Imagine the possibilities of an OpenNet system for mobility

by Greg Mittman and Lawrence Chan

Recent remarks by SingTel chief executive Chua Sock Koong caused an uproar. Ms Chua wanted to charge Internet players like WhatsApp and Skype when consumers of SingTel's networks use those services.

Singtel later clarified that it was not planning to charge users of these services separately.

The idea is hardly new.

It's a debate that's been going on for years, often described as a battle over the soul of the Internet.

At the core of the debate lies the towering principle of Net Neutrality, the linchpin of International Internet governance.

Conceived by Tim Wu, a Columbia media law professor, Net Neutrality requires Internet service providers to treat all data on the Internet equally, without discrimination or charging differentially by user, site, or application. This simple concept of fairness underpins the very success of the Internet itself, as an engine for ongoing innovation.

Why then are operators at odds with Net Neutrality?

The operators' logic is this - with Internet data traffic exploding, and traditional operator revenue streams such as voice being steadily eroded (by the likes of WhatsApp and Skype), who is going to pay for the massive investments in network upgrades that are needed to keep up?

Unless operators can charge Internet players like WhatsApp and Skype, the arithmetic, we are told, just doesn't add up.

However, an alternative view is gaining momentum around the world. Revenue-side relief – moving beyond fixed monthly subscriber charges to a "two sided model" in which operators levy toll-charges on online applications – ignores the bigger opportunity. Rather, regulated infrastructure sharing can unlock far more value, reducing costs and spurring innovation.

This is precisely what was done in the Singapore fixed broadband market through the National Broadband Network (NBN). This first-of-its-kind regulated infrastructure sharing initiative creates a single national fibre network, for use by any licensed telecom operator who in turn delivers fibre broadband service to end-users. Operators no longer build parallel, duplicative last-mile infrastructure. Instead, they collectively tap into the OpenNet system.

A smart move, the Singapore NBN is being copied around the world, including by China who is estimated to be spending US$320 billion on fibre deployment for its own NBN (Singapore invested S$1 billion).

The Singapore consumer was the big winner. Once ranked 14th in the world in broadband affordability by the International Telecommunication Union (ITU), Singapore is now among the world's best.

Could the same thing be done for mobile? If Singapore launched a regulated infrastructure sharing initiative for mobile access, how much would consumers stand to win?

The dirty secret of traditional telecom operators around the world is that the most valuable part of a telecom network might not be where you expect.

While it might be surprising for some, the key ingredients that allow traditional telecom operators to fight and defend their turf are: public rights, dirt and shovels. Note that next generation network technology is nowhere on the list. Not even close. But how can this be?

Firstly, allocations of mobile spectrum are invaluable. These precious slivers of the airwaves are public assets which are loaned by governments to operators, always for a limited period of time.

Second, rights-of-way and site rentals from government authorities and private landlords are priceless. These rights give telecom operators the ability to criss-cross the city with telecom pipes, cables, and cell phone towers.

Lastly, the roll-out and maintenance (read: workers with hard-helmets, shovels and hammers) of the telecom pipes and towers throughout a country is prohibitively expensive, and therefore very valuable. And unlike technology costs which follow Moore's Law, construction costs spiral upwards over time.

According to CapGemini, the operating costs associated with the running of a mobile operator's tower infrastructure alone (e.g. power, air-conditioning, security and site rentals), form a whopping 60 per cent of operator expenses.

According to the ITU, when each mobile operator builds its own parallel infrastructure, the end result is more expensive mobile services, with consumers having to pay for this duplication. The ITU goes on to say that the lack of infrastructure sharing is a major obstacle to economic development.

Telecom regulators understand this, and there isn't a regulator in the world that hasn't already mandated some type of mobile infrastructure sharing or isn't seriously looking at it.

Many regulators, for example, force mobile carriers to share their mobile tower footprint with other carriers, resulting in savings per operator of hundreds of millions to billions of dollars.

The Chinese regulator agrees. In a move to drive competition and innovation, China has forced incumbent telecom operators to support at least two privately-owned Mobile Virtual Network Operators each by 2014.

There are many possible approaches including a full-scale mobile NBN – an OpenNet for mobility, so to speak.

The economics would be breath-taking. With the end of costly parallel networks, mobile operators would compete intensely at the network management, product development and promotional layers. Radical new business models could become a reality, including free-mobile Internet services that are 100 per cent ad-funded, unworkable under conventional operator economics.

As is always the case with things-telecom, the technical and legal complexities are enormous – although no more daunting than the Singapore fixed line fibre NBN.

And with the soul of the Internet at risk, the stakes couldn't be higher.

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