

Singapore: broadband's policy innovator

The reach and depth of broadband may itself change telecom policy in a profound way. For Singapore, a new national broadband network has already brought a comprehensive rethink of how market structures and policy should interact.

In fact, over the past few years public policy issues have never been very far from the thinking of Keng Thai Leong, Singapore's telecoms regulator and Broadband Commissioner. As Director General of Telecoms and Post at the country's Infocomm Development Authority (IDA) he had already tracked the rise of fibre networks and their implications. "It was a question of when, rather than if, the new networks would be implemented," he points out. "We also knew that private sector solutions [by themselves] would be driven by considerations such as return on investment. This is a perfectly fair way of looking at the marketplace, but from a national perspective, we [also] wanted to gain national competitiveness from the new infrastructure."

The aim was to see a complete and fully open national broadband network deployed. But any new policy approaches had to acknowledge – but not disturb – the fully-liberalized market that Singapore had already developed, stresses Mr Leong. "We looked at various possible policy options for encouraging National Broadband Network (NBN) deployment in a timely manner," he says. The potential policy toolkit could have ranged from investment incentives to regulatory forbearance on those players building an NBN. The most important objective, however, was to be national, open and, above all, to maximize the possibilities for service innovation. "We wanted to create an environment where any individual with a good idea could access the network and see it developed," he confirms.

The final NBN network structure now being rolled out in Singapore has been carefully formulated to do just that. It will reach every household and business in Singapore as a primary requirement, and provide support for future e-government services as a secondary one. The policy option seems deceptively simple, but is calibrated to each layer in the new network. The foundation of the NBN is a passive all-fibre network and associated ducting that is being laid by a private consortium (the so-

called NetCo), and will be capable of delivering 1 Gbps or more per subscriber by 2013. The NetCo is partially funded by the Singapore government.

On top of this network is a service provider operating company – a so-called OpCo – using this network to provide wholesale and backbone services. Again it is a private consortium with government funding. Finally, on top of this is a fully competitive Retail Service Provider (RSP) layer with the prospect of many operators providing a wide range of retail services to households, businesses, and government departments.

The aim of the policy is to provide complete open access and a level playing field to all comers at the RSP layer. Singapore's NBN policy ensures full structural separation of the NetCo business from everything else. The OpCo business is also under restriction, but a less severe one, of Operational Separation (similar to Functional Separation) from other businesses. These restrictions are designed to achieve balance, a competitive market, and universal service, says Mr Leong. "[The policy] is to ensure that someone does lay the infrastructure, and does it well," he says. The government provides investment but stipulates a universal service obligation. "By doing this, not only do we have an accelerated programme of fibre to the home, but we have made fibre to the home a basic service," he argues.

He emphasizes, however, that this plan does not confer exclusivity – a common misconception about the Singapore NBN. Potentially, the policy is open enough to allow other fibre networks and operating companies into the market without barriers, although it is unlikely that Singapore will see a second NBN deployed, he points out. "We recognized [because of this probability] that there are some natural monopoly characteristics of the NBN network in the last 100 metres to every household. But this monopoly characteristic means the fibre operator itself is tasked with ensuring national connectivity but is not allowed to leverage this market power into other areas." In fact, says Mr Leong, there have already been several expressions of interest by potential service providers in running competitive OpCo entities. This progression underlines the IDA's belief that further differentiation of service even at this layer is not only desirable but also probable.

In a rapid deployment, it is the theme of service innovation to which Mr Leong constantly returns. "I firmly believe the future is innovation in services. Innovation is not really about the bit rates on offer, but the value creation coming from services. It is why we place so much emphasis on looking at the whole industry. From a policy point of view, it is how we restructure the industry in those layers

because we absolutely believe we must have open access for entrepreneurs contributing innovation in services. That is the key piece of the public policy puzzle.”

There will be further policy innovation, says Mr Leong, this time potentially in the mobile space.”We don’t see mobile broadband development having a negative impact on fixed line. In fact, it is more a question of 1 +1 equals 10.” Meanwhile, Mr Leong says he sees “excitement in the market heating up” as the fibre rollout has commenced with increasing interest from service providers.