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FACT SHEET: NEXT GENERATION NATIONAL INFOCOMM INFRASTRUCTURE

The Need : New Infrastructure, New Edge, New Possibilities

The Next Generation National Infocomm Infrastructure or Next Gen NII, is Singapore's new digital super-highway for super-connectivity.

Next Gen NII helps entrench Singapore's Infocomm leadership, ahead of Asian competitors. Japan, South Korea, Taiwan and some cities in China (Beijing, Shanghai) have optical fibre projects, which will soon offer speeds of 100 Mbps to 1 Gbps to many homes as early as 2008. While 14.4 Kbps was the norm 10 years ago, the norm today is 2 Mbps – about 140 times faster. Some examples of future demand include bandwidth-intensive applications like IP video telephony and immersive digital media. New bandwidth-intensive services and applications coming up, like HDTV and IPTV, plus other emerging applications point to a clear need for Next Gen NII.

While impossible to speculate on all the possible future applications that will fuel demand, the continued exponential growth in "speed needs" points to the need to ensure our infocomm infrastructure does not become a constrain to our growth; and to the need to future-proof Singapore's Infocomm infrastructure.

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

Next Gen NII further entrenches Singapore's infocomm hub status. Offering super-fast speeds and more choices, competition will increase in the broadband market, leading to even more competitive prices for consumers. For businesses, more competitive pricing and faster connectivity translates into lower business costs.

Next Gen NII also opens the door for players from the entire telecommunications value chain (hardware providers, systems solution integrators, vendors, enablers and content players) to participate in Singapore's enlarged broadband market. They can also develop and test-bed new applications and services, with a view to market them to the rest of Asia from Singapore. This, in addition to Singapore's strong IP rights protection, competitive regulatory policies, well-established status as a business hub and ready availability of skilled manpower, further cements Singapore as a natural test bed for new ideas and as an infocomm hub.

Next Gen NII is Singapore's economic energiser, enabling quantum transformation in the way we work, live and play. With ultra-high speed wired and ~~a~~ pervasive wireless networks, anticipated demand will come from various sectors such as:

- **Mobile workforce:** Businesses use infocomm technologies (ICT), the Internet, to allow employees and business partners to stay connected anywhere. Teleworking will become a more practical reality. Such an infrastructure would also facilitate business continuity in the event of a pandemic.
- **Education:** School work is increasingly multimedia in nature and students will benefit from a high-speed connection to do their work. Commercial schools are also exploiting online learning as a cost-effective training medium. This infrastructure will strengthen our position as a regional education hub.
- **Healthcare:** Healthcare providers are leveraging extensively on ICT to manage healthcare costs and deliver services more effectively. Voluminous medical data, such as medical x-rays and MRI, can be delivered quickly and remotely from a patient to a medical specialist for diagnosis. Singapore may even take up healthcare outsourcing projects from developed countries as a result.
- **Grid:** Grid computing, which pools computing resources, requires ultra high-speed connectivity. Sectors like the life sciences and digital media use Grid technologies for their heavy computational and storage intensive needs.

The Infrastructure: Singapore, Totally Connected, Wired and Wireless

Next Gen NII will comprise complementary wired and wireless networks to ensure Singaporeans enjoy seamless connectivity.

The carrier-neutral, totally-wired network, or the National Broadband Network (NBN) will have ultra-high access speeds capable of beyond 1 Gbps or more than 500 times the common speed of 2 Mbps today. However, in the initial years of deployment, the access speed may be lower but gradually throttled up in tandem with anticipated demand for bandwidth. IDA being technology-neutral, will consider all technologies that can offer such speeds. One technology already used by countries that have begun to deploy such networks is optical fibre – it uses fibres made of glass and can transmit data via light signals – that will allow Net access speeds to zip above 1 Gbps easily.

The totally-wireless network will be catalysed by a Call-For-Collaboration that will see the deployment of wireless broadband in key catchment areas over the next two years. Based on future wireless broadband developments, the government may continue to catalyse a further rollout.

With the combination of NBN (ultra-high speed wired network) and WBN (pervasive wireless networks), Singapore can boast of being one of the first, if not the first nation in the world to have such connectivity – that is key to staying as a leading ICT nation.

The Delivery: Public-Private Partnership

The Government will adopt a public-private partnership approach to set up the Next Gen NII.

For the wired National Broadband Network, the private sector is expected to build, own and operate the network. The Government is prepared to provide some funding to kick-start the project and to ensure that this ultra high-speed broadband service will be viable, affordable and sustainable for the longer term.

Pending industry's feedback and actual participation, the working timeline for the deployment of NBN is as follows:

- **March 06 –** Request-For-Concept (RFC) will be called. That will serve to gauge the market's response, feedback for the network. The RFC will close after about two months.
- **June 06** – Request-For-Proposal (RFP) will be called. The RFP will state the infrastructure capabilities and adopt a technology-neutral stance.
- **End-2006** - Evaluation of RFP will be completed.
- **Early-2007** - NBN will be awarded to private sector partner. The appointed operator is expected to complete at least 50 percent rollout within three years from the award, and complete the project within five years.

More details on the RFC will be released over the next few weeks.

To complement NBN, the government will first work with the private sector to accelerate the deployment of the Wireless Broadband Network in key catchment areas and to offer wireless access at highly affordable rates under a Call-For-Collaboration (CFC).

The key catchment areas include places of interests, central business district, and HDB town centres in the heartlands. Its developmental plan over the next few years is as follows:

- **March 06 -** A Call-For-Collaboration will be issued.
- **June 06** – Network deployment will commence.
- **October 06 –** Roll-out of commercial services will commence.
- **June 07 –** Phase 1 network deployment in key catchment areas will be completed.

More details on the CFC will be released over the next few weeks.

For clarifications on the Next Generation National Infocomm Infrastructure, please contact:

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