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Hong Kong Telecommunications Users Group Response to OFTA's "Consultation on Spectrum Policy Framework"

In response to OFTA's consultation regarding the Broadband Wireless Access, Hong Kong Telecommunications Users Group ("HKTUG") is pleased to provide our comments:

Overall Comment

- HKTUG applauds OFTA and CITB for the release of this consultation paper. In particular, the considerations for our future Spectrum Policy Framework is far-sighted, independent and comprehensive and shows why OFTA has established itself as a world benchmark for regulatory excellence.
- As such, HKTUG concurs with the guiding principles in spectrum management, especially that the market-based approaches be considered first for spectrum with competing commercial demands, as set in the consultation paper except the comments in the following paragraphs.

Spectrum Policy Objectives (para. 29-33)

- HKTUG considers the integration with Mainland China standards to ensure interoperability is not only strategic but essential in the post-1997 era. Sufficient consideration should be given to the standard setting such as the recent example of high definition Digital TV standard.

Spectrum and RF power relationship (para. 34)

- In general, spectrum management should include equal consideration to transmission power. There is some indirect reference to power on page 7, para 6, but it should be discussed more fully and explicitly as part of the consultation and ultimately the policy. The "externality property"

referred to is a direct result of transmission power within a three dimensional space. A transmission power of +20 dBm with a horizontal arc of 360 deg. and vertical arc of 40 deg. is much less intrinsically intrusive than the same power within a narrowly focused beam. This has to be taken into precise consideration to quantify the "externality property". This is why ERP (effective radiated power) is often used instead of the actual power of the transmitter. To this end, ERP and how it is to be measured will have to be precisely defined as part of the spectrum assignment.

- Power being clearly defined will help self-regulate technology changes such as air interface standard within an assigned spectrum. This can help make a spectrum assignment be more technology neutral and to disconnect transceiver specifications from the assignment. One example as in Korea is the change of a 2G operator at 900 MHz to 3G WCDMA at 900 MHz. If there is no increase in ERP beyond a specified level the answer should be yes with confidence knowing that there will be no change in interference potential. Another example would be a potential assignment at 2.3 GHz. Does the assignment need to specify if it is used for WiBro or for i-Burst? If spatial power is defined then it shouldn't matter which is used.
- Disconnecting transmitter power is desired from a good spectrum assignment method. WiFi presents a good example of this: The US FCC defines ERP for WiFi. When using a passive single-point antenna it turns out that a 100mw access point will be the highest allowable transmitter power under FCC guidelines. Thus the 100mw access point limit has been adopted by some regulators. This has problems however if you terminate into another type of antenna. Insert it in an active array and a focused beam can exceed ERP. Terminate the access point into a distributed antenna such as a radiating cable and then 100 mw is not enough to achieve the FCC specified limit.

Market-driven Approaches (para.36)

- The phrase "market-based approach" carries a lot of assumptions about what it means and should be more clearly defined. Does it mean based on the present local value of the spectrum? Does it mean potential value based in dominant international usage? These two definitions may

contradict each other. For example, the use of 600 MHz and 1100 MHz for wireless medical applications has no particular local value thus making it justifiable to assign this spectrum for other uses depending on what "market-based approach" means. However, in North America, these spectrums have immense value in healthcare applications and are currently the highest growth areas for wireless in US and Canada. The market-based approach in Hong Kong has to take a global view so Hong Kong don't lock ourselves out of a global market trend based on satisfying immediate local determinants.

Spectrum assignment variation and withdrawal (para. 38-41)

- HKTUG would like to see more clarity and definition in the variation & withdrawal of spectrum assignment. Page 3, para 7 states that spectrum cannot be withdrawn unless certain circumstances occur. One of the circumstances is "government policy". This does not clarify if it is a discovery of an existing government policy that has been contravened in assigning the spectrum, or if it is the result of a change in government policy after the spectrum is assigned. If it is the result of a discovered contravention, this does not mean the spectrum assignment should be necessarily varied or withdrawn. The government has some responsibility in assigning spectrum and if it finds such a case after assignment, the spectrum holder should not automatically be made to suffer the consequences of what is essentially a government error. If it refers to a change in government policy, that is the same as having no guarantee of spectrum assignment because the government can change its policy anytime it sees fit. "Public interest" is similarly vague. It suggests that spectrum could be varied or withdrawn simply by declaration without a formal predefined process for determining if an assignment should be varied or withdrawn. Both of these instances will need to be defined fully for the spectrum assignment to have any meaning. The more loosely or vaguely conditions of spectrum assignment variation or withdrawal are defined, the greater the investment risk.

Spectrum Rights for Non-Licensees (para.52)

- For low power devices that use a specific range of "open" spectrum, there are current exemptions for their use and do not require spectrum rights. For example, cordless phones in the 2.4GHz, wireless LAN

routers in the 2.4 GHz & 5GHz. HKTUG would like to see continual free use of these spectrums for general purpose.

In summary, the proposed spectrum policy framework is a far-sighted, comprehensive structure to move Hong Kong to be best-in-class in spectrum management. HKTUG would like to see an early conclusion of the consultation and the speedy implementation of the proposed framework and publishing of the 3-year rolling spectrum release plan.

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