Singapore's next-generation

by Neil Montefiore, CEO, StarHub, Singapore

Deployment of Singapore's new fibre-based Next-Generation Nationwide Broadband Network, with speeds of 100Mbps to 1Gbps, already covers more than 40 per cent of the nation. It will cover 95 per cent of Singapore by mid-2012. Singapore's mobile operators already provide a 200+kbps broadband service. Indeed, the problem now is planning how to fill the pipes. Operators expect most of the volume will come from video; they are working with content providers to adapt their output to other formats including mobile.

Neil Montefiore is the CEO and Executive Director at StarHub, Singapore; he has over 34 years of experience in the telecommunications sector. He was, most recently, the CEO and a Board Director of M1 in Singapore. Prior to that, Mr Montefiore was the Director, Mobile Services at Hong Kong Telecom CSL Limited. Mr Montefiore held various marketing and engineering management positions at the Cable and Wireless group in Hong Kong, Bahrain, Saudi Arabia and the United Kingdom. At Cable and Wireless Systems Ltd in Hong Kong, he served as Chief Executive. In the United Kingdom he served as Managing Director of PakNet Ltd, a joint venture owned by Cable and Wireless PLC and Vodafone PLC, which developed and launched the world's first public packet radio data network. He was also Managing Director of Chevalier (Telepoint) Ltd in Hong Kong.

Neil is a Fellow of the Institution of Engineering and Technology and a Fellow of the Chartered Institute of Marketing.

For an island-nation with a population of five million, we tend to do things on a very large scale and very quickly.

Just three years after the government announced plans to build a fibre-based Next-Generation Nationwide Broadband Network (*Next Gen NBN*), here we are, coming into the end of 2010 with more than 40 per cent of the new network in place. According to government estimates, we are on track to have 60 per cent coverage by the end of the year, and nationwide coverage at 95 per cent by mid-2012. Nucleus Connect, the company responsible for 'lighting' up the new fibre network, had recently announced its commercial launch, which means that they will be able to provide retail service providers (*RSPs*) with open access and wholesale connectivity services over the Next Gen NBN. As we speak, subscribers are already able to register and subscribe to services which offer speeds of 100Mbps up to 1Gbps, along with a whole suite of content-rich value-added services.

The mobile infrastructure industry in Singapore has undergone just as rapid a change in the last five years as the fixed broadband segment. After years of patiently living with access speeds of up to 56kbps over 2G and 2.5G networks, Singapore mobile users were suddenly faced in the early months of 2005 with an overabundance of speed - all 200+kbps of it. Many in the industry were giddy anticipating what could be done with all that extra bandwidth. As usual, reality quickly sank in with the fact that yes, even though we could do more on the mobile phone, we couldn't do that much more. Now, in 2010, Singapore's mobile networks have evolved past plain vanilla third generation (*3G*) and into high speed packet access (*HSPA+*) (dual carriage), which offers mobile users throughputs of up to 42Mbps. Talk is rife about Long-Term Evolution (*LTE*) becoming commercially available over the next few years. For developers and content providers, it seems everything is possible now. It seems as if customers are truly able to access content-rich value-added

services over the mobile device, the kind that many people have been dreaming about over the last three decades.

Two infrastructure developments occurring at roughly the same time can cause all sorts of angst for executives in the Singapore telecom industry. Setting aside questions of when compatible devices will be available to consumers or what kind of expenses the industry will have to bear for building the new networks nationwide, the question foremost on executives' minds right now is what exactly we are planning to do with all this bandwidth. Since Singapore is one of the earliest adopters of nationwide ultra-high speed broadband connectivity on both mobile and fixed fronts, there really isn't a precedent we can rely upon.

My opinion, having looked at scenarios in Hong Kong, Europe and the US, is that next generation networks will spur much greater consumption of video on alternative platforms than on traditional broadcast networks and this very demand will cause entertainment studios and production houses to adapt and change the way that they manufacture and market their content.

Clearly, the traditional system for producing television and movie content worldwide is deeply entrenched, and it will take some time to change, but consumer demand for more convenient video-streaming and on-demand delivery systems are putting pressures on those systems to innovate and to restructure themselves and squeeze the complexity and cost out of production and distribution.

Readily available evidence shows that there is great demand for video content. According to a 2009 report by Nielsen Media Index, the Internet audience, once the domain of young adults, has shown remarkable growth in other segments, especially in the 35-44 age range. Furthermore, the same report states that Internet usage is heavily skewed towards PMEBs (*professionals, managers, executives and businessmen*). This means that there is an even larger pool of online consumers than initially thought, clearly an opportunity for marketers and content providers to target. In our own internal surveys, we have noted that 71 per cent of our Singapore respondents stated that they watch streaming videos at least one a month, over and above other activities such as online gaming, downloading and uploading content - another indication.

A cursory look at what is happening in the industry shows that many content providers have come to the same conclusion and are evolving their content offerings to meet this demand. Look at the success of YouTube, Netflix and Hulu, and in the mobile sphere, Apple's App Store. Many major broadcasters around the world have been providing, in one form or another, digital content for broadband and mobile platforms. Ancillary markets such as DVDs and Blu-Ray are offering digital copies of movies to their customers; there is also regular buzz about the development of a cloud-based video-streaming platform for fixed and mobile devices.

Singapore is well aware of this changing paradigm, and a number of companies have made tremendous efforts to evolve their business and embrace alternate platforms. Local mobile operators have been streaming TV content over mobile, some since 2006. Now, mobile customers can access a large number of mobile channels that showcase a wide range of international and ethnic content. Similarly, on the online TV front, there have been a number of local players streaming premium content since, at least, 2004.

With the advent of next-generation networks, what will it mean for operators? Over the last few years there has been a great proliferation of devices in the home; not just the mobile phone (or two), but PCs, laptops, game consoles, video phones, surveillance devices, and the ubiquitous TV set, and all will have the ability - one day - to sync with each other. This means that there is a good opportunity to deliver services to a variety of devices and screen types, especially for video consumption, at the same time; this also means that operators can and should empower the customer to access and manage their own media needs on multiple platforms. The new networks will serve as both a catalyst and enabler for the growth of video consumption.

Working closely with the content and access industry for over a decade, we have established strong partnerships with both vendors and content providers that enabled us to get a head start with the development of these alternative platforms. For operators who want to evolve into either of these areas, there are some challenges to meet, not the least of which is how to develop a credible business case that helps both the operator and the content provider to generate new revenue streams. Many content providers are taking their first cautious steps to adopt mobile and online platforms as legitimate platforms for content distribution in Asia, and there are significant synergies to working with operators with a broad customer base.

Ultimately, I confidently predict that within the next five years, when next generation networks have reached their maturity, and the technology has moved on to even faster technology, the content developers that are looking into alternate platforms now, will eventually flourish, and the operators in Asia that help them do this will benefit the most. ●

Connect-World
connect-world.com

Connect-World is celebrating its 15th anniversary

Through the years, *Connect-World*'s authors told of the rise of mobile, of fibre, of wireless and of broadband; they told of the dot.com meltdown, of digital inclusion and convergence, of standards and breakthroughs, the rise of IP and the fall of switching and of the regulatory turnaround.

In every issue of *Connect-World* heads of state, ministers and regulators, heads of international institutions and leaders of industry speak of what the ICT revolution, as it happens, means to the people in their regions of the world.

www.connect-world.com