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Summary and Evaluation

Roundtable on Information Technology Infrastructure

August 22-23, 2008 in Bali, Indonesia



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The ASEAN region is characterized by low internet and broadband penetration, especially in low population density rural areas. The geography of most of ASEAN's members is challenging. Paragraph 52.i of the ASEAN Community Blueprint sets a 2010 deadline to facilitate high-speed connections among all national information infrastructures (NII). ASEAN Telecommunication Ministers are working together to create the necessary policy environment to achieve the 2010 goal. To help achieve this goal, the ASEAN-US Technical Assistance and Training Facility ("the Facility") organized the ASEAN Roundtable on Information Infrastructure August 22-23, 2008 in Bali, Indonesia. The Roundtable brought together representatives from the national telecommunications ministries and key national and multinational private sector providers to discuss the issue of ASEAN's information infrastructure and to develop recommendations to be presented to the Meeting of the ASEAN Telecommunication Ministers.

During the first day of the Roundtable, the presentations and discussions focused on existing and proposed infrastructure in the region and examined the extent to which the existing information networks are interconnected. Speakers highlighted the existence of excess capacity in some areas and the lack of connectivity in others. Various infrastructure projects are being designed to address some of the capacity and interconnection problems but no comprehensive plan has been developed.

At the end of the first day and continuing to the second day, the presentations focused more on the technological, financial and regulatory issues related to the development of information infrastructure in the region. This discussion highlighted the need to address regulatory issues in expanding the high speed infrastructure and the need for innovative solutions, both in technology and financing, to reach smaller communities in the region. A consistent theme throughout the Roundtable was the need to foster the development of greater ASEAN-hosted content of interest to the residents of region to increase regional internet traffic and thus support infrastructure development.

Following the presentations and discussion, the participants and speakers developed recommendations for submission to the ASEAN Telecommunications Ministers. The Roundtable proposed the following recommendations:

1. Revitalize the establishment of an ASEAN Internet Exchange (AIX) and initiate an AIX Working Group. The AIX would interconnect the information infrastructure of the region without relying on transoceanic cables.
2. Promote initiatives and activities on ASEAN Information Infrastructure by capitalizing on advances of its neighbors – China, Korea and Japan
3. Capitalize on innovative technologies and financing structures to improve penetration and service delivery
4. Foster a regulatory environment that creates an enabling environment to foster innovation and an open market

The proposed AIX Working Group shall design an executable implementation plan for the AIX concept, address sufficiency of available ASEAN bandwidth, explore the necessity to add capacity on the Eastern side of the region, and access research and collaborate on test beds. In addition, the AIX Working Group will also be tasked with looking at innovations that reduce costs of delivering information services to difficult to serve areas in ASEAN to

increase affordability and access while maintaining quality of service and assuring sustainability. Finally the roundtable proposed tasking the AIX working group to explore a regulatory framework that addresses balance between commercial and development needs. This includes USOs, spectrum management and licensing, and interconnectivity, among other relevant issues.

Directly following the Roundtable, the ASEAN Telecommunications Ministers adopted the Bali Declaration on Forging Partnerships to Advance High Speed Connection to Bridge ASEAN Digital Divide. This Declaration highlighted the need to develop a regulatory environment conducive to investments in information infrastructure, the importance of national and regional internet exchanges, the need to encourage the development of local content, and the need to bring greater connectivity to poorly served areas, among other topics. Rapid implementation of the recommendations of the Roundtable would significantly contribute to the attainment of the goals of the Declaration.

Agenda

ASEAN-US Technical Assistance & Training Facility

Roundtable on ASEAN Information Infrastructure

August 22-23, 2008 in Bali, Indonesia

DAY 1

8:00 – 8:30 Arrival/Registration

8:30 – 8:45 **Welcome Remarks**, Ms. Aghati Sofia Soeria Atmadja, Directorate General of Posts and Communications of Indonesia
Welcome Remarks, Tim Buehrer, ASEAN-US Technical Assistance and Training Facility

Session 1 Development Status and Plan of ASEAN Information Infrastructure

9:00 – 10:30 **Presentations on Physical Infrastructure and Connection of ASEAN Members:**
Malaysia, Indonesia, and Vietnam
Moderated by Jun Labadan: 15 minute remarks by each speaker, 30 minutes Q&A

10:30 – 10:45 **Coffee Break**

10:45 – 12:30 **Sub-Regional ICT Initiatives**

- Asia-American Gateway, Baharul Nizam, Malaysia Telekom
- GMS Information Superhighway, Mr. Somnuck Phothirath, Director of Telecommunications Development Division, Enterprise of Telecommunications Lao
- ASEAN-China Information Superhighway, Mr. Chen Hui, Ministry of Industry and Information Technology, The People's Republic of China

Moderated by Jun Labadan, 15 minute remarks by each speaker, 30 minutes Q&A

12:30 – 1:30 **Lunch**

Session 2 Network Architecture for a Redundant and Resilient ASEAN Information Backbone

1:30 – 3:15 - Development of ASEAN Internet Exchange (AIX) as Regional Internet Infrastructure (study), Mr. Taufik Ambaryanto, PT. Indosat, Indonesia

- Submarine Infrastructure within ASEAN and key drivers to growth in bandwidth requirements, Mak Wei Seng, SingTel
- ICT Technologies for Public Safety and Disaster Management, Bhatia Bharat, Motorola Asia Regional Government Affairs Office

Moderated by Jun Labadan, 15 minute remarks by each speaker, 30 minute Q&A

3.15-3.30 **Coffee Break**

Session 3 Innovations in Technology and Financing – Part 1

- 3:30 – 5:00
- WiMAX – Addressing the broadband needs of Southeast Asia, *Werner Sutanto, Managing Director, WiMAX Program Office, Southeast Asia, Intel Corporation*
 - New and Cost Effective Technologies, *Harry K. Nugraha, Senior Director and Indonesia Country Manager, Qualcomm*
 - Next Generation Network (routing and traffic engineering, network software, optical networking, TCP etc), *Satyen Gupta, British Telecom*

Moderated by Jun Labadan, 15 minute remarks by each speaker, 30 minutes Q&A

DAY 2

8:30 – 9:00 Arrival

Session 3 Innovations in Technology and Financing – Part 2

- 9:00 – 10:00
- Innovative Financing Options, *Natasha Beschoner, Senior ICT Policy Specialist, Global Information & Communications Technology Department, World Bank Jakarta*
 - *A Micro Experience: To Support Establishment of Broadband Infrastructure in Rural Area*", *Mamoru Udaoka, Advisor, Ministry of Internal Affairs and Communications, Japan*

Moderated by Jun Labadan, 15 minute remarks by each speaker, 30 minutes Q&A

10:00 – 10:15 **Coffee Break**

Session 4 Responsive Regulatory Framework to develop the ASEAN Information Infrastructure

10:30 – 12:15 **National Regulatory and Policy Framework for Information Infrastructure**

- Policy Framework in the United States, *Debra Ann Juncker, Finance and Development Officer, Embassy of the United States of America in Indonesia*
- Information Infrastructure and Policy in Korea, *YS Lee, Advisor of National Information Society Agency (NIA), Republic of Korea*
- Regulatory policies vis-à-vis GATS and workable infrastructure competition in a national market, *Bill Garrison, Chief of Party, USAID ITAP*

Moderated by Jun Labadan, 20 minute remarks by each speaker, 30 minutes Q&A

12:15 – 1:30 **Lunch**

1:30– 3:00 **Private sector presentations on roles and expectations from the government/regulator in the information infrastructure projects**

- *Anthony Cook, Legal and Corporate Affairs, Southeast Asia, Microsoft*
- *Patrick Chung, Director, Government and Regulatory Affairs, Yahoo.com*
- *Valerie Tan, Regulatory Affairs, Orange France Telecom*
- *Mr. Rakbmat Junaidi, Director Corporate Services, Bakrie Telecom*

Moderated by Jun Labadan, 15 minute remarks by each speaker, 30 minutes Q&A

3:00 – 3:15 **Coffee Break**

3:15 – 4:15 **Wrap Up Session to Determine Key Recommendations for the Development of High Speed Connection in ASEAN**

Led by Moderator, Jun Labadan

Evaluation

ASEAN-US Technical Assistance & Training Facility

Roundtable on ASEAN Information Infrastructure

August 22-23, 2008 in Bali, Indonesia

Your answers to this questionnaire will help us to improve our training programs. Thank you for taking the time to fill it out.

Personal data

Years of experience in ICT

Average: 15

Country of Representation

India, Indonesia, Japan,
Korea, Lao PDR, Malaysia,
Singapore, Thailand, USA,
Vietnam, Cambodia

Male/Female

28 Male; 11 Female

Presentations

On a scale of 1 to 6, please rate how informative each session was for you. A rating of 6 indicates that you found the session highly informative; a rating of 1 that you did not find it informative.

		Average Score
	Presentation	
Session 1: Development Status and Plan of ASEAN Information Infrastructure		
1	Presentations on Physical Infrastructure and Connection of ASEAN Members	5.07
2	Asia-American Gateway	4.87
3	GMS Information Superhighway	4.67
4	ASEAN-China Information Superhighway	4.87
Session 2: Network Architecture for a Redundant and Resilient ASEAN Information Backbone		
5	Development of ASEAN Internet Exchange (AIX) as Regional Internet Infrastructure (study), <i>PT. Indosat, Indonesia</i>	5.06
6	Submarine Infrastructure within ASEAN and key drivers to growth in bandwidth requirements, <i>SingTel</i>	5.25
7	ICT Technologies for Public Safety and Disaster Management, <i>Motorola Asia</i>	4.56

Session 3: Innovations in Technology and Financing		
8	WiMAX – Addressing the broadband needs of Southeast Asia , <i>Intel Corporation</i>	5.38
9	New and Cost Effective Technologies , <i>Qualcomm</i>	5.06
10	Next Generation Network (routing and traffic engineering, network software, optical networking, TCP etc) , <i>British Telecom</i>	5.06
11	Innovative Financing Options , <i>World Bank Jakarta</i>	5.18
12	A Micro Experience: To Support Establishment of Broadband Infrastructure in Rural Area" , <i>Mamoru Udaoka, Advisor, Ministry of Internal Affairs and Communications, Japan</i>	4.81
Session 4: Responsive Regulatory Framework to develop the ASEAN Information Infrastructure		
13	Policy Framework in the United States , <i>Debra Ann Juncker, Finance and Development Officer, Embassy of the United States of America in Indonesia</i>	4.44
14	Information Infrastructure and Policy in Korea , <i>YS Lee, Advisor of National Information Society Agency (NIA), Republic of Korea</i>	4.71
15	Regulatory policies vis-à-vis GATS and workable infrastructure competition in a national market , <i>Bill Garrison, Chief of Party, USAID ITAP</i>	5.06
16	Private sector presentations on roles and expectations from the government/regulator in the information infrastructure projects <ul style="list-style-type: none"> - <i>Anthony Cook, Legal and Corporate Affairs, Southeast Asia, Microsoft</i> - <i>Patrick Chung, Director, Government and Regulatory Affairs, Yahoo.com</i> - <i>Valerie Tan, Regulatory Affairs, Orange France Telecom</i> - <i>Mr. Rakhmat Junaidi, Director Corporate Services, Bakrie Telecom</i> 	5.06
17	Wrap Up Session to Determine Key Recommendations for the Development of High Speed Connection in ASEAN	4.92

Subject Matter

Would you like to see more, the same, or less time devoted to the following negotiation topics:

	More	Same	Less
Session 1: Development Status and Plan of ASEAN Information Infrastructure	10	7	0
Session 2: Network Architecture for a Redundant and Resilient ASEAN Information Backbone	5	10	2
Session 3: Innovations in Technology and Financing	7	10	0
Session 4: Responsive Regulatory Framework to develop the ASEAN Information Infrastructure	12	5	0
Wrap Up Session to Determine Key Recommendations for the Development of High Speed Connection in ASEAN	7	7	0

General

1. What part of this course did you like the most?

- o Innovation in Technology & Financing
- o Network architecture for redundant and resilient ASEAN information backbone
- o Regulatory Framework
- o Internet Exchange for ASEAN
- o Excellent moderation
- o Part 1 & 4
- o Session 3 and 4
- o Interactions with industry representatives
- o Interactions
OBS + international division of FT group. We serve enterprise segment Multinational customers.
- o Global operator
200 countries. -- We believe strongly in satisfying customer, close engagement & understanding needs, ICT evolving, so is customer's biz
- o Bringing together industry, ASEAN and other government participants, topic areas
- o Session 1
- o The regional and various national presentations
- o Discussion and Q&A
- o Session 2
- o The private sector feedback

2. What part of this course did you like the least?

- o Network Architecture
- o Regulatory Framework
- o Technology & Financing
- o Too much focus on regulations
- o Part 2
- o Session 1
- o Nothing
- o Presenters exceeding the specified time
- o As I was preparing, what is a responsive regulatory framework.
Qualcomm - 3 G tech evolution. Singtel - network evaluation.
There is evolution of reg. frameworks
- o Coordination of content in sessions. In some sessions this was good, in other it was a bit all over the topic and it would probably be more beneficial to set out objectives/key topics or issues for each session so presentations focused on these.

3. What other topics would you like to see included?

- o More on regulatory framework for new generation network
- o Community development among ASEAN people with their unique
- o Regulatory Framework
- o NGN for ASEAN toward
- o This should be best for 2 days program
- o Info infra policy in general
- o Foreign Investment
- o Infrastructure sharing + Regulatory issue on ICT Business
- o More on the relative financing for sustainable projects
- o Harmonizes communications evolution
Networks and to the service centric

IP transformation -- > convergence of voice, data & video

Applications -- > what differentiates you from competition.

-- > networks becoming commoditized

Regulatory discussion will focus on IP transformation -- > address

-- > i/x, standards, to regulate or not? What to regulate? How much?

- o The topics were all good
 - o Data Harmonization for ASEAN contents
 - o More on financing obstacles; more depth on regulatory issues
 - o Regulatory challenges with regard to new converged services
 - o Promoting and supporting information infrastructure deployment in rural, mountainous areas
4. Did this course use a good mix of lecture and interactive discussion?
- o Yes
 - o Need more lecture on new development
 - o Very good
 - o I would like to have chance to discuss in small groups
 - o Yes. It was good meeting and discussion
 - o Yes, very good questions
5. What sorts of follow-up activities for this course would you find useful?
- o Interactive with companies with whom we made
 - o Need for a workshop, acquaintances on enabling regulatory environment for NGN.
 - o More detail workshop and more implementable activities discussion
 - o Create a/some working group to discuss detail & continuity of technology/infrastructure of information on ASEAN region
 - o Better if all representative of among ASEAN country attend to this event
To consider regulation in full IP network and interconnection between exchange networks and IP
 - o networks
 - o AIX need to be further discussed and revised at a higher level of ASEAN
 - o WB and its activities in providing assistance to bridge the digital divide in developing countries
 - o More on the industry interactions
 - o Should have more roundtables on other issues of ASEAN
 - o Make a mailing list or a website to update or share data
 - o Additional small focused workshops.
 - o The moderator did an excellent job!
 - o To create an online-forum for exchange of information and discussion
 - o Follow-up forum re. next step.