

18 March 2005

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Attn: Senior Telecommunications Engineer (Technical Regulation) 2

Dear Sir,

**Consultation Paper on Licensing Framework for Deployment of Broadband
Wireless Access**

We are pleased to enclose herewith our submission on the above Consultation Paper for your consideration.

Yours faithfully
For and on behalf of
Hutchison Telecommunications (Hong Kong) Limited



Oswald Kwok
Senior Counsel – Legal & Regulatory

Encl.



HUTCHISON TELECOMMUNICATIONS (HONG KONG) LIMITED

**SUBMISSION
ON
CONSULTATION PAPER ON
LICENSING FRAMEWORK FOR DEPLOYMENT OF
BROADBAND WIRELESS ACCESS**

**Submission by Hutchison Telecommunications (Hong Kong) Limited on the
Consultation Paper on “Licensing Framework for Deployment of Broadband
Wireless Access”**

Introduction

Hutchison Telecommunications (Hong Kong) Limited (“HTHK”) sets out below its comments on the Telecommunications Authority’s (TA) public consultation paper entitled “Licensing Framework for Deployment of Broadband Wireless Access” dated 20 December 2004 (“BWA Consultation”).

HTHK has no objection to the TA’s proposal of Broadband Wireless Access (“BWA”) as a possible alternative to Type II interconnection, and the proposed designation of 3.4 - 3.6 GHz range for this purpose. HTHK does however object to the deployment of BWA to support mobile services, including the TA’s suggestion that the licensing framework for BWA as a fixed service could serve as a transitional arrangement with the possibility of future migration to mobile services.

Deploying BWA in Hong Kong for mobile services is inappropriate and premature

Insofar as deploying BWA for mobile services, HTHK believes that it is inappropriate and premature to consider the allocation and assignment of spectrum for such purpose, much less the issue of new BWA licences for mobile services in Hong Kong. Pre-mature licensing may not be in the consumers’ best interest because it can be counter-productive and lead to wastage of investments and spectrum.

Hong Kong is already one of the most overcrowded and least concentrated markets for mobile services in the world. Currently there are already three 3G networks in commercial operation. In addition, there are six 2G operators with a total of eleven 2G networks. The 3G licencees are subject to licence conditions requiring them to provide access to MVNOs on their 3G networks. 2G operators are also currently providing mobile data services via EDGE or GPRS. Given the foregoing market situation and the refarming prospect of the existing 2G spectrum, we are unable to see how Hong Kong will benefit from duplicated mobile network facilities in the long run. With scarce investment capital spread over multiple networks, it is hard to see how such a fragmented market with unnecessary duplication of networks can engender a leading data market like Japan and Korea. Before mobile operators have reached critical mass in relation to their mobile data service, the suggestion of a further issue of a mobile facilities-based licence will have a dampening effect on follow-on investments into their networks. This is not conducive to Hong Kong enjoying the “virtuous circles” that drive continual improvements in mobile data usage.

Our reasons and findings put forward last year opposing the TA's proposal to introduce a fifth 3G licence remain valid for the present suggestion to issue new BWA licences for mobile services. In particular, we maintain that there is already too much fragmentation in the Hong Kong market which undermines operators' scale and raises substantial barrier for content developers. Introduction of new network technology is also not a driver of high mobile data penetration. Introducing new licences for mobile services will only exacerbate the problem of developing Hong Kong's mobile data market.

WiMax has yet to be proven as appropriate for mobile services

Radio access technologies are often over-hyped, and WiMax is a case in point. WiMax is widely promoted because, to quote a typical characterization of WiMax: "It provides for up to 50km of service area range, allows users to obtain broadband connectivity without needing direct line of sight with the base station and provides shared data rates of up to 70Mb/s". This statement fails to point out that the three features mentioned of data rate, range and capacity plus non line-of-sight operation are mutually exclusive and is not descriptive of a mobile network.

As it presently stands, the prospect of BWA 'mobile' services is overstated. Indeed, new Radio Access Technologies such as IPWireless' TDD, Flash-OFDM and a possible future mobile WiMax 'e' profile based on IEEE 802.16e and SOFDMA, as initially defined, lack facilities to support voice and video circuit switched services, international roaming and the associated 'carrier class' call routing. For current purposes at least, it seems axiomatic that a distinction must be made between fully integrated scalable mobile systems that have mobility management, authentication, security, billing, carrier class quality of service and meet stringent licence terms, and Radio Access Technologies that simply provide IP connectivity as the system resource.

Furthermore, it is fair to say that "WiMax" is the least understood term in the field of radio technologies. Strictly, today, there are no published WiMax profiles. The first profile drafts are believed to be for fixed wireless access using OFDM256 options from IEE 802.26-2004. The term is often used to refer to other totally incompatible variants of the 802.16 family of standards, and to suggest that a smooth path exists from the current FWA systems to future mobile variants, which will in due course have WiMax profiles. In fact the mobile variant will be based on work in 802.16e and use quite different technology known as SOFDMA, which is essential to handle the mobile environment.

HCHK sees no reason why the TA should prematurely consider and decide on the BWA spectrum requirement, particularly when the Government has already committed to conduct a comprehensive spectrum policy review for both mobile and other telecommunication services. It is also inconsistent for the TA to decide on the BWA bandwidth requirements based on technology that is still nascent and evolving.

Pre-emption of pending Spectrum Policy Review

The consultancy report commissioned by the TA to study the impact of a potential new mobile licence on the market in connection with the consultation on "Licensing of Mobile Services on Expiry of Existing Licences for Second Generation Mobile Services" concluded that there is no convincing result on the prospect of a new mobile system in Hong Kong, nor as to the economic benefits that such new system can bring to the Hong Kong market. The TA accepted in his Statement dated 29 November 2004 such findings and conceded that there is no urgency in introducing a new system operating in the spectrum vacated by the IS-95 CDMA system. The Government also decided that no further allocation or assignment of other radio spectrum should be made until the completion of an overall comprehensive spectrum policy, which it undertakes to conduct in the course of this year.

Specifically the TA said in paragraph 42 of the 29 November 2004 Statement that,

"The Government intends to initiate a separate spectrum policy review on the allocation and assignment of radio spectrum for telecommunications and related services. In light of the outcome of the review, the Government will initiate the necessary legislative and administrative procedures to implement the revised spectrum policy. The TA will then determine the way forward for the allocation and assignment of the spectrum vacated by the existing IS-95 CDMA system and other available spectrum for mobile and other telecommunications services." (emphasis added)

The deployment of spectrum for BWA for 'mobile' services falls aptly within the ambit of this forthcoming Spectrum Policy Review. There are indeed many technical issues about BWA that are open for economic assessment and commercial verification such as whether it is more economical in terms of capital investments and bandwidth requirements than the existing technologies in providing broadband services, given the already very high broadband penetration rate in Hong Kong. The parallel evolution of the existing 3G technologies (such as the evolution of HSPDA as a 3.5G standard) would also need to be assessed in conjunction.

Purely from an economic point of view, issuing new licences without any proper study of capacity requirements may give rise to over-investment in network capacity for Hong Kong being such a small economy, resulting in the duplication of network facilities.

Therefore in response to the TA's question on the appropriate timing for the invitation of applications for BWA licences, HTHK's view is that, with respect to the deployment of BWA for mobile services, the TA has no reason to deviate from his earlier decision and any decision to issue BWA licences must only take place after the completion of the Spectrum Policy Review and a further commissioned study on Hong Kong's capacity need for such services.

Any decision by the TA to allocate and assign spectrum for the purposes of BWA licences will pre-empt the Spectrum Policy Review, which is intended to be a holistic review of Hong Kong spectrum plan. Given the open technical issues and the immaturity of BWA technologies at the present moment, HTHK sees no real need for the TA to preempt the spectrum policy review.

BWA deployment as an alternative to Type II interconnection should not be mixed with mobile services

In respect of the TA's proposal to offer BWA as a wireless extension of the conventional wireline based fixed network service with a restriction on cell handoff capability, HTHK has no objection in so far as the TA's intention is to enable BWA as a Type II interconnection alternative throughout the licensed period. HTHK however opposes any proposal by the TA to issue BWA licences, which has the possibility of being converted into a full-fledged mobile licence in the future.

We strongly recommend that the TA should not mix the issue of BWA as a Type II interconnection alternative with the deployment of BWA for mobile services, whether as a full-fledged mobile service or otherwise at this stage. The considerations involved in BWA being used as an alternative to Type II interconnection are clearly different from BWA being used to support a full-fledged mobile service, and hence the applicable licence conditions.

We believe that it is inappropriate to suggest in this Consultation that BWA licences may be issued with a transitional restriction on mobility with the possibility of future migration to mobile services.

In a recent article in the South China Morning Post dated 15 March 2005, the TA appears to have amplified the scope of the BWA Consultation by implying that BWA licences should now be considered for mobile services. For the reasons explained above, this is premature, inappropriate and outside the scope of the BWA Consultation. Furthermore, such statements/suggestions give rise to uncertainty in the marketplace, which could discourage investment incentives to develop mobile data services as well. Furthermore, if BWA licences are auctioned with a transitional restriction on mobility, this could result in speculative bidding for the spectrum with no genuine concern for immediate deployment and, hence, economic distortions.

"No Mobility" Restriction

As a Type II interconnection alternative, HTHK believes that the mobility restriction in such BWA licences should be absolute. The use of BWA should be strictly limited to last mile replacements as a form of wireless local loop. Therefore HTHK is of the opinion that a "no mobility" licence will not be in conflict with such purpose and will put to rest any speculation that a "limited mobility" licence could still have the potential to provide mobile services. Moreover, the scope of 'limited mobility' cannot be precisely defined,

and is therefore unusable as a working definition for the type of services that may be offered.

Spectrum Plan Consideration

HTHK further notes that the proposed 3.4 – 3.6 GHz range, whilst appropriate from a policy perspective given the harmonization with Mainland China's frequency plan, is presently designated for FSS. As such, from a technical perspective, it would make more sense if any such designation were postponed pending an overall review of Hong Kong's spectrum plan.

In any event, HTHK is of the opinion that, without the TA first assessing the genuine market demand, his proposal to allocate three 14 MHz x 2 paired frequency blocks and four 20 MHz unpaired frequency blocks based on an evolving and untested technology is wasteful. Before the applicable technologies have been commercially tested by the market, the TA should not make available the entire spectrum bandwidth available for bidding. No allocation should be made until the applicable technology demonstrates a clearer and more concrete demand for spectrum.

HTHK suggests that the TA should first assess the FTNS operators' demand for using the spectrum as a Type II interconnection alternative. The TA should in the next round of consultation then devise the relevant licence conditions for such purpose (such as the specified user, the term of the licence and the applicable SUF scheme) and allocate part of the available spectrum, say, not more than half of the frequency spectrum for auction.

The unallocated portion together with the unassigned portion, if any, after the auction exercise should not be decided upon until the Government has holistically considered and taken into account the market and technical needs of BWA technology (or any other applicable technologies) when conducting the forthcoming Spectrum Policy Review.

Conclusion

HTHK has no objection to the TA's proposal of BWA as a possible alternative to Type II interconnection. HTHK also does not object to the proposed designation of 3.4 - 3.6 GHz range for this purpose. However, HTHK strongly objects to the issuance of BWA licences for mobile services, including the TA's suggestion that such licences be initially used for fixed services with the possibility of being subsequently converted to provide mobile services. HTHK believes that any BWA licences issued by the TA must come with a clear "no mobility" restriction over the full term of the licence to prevent speculation over its potential to provide mobile services.

Insofar as deploying BWA for mobile services is concerned, HTHK's view is that BWA is still an evolving technology and given the Government's intention to conduct a Spectrum Policy Review, the better approach is for the TA to delay any decision on

BWA spectrum assignment and licensing for mobile services until after the Spectrum Policy Review.

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