

Singapore, 14 June 2005 | For Immediate Release

IDA Launches New Policy Framework for Internet Protocol (IP) Telephony
More Consumer Choices and Lower Market Entry Barriers for Telephony Providers

In the bid for lower costs, consumers are increasingly using the Internet and other Internet Protocol (IP)-based networks to make local and international voice calls, together with, or as alternatives to traditional fixed-line telephony. To advance Singapore's development in this market segment, Dr Lee Boon Yang announced today that the Singapore Government will introduce a new policy framework for Internet Protocol (IP) Telephony.

Speaking at the Infocomm Media Business Exchange 2005 (imbX) Opening Ceremony, Dr Lee said, "IDA will issue licences and phone numbers for the provision of IP telephony services to facilitate the entry of companies interested in offering IP Telephony services in Singapore. We expect growth in IP Telephony to bring about reduced costs in providing telephone services, and in turn, translate to reduced prices and more service choices for businesses and consumers."

IP Telephony is a form of Voice over IP (VoIP) service - a user's voice during a IP telephony call is digitised, carried over public Internet or private IP networks in IP data packets, then de-digitised back into 'voice' at its destination. With IP Telephony, a user can potentially use any broadband Internet access connection to make and receive local or international voice, data and video calls (regardless of location), with a phone number.

IDA Deputy Chief Executive and Director-General (Telecoms), Mr Leong Keng Thai said, "A proper framework that provides phone numbers for VoIP brings convenience to consumers. Other potential benefits for businesses and consumers we expect include lower business costs, flexibility, and innovative service choices."

He added, "IDA's framework will benefit broadband users. Individuals should consider taking up broadband so that they can take advantage of such IP Telephony services that will be available soon."

IP Telephony Framework

Facilities-based operators¹ (FBOs) and services-based operators² (SBOs) can be licensed under the new IP Telephony framework. For the provision of IP Telephony services, FBOs can use 8-digit level "6" numbers. In addition, IDA will issue a new 8-digit number level "3" (i.e. +65 3xxx xxxx) to both FBOs and SBOs.

To encourage adoption in this emerging technology, IDA's framework includes minimal regulatory obligations to address certain public and regulatory concerns. Operators providing IP Telephony services using level '3' numbers, are not required to provide number portability, emergency service connection, directory enquiry and printed directory services, or conform to QoS levels set by IDA. However, operators must provide clear information to their subscribers, for example, whether their service allows access to emergency services and whether it meets the minimum QoS levels set by IDA for local fixed-line services.

FBOs who wish to use 8-digit level "6" numbers (i.e. +65 6xxx xxxx) for IP Telephony services can do so, if they can provide number portability; connection to emergency services; directory enquiry and printed directory services; and, ensure quality-of-service (QoS) levels that are

currently required for local fixed-line services. FBOs must also ensure interconnection such that users can receive and make voice calls to fixed-line and mobile subscribers in Singapore. These are similar obligations for current local fixed-line services.

Also, FBOs are only to assign level '6' numbers to users with valid Singapore addresses. This ensures that Singapore's national numbering plan³ resources continue to benefit users in Singapore.

More details on IDA's IP Telephony framework can be found at IDA's website, in the sections "Policy & Regulation", "Consultation Papers".

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Notes to Editor:

¹FBOs refer to operators who deploy and/ or operate any form of telecoms network, systems and/ or facilities. Such deployment is for the purpose of providing telecoms and/or broadcasting services (outside of their own property boundaries) to third parties, who may include other licensed telecoms operators, business customers or the general public.

²SBOs are operators that lease (from an FBO) any telecoms system (including telecoms network elements such as transmission capacity, switching services, ducts and fibre) to provide telecoms services to third parties, or to resell the telecoms services of FBOs.

³Currently, under Singapore's National Numbering Plan, telephone numbers are allocated for the provision of telecoms services, such as fixed-line, mobile or paging services.

Supplementary Information

Please refer to the IDA Media Portal at www.idanews.gov.sg for a backgrounder on "[IP Telephony – Module 101](#)". To receive such articles and regular IDA news updates, subscribe to "Infocomm News" at www.idanews.gov.sg -> Subscriptions.

About Infocomm Development Authority of Singapore

The Infocomm Development Authority of Singapore (IDA) is committed to growing Singapore into a dynamic global infocomm hub. IDA uses an integrated approach to developing infocommunications in Singapore. This involves nurturing a competitive telecoms market as well as a conducive business environment with programmes and schemes for both local and international companies. For more news and information, visit www.idanews.gov.sg.

Singapore, 03 March 2006 | For Immediate Release

Singapore to Have Next Generation Broadband Networks
And Enhanced National Infocomm Scholarship Programme

Plans for Singapore's Next Generation National Infocomm Infrastructure and Manpower development were announced by Dr Lee Boon Yang, Minister for Communications, Information and the Arts, in Parliament today.

These developments are part of the iN2015 master plan that will transform Singapore into a global leading city, where Infocomm becomes intrinsic to how we live, learn, work and play. The master plan will be launched in June 2006.

The developmental programmes for the two key areas of infrastructure and manpower in the Infocomm sector are detailed in the accompanying Fact Sheets.

Briefly:

Next Generation National Infocomm Infrastructure (Next Gen NII) This is Singapore's new digital super-highway for super-connectivity.

Next Gen NII has two components: A wired broadband network that will deliver ultra-high broadband speeds to all homes, offices and schools, while a wireless broadband network will offer pervasive connectivity around Singapore.

Data trends suggest exponential growth in network traffic will continue. Ultra-high speed broadband pipes are necessary conduits for the future. Infocomm infrastructure has been an enabler and a source of competitive advantage for Singapore. Such strategic foresight has served Singapore well.

Next Gen NII is Singapore's economic energiser, enabling quantum transformation in the way we will work, live and play.

Infocomm Manpower Development Updates

Infocomm talent is critical to Singapore's continued leadership as the location of choice for Infocomm business and innovation.

Last November, IDA announced a \$120 million five-year roadmap to develop Singapore's Infocomm manpower capabilities.

Part of that roadmap is the National Infocomm Scholarships (NIS) programme that aims to hone the next generation of Infocomm talent. The programme received two booster shots today:

There are now 100 more National Infocomm Scholarships to be awarded over the next five years, in addition to the 90 scholarship places previously planned. As a result, an additional \$30 million will be pumped into this programme, on top of the \$9 million previously set aside. The Singapore Management University and the world-renowned Carnegie Mellon University will offer a joint programme that lets NIS scholars studying in SMU to graduate with a Bachelor of Science (Information Systems Management) degree along with a master's degree in IT from Carnegie Mellon.

Singapore, 09 March 2006 | For Immediate Release

Wireless Broadband Network Call-For-Collaboration

Following the parliamentary announcement on 3 March 2006 by Dr Lee Boon Yang, Minister for Information Communications and the Arts, to deploy a Next Generation National Infocomm Infrastructure (Next Gen NII), the Infocomm Development Authority (IDA) today launches a Call-For-Collaboration (CFC) for its Wireless Broadband Network (WBN).

The Next Gen NII is Singapore's new digital super-highway for super-connectivity and it comprises WBN and the wired Next Generation National Broadband Network (NBN). The Wireless Broadband Market Development CFC launched today is for WBN. A Request for Concept (RFC) for NBN will be issued within a month, as announced in Parliament by Minister MICA on 3 March 2006.

The Next Gen NII will entrench Singapore's Infocomm hub status and open the doors to new business and social growth for the country. Next Gen NII will be capable of ultra-high speeds of 100Mbps to 1Gbps as early as 2008 and pervasive wireless access within key catchment areas as early as August 2006.

Wireless Broadband Market Development CFC

Through the CFC, IDA now invites interested operators and service providers to submit proposals for the deployment of wireless broadband coverage in Singapore. The CFC seeks to achieve the following objectives:

- Accelerate the deployment of wireless broadband by providing coverage in locations where users out of their homes, schools and offices can conveniently access wireless broadband services using data-centric infocomm devices.
- Catalyse the demand for wireless broadband services by increasing the number of wireless broadband users.

Submissions of CFC proposals must reach IDA on 5 May 2006 by 11am. The CFC documents can be downloaded from the IDA website (www.ida.gov.sg) under the sections: "Wireless", "Call for Collaboration", "Wireless Broadband Market Development". Responses should be submitted on the CFC documents. The CFC sits within the following NGNII timeline:

- March 2006 CFC called
- June 2006 Award of CFC
- August 2006 Roll-out of Commercial Services to commence
- June 2007 WBN in key catchment areas deployed

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Supplementary Information

Please refer to the IDA Media Portal at www.idanews.sg for backgrounder on Singapore's Next Generation National Infocomm Infrastructure.