunities that ICTs can offer, all stakeholders should work together to improve access to information and communication infrastructure and technologies as well as to information and knowledge; build capacity; increase confidence and security in the use of ICTs; create an enabling environment at all levels; develop and widen ICT applications; foster and respect cultural diversity; recognize the role of the media; address the ethical dimensions of the Information Society; and encourage international and regional cooperation. These are the key principles for building an inclusive Information Society.

In addition, special focus would be given to the following objectives:

a. Through relevant agencies, provide national leadership and innovation in ICT and manage the strategic use of ICT in the country;

b. To coordinate and examine the ICT needs of the public sector and provide relevant guidance to the private sector;

c. To facilitate the construction and expansion of an interconnected and interoperable national information infrastructure.

d. To promote free and efficient flow of information.

e. To further the development of human resources by:

   i. Enhancing the level of ICT literacy among all members of the Brunei Darussalam's society.

   ii. Ensuring a sustainable level of the supply of needed IT experts and other personnel in the country.

f. To promote effective application of ICT, facilitate best practices in the public and private sectors and reduce the cost of doing business.

g. To scan strategic and leading edge information technologies and to promote their effective diffusion in Brunei Darussalam through R&D and dissemination.

h. To create a policy and regulatory environment favorable to the development of a national information infrastructure.

i. To promote the development of ICT industries in particular the development of content and e-Application.

j. To promote the establishment and growth of ICT-linked businesses and services.

k. To promote and maintain strong regional and international cooperation in ICT developments including global business activities.

6. CORE STRATEGIES

To realize the vision towards an Information Society, Negara Brunei Darussalam subscribes to the following core strategies which shall be in line with the national vision and MIB philosophy:

a. Promoting a competition-driven environment.

b. Encouraging business/private sector investment and participation.

c. Creating a sound and dynamic policy and regulatory framework.

d. Intensifying cooperation among main players in both the public and private sector in the development of the information infrastructure.

e. Narrowing the infrastructure gap between the least developed areas and most developed areas.

f. Ensuring open and non-discriminatory access to public telecommunications networks for all information providers and users in accordance with the laws and regulations

g. Ensuring universal provision of an access to public telecommunications services.

h. Promotion of diversity of content including cultural and linguistic diversity.

i. Ensuring the protection of intellectual property rights, privacy and data.

j. Promotion of Research & Development.

7. CURRENT DEVELOPMENT

a. Brunei Competitiveness: Where are we?

In our effort to create an Information Society towards the fulfillment of Knowledge Economy, it is crucial to benchmark Brunei Darussalam against other established economies. The following indicators may be used to assess Brunei Darussalam's development towards an Information Society:

Indicators	Brunei	Germany	Korea	Malaysia	Singapore
Population (Million)	0.36	82	46	21	4.20
Land Area, '000 Sq Km	5.8	349	99	329	0.7
GNP US$ billion		2319.5	485.2	98.2	86.8
GNP at PPP per capita US$	14,400	21,300	13500	10920	22,800
Mobile Phones per 100 people[1]	58.7[2]	78.52	70.09	56.5[3]	94.0[4]
Fixed Line Telephones per 100 people[5]	23.2[6]	65.16	48.86	16.5[7]	44.5[8]
PCs per 100 people[9]	7.67	48.47	55.80	16.69	62.20
Internet Hosts per 10,000 people[10]	176.90	315.39	797.62	42.90	1,155.31
Scientists & Engineers in R&D per million people		3016	2636	87	
No. of patents filed, residents		51948	59249	141	
No. of patents filed, non-residents		84667	37308	3911	
SMEs level of ICT Usage					
Internet Access to school	92% (2004)	92%	57.2% (yr 2000)	15%	92% (yr 2002)
ICT/Computer Lab per school (at least 1 lab) Primary and Secondary	100% (2004)	90%	50.6	35%	96% (yr 2002)
ICT Spending (% if GDP)					
Total No of SMS/1000 people					
Total Internet Price as % of GNI per capita	1.4	0.7	1.2	2.9	0.6
Cost of broadband/100kbps					
Amount of e-transaction/1000 people					

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[1] Source: www.itu.int (Cellular Subscribers)

[2] Source: DST 1ST Quarter 2005 Report

[3] Source: MCMC: Communications & Multimedia – Selected Facts and Figures Q1 2004

[4] Source:
http://www.ida.gov.sg/idaweb/factfigure/infopage.jsp?infopagecategory=&infopageid=I3365&versionid=1

[5] Source: ITU's Yearbook of Statistics: Chronological Time Series 1993-2002

[6] Source: Jabatan Telekom Brunei (JTB) Statistics of the year 2004.

[7] Source: MCMC: Communications & Multimedia – Selected Facts and Figures Q1 2004

[8] Source:
http://www.ida.gov.sg/idaweb/factfigure/infopage.jsp?infopagecategory=&infopageid=I3365&versionid=1

[9] Source: www.itu.int (Information Technology)

[10] Source: www.itu.int (Information Technology)

[11] Source: Brunei's 8th National Development Plan Book

b. Existing Infrastructures and Initiatives

One of the critical success factors that will develop Brunei Darussalam into a knowledge economy is the deployment of a robust well –established and extensive communications network and information infrastructure with reliable, efficient and cost effective connectivity to all major business centers in the region and the world.

Over the next few years, we will witness a transition from existing network infrastructures towards Next Generation Networks (NGN) as a result of the convergence process leading to different application/services sharing network infrastructures. It is imperative that telecommunication network architectures need to continually evolve to meet the new requirements for new services and applications (for e.g. Broadband, IP, Multimedia, Mobile, etc) in order to provide companies in Brunei Darussalam the competitive edge in conducting their businesses.

c. E-Government Initiative

One of the many applications that will drive Brunei Darussalam towards an Information Society is the e-government initiative which is currently being implemented. Under this project, all government ministries and departments will be connected via broadband network enabling electronic services to be delivered to the general public. A total amount of about B$1 billion has been allocated for the implementation of e-government services which is a significant proportion of the total government's budget. Under the leadership of the Brunei Information Technology (BITS) Council the e-government project is now being smoothly implemented.

8. INFORMATION SOCIETY: FOCUS AREAS

ICT applications can support sustainable development, in the fields of public administration, business, education and training, health, employment, environment, agriculture and science within the framework of national e-strategy. This would include primary focus on the following sectors:

a. **E-Government** : Use of ICT will enable policies more accountable and transparent and will enable better monitoring, evaluation and control of public services and allow for greater efficiency in their delivery. Public administration can make use of ICT to enhance transparency, accountability and efficiency in the delivery of public services to citizens and to enterprises.

b. **E-Business** : Enterprises both large and small can use ICTs to foster innovation, realize gains in productivity, reduce transaction costs and benefit from network externalitites. In support of this process, the government needs to simulate, through the adoption of an enabling environment services, regulatory framework for the promotion of private investment in applications and content, based on a widely available broadband infrastructure, and foster public-private partnerships. Use of digital technologies can enhance the role of enterprises in promoting entrepreneurship, the accumulations of knowledge, the upgrading of skills, and thereby increasing productivity, incomes and jobs and promoting qualitative improvement of working life. Special attention should be given to small and medium enterprises both as beneficiaries and promoter of e-business.

c. **E-Society** : In the Information Society, the involvement and participation of all, irrespective of gender or economic status, as well as the facilitation of ICT use in daily life and work, is a major objective. The government should actively promote the involvement of different stakeholders in the development of applications that improve overall quality of life, particularly in key areas such as education and health at the local community level. Public policy should also foster the creation of varied information content, which helps to preserve and disseminate local and national culture, language and heritage. Promotion of cultural diversity and identity, including the creation of varied information content and the digitalization of the educational, scientific and cultural heritage is an important priority in the development of the Information Society.

In addition, the following sectors will also be given special attention:

d. **E-Education** : Education is another promising area where there are boundless opportunities to exploit info-communication for a more enriching experience. As the vision for e-Education stated to transform Brunei Darussalam to a more knowledgeable, thoughtful, multi-skilled, competitive and smart nation upon the teaching of Islam according to Ahli Sunnah Waljamaah. This is where e-Learning, one of the project pillars, through "Smart schools and smart learning" leverages on info-communication technologies to enhance learning and teaching. By adopting interactive broadband multimedia content in their curricula, students experience enhanced learning process particularly in the understanding of difficult concepts via enabling features such as visualization of the educational concepts, interactive animations, simulations and online experiments. The use of broadband through e-Learning allows for interactive and media rich content and students can enjoy the self-directed and self-paced learning process. A number of e-Learning initiatives should be supported and adopted in Brunei Darussalam to propagate and promote e-learning standards, certification,

benchmarking and development. e-Learning is strategic to Brunei Darussalam in order to build manpower capabilities through distance and life long learning, bridge the digital divide and help Brunei Darussalam compete in the knowledge-based economy.

e. **E-Health :** e-Health will use emerging ICTs to improve, enable or enhance health and healthcare services delivered across the nation. Through the e-Health initiative, we can i) Improve health status by supporting healthy lifestyles, improving health decisions, and enhancing health care quality; ii) Reduce health care costs by improving efficiencies in the healthcare system and prevention; iii) Empower people to take greater control of their health by supporting better-informed health decisions and self-care; iv) Enhance clinical care and public health services by facilitating health professional practice and communication; and v) Reduce health disparities by applying new approaches to improve the health of underserved populations. In brief, ensuring access to and quality of e-Health resources will be central to realizing and maintaining health in the future. [Further input by MOH]

f. ~~**E-Agriculture** : With the agro-industry as a potential growth area in Brunei Darussalam's diversification from oil and gas and the move to a Knowledge Economy, e-Agriculture can play an essential role in ensuring a systematic dissemination of information using ICTs on agriculture, fisheries, animal husbandry, forestry and food. E-agriculture will provide ready access to comprehensive, up-to-date and detailed knowledge and information, particularly in rural areas. Production in terms of quantity and quality can be improved through maximizing the use of ICTs in the agro-industry.~~ [*Suggested by MIPR to be deleted*]

g. **E-Industry** : With the manufacturing, primary resources and tourism sectors as a potential growth area in Brunei Darussalam's diversification from oil and gas and the move to a Knowledge Economy, e-Industry can play an essential role in ensuring a faster, efficient and friendly delivery of services using ICTs for the development of the manufacturing, tourism, agriculture, fisheries and forestry sectors. ICTs will enable the provision of an integrated applications system to provide fast, efficient and friendly seamless on-line services to citizens, entrepreneurs, businesses and investors in the sectors. ICTs will enable citizens, entrepreneurs, businesses and investors to apply for licences, permits, industrial land, financial loans as well as entrepreneurial and business support such as consultation, training, promotion and marketing on-line. Workflows will be shortened and processes streamlined enabling increased efficiency and productivity. In the long term, productivity of these sectors in terms of quantity and quality can be improved through maximizing the use of ICTs.[*Input provided by MIPR*].

h. E-Employment : [Input by MOHA]

ICTs can provide tools for new job creation and enhance competitiveness and productivity through teleworking, enterprise networking and efficient linking of job seekers and employers. Best practices and new labour laws for e-workers and e-employers built on principles of social justice and gender equality should be developed. Telecommuting should be promoted to allow the best brains of the developing world to live in their societies and work anywhere.

i. E-Environment : [Input by MoD?]

The use of ICTs in a sustainable environmental protection strategy encompasses environmental data finding, environmental data analysis and environmental monitoring.

Environmental data finding, analysis and monitoring provide the world community with improved access to meaningful data and information, and help increase the capacity of governments to use environmental information for decision-making and action planning for sustainable human development.

Relevant international institutions should thus develop a strategy for the use of ICTs for sustainable development. The government and the private sector should develop different instruments that can help to extract the maximum environmental benefits from ICTs and speed the development of sustainability solutions throughout society.

j. E-science : [Input by MoD/MoE]

9. IMPROVEMENT AREAS

a. Information and communication infrastructure: financing and investment, accessibility & affordability, development and sustainability.

Apart from the backbone network, the most difficult component of the network to build, and the least cost-effective to maintain, has proved to be the local access network. The cost of investment and engineering efforts required to build and maintain copper based networks has made high penetration rates for basic telephony only to the industrialized part of the world. The "last mile" access to customer premises also needs to ensure that it can accommodate the bandwidth requirements of a growing number of multimedia applications. While these growing numbers of multimedia applications will be made available over the next few years, service providers must ensure that these applications are made available to the consumers at an affordable cost.

b. Access to information and knowledge.

A widespread use of ICT by citizens is necessary in accessing information and knowledge.Citizens are encouraged to be aware of the benefits that a knowledge economy brings and seeks to encourage greater ICT adoption and higher level ICTs literacy among Bruneians. With a high-speed network infrastructure capable of fast data and multimedia content transfer, the ICT savy citizens will be able to access information and knowledge almost anywhere and anytime.

c. The role of governments, the business sector and civil society in the promotion of ICTs for development.

The Government of Brunei Darussalam has, over the past 10 years, invested hundreds of million dollars to build such an infrastructure which in turn has rolled out services. Here, the role of the business sector is key in developing the infrastructure as well as in the provision of services. In turn, the people need to be aware of the benefits that an e-society brings and seeks to encourage greater ICT adoption and higher level infocomm literacy among Bruneians. Hence, initiatives to promote the adoption of ICT and ICT literacy complemented with initiatives to narrow the digital divide that exists between various ages, income levels and educational qualifications are best driven by a government-business-society tri-party cooperation.

d. Capacity Building human resources development, education and training.

In realizing our national information society, the overall information literacy of all the public including the senior and disabled citizens is necessary. All citizens need to acquire the basic IT knowledge and skills to enjoy the benefits of ICT basic applications and services. Education and training for ICT manpower will come in the form of highly qualified and experts who will become the ICT instructors to the public. In fostering the qualified ICT instructors, school teachers and civil service trainers should be given more opportunities on basic IT training. To cater for the public ICT training needs, the role of training experts from the industry is encouraged.

e. Security

Promote the shift to the Internet networks equipped with [IPv6] that provides enough address space and stricter protection of privacy and network security, anticipating that various Internet access and digital home appliances will

become highly popular and highly demanded to be constantly connected to the Internet.

[Further input by MoC, Tkt1]

f.   Enabling Environment

To maximize the economic and social benefits of the information society, governments need to create a trustworthy, transparent, an non-discriminatory legal, regulatory and policy environment, capable of promoting technological innovation and competition, thus favouring the necessary investments, mainly from the private sector, in the deployment of infrastructures and development of new services. Issues such as privacy protection, consumer trust, management of domain names, facilitation of e-commerce, protection of intellectual property rights, open source solutions should be addressed with the active participation of all stakeholders.

g.   Promotion of development-oriented ICT applications for all.

[Input by JPM]

h. Cultural identity and linguistic diversity, local content and media development.

[Input by KBS]

i. Identifying and overcoming barriers to the achievement of the Information Society with a human perspective. [Input by all]

j.   Strengthening Intellectual Property (IP) & Patents

In order for Brunei Darussalam to be a leader amongst the information societies of the new millennium, it needs to make a complex progression and transition to becoming an innovative and creative economy. This can be achieved through the Government encouraging and funding R & D work in order to see a steady increase in the number of patents, trade marks and industrial designs which will in turn constitute an inventory of the nation's intellectual property (IP). IP allows people to own their creativity and innovation in the same way that they can own physical property. The owner of IP can control and be rewarded for its use, and this encourages further innovation and creativity to the benefit of us all. Patents provide incentives to individuals by offering them recognition for their creativity and material reward for their marketable inventions.

k. Promoting good Internet Governance

The phenomenal growth of ICT and the Internet in particular has raised the need for an integrated mechanism for the governance by various stakeholders and agencies involved. Internet governance is now recognized as an important driving component in the development of the Information Society. For instance Internet content censorship is a main issue in Internet governance. The relevant laws, regulations and codes of practices will play a key role in providing the general guidelines for positive use of the Internet by the public. In addition, the government's role in constantly educating the public on Internet positive use is important. To some extent Internet Service Providers ISPs can also play some roles in blocking users access to certain harmful or immoral websites. However it is still almost impossible for any agency to actually regulate or censor the very dynamic nature of Internet content. Another option is the act of self-regulation by the users themselves is one success factor in administering an effective Internet governance.

10. TARGETS

a. Internet users in Brunei Darussalam to reach [60/100 population] by [year].
b. All schools to be connected by 2005.
c. All government departments to have a continuously updated website.
d. [700] Local ICT companies established by [2010].
e. To maintain fixed line telephone penetration at 25% by 2008.
f. Wireless and Fixed broadband connection of [70%] by 2010.
g. Trade on ICT infrastructure, applications and services to reach x % of GNP or GDP by [year].
h. All mukims/villages to be connected with ICTs and establish community access points by [year].
i. All health centers and hospitals to be connected by [year]
j. The number at present is 9 ICT training centers (2005).
k. [number] of Internet Hosts per 10,000 people by [year]
l. [Cost] of broadband/100kbps by [year]
m. Targets such as in Telecommunications Index and ICT Index as prepared by Global Survey firm are comparable to other smaller countries of equivalent GDP such as the following:
   a. Number of electronic transaction/100 people
   b. Total ICT spending by the public and private sectors
   c. Number of patents filed
   d. Number of Scientists & Engineers in R&D per 10,000 people
   e. Number of ICT training centers
   f. Number of local ICT professionals
   g. Others

11. **ACTION PLAN**

a. **Realignment of roles of government agencies:** To realign the roles and functions of various government agencies responsible for the regulation of converged services.

b. **Institutionalizing NASIS :** Institutionalize NASIS as a national forum which will be followed by thematic meetings of NASIS.

c. **Promotion :** To promote the use of ICT by reducing the cost of access to information and enhancing the ICT skills of people by organizing community training.

d. **Technology-Transfer:** Enforcing mandatory technology-transfer for ICT projects by obligating ICT companies to employ at least 80% local ICT professionals. [requires further confirmation]

e. **Funding:** Special incentive schemes for ICT competency programs and courses, e-business industry development funding schemes as well as incentives for the incubation of upcoming software developers are among the many special government funding schemes that could be offered in driving Brunei Darussalam towards an information society.

f. **Health Information Networks**: To develop health information networks between points of care (hospitals, laboratories and homes) with broadband connectivity where relevant.

g. **Interactive Public Services**: To provide basic public services which are interactive, where relevant, accessible for all, and exploit both the potential of broadband networks and of multi-platform access.

h. **Culture and Tourism** : To define e-services to promote the country to offer user-friendly public information which are accessible from all types of digital terminals.

i. **Reskilling for the knowledge society:** To provide adults with the key skills needed for the knowledge society, to improve their employability and overall quality of life. These actions will take advantage of the possibilities offered by e-learning.

j. **Facilitation of e-business? / Legislation:** ~~To review relevant legislation where appropriate with the aim of identifying and removing factors that prevent enterprises from using e-business.~~ To formulate policies and incentives and review relevant legislations where appropriate with the aim

of encouraging and expediting the integration of ICTs and e-Business by enterprises. [*Input by MIPR*]

k. **National CERT:** CERT able to collaborate effectively with other CERTs in developing cyber security policies and exchanging real-time information on cyber security threats and issues.

l. **Establishment of a nation-wide high speed broadband Internet access** – To promote the establishment of one of the region's most advanced High-speed access networks and enable the public who need it to have high speed of at least (256kbps as standard and up to 30-100Mbps) at affordable rates at par with other countries in the region.

m. **Local Content development** - to encourage a high demand for users to access the Internet. There will have to be an attractive content for users to find the Internet as a more convenient and popular channel to access media and entertainment content, for example, compared to the

NOTES

Stakeholders: *Stakeholders referring to:*
a.   Government that plays a role in developing national e-strategies;
b.   the private sector for diffusing ICT in the society;
c.   the civil society that creates an equitable information society and implementing ICT-initiatives for development; and
d.   the international and regional institutions that has a key role in integrating the use of ICT in the development process.

Industrial Society: *A large-scale community with diverse manufacturing sectors and an infrastructure and economy based on the science, technology and instrumental rationality of the modern West.*

Information Society: *Information Society is a term for a society in which the creation, distribution, and manipulation of information has become the most significant economic and cultural activity.*

Ubiquitous: *Existing or being everywhere, or in all places, at the same time.*

MIB: *Stands for "Melayu Islam Beraja". This national philosophy basically is a blend of Malay language, culture and Malay customs, the teaching of Islamic laws and values and the monarchy system in Brunei Darussalam.*

IPv6: *Internet Protocol version 6 is the next version of internet protocol. Its major feature is that the length of address will be expanded from 32bits to 128 bits.*

High Speed Access Networks: *The internet networks through which music, data and others can be smoothly downloaded. e.g. xDSL lines, cable TV, subscribers WAN.*

Mbps: *Mega bits per second, bps is a unit of data transmission indicating the volume of bit transmitted per second. Mbps is a million bit per second.2*