ASIA – PACIFIC TELECOMMUNITY
2nd MEETING ON ASIA - PACIFIC INITIATIVES FOR THE
INFORMATION SOCIETY (AIIS)

5-9 August 2002 – Bandar Seri Begawan, Brunei Darussalam

SUMMARY

1.   Introduction

1.1   The Asia-Pacific Telecommunity organized the 2nd Meeting on Asia-Pacific Initiatives for the Information Society (AIIS) in Bandar Seri Begawan, Brunei Darussalam from 5th to 9th August 2002. The meeting was jointly organized by the APT and the Government of Brunei Darussalam through its Ministry of Communications. The main objectives of the meeting were to monitor the Tokyo Declaration and Action Plan for bridging the digital divide in the Asia-Pacific region and identify further specific actions in this direction. Members discussed their on-going initiatives, Pilot Project proposals and future AIIS programmes and its activities. Prominent speakers from the ICT industry, Intergovernmental organizations and other global and regional organizations discussed the issues that will enhance the promotion, and development of the Information Society in the Asia-Pacific region.

1.2   The meeting was attended by 120 participants from different sectors of the Information and Communications Technology (ICT) including high-level officials from APT member countries, ICT Experts, Heads of Telecom operators and Internet service providers, Academia and other industry

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stakeholders, and representatives of Global, International, regional and local organizations.

2.   Opening Session

2.1   Mr. Amarendra Narayan, Executive Director of APT in his welcome address expressed his sincere thanks and gratitude to the Government of Brunei Darussalam for hosting the event and to the Ministry of Public Management, Home Affairs, Posts and Telecommunications of the Government of Japan for their generous contribution in supporting the Asia-Pacific Initiative for the Information Society (AIIS). He also thanked the Government of Japan for their support to this yearly meeting which contributed greatly to the overall development of the region's Telecommunications infrastructure and promotion of the Information Society in the region. He stressed upon the importance of promoting partnerships and mobilization and sharing of resources to progress the implementation of various APT programmes in areas of common interest among the members. He also stressed on the need to accelerate a qualitative and sustainable growth of telecommunications, emerging Internet market and ICT services in the region.

2.2   Mr. Zhao Houlin, Director of Telecommunication Standardization Bureau of International Telecommunication Union gave the details of the overall structure of ITU Standardization sector and its new environment. He stressed ITU's continous commitment and its relationship with APT for the benefit of members and for promoting standardization activities in the region. He suggested that it would also be beneficial if members can develop guidelines on selected matters for the benefit of the larger APT membership. With the rapid growth of Internet, the ITU-T adopts recommendations with a view to Standardizing telecommunications on a worldwide basis. Among many areas, IP related issues, mobile technologies, tariffs and accounting issues are topics of high priority of ITU-T.

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He added that there is a positive awareness amidst the rapid changes of the technological environment. It is vital that developing countries are not left behind. He also said that The ITU-T has a wide membership comprising of 189 members. In 2001, around 24% of the total member of delegates who attended the ITU-T meetings in Geneva were from developing countries.

2.3   In the message from Dr. Kim Hak-Su, Under-Secretary General of United Nations and Executive Secretary of ESCAP which was delivered by Mr. Wu Guoxiang, Dr. Kim stressed that Information and Communications Technology is a major driving force for economic and social development and for poverty reduction. ICT applications in a number of least developed countries are quite low, there is a large and wide spread digital divide between least developed, advance developing and developed countries, urban and rural areas in the region. He informed the meeting that an Information, Communications and Space Technology Division was set-up recently in ESCAP Secretariat to assist capacity-building of the countries in the region for creating an enabling environment for the development, transfer and application of ICT. He further stated that ESCAP would continue and strengthen its cooperation with other regional organization/institutions in supporting national efforts of countries in the region to facilitate the development and application of ICT in all aspects of social and economic development. As an important step in the direction ESCAP has joint hands with APT and ITU Regional Office in setting up the Interagency Working Group in ICT, as well as with the Government of China and India in the establishment of the Asia-Pacific Regional Networks of the United Nations ICT Task Force.

2.4   H.E. Yang Berhomat Pehin Dato Haji Zakaria Sulaiman, Minister of Communications, Brunei Darussalam began the inaugural address by welcoming all delegates to the APT 2nd Meeting of the AIIS and expressed pleasure in hosting the event. He stressed upon the need to have united and collective effort towards an Information Society in the Asia-Pacific. He also acknowledged the existence of digital divide and identified the needs to bridge

and gradually diminishes the divide for the sake of continued growth and development. He highlighted the issues concerning the negative influences of the Internet on the minds of younger generations. He said that for the establishment of an Information Society in the region, certainly it is our duty to emphasize the benefits of the Internet, to educate the public and to provide them with the right guidance, support and encouragement.

2.5 Selection of Session Chairman and Drafting Committee

The following Session chairpersons were unanimously elected.

Session 1   - Mr. Houlin Zhao, Director, TSB, ITU
Session 2   - Mr. Muhammad Omar Farooq, Secretary, MPT, Bangladesh
Session 3   - Mr. Hussain Shareef, D.G. PTD Maldives
Session 4   - Mr. K.K. Gunawardana, Area Representative, ITU
Session 5   - Mr. Chaijaveng Kittiyakhom, Executive Vice President, TOT, Thailand
Session 6   - Mr. Sompol Chanprasert, Vice President, CAT, Thailand
Session 7   - Ms. Cecilia V. Reyes, Assistant Secretary, DOTC, Philippines
Session 8   - Mr. Akhtar Ahmad Bajwa, Chairman and CEO PTCL, Pakistan
Session 9   - Maj. Gen. Shahzada Alam Malik, Chairman PTA, Pakistan
Session 10   - Mr. Amarendra Narayan, Executive Director, APT
Session 11   - Mr. Amarendra Narayan, Executive Director, APT
Session 12   - Mr. Mukunda Prasad Acharya, Joint Secretary, MIC Nepal
Session 13   - Prof. Dan Wedemeyer, University of Hawaii
Session 14   - Mr. Amarendra Narayan, Executive Director, APT

Chairman of Drafting Committee -
Mr. Tilson Kephas. Frequency Manager of Federated State of Micronesia was unanimously elected as Chairman of the Drafting Committee.

2.6   The proposed agenda was approved by the meeting.

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3.   Session 1: Transnational Key ICT Initiatives

Chairman: Mr. Houlin Zhao, Director, TSB, ITU

3.1   A video presentation by Mr. John Dryden, Deputy Director of OECD on the "Global Initiatives on the Information Society - A View from the OECD" was screened. In the video presentation, Mr Dryden described the OECD and scope of its work in the knowledge based economy by seizing the benefits of ICT, harnessing the potential of innovation and technology diffusion, enhancing human capital and its potential, fostering a creativeness and entrepreneurship and getting the fundamental right. He also cited the framework of the OECD's "Blueprint" and gave his personal view of the new economy. He explained the international ICT initiatives of OECD through the intergovernmental bodies, business sectors and civil society and its cooperation in the Asia-Pacific region like APT for the new matrix of works to non-members. He concluded by inviting APT for their forthcoming meeting on "Global Forum on Policy Strategies for the Digital Economy" in Honolulu Hawaii on 14 to 17 January 2003 to prepare for the World Summit on the Information Society.

3.2   Mr. Wu Guoxiang, Chief of Space Technology Applications Sections of the Information Communications and Space Technology Division of UN-ESCAP gave an overview on the efforts made by ESCAP, in cooperation with APT and ITU towards the establishment of the Regional ICT Task Force network in Asia-Pacific. He informed the meeting that a Regional Interagency Working Group on ICT was set up to enhance the complementary and synergic efforts of all relevant United Nation, international and intergovernmental organizations working in the Asia-Pacific region to develop joint projects and activities for bridging the Digital Divide, and the facilitate regional preparation towards the WSIS.

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He briefed on the decisions of the first Preparatory Meeting for the setting up of the regional ICT Task Force network in Asia. These decisions suggested the objectives, modalities, activities, membership, working mechanism of the networks and submitted to and discussed by the First Meeting of the Asia Network of the UN ICT Task Force. The meeting decided that the Asia Network of the UN ICT Task Force would comprise of inter-governmental, private sector and interagency elements. He also briefed the meeting about the recent establishment of the Information, Communication and Space Technology Division and the activities under the regional cooperation on space- base and ICT applications.

3.3   Ms. Pamela Mar, Senior Regional Manager of World Economic Forum presented a paper on World Economic Forum' s Approach to the Digital Divide Cross-sectoral and Intra-Regional Initiative. To support the initiatives, WEF focused on the implementation of a number of programmes and activities providing solutions on building awareness, launch and implement initiatives on increasing access and community-oriented project and streamline the regulatory and licensing environment.

3.4   Dr. Robert Guild, representing the Pacific Islands Forum Secretariat, presented a paper on Regional Co-operation in Sector Planning: Development of the Pacific Regional ICT Policy. He introduced the need for a Pacific ICT policy and strategic plan and cited the activities of the Council of Regional Organizations of the Pacific (CROP) Working Group on ICT to ensure that plans are consistent and complementary. He gave the draft vision of the Pacific Regional ICT Policy which is: Information and Communication Technologies for every Pacific Islander. He also outlined the guiding principles of human resources, infrastructure development, stakeholders cooperation, and regulatory frameworks. Priority activities in the areas of tele-health, multipurpose community tele-centres, HRD, and national policy and regulatory environments were emphasized. The expected result to sustain development growth throughout the Pacific region. He also informed the participants that

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the ICT Plan for the Pacific Island countries was finalized and adopted by Ministers in April 2002 and is now a regional mandate.

4.   Session 2: Intra-Regional Approaches

Chairman: Mr. Muhammad Omar Farooq, Secretary, MPT, Bangladesh

4.1   Ms. Jaroenjit Pothong, Senior Project Analyst, e-ASEAN Coordination Center Group presented the e-ASEAN ICT Initiatives and scheme of its five grouping on ASEAN Information Infrastructure (AII), e-Commerce, Trade Liberalization and Facilitation for ICT Goods and Investment, Capacity Building and e-Society and e-Government. She explained that the eASEAN task group is being Shepherd and co-shepherd by the members of ASEAN. The e-ASEAN Working Group is in collaboration with other regional bodies in the region addressing a full range of ICT services and opportunities.

4.2   Mr. Quentin Kilian presented a paper of Dr. David Hartshom on behalf of the Global VSAT Forum. He started by giving background on the key part of the solutions in improving access capacity. He further proposed a solution in Asia towards open skies for VSAT services by a consensus among most satellite operators in the region by complying the WTO trade principles as well as ITU Regulatory/Policy Principles. He further proposed a timeline and an MOU on national regulators that will facilitate direct access to all available On-Orbit Satellite while upholding national sovereignty and adhering to ITU Standards.

4.3   Mr. Shahid Akhtar, CTA and Programme Co-ordinator of the Asia-Pacific Development Information Programme (APDIP) and United Nation Development Fund (UNDP) outlined the ICT Policies and Strategies - Intra and Inter-Regional Approaches: A Catalyst of ICT Development. He analysed the statistics on Internet usage, ICT market and business network readiness. He pointed out some of the potential benefits of ICT in expanding economic growth, improved welfare and stronger form of democratic government. He

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emphasized some snapshots on national ICT strategies in Asia-Pacific region by citing several major issues on ICT and Public sector, bridging the digital divide, legal and regulatory framework, regional and global connectivity. He further stressed the UNDP's perspective on regional network of the ICT Task Force. He concluded by focusing on the ICT issues and policies as well as impact on ICT.

4.4   Haji Mohd Daud bin Haji Mahmud, Director of SEAMEO VOCTECH presented the SEAMEO's VOCTECH's Initiatives on Bridging the Digital Divide. In his presentation, he introduced SEAMEO VOCTECH's mandate, roles and its services. He emphasized that in all the programmes of the Centre, it utilises latest technological tools such as Macromedia Flash, Author ware and Fireworks in multimedia development. He further stated the future IT Direction of SEAMEO VOCTECH to continue to emphasize on IT for its training programme, Web-enable its resources and services, adopt more schools to develop their ICT capability, increase the use of open and distance learning modes for training delivery, develop more multimedia courseware for VTET and secure donor support for ICT projects.

5.   Session 3: Follow-up of Tokyo Declaration and Action Plan

Chairman: Mr. Hussain Shareef, D.G. PTD Maldives

5.1   Mr. R. B. Kumarapathirana, Director of Project Development presented the Tokyo Declaration and Action Plan by outlining the key elements and issues that were tackled by the Ministers during the summit and discussed the AIIS Programme and ICT Initiatives. In his presentation, he also explained that APT work program has been restructured to focus on the human resources development, capacity building, information sharing towards the preparation of the WSIS. He outlined the training programme by giving the various courses on ICT related subjects, expert mission, sub-regional and regional meetings on ICT's, he further explained the APT's partnerships with UN,

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World Bank and other regional and international organizations in sharing the information. Mr. Kumarapathirana concluded that preparations are on the way for WSIS.

5.2   Mr. K. K. Gunawardana, Area Representative of ITU Regional Office presented a paper entitled " End to End QoS & Affordability – Impact of the Converging Network Infrastructure." The presentation focused the performance of the impact of convergence on end to end QoS of Internet services and propagation of inefficiencies of internet routing to other networks – such as the PSTN offering access to the Internet. The findings which derived from sample route tracings of logical connections of inter and intra regional traffic and those of the European region, data of traffic of PSTN access networks and experiences of highly reputed operators of developed nations. Comparison of these observations with relevant ITU I and Y series the recommendations shows that the performance of the network infrastructure falls much below the guidelines set out in the ITU T recommendations. In particular it establishes that all samples fail to comply with IP network QoS class definitions and network performance objectives recommended in Y 1541. It also illustrates the harsh impact inflicted on the PSTN access networks by the routing inefficiencies of the Internet that in some instances also appear to be overloading SS7 network. The paper also highlighted migration to the NGN technology as a pragmatic option to overcome the above inefficiency and also to benefit from its feature, which are cost effective products. He concluded by proposing to setup collaboratively a platform of interconnected exchanges / core routers distributed over the region, managed by neutral entities comprising of an alliance of interconnected ISPs/IXPs in the region.

5.3   Dr. Zhao Houlin, Director of Telecommunication Standardization Bureau of International Telecommunication Union continued his presentation by giving the other segment of his presentation on the overall structure of ITU ICT Initiatives and development of all its members.

5.4   Question & Answer ensued focusing on the following:

- resource mobilization and infrastructure towards universal access of Internet.
- Investment cost of lines and connections

6.   **Session 4: Selected APT Member State Initiatives on ICT and Information Society**

Chair: Mr. K.K. Gunawardana, Area Representative, ITU

6.1   Ms. Azizah Hamzah, Senior Pricipal Assistant Secretary of the Ministry of Energy, Communications and Multimedia of Malaysia made a presentation on "Private Companies and Business Sector: As Driving Forces on ICT Development". She gave the profile of Malaysia, ASEAN and ASIA including the changing economic structure of each grouping. She elaborated on the Malaysia Inc. Policy, and benefits of Privatisation. In particular, she gave the present outlook of the Malaysian Communication Sector and its development by widening ICT access to schools and rural Internet centres.

6.2   Mr. Tran Quang Cuong, Telecom Manager of Department General of Post and Telecommunication of Vietnam made a presentation on "ICT Policy and Regulation in Vietnam". In his presentation, he provided his view on the global market context of the fast changing ICT industry. He introduced some of the development policies of his country in an effort toward the Information Society. He also discussed Vietnam's initiatives to develop its national information infrastructure.

6.3   Mr. Yong Hwan Chung, Director of Information Infrastructure Division of the Ministry of Communication of the Republic of Korea, presented a paper on "Korean National Policies to Close the Digital Divide". In his presentation he described the progress made by the Republic of Korea fare in the area of Information and Communication Technology (ICT). He discussed issues like

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Republic of Korea's domestic policy and Internet access, Infrastructure for telecommunications services and provisions of IT learning opportunities as the country strategy in closing the global digital divide.   In conclusion, he elaborated on special projects for closing the digital divide in East-Asia which covers IT Infrastructure, Research and Forum & Symposium.

6.4   Mr. Noor Iza, a representative from the Directorate General of Post and Telecommunications, Indonesia, focused on policy and regulatory framework and Information Society Development. He highlighted ICT developments in Indonesia including programmes in ICT regulations, information access and educations, and application development in the Tele-education, Telemedicine and E-Government.

6.5   Mr. Narendra K. Yadav, Deputy Director General of BSNL India presented a paper on " Indian Initiative for Information Society - Rural Scenario" . He outlined his presentation agenda on the characteristics of Indian sub-continent, features of rural areas, government initiatives for rural areas, technology options and status of rural telecom development. He explained government initiative such as the National Telecom Policy 99, 9th Plan (1997-2002) objectives and BSNL plan for coverage of rural India giving thrust wireless technologies.

6.6   Ms. Jiraporn Bhongstiern, Senior Expert of Post and Telegraph Department of Thailand presented a paper on " Policy Initiative on ICT Ministry in Thailand" . She gave an outline on National IT Policy, IT 2000 and IT 2010: Towards the knowledge-Based Economy, ICT Development Strategies. She explained the new set-up of ICT Agencies under the Ministry of Information and Communications Technology. On the initiatives towards Tokyo Declaration, the ICT Ministry shares a common vision of giving high priority to ICT as a National agenda, strengthen cooperative relationship with international organizations and APT member countries in seeking solutions to ICT issues, IT 2010 shall guide the digital divide, while telecommunication liberalization policy helps promote info-structure development for all sectors,

ICT applications through e-society, e-education, e-government, e-commerce, e-industry and contribute to economic prosperity towards the knowledge-based society.

6.7   Mr. Junichi Shioya, Deputy Director of MPHPT, Japan presented a paper on "Information and Communications Policies in the Broadband Internet Era". He discussed the trends in the number of Internet users including broadband users penetration rates and e-Japan strategy's philosophy in providing the world's most advanced ICT environment to the citizens and make a real contribution to the world by quickly and steadfastly implementing institution reforms and measures. He further stressed the following 5 priority policy areas:

- Ensuring of security and reliability;
- Digitization of administration;
- Facilitation of e-Commerce;
- Promotion of education and HRD; and
- Formation of the world's most advance network

In conclusion, he gave the policy targets of the Asia Broadband Program by Japan's contribution to establish a Broadband Internet environment in Asia, increase information flow within Asia and balance the information flow of each region in the world to make Asia a larger information hub for the world.

6.8   Mr. Haji Mahmud Bin Haji Mohd Daud, Director of Information Technology and State Stores Department (ITSSD) of Brunei Darussalam presented a paper on "Brunei Darussalam National Development on ICT Capacity". He gave a historical background of Brunei Darussalam and its present development and core strategies of telecommunications regime. He further described the ICT economy in the 8th National Development Plan as well as Brunei's IT vision to exploit information technology to its fullest potential. In his presentation, he mentioned the new structural changes that are taking place in the Communication and Information environment in Brunei

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Darussalam towards the formation of the Info-Communication Industry Authority.

7. Session 5: Private Companies and Business Sector: As Driving Forces On ICT Development

Chairman: Mr. Chaijaveng Kittiyakhom, Executive Vice President, TOT

7.1 Mr. Michio Naruto, Asia Co-Chair of GIIC Forum (a Special Representative, Fujitsu Co. Ltd.) made a presentation by giving the overview of the Internet Development in Asia, its utility rates and number of users as of November 2000. He explained GIIC's focus and direction on the emerging economies by listening and providing advice and to the New Information Society Era for new ventures and New SMEs by encouraging and supporting the education and human capital development. He also pointed out that GIIC is "a marketplace of ideas" with global reach, its structure is open and inclusive, offer diversity of its membership, provides networking opportunities with local and regional business people and acts as catalyst for change with opportunity to give input into global policy making.

7.2 Mr. Osamu Koike, General Manager of KDDI Corporation, Japan presented a paper on "KDDI's Wireless Solution for Rural Communication". He introduced the KDDI Group international activities, mobile and IP Strategy, network strategy and its Digital Divide Solutions following up the Asia-Pacific Summit on the Information Society. He explained that broadband IP platform is indispensable for multimedia services by citing the ITU-D FG7 Pilot Project Concept, Expanded Tele-center approach and CFO-SS project. He concluded by urging the government sector to help community to construct its own communication platform, coordinate inter-community connectivity, take necessary action to apply for overseas ODA to meet financial deficiency for development and take active role to develop human resources.

7.3   Mr. Quentin Kilian, Consultant, New Skies Satellites N. V. gave a presentation on " Broadband via Satellite: Connecting Asia – Connecting the World. He gave the demand factors and needs of the region in Satellite broadband connection and described its potential growth. He further presented the prediction for Gbps usage across Asia. He gave brief background capabilities and performance on both down-link and up-link transmission of New Skies satellite fleets. In particular the new NSSS-6 Satellite at orbital location 95° East. Thus, the new NSS-6 represents a highly flexible solution proving service to six regions visible from its key orbital solutions in meeting the regional and global connectivity requirements.

7.4   Mr. Soonthorn Vassana, Director of Telecommunications, Planning Department, Communications Authority of Thailand gave a presentation on their view on how Thailand bridge the digital divide by: Public Internet Booth, Khonthai.com, GINet, SchoolNet, UniNet, and CAT infrastructure networks. He cited some challenges in complying with the IT2010 Policy as well as Dot Force, UN ICT Task Force eASEAN, ITU, APT etc. Among others Telecommunications infrastructure, Affordability, local content, Legal frameworks and Human resources. He proposed public-private partnership as solutions to bridge the digital divide in Thailand.

7.5   Mr Chirag L. Unadkat, Executive Director of IUCI and Director of WESRA, presented a paper on " Financing the Communication Infrastructure in India". He pointed out the fact that the average time and money spent on entertainment in India is far greater than that spent on communication. Also, the entertainment industry needs convergence and delivery of entertainment through the Internet infrastructure to tackle the problems of international and domestic reach as also of piracy. Availability of entertainment products like films and television programs over the internet will make it possible to get better financial returns from investment in internet infrastructure from the non-urban areas of India as the entertainment market in these areas is larger than the urban market. Broadband Internet can be used for entertainment and this maybe the only way to pay for communication infrastructure in rural areas.

8.   Session 6: Government Information Society Initiatives

        **Chairman: Mr. Sompol Chanprasert, Vice President Communication
                Authority of Thailand.**

8.1   Mr. Kim Chun II, Senior Officer of Department of Telecommunication, Ministry
        of Post and Telecommunications (MPT), DPR. Korea outlined in their country
        presentation on various achievements for consolidating ICT infrastructure and
        energetic activities for information society. He concluded by informing that
        MPT will actively push ahead in considering international trend of ICT and
        accelerate cooperation and interchange with international organizations and
        other countries to actively contribute to the program for bridging the digital
        divide, drawn up and implemented regionally and globally according to the
        Tokyo Declaration and Action Plan.

8.2   Mr. Fa'afetai Karanita Ah Kuoi, Principal Inspector Licensing and Monitoring,
        Ministry of Post and Telecommunications (MPT) of Samoa contributed a
        paper in which he gave a brief country profile and current situation in Samoa
        on Bridging the Digital Divide. He further detailed the essential applications
        for the Information Society as well as development information and
        communication infrastructure. Mr. Kuoi concluded by focusing on some
        projects such as Infrastructure Asset Management, Automated Systems for
        Customs Data and Education Net etc.

8.3   Mrs. Kalisi Matoto Fine, Assistant Secretary, Department of Communications,
        Prime Minister's Office in Tonga presented a paper " Tonga in Focus" .
        Mrs. Fine outlined her presentation by focusing on the following key factors:
        2000 Reform, Communication Policy Statement, Policy Revision (on ICT),
        Work Plan and Issue and Challenges.

8.4   Ms. Cecilia V. Reyes, Assistant Secretary, Department of Transportation,
        Communications, Philippines presented a paper on " Information and

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Communication Technology (ICT) Development in the Philippines". Ms Reyes stressed that ePhilippines' vision is to make Philippines an e-enabled society where citizens have access to technologies that will provide quality education, efficient government service, greater source of livelihood, and better way of life. In her presentation, she further highlighted the following strategies to achieve the ePhilippines vision: develop country as world class ICT service provider, provide government services to stakeholders online, create enabling legal and regulatory environment, develop an IT enabled workforce and provide affordable Internet access to all segment of the populations.

8.5 Mr. Tashi Chewang, General Manager, Operations, Bhutan Telecom, presented a paper " Implementation of the Tokyo Declaration and Action Plan for Asia-Pacific Renaissance through ICT". In his presentation, he gave a brief overview of the Kingdom and touched on the global and regional trend, vision and mission as well as bridging the divide. Mr. Chewang indicated that Bhutan Telecom, which is 100% state owned corporation has a big challenge ahead in shouldering the responsibilities to develop and implement the required network infrastructures. He concluded by adding that with limited resources, Bhutan is making every effort to develop infrastructures stage by stage and implement vision for the creation of information society and participate in the global economy.

8.6 Mr. Muhammad Omar Farooq, Secretary Ministry of Posts and Telecommunications (MPT) Bangladesh presented a paper on " ICT Policy, Regulation and Action Plan Supporting the Implementation of the Tokyo Declaration – 2000 : The Bangladesh Experience". In his presentation, he focused on issues pertaining to the implementation of the Tokyo Declaration and Action Plan with a vision to increase tele-density from the current 1% to 3% plus, to bring the entire population of Bangladesh under tele-access, to develop communications infrastructure i.e., telecom transmission facilities for voice and data-communications and make the tools of access to communication infrastructure like telephones (including mobile phone), and

Internet easily and quickly available to the people of Bangladesh by 2005, for the rapid dissemination of ICT amongst the people of the country. He also stressed upon the enhancement of ICT literacy and development of HRD, as ICT has been designated as the lead sector by the government of Bangladesh for economic development, reduction of poverty and improvement in the standard of life of the people.

8.7   Mr. Masoud Chitsaz Chazvini, Director General of Supervision on Development and Acting Deputy Minister for Planning and Development, MPTT, Iran, gave an outline on duties and structure of the Supreme Council of information & communication technology (ICT) and strategic objectives of development and application of ICT Plan. He presented a pyramid defining society as the focal point while community and people, technology and applications and information and infrastructures as the tri-legged bases. The following are the main initiatives in the development and application of ICT Plan:

- Systematic extension of ICT along with the national sustainable development
- Human resource development as a priority in ICT strategic development
- Empowerment of national participatory environment
- Infrastructure arrangements including access network, regulations, resources and facilities
- Private sector as strategic and key driver of ICT development

He also informed the meeting on their initiatives in development and application of ICT Plan with different phases. These phases include: data network, capacity international connection, core network layer, network access layer, services and edge network layer. He ended his presentation by citing the achievement on internet and network infrastructure, IP subscribers and data transmission network capacity.

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9   Session 7: Government Initiatives on ICT and Information Society (continued)

Chairman: Ms. Cecilia V. Reyes, Assistant Secretary, DOTC, Philippines

9.1   Mr. Tint Lwin, Chief Engineer, Posts and Telecommunications, Myanmar gave a brief background of Myanmar and that of the Telecommunications Infrastructure, Skill and Human Resources Development, Government Encouragement and Initiative. In his presentation, he indicated that the Myanma Posts and Telecommunications is the sole provider of posts and telecommunications services. Myanmar has been connected with SEA-ME-WE3 international optical fibre transmission system. Mr. Lwin concluded by focusing on several areas that will help narrowing the digital divide.   The areas indicated are: Implementation of e-ASEAN Information Infrastructure, facilitation of growth in e-Commerce, Liberalization for ICT Goods and Services, capacity building and development of e-Government. He mentioned the requirement of APT's assistance for Myanmar Rural Telephony Project by Satellite.

9.2   Mr. Mukunda Prasad Acharya, Joint Secretary, Ministry of Information and Communications, Nepal mentioned the national initiatives in bridging the Digital Divide and human resource development and enhancement of ICT literacy. Mr. Acharya stated that, in order to make the citizens having at least basic skills on the information and communications technology, HMG/Nepal has started special programs to train the people and increase the number of trained manpower in the field of ICT. He concluded by indicating efforts taken to achieve target for Internet Access " Phase One" .

9.3   Mr. Edmund Carter, General Manager, Palau National Communications Corporation (PNCC) of Palau presented a paper on " Bridging the Digital Divide – Republic of Palau's Perspective" . Mr. Carter shared Palau's vision on bridging the digital divide, developing ICT Infrastructure, essential applications for Information Society. He stated that Palau's Development of Internet Access should meet " Phase One" target of Tokyo Declaration.

9.4   Major General Shahzada Alam Malik, Chairman, Pakistan Telecommunication Authority (PTA) presented a country report on digital divide for Pakistan. He stressed upon the strategy towards digital divide, telecommunication sector development as well as public switched telephone networks. He concluded by describing the current status of liberalization and regulations that are being introduced in view of the emerging global trends and the nation's increasing and pressing needs for telecommunications development. He said that the Government of Pakistan formulated a dynamic and forward-looking telecommunication development policy back in 1994.

9.5   Mr. Gombo Basanjav, Director of Policy and Coordination Department for Roads, Transport, Information, Communications and Tourism, Ministry of Infrastructure in Mongolia contributed a paper on ICT Progress Report for Mongolia. Mr. Gombo outlined his presentation with a country overview followed by the following items: forming a shared vision, policy and regulatory status, fundamental objectives of the medium term strategy for development of information and communication technology sector, bridging the digital divide, developing Information and Communication Infrastructure, essential applications for the information society, human resource development and enhancement of ICT literacy and regional co-operation and global co-ordination. He further stated that more than 7 universities offer undergraduate, graduate courses in ICT. He added that the Computer Science and Management School of the Mongolian Technological University is a recipient of the UNDP – APDIP initiative which established CISCO networking academy, which is the only training center for internationally certified professionals. Moreover, a professional testing center for Microsoft, Oracle, Linux and other international certificate providers has already started its operation.

9.6   Mr. Tilson T. Kephas, Frequency Manager, Department of Transportation, Communications and Infrastructure, Federated States of Micronesia (FSM) presented a paper on FSM Information and Communications Technology. In

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his presentation, he stressed that much more still needs to be done in order to bridge the digital divide. The FSM Telecommunications Corporation (FSMTC) infrastructure needs to be developed in FSM's outer islands. He further stated that the FSM, like all small island countries in the Pacific and Indian Oceans cannot implement the Tokyo Declaration and Action Plan without assistance. He also pointed out that grant funds, training programs, UN assistance and loans will be necessary to extend telecommunications services to remote islands. Mr. Kephas concluded by adding that these special needs must be brought to the attention of the World Summit on Information Society and the Summit needs to consider and initiate programs to address the unique needs of small island nation and island communities that are scattered widely across approximately 70 percent of the surface of the earth.

9.7　　Mr. Snith Xaphakdy, Director of Department of Posts and Telecom, Lao PDR. presented a paper on " Developing Information and Communication Infrastructure to support the Tokyo Declaration and Action Plan".

10.　Session 8: Regional Preparation for World Summit on the Information Society (WSIS) 2003

Chairman: Mr. Akhtar Ahmad Bajwa, Chairman and CEO, PTCL, Pakistan

10.1　Mr. Houlin Zhao, Director of Telecommunication Standardization Bureau of ITU made a presentation on the "WSIS - An Overview of the Summit and the Preparatory Process" by giving a background to WSIS and the involvement of United Nations and the International Telecommunication Union. Mr. Zhao explained the proposed outcome of the first phase, which is the Declaration of Principles on the Information Society (The Geneva Declaration) and A Plan of Action for all stakeholders involved (the Geneva Action Plan). He said that preparatory process for the Geneva 2003 Thematic Level is under way and international regional and national thematic meetings shall take place in the major regions of the world. For those interested for more information, he

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urged the participants to visit the World Summit on the Information Society website.

10.2   Mr. R.B Kumarapathirana, Director Project Development of APT made a presentation on " APT Preparation for World Summit on the Information Society" . In his paper, he outlined the key elements of the Tokyo Declaration and the Action Plan. He briefed about APT's preparation towards WSIS and implementing the Tokyo Declaration Action Plan. He detailed the activities of the inter-agency coordination and the information sharing basis through the Inter-agency Website hosted at the APT Web server. He also mentioned the WSIS preparatory meetings to be held in early next year. Then he briefed about the recommendation and conclusions of the APT Seminar on the Digital Opportunity for ALL: ICT and the Fight against Poverty held in Chiang Rai, Thailand which form an input to the WSIS. He concluded that the Tokyo Summit Action Plan has laid the foundation for the WSIS on which we have to build on.

10.3   Mr. Kenichiro Shinkura, Assistant Director of International Affairs Department of MPHPT Japan presented a paper on the " Preparation of Asia-Pacific Regional Conference for WSIS" . He explained the outline of the preparation, the dates, venue and participant to be invited, possible themes of WSIS itself and the Asia Broadband Porgram as a voice of Asia to WSIS. He concluded by explaining to input from Asia to WSIS the Tokyo Declaration and Action Plan.

10.4   Mr. Tilson Kephas, Manager of Frequency of Dept. of Transportation and Communication and Information presented a proposal on "Bringing Digital Opportunities to Small Island Nations and Island Communities". The proposal call for endorsement of organizations participated in the 2nd AIIS Meeting .

11.   Session 9: HRD Programme for Exchange of ICT Researchers and Engineers

Chairman: Major General Shahzada Alam Malik, Chairman, PTA, Pakistan

11.1   The Chairman introduced the APT HRD Programme for Exchange of ICT Researchers and Engineers. He mentioned that the projects are supported under the Extra-Budgetary Contribution from Japan to nurture the development of researchers and engineers in the field of ICT among institutions of higher education and research in the Asia-Pacific region.

11.2   Mr. Niran Joshi, Engineer of Nepal Telecommunications Corporation reported the research project result on the " Selection of Appropriate Technology in Access Network Planning Using Geographic Information System (GIS)"

11.3   Mr. Genichiro Kikui, Head of Department 2, Advance Telecommunication Research Institute International (ATR) reported the research project result on Thai Speech Recognition within the SPREC Framework.

11.4   Dr. Virach Somlertlamvanich, Director, Information Research and Development Division, NECTEC presented a report on the status of the Survey of Research and Development of Machine Translation in Asian countries.

11.5   Dr. Kazi M. Ahmed, Assoc. Professor of Asian Institute of Technology   (AIT) Telecommunication Program reported the result of the research on Dissemination of Advanced Mobile Communications Technologies in Asia Countries.

11.6   Professor A.B. Sharma of Asian Institute of Technology presented a paper entitled " Information and Communications Technologies (ICT): Towards Knowledge Communities for Poverty Alleviation."   He explained the ICT and Telecommunication programs which is a part of curriculum development of the institute. He described ICT's important role of information services and service provision in the creation of an information infrastructure. He stressed

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that a massive investment will be needed in developing countries to raise the level of ICT readiness. In conclusion he described ICT as a powerful tool in promoting the concept of knowledge societies.

12.   Session 10: AIIS Projects: Progress Report and Best Practices

Chairman: **Mr. Akhtar Ahmad Bajwa, Chairman and CEO, PTCL Pakistan**

A. Presentation of Reports

12.1   Mr. Kittipong Tameyapradit, Vice President of TOT, Thailand presented   the progress report of the AIIS Pilot Project on the Establishment of a Multi-Purpose Community Tele-service Centre (MCTC) for Rural Thailand.

12.2   Mr. Apipol Gunabhibal, Engineer of TOT, Thailand presented the final report of AIIS Pilot Project on Videoconferencing

12.3   Mr. Junaidy Ismail, Head of Technology Development, CELCOM Malaysia Bhd. presented the status of the " Internetwoking of Test-Bed Environment for Malaysia Multimedia Applications and Networking (TEMAN) with All Test Beds" Phase One.

12.4   Mr. Narendra K. Yadav, Deputy Director General, BSNL India reported the status of the AIIS " Pilot Project on Distance Learning and Remote Library Access" .

12.5   Mr. Teruo Kobayashi, Assistant Director of the International Affairs Department of MPHPT, Japan reported the status of the AIIS Projects on " Advanced Satellite Test-Bed Project" and " APII Technology Center" .

12.6   Mr. Cheung Moon Cho, Director of the Project Development Department, Information Culture Center of Korea reported in the meeting three AII Pilot Projects on Virtual Post Office on the Net (VPON), Electronic Culture Center (ECC), Tele-Vocational Education (TveD).

B. Presentation of New AIIS Project Proposal

12.7   Mr. Hariyanto from P.T. Telekom, Indonesia presented the new AIIS project proposal on ICT Integrated Solution for Local Government

12.8   Mr. N.K. Yadav, Deputy Director General of BSNL, India presented the Proposal on e-Commerce for initiative on ICT Regional Projects

12.9   An AIIS Pilot proposal on e-Government Pilot Project in the Suva Area by the Ministry of Communication and Civil Aviation was presented by Director Project Development on behalf of Fiji.

12.10   The proposal from Cook Island on e-Government was presented by the Director Project Development of APT on behalf of Cook Island.

13.   Session 12: AIIS Working Group (AIIS-WG) Report

Chairman: Mr. Mukunda Prasad Acharya, Joint Secretary, MIC, Nepal

13.1   Mr. Abdul Mutalib Pehin Dato Yusof, newly elected Chairman of the AIIS-WG, presented the report of the AIIS Working Group Meeting. (see Doc. 12-1).

13.2   The AIIS WG Report was adopted by the 2nd AIIS Meeting. The meeting also agreed that the proposals for approved projects will be sent to the APT secretariat by 20 August for inclusion in the work programme for the year 2003.Also any additional proposals from members should also be submitted

to the secretariat by 20 August for further action. It was also agreed that the AIIS WG will also refer any appropriate question for study by the 2nd APT Study Groups.

to the secretariat by 20 August for further action. It was also agreed that the AIIS WG will also refer any appropriate question for study by the 2nd APT Study Groups.

14. **Session 13: Panel Discussion: ICT Readiness of Asia-Pacific Region**

Chairman: Prof. Dan Wedemeyer, University of Hawaii

14.1 Professor Dan Wedemeyer of the University of Hawaii, School of Communications gave a presentation entitled " The 21st Century ICT Readiness for the Asia Pacific Region: Immediate and Long-Tem Approach."
In his presentation, he gave a summary of the Tokyo Declaration, Phase One (2000-2005) and stated that regional or global ICT problems are relatively identifiable. On the other hand, emerging problems are not easy to defined and therefore addressing these problems is very difficult yet necessary. He emphasized that Bridging the Digital Divide must be addressed within and between nations. He further described the Futures Forecasting Engine (FFE) Methodology as well as SWOT/ESPT Development Matrix for identifying emerging problem. He concluded by stressing that a " profiled" ICT problem could be significantly reduced by deployment of a team or " corps" of highly selected and " locally sensitive" professionals to the location to develop a plan of action.

14.2 Panel Discussion

Topics:
- Implementation of Tokyo Declaration and Action Plan
- Developing Information Communications Infrastructure
- Essential Applications for the Information Society
- Human Resources Development and Enhancement of ICT Literacy
- Regional Cooperation and Global Coordination

Panelist:

Mr. Farooq Muhammad Omar from Bangladesh pointed out the following:
- ICT is now the fastest changing frontier of humanity

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- ICT readily lends itself to practical applications that could be used to promote economic development, reduce poverty and enforce the standard of life of people

- The Digital Divide needs to be measured, if possible quantitatively, and monitored regularly so that the "Divide" does not become wider, and the process of bridging is effectively enhanced.

- To reduce the Digital Divide the following maybe done.Concrete targets should be set for the development of communication infrastructure, access to using ICT like telephones. Internet should be affordable and readily available, ICT literacy should be encouraged and promoted by training facilitations, internet and telephone access as well as PCs and the like.

- Countries need to be assisted with investment and perhaps technical assistance where necessary.

- Future requirements and opportunities should be anticipated and mapped.

Mr. Hj Mahmud Hj Mohd. Daud from Brunei Darussalam mentioned the following points in his discussion:

ICT should be aligned with national development to gain leadership and multi-perspectives buy-in. In bridging the digital divide one should consider the unwired world, connected wired and wireless world. We should also consider delivering values that reach their appropriate attentions. In developing their infrastructure, one should encompass organizational infrastructure as well as technological infrastructure that are implementable and sustainable. He also said, one should address core applications that essentially are business driven and are of critical requirements. HRD programme should not be neglected as about training and workshop alone. There should be fundamental educational program introducing to school and beyond as a core subject. Cooperation needs to account the difference in the level of instruction, so as to allow action plans which should be taken up to meet the general expectations. He said that Internet access is a socio economic issue and should not left to the private sector alone. It should be given similar

consideration as electricity and water and should be made available to the everyone.

Mr. Mukunda Prasad Acharya from Nepal pointed out the following issues:

- Reach of the general public to telephone facilities should be made easier.
- Rural-urban tele-density gap should be minimised. Expansion of Telephone lines to the rural areas should be faster
- Resources for developing ICT infrastructure in LDC's should be made available.
- Affordability and accessibility – a need for general public's access to modern means of communications should be made easier and affordable.
- Emphasis should be given to the "Phase One" of Tokyo Declaration on Internet Access to All.
- Broadcasting sector should also be due consideration.

Mrs. Matoto Fine from Tonga gave a closer look at the Tokyo Declaration in her discussion. She underscored the Tokyo Declaration of 2000 as a platform for ICT development in the Asia-Pacific region since its inception 2 years ago and as providing fruitful experience to meet the commitment of the Declaration at the same time, it is important to address the needs of most of the Pacific Island countries which are still in their initial phase of reform and establishment of ICT connection. In implementing the changes, challenges the problems have been compounded due to lack of availability of resource, high access cost and vulnerability to natural disaster. She ended by expressing that "digital divide" cannot be cured unless the Pacific region received support from the neighbouring partners in alleviating the challenges mentioned above.

Mr. Wataru Chujo from Japan centered his discussion on bridging the digital divide to the second stage in Asia-Pacific region since the network infrastructure and human resource is now developing in most of the countries.

He said that existence of gap between the developing countries and other sectors is a gap of experiences especially on the ICT equipment that is not foreign even in developed country like Japan. He opined that to resolve the issue of the digital gap, long term continuous development of both network infrastructure and human being are important. He highlighted the high-speed backbone network infrastructure that will provide continuous global long-term collaboration with each other in the Asia Pacific region and promotion of a long-term exchange of researchers and engineers mutually between developing countries and others. He added that these two factors will finally promote the globalisation of research and development collaboration.

Mr. K.K Guanwardana of ITU stated that Two of the key drivers of affordability are the per line investment and operating costs. The current and emerging products of NGN technology offer opportunity to reduce costs considerably through use of the feature abound NGN products that could replace the PSTN local switch and trunking. He said that these parameters alone cannot improve. Equally important is efficient utilization of the installed network capacity. Typically the diurnal usage of most networks is less than 40%. The cause attributable to above is the yet prevailing vestiges of the monopoly practice of customization and pricing of products and establishment of interconnection bilaterally These practice fail to realise that CAPACITY has NO SHELF VALUE. In conclusion, Mr. Gunawardana said that National and Regional initiatives to set up collaboratively neutral and transparent regional/national interconnection points to enable exchange of traffic between any to any network is of utmost importance to ensure benefits of feature abound and low cost NGN technology swiftly reaching the end user.

Comments and Recommendation:

Maj Gen. Shahzada Alam Malik from Pakistan commented that the Pacific Islands are not developed and he recommended that IT should not only be concentrated in the urban areas but also in the rural areas.

He also recommended that IT should be made more meaningful.

Mr. Tran Quang Cuong from Vietnam provided some comments on the forming of a shared vision. He mentioned that the delegates and participants had discussed a lot about the development of ICT infrastructure, applications, human resource. However, there seems to be lack of a shared vision for this region concerning ICT development as where the Asia Pacific region would like to go, what it would like to reach. He also suggested the conference and the AIIS Working Group to form a vision and sell ICT to all member countries, so that it would be a shared vision for the region. He said he believed that when the region shares the vision, then every member country would be committed to take every effort to realize this shared vision.

Dr. Kazi M. Ahmed from the Asian Institute of Technology commented three success points in ICT and reduction of digital divide:

- The literacy of the people in overall terms has to be increased as fast as possible, through this the ICT literacy can be a reality.
- A cadre of experts in ICT needs to be created through HRD Program. This cadre will work as multiplier agent in promoting ICT education in different countries.
- Most importantly, it is important to have peoples'   participation through rural people-cooperatives (through NGO efforts), for establishing the ICT network centre, which will be connected to the national ICT infrastructure. The national infrastructure has to be extended to every sub-district level of administrative divisions.

Mr. Tanvir Ahmed, Director General (Operations) PTCL, Pakistan stressed eight basic issues to bridge the digital divide and enforce ICT.

- Taking care of literacy rate – ICT can only be promoted if literacy specifically English language is taken care of as there is no short cuts to bridge the gap faster.

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- Role of Private Sector – they need to join hands
- Regulators to ensure the facilities even in economically un-viable place such as rural areas
- Open up and liberalize the ICT sector
- Give special incentives for un-served (rural) areas
- Reduction in cost to operator and prices to customer
- Reduce taxes and other burdens
- Minimize regulations and enhance flexibility

Mr. Edmund Carter, CEO, Palau National Communications Corporation presented his view that he agreed with the earlier comments made by Maj. Gen. Shazada Alam Malik from Pakistan, that many of the larger countries have tremendous Rural Development Challenges that is sheer numbers of affected people dwarf the smaller and island nation development issues. But the smaller countries do have some problems in ICT development that are unique. He pointed two areas that strike him as large differences between the larger countries and the smaller ones. First, many of the larger countries have good international access to their countries and advanced developments in their cities. Second, they have sophisticated expertise within their cities that have developed applications that they are trying to move out to rural areas. In contrast, we are more like their rural areas. We do not have the impressive fibre optic and bandwidth available to us that they do nor do we have expertise to develop applications. Countries have presented many applications that they have developed with the available expertise they have. Perhaps some of the applications could be shared with other countries if they are of a nature that could readily modified for other countries. He recommended that APT could perhaps develop a database of applications that are available for sharing with others.

Ms. Cecilia V. Reyes, Assistant Secretary, DOTC, Philippines suggested that in relation to the recommendation as provided in Document 13-1, adding of "anticipatory" preventive component in the ICT equation, the aspect of

"Security" be considered for inclusion in APT programmes and initiatives in developing information and communication infrastructure.

Mr. A. Nayaran, Executive Director, APT stated that the Tokyo Declaration and Action Plan has given a big impetus to the Asia Pacific Renaissance through ICT. Several APT members have made excellent progress in the development of ICT in their country. Now there is a need to revisit the Declaration after the first WSIS so that the Region can look further towards accelerating the development of Information Society in the Region. For this purpose, APT should organize a meeting of ministers of Communications and Information Technology in the second quarter of the year 2004.

16.   Conclusion and Recommendation of the Meeting

16.1   The meeting emphasized upon the need to accelerate the process of the Tokyo Declaration and Action Plan.

16.2   There is an urgent need to develop the network infrastructure in the Asia-Pacific region. The lack of resources is a major factor in preventing the growth of network infrastructure. On the other hand, the Asia-Pacific region as a whole is quite resourceful in terms of technology and skills. The issue of network development and resource mobilization should be discussed at national, sub-regional and regional levels. APT should assist the members by organizing sub-regional/regional seminars on network development and resource mobilization.

16.3   The activities of the inter-agency working group and its website should be further strengthened to promote information sharing, to develop partnership projects and to harmonize region's input to WSIS.

16.4   APT should continuously encourage members to initiate focused programs and projects that are beneficial in advancing human resources, ICT skills and technology transfer.

16.5   APT should include into its work programme the following:

- Holding of a Digital Development Conference
- Introduction of new ICT skills programme and enhancement of its literacy
- Continue offering the ICT Researchers and Engineers Exchange Program
- Establishment of a national, sub-regional and regional ICT action plans
- Continuously developing beneficial and mutual partnership with funding agencies, sub-regional, regional and international organizations and private sector through ICT related projects
- Provide an avenue for the AIIS-Working Group (AIIS-WG) to increase their participation in the direction of the AIIS through on-line consultation, listserv discussion board and Internet e-mail reflector system
- The APT to continue publishing the ICT Compendium and update it on an annual basis. This would serve as a handy reference or guide in the ICT infrastructure development.
- Promotion of e-Government is a key issue for the Asia-Pacific region. In view of the urgent need of facilitating information exchange, sharing of experience on matters relating to e-government. APT should organize a regional seminar on " Accelerating the Development of e-Government in the Asia-Pacific Region" in the year 2003.
- Promote participation of end-users of ICT applications in APT events.

16.6   The Tokyo Declaration should be revisited after the first WSIS meeting in an APT meeting of ministers of communications and Information Technology for further accelerating the development of Information Society in the Asia Pacific region.

17.   Session 14: Closing Session

Chairman: Mr. Amarendra Narayan, Executive Director, APT

17.1   Presentation of the Report of the Meeting:

Mr. Tilson Kephas, Chairman of the drafting committee presented the Draft Summary Report and was adopted by the meeting.

17.2   Closing Remarks:

In his closing remarks, Mr. A. Narayan, Executive Director of APT thanked the host, the Government of Brunei Darussalam in particular the Ministry of Communications and other partners for their excellent support, which resulted in the success of the meeting. He also thanked the Chairman of different sessions, resource persons, presenters, and the participants of the meeting for their valuable contributions. He finally thanked the meeting Secretariat from the host and from the APT.

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