



**Asia-Pacific  
Economic Cooperation**

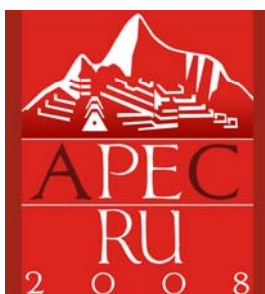
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**2008/TEL38/PLEN/030**

Agenda Item: 7

## **Policy and Regulatory Update – Singapore**

Purpose: Information  
Submitted by: Singapore



**38<sup>th</sup> APEC Telecommunications and Working  
Group Meeting – Plenary Session  
Lima, Peru  
15-17 October 2008**

**APEC TEL 38  
12-17 OCT 2008  
LIMA, PERU**

**POLICY AND REGULATORY UPDATE**

**SINGAPORE**

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**Key ICT Indicators**

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	Penetration @ TEL 38	Penetration @ TEL 37
Broadband Household Penetration	88.6% (Jul 08)	78.2% (Jan 08)
Mobile Phone Penetration	135.6% (Jul 08)	125.6% (Jan 08)
3G Penetration	35.6% (Jul 08)	30.8% (Jan 08)

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**Update on Next Generation National Broadband Network (NGNBN)**

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Background

In 2006, Singapore announced its plans to developed a ultra-high speed Next Generation National Broadband Network (NGNBN) which will be capable of delivering speeds of up to 1Gbps and beyond.

Following intensive consultations and discussions with the industry and the public, two Request-For-Proposal (RFP) totally up to S\$1 billion worth of governmental grant were issued for the NGNBN:

- a. The first RFP is for a Network Company or the NetCo to design, build and operate the passive infrastructure that will carry the traffic of the NGNBN. For this RFP, the government grant is capped at S\$750 million.
- b. The second RFP is for an Operating Company or OpCo to design, build and operate the active infrastructure. Besides managing the flow of traffic on the passive infrastructure, the NGNBN OpCo will also be the operator that provides wholesale services to the Retail Service Providers (RSPs). For this, RFP, the governmental grant is capped at S\$250 million.

NetCo RFP

*Award*

The NetCo RFP was launched on 11 December 2007 and closed on 5 May 2008. IDA has selected the NetCo RFP proposal submitted by OpenNet Consortium on 26 September 2008. The OpenNet Consortium is led by Axia NetMedia Corporation from Canada and includes Singapore Telecommunications Ltd, Singapore Press Holdings Ltd and SP Telecommunications Pte Ltd as the other partners.

### *Rollout*

The OpenNet has committed to achieve 60% roll-out of all households and businesses by year 2010 and 95% by 2012. Universal Service Obligation (USO) will be imposed on OpenNet from 2013.

### OpCo RFP

#### *Award timeframe*

The OpCo RFP was launched on 7 April 2008 and is scheduled to close on 14 November 2008. IDA expects to award the OpCo RFP by the end of 1<sup>st</sup> Quarter 2009.

#### *Uplink Downlink Speeds*

The OpCo will be required to minimally provide 100Mbps downstream and 50Mbps upstream initially, and provide plans on subsequent provision for speeds of up to 1Gbps and beyond.

#### *Consortium Leads*

With the launch of the RFP, IDA conducted an exercise to qualify interested candidates to participate in the OpCo RFP as Consortium Leads. Successful companies were:

- i. Alcatel-Lucent Singapore Pte Ltd
- ii. Axia NetMedia Corporation
- iii. BT Singapore Pte Ltd
- iv. City Telecom (H.K.) Limited
- v. Deutsche Telekom Asia Pte Ltd
- vi. MobileOne Ltd
- vii. Nippon Telegraph and Telephone West Corporation
- viii. Nokia Siemens Networks Singapore Pte Ltd
- ix. Singapore Computer Systems Ltd
- x. Singapore Telecommunications Ltd
- xi. StarHub Ltd

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### **Full Mobile Number Portability**

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In 13 June 2008, Singapore introduced a Full Mobile Number Portability-solution to replace the previous Call-Forwarding solution which was introduced in 1997.

With Full Mobile Number Portability, mobile users who wish to keep their current number when they switch mobile operator, can do so by the next working day.

Additionally, the solution also allows both pre and post-paid mobile users to switch mobile operators while:

- a. Retaining the full use of his mobile number, which will continue to appear on his contact's Caller-ID when he makes a call or uses the Short Message Service (SMS)/Multi-Media Message Service (MMS).
- b. Continuing to receive MMSes on his number from his previous mobile operator.

Full Mobile Number Portability is meant to empower consumers with greater flexibility to choose from the offerings from mobile operators, such as to further intensify competition in the mobile market.

In addition to Full Mobile Number Portability, IDA also required operators to cease recurring monthly porting fees for fixed line telephony in Jan 2008<sup>1</sup>.

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## **National Authentication Framework**

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In early Oct 2008, IDA, supported by the Monetary Authority of Singapore and the Ministry of Finance, announced that it will commence a Call-For-Collaboration (CFC) to roll-out a National Authentication Framework (NAF).

Currently, banks and other institutions requiring a more rigorous process of validating identities, uses a second-factor authentication method in their log-in processes; when a user accesses an online service, in addition to using a User-ID and Password, the user would be required to enter an additional "second factor password", which is generated on demand. The dynamically-generated "second factor password" could be delivered through hardware tokens or via SMS. Other types of authentication methods include certificates and biometrics.

When the National Authentication Framework (NAF) is implemented, online service providers such as government agencies and financial institutions will be able to outsource their second-factor authentication infrastructure to trusted third parties (also known as the Authentication Operators or AOs).

AOs are free to offer multiple authentication devices and methods, depending on market needs. However, regardless of the device offered, the chosen device will be able to be used to access multiple online e-services that require strong authentication. Consumers can thus benefit from the enhanced security of strong authentication without the inconvenience of having to carry multiple devices.

IDA's CFC for the NAF is meant to seek industry partners to operate as Authentication Operators. The NAF CFC public documents and details of CFC submission is expected to be made available from 13 October 2008. The CFC is expected to close in December 2008.

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<sup>1</sup> A similar requirement was put in place for mobile operators in June 2003,