



## **THE 11<sup>th</sup> APT POLICY AND REGULATORY FORUM (PRF-11)**

***17-19 May, 2011***

***Hanoi, Vietnam***

### **PROCEEDINGS**

#### **I. Introduction**

- 1.1. The 11<sup>th</sup> Meeting of Policy and Regulatory Forum was held from 17 to 19 May, 2011 in Hanoi, Vietnam. The Ministry of Information and Communications of the Socialist Republic of Vietnam hosted the forum.
- 1.2. A total of 112 participants representing APT Members, Associate Members, Affiliate Members and International Organizations attended the event.

#### **II. Opening Session**

- 2.1 Welcome Address was given by Mr. Toshiyuki Yamada, Secretary General, APT. He welcomed all the distinguished delegates to the APT Policy and Regulatory Forum and expressed his greetings on the occasion of the World Telecommunication and Information Society Day. He stressed the importance of ICT as reflected by the theme “Better Life in Rural Communities with ICTs”. He also conveyed greetings on behalf of the APT to the Secretary General and the staff of ITU on this occasion. He thanked MIC, Vietnam for the effort and excellent arrangements for the PRF and specially thanked H.E. Dr. Tran Duc Lai for gracing the occasion. He then outlined the program of the PRF and mentioned the significant role of ICT policy and regional collaboration in improving the quality of lives of all citizens in the region. The full text of the address is attached in Doc. No. PRF-11/INP-28.
- 2.2 The Inaugural Address was delivered by H.E. Dr. Tran Duc Lai, Vice Minister of the Ministry of Communications, Socialist Republic of Vietnam. He welcomed all delegates to the forum. In his speech, he stressed the role of Broadband and technology convergence in transforming the world into the information society and knowledge -based economy. He mentioned the efforts of Vietnamese government in developing and completing the legal framework to boost the development of the telecom and IT industries. He highlighted the national strategy on “Transforming Vietnam into an advanced ICT country”. In the occasion of World Telecommunication and Information Society Day on the 17th May, he called upon the forum to connect the broadband topics with the rural development according to the theme “Better Life in Rural Communities

with ICTs” in a more efficient way. Lastly, he expressed high appreciation to APT Secretariat and encouraged participation from participants. He wished the forum a fruitful deliberation. He then declared the forum opened. The full text of the address is attached in Doc. No. PRF-11/INP-29.

- 2.3 The Secretary General, Mr. Toshiyuki Yamada presented a token of appreciation to H.E. Dr. Tran Duc Lai for inaugurating the event.
- 2.4 A group photo was taken at the end of the opening session.

### **III. Session 1**

#### **Adoption of Agenda**

- 3.1 The agenda of the PRF was adopted.

#### **Election of the Chairman of the PRF**

- 3.2 Mr. Pham Hong Hai, Director General, Telecommunications Department, MIC from Vietnam was introduced by the Secretary General as the nominee from the host country for the Chairman of PRF.
- 3.3 Mr. Pham Hong Hai, Director General, Telecommunications Department, MIC, Vietnam was elected as the new chairman of the PRF and will continue his chairmanship until the next PRF meeting in 2012 according to the Working Methods of the PRF.

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| <b>Decision no. 1 (PRF/2011/1)</b> |
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| Mr. Pham Hong Hai, Director General, Telecommunications Department, MIC, Vietnam, was elected as the chairman of the PRF. He will continue his term until the PRF meeting in 2012. |
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#### **Remarks by the Chairman of PRF**

- 3.4 Mr. Pham Hong Hai, Chairman of PRF delivered his Remarks. He encouraged the forum to support the Bali Statement and its Plan of Action.

#### **Business Dialogue - Industry view on Innovative Environment for Broadband Economy**

***Chairman: Mr. Pham Manh Lam, Deputy Director General, National Institute of Information and Communications Strategy (NIICS), MIC, Vietnam.***

- 3.5 The presentation on “Mobile broadband in APAC - opportunities and growth “ was delivered by Dr. Hakan Ohlsen, Director Technology and Industry APAC, Ericsson, Vietnam. (Doc. No. PRF-11/INP-11 Rev. 1).

The presentation outlined technology evolution and market trends for mobile systems providing broadband solutions affordable to all. It talked about spectrum and regulatory situation globally and in the Asia-Pacific region with specific attention to the digital dividend and how this relates to increased opportunities for both society and businesses.

- 3.6 The presentation on “**Broadband Access in APAC : Trends & Regulatory Considerations by**” was delivered by Mr. Andrew Mackay, Wireless Technology & Strategy, Alcatel Lucent Singapore, Singapore. (Doc.No.PRF-11/INP-05).

This presentation looked at the broadband market in the Asia-Pacific region. It noted the tremendous growth in the broadband market and the major challenges for the sustainability. He noted both in the emerging markets and the developed market the main challenges for sustainability is related to coverage and capacity issues.

The tremendous growth of the mobile market and consumers moving to data services and high expectations for higher capacity data communication has been impacting the quality of service delivery and the network economy of Network Service Providers in the region. Regulators need to assist the industry to remove the regulatory obstacles in encouraging investments in infrastructure, facilitating convergence of technologies and effective use of spectrum for broadband services using new technologies and changing network architectures.

- 3.7 The presentation on “**The role of service development in the broadband economy**” was delivered by Mr. Nguyen Xuan Cuong, Specialist, VNPT, Vietnam. (Doc.No.PRF-11/INP-16).

The presentation provides views and aspects of the broadband economy. It talks about the relation of ICT services to economic development together with the opportunities and challenges.

### Q&A

- Dr. Iwan Krisnadi of Indonesia sought clarification on the definition of broadband economy. He mentioned that OECD has linked the broadband to the economic growth such as GDP. He wanted to know if there is similar definition of broadband economy within APT.
- Mr. Mackay shared his view that the connectivity is not necessarily being the link to economy but rather about being part of the society and economy.

- Dr. Ohlsen added that broadband with especially cost efficient coverage will bring new opportunity such as jobs in rural areas in developing countries.
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- Mr. Leong Keng Thai from IDA mentioned the study from World bank that every 10% growth in broadband penetration will lead to around 1-1.3 % growth in GDP.
- Mr. Ali Mehmud of Pakistan wanted to know if interoperability between devices will bring data security issue in the future.
- Dr. Ohlsen responded that the connecting devices required interfaces that require globally harmonized standardization. Different relevant parties need to be engaged and this is under discussion. Security issues will be expected in the future.
- Mr. Bhatia of Motorola India, mentioned that the impact of broadband penetration is at around 6.25 times of Mobile Penetration.
- Mr. Moriani Mohamed from Celcom Axiata queried on the status of the exploitation of the digital dividend in APT.
- Dr. Ohlsen responded that other regions such as the US and Europe are ahead of our region in the terms of specific band. However, in terms of harmonized band, APT is opening up the opportunity and in a good position on this matter.

3.8 Chairman then summarized the session.

#### **IV. Session 2: Business Dialogue - Industry view on Innovative Environment for Broadband Economy**

***Chairman: Mr. Leong Keng Thai, Deputy Chief Executive and Director-General (Telecoms & Post), IDA, Singapore***

4.1 The presentation on “**Benefiting from Mobile Trends** “ was delivered by Mr. Orange Alex, Director, Government Affairs South East Asia, QUALCOMM International. (Doc. No. PRF-11/INP-06 Rev1)

Changing user habits, use cases, new devices and services are creating explosive growth in demand for mobile data. This demand is being met by evolving mobile technologies utilizing harmonized radio spectrum such as the 698 – 806 MHz band. The utility of this spectrum can be maximized via the implementation of clear national plans and policies.

- 4.2 The presentation on “**Policy and Regulatory Issues for Public safety and Emergency Communications** ” was delivered by Mr. Bharat Bhatia, Director, Motorola, India (Doc.No.PRF-11/INP-08).

The Radiocommunication needs of Public Safety agencies involved in the maintenance of law and order, protection of life and property as well as being the first responders to manmade and natural disasters are growing immensely.

Public Safety and Emergency agencies and organizations have an initial set of requirements, including interoperability, secure and reliable communications, and sufficient capacity to respond to emergencies, fast response times, ability to handle multiple group calls and the ability to cover large areas.

Communications and in particular interoperable broadband mission critical communications is fundamental to the success of Public Safety and Emergency agencies. However necessary enabling regulatory policies are a critical gap in meeting this need. The presentation highlights these needs.

- 4.3 The presentation on “**Impact of Market-Based Policies on Broadband Investment** “ was delivered by Dr. Yoshikatsu Nakagawa, Ph.D., Executive Researcher, Wireless Technology Policy and Standards, Corporate Technology Group, Intel KK, Japan (Doc. No. PRF-11/INP-18)

Broadband penetration has been widely linked to improving economic development. Therefore, many countries worldwide are eager to spur investment in the deployment of broadband networks. Market-based policies are able to most efficiently increase investment in broadband networks. In particular, flexibility in licensing policies and the expeditious awarding of spectrum licenses are crucial for encouraging investment and providing business and citizens with the benefits of widespread broadband network availability.

- 4.4 After these presentations, general discussion as well as questions and answers ensued. The following observations and comments were made by the speakers of this session and the floor:

- Dr. Krisnadi of Indonesia queried on the worldwide mobile broadband spectrum in particular on FDD bandwidth deployment options as to why the 2.3GHz band was not included in the diagram.
- Mr. Orange responded that the intention was to allow 2.3 GHz to evolve to TDD LTE.

- Dr. Krisnadi mentioned that the fact that the policy delay resulted in associated cost is well understood in the telecommunication sector. He commented that it is very difficult to convince the broadcast community to fade out the analogue TV.
- Dr. Wee shared the experience in Republic of Korea on the exploitation of digital dividend for telecommunication that the deadline of migration to digital TV is delayed till the end of 2012. This is because the broadcast community needs time to define the band plan for broadcasting. This will give them opportunity to develop the proper broadcasting technology in the future in order to provide future service with the telecommunications.
- Mr. Leong Keng Thai of Singapore sought views from Mr. Orange regarding the offloading of traffic e.g., in the indoor coverage onto networks such as WiFi.
- Mr. Orange responded that this is driven largely by the advent of Tablet which comes with multimode access. The offload of traffic is normally done from the network that guarantees the quality of service onto the network that does not. This happens in LTE based network whereby there are home node B and femto cell providing indoor coverage. This method, however, has its limitation on QoS. The consumers have the choice as long as they are happy with the quality of service and they do not pay for it, it is acceptable.

4.5 Chairman then summarized the session.

**V. Special Event “Better life in Rural Communities with ICTs” to Celebrate the World Telecommunication and Information Society Day**

***Moderator: H.E. Dr. Tran Duc Lai, Vice Minister of MIC, Vietnam***

***Panelists included:***

1. *Mr. Toshiyuki Yamada, Secretary General, APT*
2. *Ms. Cathrine Muller, Head, Representative Office UNESCO in Viet Nam*
3. *Mr. Leong Keng Thai, Deputy Chief Executive, Director General, IDA, Singapore, and ITU Broadband Commission*
4. *Mr. Nguyen Viet Chien, Director General of Information Center, Ministry Agriculture and Rural Development, Vietnam*
5. *Mr. Pham Hong Hai, Director General, Telecommunications Department, MIC, Vietnam*
6. *Mr. Phan Thao Nguyen, Deputy Director, Information and Public Relation Center, VNPT Group, Vietnam*
7. *Mr. Tong Viet Trung, Vice President CEO, Viettel Group, Vietnam*

- 5.1 The Session was organized by MICT, Vietnam. The session began with the message from Dr. Toure, ITU Secretary General. In his message, he mentioned the role of ICT in economic and social development and stressed on the importance of content to enhance the broadband access. This was followed by the video presentation on the progress on ICT for rural communications in Vietnam.
- 5.2 The panellists discussed and shared the views in various issues regarding the ICT and rural development. These include the ICT as a tool to achieve the MDG(Millennium Development Goal), the role of ICTs for the development of Economic and Culture in the rural areas, policies and priorities of government for developing economic and culture in rural areas, participation of operators in implementing such strategic policy and priorities, and programme and projects realized in rural areas for the purpose.
- 5.3 Ms. Muller shared her view on the use of ICTs to achieve the MDG. She also mentioned projects undertaken by UNESCO for rural communities.
- 5.4 Mr. Yamada highlighted the role of APT, the programs and relevant projects undertaken by APT for rural communications such as the Exchange of Researchers/Engineers and Pilot Projects.
- 5.5 Mr. Leong shared his views on the importance of broadband to rural development under the framework of the Broadband Commission of ITU.
- 5.6 Mr. Pham Hong Hai provided some information on the projects of government of Vietnam such as the Universal Service Fund under the name of Public Utility Fund.
- 5.7 Mr. Nguyen Viet Chien shared the information on the projects under Ministry Agriculture and Rural Development such as the weather and disaster forecast and information dissemination to fishermen.
- 5.8 Mr. Phan Thao Nguyen, Deputy Director, Information and Public Relation Center, VNPT Group, Vietnam shared information on the telecenter projects in Vietnam.
- 5.9 Mr. Tong Viet Trung, Vice President CEO, Viettel Group, Vietnam shared the success story regarding the project to provide free internet to all schools in Vietnam. The project was also expanded to Lao PDR and Cambodia with the support from relevant governments.
- 5.10 Mr. Rahman from Banglalink mentioned on the initiatives taken by the government of Bangladesh on the content development that was put in the central repository.

- 5.11 Ms. Sofi of Indonesia queried on the theme “Better Life in Rural Communication with ICTs” whether APT members had some action items in this regard to achieve the ICT inclusion.
- 5.12 Mr. Leong responded by mentioning ASEAN ICT Master Plan as one of the actions relating to the theme.
- 5.13 Ms. Silva from Sri Lanka updated the forum on the progress in the programmes in agricultural, medical, education sector in Sri Lanka.
- 5.14 Mr. Fetufou AIONO from Samoa asked about the difficulty of implementing and sustaining telecenters.
- 5.15 Mr. Hai responded that government provided some assistance to telecenters through USF.
- 5.16 The MIC, Vietnam presented special awards to VNPT and Viettel for the effort they have extended to support the rural communication.

**Day 2 : 18 May 2011**

**VI. Session 3: Policy and Strategic initiatives towards Broadband Economy - I**

***Chairman: Tan Sri Khalid Ramli, Chairman of MCMC, Malaysia***

- 6.1 **Report on the 34th Session of the Management Committee relevant to PRF** (Doc. No. PRF-11/INP-22-Doc, PRF-11/INP-22-PPT) was presented by Mr. Mohamed Amir, Director Project Development, APT.
- 6.2 He briefly reported the forum of the MC-34 decisions which are relevant to PRF which are the PRF Working Methods, PRF in 2011, and the Implementation Matrix of Bali Plan of Action.
- 6.3 **Follow-up on Bali Plan of Action** (Doc. No. PRF-11/INP-23) was presented by Mr. Mohamed Amir, Director Project Development, APT.
- 6.4 He presented Implementation Matrix of Bali Plan of Action that is relevant for the PRF as decided by the MC-34. He requested the forum to review the proposed matrix of Bali Plan of Action and provide input to the matrix.
- 6.5 The presentation on “**Malaysia’s Broadband Report**” was delivered by Ms. Nor Akmar Shah Minan, Acting Senior Director, Broadband Secretariat, MCMC, Malaysia, Chairman of MCMC, Malaysia. (Doc. No. PRF-11/INP-19)



The presentation outlines Malaysia's National Broadband Implementation Policy. The positive outlook of the telecommunication industry in Malaysia together with examples of achievements are highlighted. The presentation also touches on strategies and Initiatives to accelerate demand from the year 2011 onwards embracing many aspects including Coverage, Awareness, Affordability, and Attractiveness. It concludes with key strategic areas addressed by National Key Economic Area (NKEA) Communications Content and Infrastructure (CCI).

- 6.6 The presentation on “**Towards Broadband Economy in the Asia - Pacific region - ICT Policy and contribution of Japan**” was delivered by Mr. Toshiyuki Yokota, Director General for International Affairs, Ministry of Internal Affairs and Communications, Japan. (Doc. No. PRF-11/INP-24)

The presentation shared lessons learned from the great east Japan earthquake and Tsunami. Internet has become the lifeline of Japanese society. Twitter has proven to be an effective mean of communication during the disasters. He then gives an overview of the ICT Policy of Japan. Cloud services will enhance the international competitiveness of Japanese industry and it is the ICT policy of MIC to promote the use of Cloud services. The presentation concludes with the highlight of the Extra Budgetary Contribution from Japan provided to APT in the form of Training Programs, Exchange of ICT researchers/Engineers, and the Pilot Projects.

- 6.7 After these presentations, general discussion as well as questions and answers ensued. The following observations and comments were made by the theme speakers of this session and the floor:

- Dr. Krisnadi from Indonesia queried on the cloud services in Japan. He mentioned that the limited of use of cloud service was due to the lack of trust in security issue. He wanted to know the business model of cloud services in Japan.
- Mr. Mehmud from Pakistan queried on the access technology used in wireless village in Malaysia. He also sought for clarification on PPP model used in Malaysia.
- Mr. Yokota responded that Japan allowed foreign company to use the service in Japan and the cloud service offer a great opportunity. Gradually, people will recognize the usefulness of the service as it offers reliability. He also mentioned that the government would encourage the use of the service. However, international rules and agreement should be made in this regard as the data was transferred cross border.
- Ms. Akmar responded that under the wireless village project, individual licensee would deploy different technologies independently such as 3G,

WiMAX, and WiFi. As for the USP programme, the 1<sup>st</sup> phase used WiFi. As for the PPP, it was also funded partly by government through USP.

- Mr. Leong of Singapore queried on the issue of data protection in cloud service as data is transferred cross-border. He wanted to hear the experience from Japan and sought for clarification whether legislation on this matter was in place in Japan.
- Mr. Yokota clarified that data protection was one problem and that EU commission had directives on data protection. From EU point of view, data protection as stipulated by EU is sufficient for Japan. He mentioned further that the US and EU had bilateral agreement with sufficient level of protection. He explained that this was a delicate and difficult problem and that the EU requested to have an independent authority in charge of data protection. However, such policy is unpopular in Japan. Japan is trying to look for measures to resolve the problem.
- Mr. Amir asked participants view on the possibility of assistance and further cooperation from advanced countries in the region in the implementation of the broadband economy in the region.
- Tan Sri Khalid Ramli from Malaysia responded that Malaysia was willing to assist members as much as possible.
- Mr. Punaha from PNG mentioned that PNG had close collaboration with MCMC in policy and regulation area and he thanked MCMC for the assistance extended.
- Dr. Nakagawa commented on the use of twitter as an effective tool in disaster situation. He had the view that one had to be very careful on the message coming from twitter. He wanted to know as to how to monitor the message that came simultaneously.
- Mr. Yokota responded that the discussion whether internet should be opened or intervened was ongoing. There is no concrete method on the issue. Currently, MIC, Japan has communicated closely with broadcaster and the media to help in monitoring process. This has proven to be sufficient so far.

6.8 Chairman summarized the important points of all presentations.

## **VII. Session 4: Policy and Strategic initiatives towards Broadband Economy - II**

***Chairman: Mr. Pham Manh Lam, Deputy Director General, National Institute of Information and Communications Strategy (NIICS), MIC, Viet Nam***

- 7.2 The presentation on “**Latest Achievements in Telecom and ICT Sector in Islamic Republic of Afghanistan**” was delivered by Mr. Abdul Wakil Shergul, Chairman of ATRA, Afghanistan (Doc. No. PRF-11/INP-12, PRF-11/INP-26)

The presentation reports on the Afghanistan Telecommunication Sector as of today. It outlined the situation of telecommunication sector in Afghanistan and related legal framework. It also highlights the approach taken to address the emergency communication in the country. The problem of higher prices of internet in landlocked countries is mentioned. The issue of the transit right of landlocked countries to access the international bandwidth providers terrestrially is raised. Lastly, inter-regional cooperation to cope with the issues causing barriers is called for.

- 7.3 The presentation on “**Policy and Strategic initiative towards broadband economy - Bhutan experience**” was delivered by Mr. Wangay Dorji, Head, Telecommunications, BICMA, Bhutan. (Doc. No. PRF-11/INP-14)

The presentation stresses the importance of Broadband for Bhutanese. It explains Bhutan’s Policy and Strategies. It also provides the information on the initiatives undertaken to promote Broadband. The overview of current Bhutanese ICT Market is reported. The presentation concludes with Bhutan’s aspiration and challenges faced.

- 7.4 The presentation on “**Policy and Strategic Initiative towards broadband economy: Indonesia Experiences**” was delivered by Ms. Sofi Soeria Atmadja, head of Regional Affairs Division, Centre of International Affairs, Ministry of Communications and ICT (MCIT), Indonesia. (Doc. No. PRF-11/INP-25)

The Government of Indonesia has implemented the policy and initiative towards broadband economy. To widen broadband connectivity, the Government has provided availability of access which focus on development in eastern region, including the Internet Services for Subdistrict Areas (PLIK), Management and Monitoring System for PLIK (SIMMLIK), Nusantara Internet Exchange and Palapa Ring. To cope with the gap in deployment broadband backbone in the eastern region of the country and unreserved areas, the government is finalizing the concept of USO Fund, which will be utilized for the construction of backbone infrastructure Palapa Ring.

Other initiatives that have been conducted by Government are implementation interconnection regime with cost based approach in enabling affordability of telecommunications services, allocating the radio frequency band for wireless broadband service in expanding broadband connectivity.

- 7.5 The presentation on “**Developing nation-wide broadband infrastructure for Vietnam early becoming a country with high level of ICT development**”

was delivered by Mr. Pham Manh Lam, Deputy Director General, NIICS, Vietnam. (Doc. No. PRF-11/INP-07)

Realizing the important role of information and communication technology (ICT) towards the country socio-economic development, Vietnam has tried the best to promote the development and use of ICT. Recently, the Prime Minister of Vietnam has approved the Projects for Vietnam early becoming a country with high level of ICT development with an emphasis on the establishment of a nation-wide broadband infrastructure.

This talk will provide an overview of the current status of telecommunications development in Vietnam, especially the development of broadband services. The Vietnam's strategic initiatives of establishing a nation-wide broadband infrastructure and the policy for supporting the development of broadband will be presented as well.

### **Q&A**

- Mr. Mackay of Alcatel-Lucent queried on the local loop unbundling in Bhutan.
- Mr. Dorji responded that laying copper wire was expensive than the wireless so for the new entrant the wireless was the technology of choice. He added that currently Bhutan did not have concern on the issue. In Bhutan, the copper wire is owned by the incumbent operator. However, the process for unbundled the copper wire has already taken place. He mentioned that the mindset of incumbent operator had to be changed.
- Chair concurred with Mr. Dorji's statement and noted that since 2009, number of fixed subscriber had reduced and would continue to do so, and that the majority of mobile subscribers used the phone for voice service. Government of Vietnam used the USF to subsidize to the expansion to the rural area.
- Mr. Batsuren of Mongolia asked about the competition policy for broadband networking especially in separating network and service.
- Mr. Dorji responded that recently the government of Bhutan had the initiative that the backbone infrastructure would be under one organization and everybody could have access to it. The costing and depreciation value will be done by the government.
- Ms. Sofi added that in Indonesia the competition policy was reflected in the interconnection policy through attractive interconnection tariff.

### **VIII. Session 5: Migration to IPv6**

***Chairman: Mr. Tran Minh Tan, Deputy Director General, Vietnam Internet Network Information Center (VNNIC), MIC, Viet Nam***

- 8.1 Mr. Tran Minh Tan opened the session with introductory remarks.
- 8.2 The presentation on "**Governmental Policy and IPv6 Adoption: Strategic Linkages**" was delivered by Ms. Miwa Fujii, Senior IPv6 Program Specialist, APNIC. (Doc. No. PRF-11/INP-10).

The Asia Pacific Network Information Centre (APNIC) is a regional body that is in charge of the fair distribution and responsible management of Internet Protocol (IP) addresses. The presentation noted the exhaustion of IPv4 address resources in especially in the Asia-Pacific region and called for an effective implantation of IPv6 in the region.

It noted, IPv6 deployment is picking up speed in many parts of the world; yet Internet traffic over IPv6 is significantly less than IPv4. Close attention is needed to further increase the rate of IPv6 adoption. The development of the Internet, including the challenge of IPv6 deployment, has been undertaken in a multi-stakeholder environment. Governments play an essential role as important users of the network and also to provide incentives to industry to encourage IPv6 deployment.

### Q&A

- Dr. Nakagawa of Intel KK, commented that as internet was connected all over the world, he sought views from APNIC if there was any global strategy for the transition of IPv4-to-IPv6.
- Ms. Fujii responded that each individual network needed to be migrated. She mentioned that the global effort was already taking place. In the coming June (8<sup>th</sup> of June 2011, World IPv6 day), there will be a test production of IPv6 for 24 hrs with google, yahoo, facebook, akamai, and others. There has been global effort going on in the last couple of years. She stressed that government as one of the stakeholders should start to act on the issue.
- Mr. Aiono from Samoa wanted to know the threat in case that the country decided to stay with IPv4.
- Ms. Fujii responded that SIDS might have enough IPv4 addresses. However, in the future, end users with only IPv6 from outside the country may not be able to reach the websites in the IPv4 only economy.
- Mr. Tan of Vietnam asked if APNIC has received any report on the IPv6 enabled service from members.

- Ms. Fujii responded that APNIC had not received any report on the IPv6 enabled service from members as this was an operational issue. She, however, pointed out that on the IPv6 Forum website, one can see the available IPv6 enabled services.
- Mr. Tan queried further on the initiative undertaken by APNIC to promote the IPv6.
- Ms. Fujii responded that during the test production of IPv6, APNIC would provide measurement tools which the operator could use to see how many failures occur and find out the causes of the problems. She added that APNIC, as a content providers also made every online service available in IPv6.

8.3 The presentation on “**IPv6 in China**” was delivered by Mr. Shen Yongtao, Director, MIIT, China. (Doc. No. PRF-11/INP-13)

The presentation outlines the rationale of IPv6 deployment and how it is implemented in China. It explains IPv6 standards, progress of IPv6 and its network including example of applications in China.

**Q&A**

- Ms. Le Thi Phuong Anh of Vietnam queried on the IPv6 switching points in China.
- Mr. Shen responded that there were two international IPv6 switching points, i.e., Beijing connecting to the US, and Shanghai connecting to Europe.

8.4 The presentation on “**IPv6 Promotion in Vietnam**” was delivered by Ms. Le Thi Phuong Anh, VNNIC, Viet Nam. (Doc. No. PRF-11/INP-17)

Playing the role of National Internet Registry (NIR), Vietnam Internet Network Information Center (VNNIC) saw the importance of promoting awareness and implementation of IPv6 in Vietnam. Therefore, since 2004, VNNIC has deployed various activities to promote IPv6.

On 29 March 2011 the Minister of Information and Communication has issued Vietnam National action plan on IPv6 which determine the objectives, specific roadmap for transition to IPv6 in Vietnam with three phases to ensure the stable operation of Internet in Vietnam with IPv6-based.

The presentation discussed the history of promoting IPv6 development in Vietnam; current status of IPv6 deployment and provides summary information in the National action plan for Vietnam on IPv6.

### **Q&A**

- Ms. Fujii said that VNNIC had supported industry to migrate to IPv6. She sought recommendations from Mr. Tan to other countries.
- Mr. Tan responded that from his experience human resource played an important role in IPv6 deployment. He also recommended creating IPv6 test network at the national level.
- Ms. Fujii added that APNIC had offered IPv6 workshops and trainings. APNIC is willing to coordinate with international organization and open for cooperation to support member countries within the region to migrate to IPv6.

## **IX. Session 6: International (broadband) connectivity**

***Chairman: Mr. Charles Punaha, CEO, NICTA, PNG***

9.1 Chairman opened the session by introducing the issue.

9.2 The presentation on “**International (Broadband) Connectivity - Bhutan Experience**” was delivered by Mr. Wangay Dorji, Head, Telecommunications, BICMA, Bhutan. (Doc. No. PRF-11/INP-15)

The presentation stresses the importance of International Broadband Connectivity for Bhutanese. It also provides the information on current Bhutanese international connectivity and the initiatives undertaken. The presentation concludes with challenges faced in Bhutan.

9.3 The presentation on on “**Regional cooperation for expanding connectivity**” was delivered by Prof. Rohan Samarajiva, CEO, LIRNEasia, Sri Lanka (Doc. No. PRF-11/INP-03)

With the lessons from voice success, we have seen the effect of low prices leads to greater connectivity. This must be repeated for broadband. International backhaul is the major barrier to connectivity mainly due to two main factors, i.e., Reliability and Affordability. Necessary condition for affordable broadband is the decrease in international backhaul costs. The challenge is how the international backhaul costs can be reduced for all operators, not just for incumbents. The presentation proposed a win-win regional solution for expanding connectivity that leverages the combined strengths of UNESCAP and APT.

9.4 After these presentations, general discussion as well as questions and answers ensued. The following observations and comments were made by the theme speakers of this session and the floor:

- Prof. Samarajiva sought view from Bhutan assuming hypothetically there was a link from Bhutan and to the Russian network. He mentioned that this could be helpful as the BPO and KPO industries were looking for the reliable routes probably through the north of Bhutan. He commented that landlocked countries should think of themselves as crossroads for the link rather than the endpoint of the connection.
- Mr. Dorji responded that Bhutan had not explored the opportunity as the Himalayan was an obstacle for the connection to China in which the area to be connected was also dessert. However, he is willing to consult with the government to explore the possibility.
- Mr. Amir felt that the presentation related more to the terrestrial and continental countries. He said that the countries in the pacific should be involved when considering the interconnectivity network.
- Mr. Punaha gave the example in the Pacific that French government had the policy that French territories should be able to enjoy the same level of service as in Paris. With this respect, French Polynesia is now connected Hawaii. But unfortunately the Micronesian and Melanesian states are not connected. He mentioned that PNG had international connectivity through Sydney and there was a new pipeline through Guam. He hoped that Solomon Islands and Vanuatu could be connected to New Caledonia and PNG soon.
- Prof. Samarajiva answered that LIRNEasia had started the work in south Pacific and would investigate the other part of the pacific in the future. He said that normally people expected the cable to be expensive but we did not have the problem in the south pacific. He gave the example of Maldives in which there were two cable landing points.
- Ms. Silva From Sri Lanka queried on legal implication in terms of maintenance with respect to the terrestrial infrastructure.
- Prof. Samarajiva responded that undersea cable is prone to earthquake and sabotage. He stressed that mesh network offered redundancy and reliability. He mentioned that the issue is fundamentally not different from undersea cable.
- Mr. Amir made an observation that business case of mesh network needed the investment from other sectors. They have to be involved and coordinated. Another point is that many countries already made use of the



conduit and coordination was needed if we were to build the trans-continental terrestrial fiber network.

### **Day 3 : 19 May 2011**

#### **X. Session 7: International Roaming**

**Chairman: Ms. Nur Sulyna Abdullah, Acting Senior Director, International Affairs, MCMC, Malaysia**

- 10.1 The presentation on on "**Progress on APT IMR WG**" was delivered by Mr. Esmond CT Chiu, Senior Telecommunications Engineer, OFTA, Hong Kong, China. (Doc. No. PRF-11/INP-09)

Following the APT workshop on International Mobile Roaming ("IMR") services in Brisbane, Australia last June, the APT IMR WG has been set up to undertake tasks on various IMR-related issues and make recommendations to the APT. This presentation aims at briefing APT Members on the progress of the WG and the details of the next APT IMR Workshop to be held in Hong Kong, China in June 2011.

- 10.2 The presentation on on "**Roaming: Regulate or not?**" was delivered by Prof. Rohan Samarajiva, CEO, LIRNEasia, Sri Lanka. (Doc. No. PRF-11/INP-04)

The arguments against reasonable roaming rates are wearing thin. Roamers do not enjoy price transparency and choice as in competitive markets. The argument that international roamers must cross subsidize domestic users echoes the obsolete justifications for excessive international prices a few years back. The claim that roaming regulation is unique to Europe is wearing thin, with Malaysia and Singapore on the glide path to lower rates starting from May 2011. The single-market rationale behind roaming regulation is not unique to Europe. Asia is considering integrating its markets in various forms.

The simple and converging prices faced by intra-European roamers are contrasted with the complex and increasing prices that are imposed on intra-Asian roamers. Actions for operators and regulators are identified.

- 10.3 The presentation on on "**International Roaming Regulation – An Industry Perspective** " was presented by Ms. Isabelle Mauro, Head of External Affairs, Public Policy, GSM Association. (Doc. No. PRF-11/INP-20 Rev1), (Doc. No. PRF-11/INP-21)

The presentation gives an overview on what roaming is, how it works and the cost associated to roaming. It introduces the regulation inside and outside EU. It also highlights Market trends of IMR. Subsequently, IMR in Asia with the structural difference between Asia and EU including challenges in regulating roaming are explained. It stresses on the importance of Economic Impact Assessment. The presentation lastly concludes with recommendations on IMR to the forum.

10.4 After these presentations, general discussion as well as questions and answers ensued. The following observations and comments were made by the theme speakers of this session and the floor:

- Ms. Sulyna summarized key parameters to facilitate the discussion on whether or not to regulate the roaming.
- Dr. Iwan Krisnadi from Indonesia queried on the presentation from Prof. Samarajiva regarding the pricing of the roaming used whether it was applicable for all operators.
- Prof. Samarajiva responded that the price was not for all operators but based on the big operators.
- Mr. Borthwick from Axiata sought views on the comparison between the situation Asia-Pacific and the other parts of the world.
- Ms. Mauro responded that regulation in EU did not lead to competition and elasticity. For the Asia-Pacific, she suggested looking at the bottleneck such as monopoly of international gateway and double taxation. The region should be very careful on the impact of regulation on the market in the region. She stressed the importance of impact assessment that had been evaluated. She also mentioned the structural difference between APAC and EU.
- Ms. Sofi of Indonesia commented that according to the mode of supply in WTO, roaming was important and APT should make effort to regulate as part of commitment to WTO.
- Ms. Sulyna informed the forum on the initiatives undertaken by ASEAN on roaming. ASEAN did a study on roaming rate within ASEAN and found out that the rate is 100 times difference to the domestic price. The work had then started on the issue. She also mentioned the Singapore-Malaysia bilateral agreement on voice and SMS rate reduction that had been accomplished through close cooperation between the countries.
- Ms. Leong Kein Lam from Maxis shared the view from operator perspective that Malaysia-Singapore agreement was a win-win solution.

He mentioned that for other countries such as small islands to follow suit, one needed to be careful on the imbalance of traffic and the local circumstance. He further mentioned that glide path and reasonable timeline set out in the bilateral agreement allowed the operator to adjust.

- Prof. Samarajiva mentioned that we should also look at the experience from other regions than Europe such as east African and the gulf countries,
- Mr. Chiu mentioned that the IMR was the topic of heated debate. One should look at benefits and drawbacks on each approach. The statistics had shown that after the EU regulation, the roaming rate inside the EU had decreased but the rate between EU and countries outside the region had increased. He stated that Hong Kong was pro market mechanism and would rely on market force to reduce the price. He added that WG would discuss the topic in the coming workshop of IMR in Hong Kong and see the range of options.
- Ms. Mauro made a remark that the figures of the outliers in the statistics made the rate seemed exceptionally high. She mentioned one should look at where the problem actually lay. She also mentioned that transparency was a two-way system. From the operator perspective, this should be done through the provision of information. The regulator should also regulate in a transparent way and the impact assessment was required before the regulation. She suggested that the first step was to work on transparency before considering the regulation.
- Ms. Sulyna contended that local SIM card was not a substitution. She also added that bilateral agreement needed good relationship between the partners.
- Dr. Wee of Korea queried whether GSMA had any agenda among operators to reduce the roaming rate.
- Ms. Mauro responded that this had been in the agenda of GSMA for the last 10 years.
- Dr. Wee added that APT needed to work on this area further and would take this issue to the MC for further deliberation.

## **XI. Session 8: Protecting the consumers and industry**

***Chairman: Mr. Mohamed Nasih, Deputy Director General, CAM, Maldives***

- 11.1 The presentation on on “**Protecting the consumer and industry : Indonesia case**” was presented by Dr. Iwan Krisnadi, Commissioner, BTRI, Indonesia. (Doc. No. PRF-11/INP-02)

The last census in the year 2010, Indonesia has more than 237,6 million population. The ICT development Index (IDI) was presented in the first time in the 2009 edition of Measuring the Information Society while in the 2010 edition, the IDI rank of Indonesia is 19 regional rank and 106 global rank.

The Mobile subscriber is growing significantly and current position is more than 200 million subscribers. The internet user is also increasing significantly, especially the mobile internet service. This growth is caused by the regulatory of the efficiency in the aspect of the availability and the affordability.

Since the ICT User get the easily facility of the internet, then there are detrimental effects of ICT such as SPAM and unhealthy application.

Indonesia introduced the Act no. 44 in year 2008 concerning the pornography. The Government has taken a necessary action to ban the pornography sites from the internet. There are so many SMS Spam complains from the customer. The Regulator and the Operators are joining together to reduce SMS Spam with both approach include the Law & Regulation as well as the technical solution. It is necessary to define the SPAM.

- 11.2 The presentation on on “**Mobile Number Portability**” was presented by S. Mohan Kumar CHANDRA, Deputy Advisor (MN), TRAI, India (Doc. No. PRF-11/INP-27)

India introduced Mobile Number Portability on pilot basis on 25th Nov 2010 in Haryana Service area and it has implemented countrywide with effect from 20th Jan 2011. Telecom Regulatory Authority of India formulated the business process framework for Mobile Number Portability and also determined the per port transaction charge and porting charge. The presentation on discussed introduction of MNP, various implementation methods, TRAI's efforts in introducing MNP, salient features of MNP regulations, porting process and implementation issues.

- 11.3 Honorable Jackson R. NGIRAIN GAS, Minister, Ministry of Public Infrastructure, Industries & Commerce, Republic of Palau delivered a statement.

In his statement, he stated that as the theme of the forum was on policy and regulation, it was of the interest in the aspect of policy decision making and legal framework. Palau is still in its infancy in the area of telecommunications. Palau is now developing legal framework, policy, and regulation. It is important that this should be developed before moving to the implementation. He mentioned that the roaming rate was quite high. He gave the example of roaming rate in Palau which was around 5 USD/min. He mentioned that there was still a lot needed to be done to bring down the rate and Palau would follow the appropriate approach. The area that caught his attention in particular was the issue on providing the telecommunication service to the areas that were hard to reach.

- 11.4 He then mentioned the importance of communication during the disasters. He said that it was not about the technology and how to use it. It was how it should be set up in the right area and location. He stressed the importance of energy, power, and electricity that was the driver of all things. He suggested integrating energy in the telecommunication development. He urged the APT to take this into consideration.
- 11.5 He further stressed that continuance in leadership was important for APT to make sure the objectives of our programmes were met as we approached the last year of Bali Plan of Action. We urge APT to act on issues discussed. He hoped that the forum would give insight on issues and put this into actions. The taskforce and committee should be formed by engaging stakeholders to act on the issues.

### Q&A

- On the query regarding the reason of implementation of MNP at the stage whereby the penetration in India was still not high, Mr. Chandra responded that MNP was not only for competition but also for the consumer convenience.
- On the comment made according to the report about the MNP in Thailand and India that the projects were not successful and that countries in Asia with low ARPU should not implement MNP, Mr. Chandra responded that since the MNP had only been started in January; therefore, it was premature to say that it was not successful at this stage.
- Mr. Shen from China wanted to know whether the consumer lost their value of services after the MNP.
- Mr. Chandra responded that the consumer should be aware of the value added service in the recipient network. This is a customer's choice. According to his experience, there was a case on the problem of receiving International SMS occurred only in one operator in India.
- Mr. Nasih summarized the session by mentioning key points of the session.

## **XII. Session 9: Facilitating investment for broadband penetration**

***Chairman: Ms. Nur Sulyna Abdullah, Acting Senior Director, International Affairs, MCMC, Malaysia***

- 12.1 The presentation on on **“Rural Broadband of Bangladesh – Time to declare it as right!”** was presented by Mr. Mashid Rahman, PMP, Senior

Manager, Government Relation & Regulatory Affairs, Orascom Telecom Bangladesh Ltd (Banglalink). (Doc. No. PRF-11/INP-01)

The paper termed “Rural Broadband of Bangladesh – Time to declare it as right!” depicts a clear image of the broadband sector of Bangladesh; It highlights governments effort and Public Private Partnership in spreading broadband in rural Bangladesh.

The paper outlines the followings:

- Rural Broadband in Bangladesh
- Currently offered Services & Technologies
- Regulatory Challenges
- Future Scope in Bangladesh

This paper is a great case study for the possibilities of Public Private Partnership and proposes broadband as a right for the developing nations to decrease digital divide.

### **Q&A**

- Ms. Sulyna supported the idea that the broadband should be a right. She added that ASEAN realized and believed that broadband should be a right. She shared with the audience the statement on the broadband from ASEAN ICT master plan launched in January this year.
- Mr. Mehmud of Pakistan queried whether there is a universal service for Broadband in Bangladesh.
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- Mr. Rahman responded that USF has been proposed as license was being renewed. The USF is on the way but it has not yet been finalized.
- Mr. Borthwick from Axiata commented that he did not think that broadband should be a right. He further mentioned that one obstacle of broadband access in Bangladesh was the total tax launched to the industry in Bangladesh.
- Mr. Punaha added that as government had responsibility to ensure the service in rural areas. One way to accomplish this is through tax imposed to the industry.

## **XIII Way Forward**

### **13.1 Election of Vice Chairmen of PRF**

The Secretary General reported the result of consultation regarding the candidates for the Vice Chairmanship of PRF.

From the East Asia sub-region, Mr. Amgalanbat Batsuren, Director General, Policy and Planning Department, Mongolia was proposed for a second term.

From the South East Asia sub-region, Nur Sulyna Abdullah, Acting Senior Director, International Affairs, MCMC, Malaysia was proposed for a second term.

From the South Asia sub-region, Mr. Ali Mehmud, Director (Telecom), Ministry of Information Technology, Pakistan was proposed.

From the Pacific sub-region, Mr. Charles Punaha, CEO, NICTA, PNG was proposed.

The proposals were approved with acclamation.

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| <b>Decision no. 2 (PRF/2011/2)</b> |
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| <ol style="list-style-type: none"><li>1. From the East Asia sub-region, Mr. Amgalanbat Batsuren, Director General, Policy and Planning Department, Mongolia was elected as the Vice-Chairman of the PRF.</li><li>2. From the South East Asia sub-region, Ms. Nur Sulyna Abdullah, Acting Senior Director, International Affairs, MCMC, Malaysia was elected as the Vice-Chairman.</li><li>3. From the South Asia sub-region, Mr. Ali Mehmud, Director (Telecom), Ministry of Information Technology, Pakistan was elected as the Vice-Chairman.</li><li>4. From the Pacific sub-region, Mr. Charles Punaha, CEO, NICTA, PNG was elected as the Vice-Chairman.</li></ol> |
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## 13.2 Bali Plan of Action

- a. Mr. Amir went through the matrix of Bali Plan of Action (Actions relevant to the PRF).
- b. He mentioned that it was the decision of the Forum that Rapporteur Group should be established to study the status and rates of international connectivity, and make recommendations for areas of regional cooperation.
- c. He also mentioned that the Rapporteur Group to study the status of convergence licensing could not carry out the task due to lack of nominations.

- d. There are four areas to be undertaken by PRF, i.e., International connectivity, international mobile roaming, convergence licensing, and Seoul-Melbourne multilateral memorandum of understanding.
- e. Mr. Amir suggested Members to provide APT with update information on the above-mentioned areas and the report will be prepared and be proposed to MC.
- f. Ms. Sulyna requested Members to provide suggestions on how to move the 4 areas forward within two weeks. The Secretariat is to work with the 4 Vice Chairmen to find out the practical solution to be undertaken further in the next PRF.

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| <b>Decision no. 3 (PRF/2011/3)</b> |
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| <ol style="list-style-type: none"> <li>1. Members are to provide suggestions on how to move forward the topic of international connectivity, convergence licensing, international roaming and Seoul-Melbourne multilateral memorandum of understanding to Secretariat within two weeks.</li> <li>2. The Secretariat is to work with the 4 Vice-Chairmen to find out the practical solution to be undertaken further in the next PRF.</li> <li>3. The Secretariat will circulate the revised Matrix of Bali Plan of Action to the participants for comments and finalize it before it is submitted to the Management Committee for consideration.</li> </ol> |
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### 13.3 Discussion on Themes for the next PRF

- a. Ms. Sulyna requested for input regarding the themes of the next PRF. She suggested that broadband as the topic for the next year with more specific focus. She also suggested IMR together with WG report as another topic.  
From the perspective of International connectivity, the protection of submarine cable was suggested as another topic.
- b. She also mentioned energy as it was linked to the ICT as another possible topic.
- c. Ms. Sulyna called for input on possible themes for the next PRF.
- d. Mr. Mehmud proposed the topic of cost of device as a factor of broadband penetration.



- e. Mr. Nasih suggested the ICT and climate change, Disaster preparedness, green and energy efficient telecom as the topics.
- f. Mr. Orange noted that smart grid was the intersection of many topics such as machine-to-machine communication, green energy and ICT, and energy efficiency.
- g. As for the themes for business dialogue, Ms. Mauro will consult with operators in the region and feed the input back to the Secretariat via email.
- h. Secretary General mentioned that with all the inputs, Secretariat and Vice Chairmen were tasked to finalize the themes for the next PRF.

#### **XIV. Closing Session**

- 14.1 Closing remarks were delivered by Madam. Quan Duy Ngan Ha, Director General, International Cooperation Department, Vietnam and Mr. Toshiyuki Yamada, Secretary General, APT.
- 14.2 Secretary General thanked MIC of Vietnam for the hospitality and the preparation of the forum. He extended special thanks to Madam Ha and Vice Minister Dr. Tran Duc Lai. He also thanked the outgoing Vice Chairman, Mr. Wangay Dorji for his kind contribution. Lastly, he thanked Minister Ngiraingas from Palau for attending the forum.
- 14.3 The meeting was then closed.

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