Hong Kong and Singapore lead LTE charge in Asia-Pacific

Wireless Intelligence forecasts that LTE will account for 10-15% of connections by 2015

Hong Kong and Singapore are set to become two of the world's leading LTE markets with the next-generation technology accounting for over 10-15 percent of total connections in each market within five years. According to Wireless Intelligence data, LTE will account for 10.7 percent of connections in Hong Kong and 15.3 percent of connections in Singapore by the end of 2015. Both markets are forecast to have over 1 million LTE connections by this point.

The figures are the first LTE forecasts published by Wireless Intelligence and form part of a global LTE study due to be published later this year.

Both Hong Kong and Singapore are small but highly-advanced mobile markets with the majority of subscribers in each market already migrated to WCDMA and HSPA. The two markets are also similar in that some local operators are aggressively rolling-out LTE while others are relying on HSPA+ technology to support high-bandwidth services in the short-to-medium term.

Leading the way in Hong Kong is CSL – a subsidiary of Australia's Telstra – which claims to be the first operator in the world to have deployed a network combining dual-cell HSPA+ (42Mb/s) and LTE. CSL first launched 21Mb/s HSPA+ in March 2009, but the new network has been built from scratch in collaboration with Chinese equipment vendor ZTE. The operator is testing LTE in both the 2.6GHz and 1.8GHz bands and is scheduled to launch commercial LTE services before year-end, concentrating first on high-density areas.This timeframe should make CSL the first Hong Kong operator to launch LTE. Wireless Intelligence forecasts that CSL will be Hong Kong's largest LTE operator over the next five years, commanding a dominant LTE market share of around 40 percent by 2015.

Hong Kong sold-off LTE-suitable 2.6GHz spectrum in early 2009 to CSL, China Mobile (Peoples) and a joint-venture comprising local operators Hutchison and PCCW called Genius Brand. SmarTone-Vodafone was the only operator to miss out but has since said it will deploy LTE using its existing GSM (900/1800 MHz) spectrum, although it does not intend to launch commercially until 2013 at the earliest, which is likely to make it the last Hong Kong operator to do so. In the interim, SmarTone will continue to invest in upgrading its HSPA+ network, which it claims will soon be able to offer theoretical peak speeds of 84Mb/s (double what is currently possible).

According to our forecasts, operators in Singapore will not launch commercial LTE networks until next year, but migration will happen at a slightly faster pace than in Hong Kong, accounting for over 15 percent of total connections within five years. Market-leader SingTel is currently trialling LTE in four markets: Singapore, Australia (Optus), Indonesia (Telkomsel) and the Philippines (Globe Telecom) as part of a plan to establish a "regionally compatible LTE network" across its APAC footprint. In Singapore, SingTel says that network rollout should be completed within two years, and we forecast that the operator will have a dominant LTE market

share of around 45 percent by 2015.

However, SingTel's largest domestic rival – StarHub – has opted to invest further in HSPA before moving to LTE. The operator launched 21Mb/s HSPA+ in July 2009 and in March this year became the first Asia-Pacific operator to upgrade to dual-carrier HSPA+ capable of theoretical peak speeds of 42Mb/s. StarHub said that this latest upgrade – implemented by Huawei – has increased network capacity by 20 percent.

While StarHub has also launched technical trials of LTE, commercial launch is not expected until 2012. This means that Singapore's third operator, MobileOne (M1), will be competing with SingTel to be the first in the market to offer LTE services. M1's vendor – Nokia Siemens Networks – said in February that the operator had successfully completed a 100Mb/s data call on its trial LTE network. Commercial launch is expected next year.

Joss Gillet, Senior Analyst, Wireless Intelligence:

> Hong Kong and Singapore are well positioned to benefit from early launch of LTE services. Firstly, both markets have advanced mobile networks already in place with almost half of their user bases already on 3G networks, which reflects their customers' keenness for adopting the latest technologies and services. Secondly, both markets are global ICT hubs due to their unique positions at the centre of a burgeoning Southeast Asian economy. The introduction of LTE data services is expected to drive increases in revenue generated from data roaming - a role that HSPA-enabled dongles and datacards have excelled at since 2006. Mobile operators are likely to charge a premium for LTE services in the initial phase of development, targeting the enterprise segment and high-value consumers. By the time LTE voice services come to market – around 2012-13 – and LTE handset portfolios expand, operators will have time to closely monitor price elasticity and exploit more granular consumer segmentation. Multi-mode LTE dongles are already available to address data traffic opportunities but operators will have to differentiate their LTE offers from current fixed and mobile broadband offers to avoid cannibalisation of existing revenue streams. Hence, by being early adopters of LTE, Hong Kong and Singapore will not only maintain their technological edge, but also tap into substantial revenue opportunities that can provide a faster return-on-investment than the original WCDMA networks launched five years ago.

	Hong Kong			**Singapore**		
	Connections (000)		% LTE	Connections (000)		% LTE
	LTE	Total		LTE	Total	
2010	3	10,930	0.03	-	7,276	-
2011	30	11,704	0.2	28	7,667	0.4
2012	147	12,359	1.2	151	7,952	1.9
2013	445	12,887	3.5	422	8,163	5.2
2014	880	13,288	6.6	799	8,326	9.6
2015	1,446	13,561	10.7	1,296	8,456	15.3

Hong Kong and Singapore LTE forecasts (2010-2015)
Source: Wireless Intelligence