



Submission of Comment on the Consultation Paper on Licensing Framework for Deployment of Broadband Wireless Access issued on 31 August 2005

Submission by Hong Kong Broadband Network Limited to the Telecommunications Authority of Hong Kong

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Part A- Executive Summary

1. Hong Kong Broadband Network Limited (“**HKBN**”) welcomes the opportunity to comment the proposed licensing framework for deployment of broadband wireless access (“**BWA**”) technologies for fixed telecommunications services in Hong Kong.
2. Before considering specific issues raised in the 2nd Consultation Paper, HKBN opines that there are more fundamental issues yet to be considered and cleared. Without clearing these fundamental issues, we are in serious doubt in respect of the regulatory approach taken by the TA for the introduction of BWA in Hong Kong. In particular, HKBN would be interested to know what prompts the TA (i) to include mobile operators into the proposed licensing regime while it is fixed telecom operators (except PCCW) being affected by the phasing out of Type II Interconnection; and (ii) to find or predict BWA technology to support full mobility would be available in two years’ time. If the TA has knowledge that such technology for full mobility will be or will most likely be available for deployment in 2008, it is HKBN’s view that any consultation for the licensing framework for deploying BWA should only be made upon such availability.
3. HKBN does not find that the TA has any reasonable grounds to push for the licensing for BWA service to be held in 2006 until at least 2008 if the TA considers the BWA technology for full mobility would be

available and the issues concerning fixed and mobile convergence would be sorted out by then.

Part B - Statement of Interests

4. HKBN is a FTNS operator in Hong Kong, having obtained the local wireless FTNS licence on February 3, 2000 and having upgraded to a wireline-based FTNS licence on April 16, 2002.
5. HKBN has successfully established one of the largest Metro Ethernet IP networks in the world and has extended its network coverage to 1.2 million homes, representing about 60% of the total number of households all over Hong Kong.
6. The deployment of our IP Next Generation Network provides an intelligent infrastructure from which application-aware services are delivered by a service-aware network. This infrastructure opens new opportunities to offer customers advanced, highly secured, value-added and personalized all-media services.
7. HKBN makes this submission in response to the consultation paper issued by the TA on 31 August 2005 with regard to the licensing for deployment of BWA (the “**2nd Consultation Paper**”).

Part C – Specific Comments

Issues of Principles

8. The 2nd Consultation Paper discusses a number of issues ranging from spectrum issues, licensing issues to roll-out obligations for the offering of the BWA services, most of which are found to pave way for the TA to solidify its intention to implement the licensing framework for deployment of BWA.
9. However, there are more fundamental issues yet to be considered and cleared before we could consider those specific issues raised in the 2nd Consultation Paper. Without clearing these fundamental issues, we are in serious doubt in respect of the regulatory approach taken by the TA for the introduction of BWA in Hong Kong.

Want of policy objectives

From facilitating Type II interconnection phasing out to Full mobility

10. In the first Consultation Paper of the same topic herein issued on 20th December 2004 (“**1st Consultation Paper**”), the TA formed the preliminary view that BWA in Hong Kong might initially be offered as a wireless extension of the conventional wireline based fixed network service, and the “*BWA deployment may overcome the limitations posed*

by traditional wired-based broadband connections by virtue of its wide-area coverage through wireless means.” (Para. 7 of the 1st Consultation Paper)

11. This initial intention of the TA as evidenced by the 1st Consultation Paper was to have BWA serving as a possible alternative to the conventional wireline technologies (including digital subscriber line (DSL), fibre-to-the-building, cable modem and metro Ethernet) that a ***FTNS operator*** may consider adopting for speedy rollout of a broadband network. This was clear that the BWA licences as originally intended should be reserved for FTNS operators so as to facilitate them with the gradual phasing out of the mandatory Type II interconnection arrangements by end-June 2008.

12. While comparing the 2nd Consultation Paper with the 1st Consultation Paper and as noted from the various documents issued by the Government, we regret to note a sudden change in TA’s view in the 2nd Consultation Paper that the scope of permitted services had been expanded to include full mobility services in 2008 devoid of any explanation as to how such date is derived at and how such an expansion of scope of permitted services is in line with the statement made by the TA or supported by any reasonable grounds.
 - (a) In the 1st Consultation Paper, it says

“In a dense city environment like the urban areas in Hong Kong, BWA links may be deployed to replace the underground cables It is therefore seen as a viable solution for the “last mile” access For those FTNS operators relying heavily on Type II interconnection, BWA is a possible alternative that operators may consider to replace the installed Type II interconnection link in an efficient manner. (underlined with emphasis)” (Paragraph 9 of the 1st Consultation Paper)

- (b) In the Telecommunication Perspectives column published on the OFTA’s website on 20th February 2005, the TA further recognized that:-

“In the first few years, the BWA technology will not be able to support “full” mobility similar to 3G services (underlined with emphasis). Therefore, it cannot be used inside fast-moving vehicles. This is the main reason behind OFTA’s proposal that the BWA spectrum should initially be confined to “fixed” services. “Fixed” services, however, include the provision of “nomadic” services for palmtop and notebook computers, meeting market demand that is not well served at present. The timing for the technology to have the capabilities of full mobility and for the widespread availability of consumer equipment as well as the status of development of 3G services at that time cannot be accurately predicted at this point of time (underlined with emphasis). If we should invite bids for the spectrum for full

mobility services at this stage, there would be too many uncertainties for the bidders to make their decisions.

Mandatory “Type II Interconnection” will be withdrawn in mid-2008. Some measures are necessary to ensure that the BWA spectrum can be used for the provision of the “last mile” access rather than holding it off until the technology for full mobility services in such spectrum is mature.”

- (c) Despite the TA did recognize that the application of the BWA technology was not envisaged to serve full mobility and that no technology was mature enough to serve full mobility services in these couple of years, we could clearly see the drifting of OFTA’s intention of the deployment of BWA when it says in its Press Release dated 31 August 2005 that:-

“the primary objective of the Government to offer the BWA spectrum for deployment by the industry is to facilitate the progressive withdrawal of Type II Interconnection links in fixed telecommunications services. On the other hand, it is envisaged that BWA would be further developed to support full mobility services in the non-too-distant future.”

13 HKBN would be interested to know what prompts the TA to find or predict that such technology would be available in two years' time i.e. in 2008 and BWA with full mobility ("**Full Mobility BWA**") could be ready by 2008. If the TA has knowledge that such technology for full mobility will be or will most likely be available for deployment in 2008, it is HKBN's view that any consultation for the licensing framework for deploying BWA should only be made upon such availability. Otherwise, it would be premature to discuss the licensing regime and its scope of permitted services etc.

14. Furthermore, in a recent article of Mr. M H Au, Director-General of Telecommunications entitled "*Let the Market Decide*" which is published on 15th November 2005, your Office reinforces its original intention of offering BWA in Hong Kong to serve as a possible alternative to the conventional wireline technologies by stating clearly that:-

"One of the key considerations for immediate initiation of the BWA consultation was that mandatory Type II interconnection would be terminated from the middle of 2008. BWA potentially can provide substitutes for the "last mile" to connect the customers who may not be connected by optical fibres."

15. If from the outset it is your Office's objective and purpose to facilitate the phasing out of Type II interconnection by offering BWA, we are

doubtful as to the reasons and policy objectives of your Office for including mobile operators in the offering of BWA service. Evidently, only fixed telecom operators (except PCCW) are affected by the phasing out of Type II interconnection, and inclusion of mobile operators would inevitably mean introduction of new entrants and competition, which we believe is not the aim of OFTA in the present proposed licensing of BWA service. Hence, we opine that unless substantiated with reasons for the benefit of the industry and consumers at large, mobile operators should be excluded in the present BWA licensing. After all, it is the fixed telecom operators (except PCCW) which have to be prepared for the phasing out of Type II Interconnection.

16. We must stress that up till present, we could not find such a sudden extension/ change of policy of the TA in less than a year's time:-
 - from the initial intention to have BWA serving as a possible alternative for facilitating phasing out of Type II Interconnection to the current intention of facilitating full mobility and the inclusion of mobile operators which are not parties affected by the phasing out; and
 - from the initial perception that no technology capable for full mobility could be predicted to be available in the near future to current perception that technology for Full Mobility BWA will be readily available in early 2008,

is substantiated by any grounds.

17. HKBN believes that if it is the policy objective of the TA to promote competition amongst operators so as to benefit consumers at the end, it would be more appropriate for the TA to wait till the technology for deployment of BWA is recognized by the industry to be mature enough to support full mobility for the issuing of any BWA licences. Otherwise, the fixed operators will be placed in a disadvantageous position in the market i.e. both the mobile operators and fixed operators would not be able to compete in the level playing field as all along advocated by the TA.

Spectrum Policy Review and the Withdrawal of CDMA & TDMA spectrum

18. According to section 32G of the Telecommunications Ordinance (Cap. 106), the TA has the statutory duty to promote the efficient allocation and use of radio spectrum as a public resource of Hong Kong. We also understand it is within the agenda of OFTA to conduct a spectrum policy review this year and that there shall be a gradual return of the spectrum currently assigned under the CDMA (Hutchison) and the TDMA (CSL) licences to the TA by 2008 (Paragraph 42 and 47 of the TA Statement of Licensing of Mobile Services on Expiry of Existing Licences for Second Generation Mobile Services issued on 29th November 2004).

19. All these spectrum issues are all interrelated and intertwined with the upcoming discussion relating to the fixed-mobile convergence issue. HKBN believes that it would be to the benefit of the public that all these spectrum issues should be considered together on a wider perspective. This is especially true that the TA has for reason unknown to us considered the deployment of Full Mobility BWA would be available in 2008.

Development of BWA in other countries

Singapore

20. The Infocomm Development Authority of Singapore issued six Wireless Broadband Access (“WBA”) spectrum rights in the 2.3 GHz and 2.5 GHz frequency bands on 24th May 2005 at the WBA auction. It could be seen from the auction result that the final auction price paid by the successful bidders for each spectrum lots (140 MHz) awarded could go down to S\$215,200 and have the maximum of S\$550,000. As compared to the price of S\$100 million per licence for third generation mobile communications spectrum rights awarded in Singapore, the auction price paid by the successful bidders for WBA is merely a fraction of those payable for the 3G service, which we believe operators are uncertain as to how long term commercial benefits could be derived from WBA at this current stage.

South Korea

21. Furthermore, the Ministry of Information and Communication (“MIC”) of South Korea has selected three Wide Broad Internet service (“**WiBro**”) operators, namely SK Telecom Co., KT Corp. and Hanaro Telecom, for the business licences in January 2005 with a view to the arrival of the portable internet service by June 2006. However, several months after such an award, Hanaro Telecom, withdrew its plan to enter into the wireless market citing saturation in South Korea’s broadband market.

22. Taking the experience of our neighbourhood countries i.e. Singapore and South Korea as an example, we could see that the lack of popularity of BWA service is adequately reflected by the significant reduction in the spectrum rights fee for BWA service in Singapore as mentioned in paragraph 20 above and the speedy surrender of WiBro licence by one of the telecom operators in South Korea where 3G and broadband usage rates rank top of the world as mentioned in paragraph 21 above. In this premises, HKBN holds a strong view that the current market environment in Hong Kong should not be considered as appropriate for the rolling out of BWA service.

23. For the efficient use of spectrum resources and the interest of the populace, HKBN suggests the TA to monitor closely the market development and further consider whether BWA is appropriate for the

environment of Hong Kong, say in early 2008, when the TA considers Full Mobility BWA would be available by then.

Fixed-mobile convergence

24. It is evident that the telecommunications market is in the heat of the discussion of the fixed-mobile convergence, whereby it is envisaged that the introduction of BWA could serve both fixed and mobile customers in the long run.
25. However, the TA should well be aware that the discussion of the fixed-mobile convergence is still at its budding stage, not to mention it is still far to encompass any detailed arrangement thereof. As the licensing and assignment of BWA spectrum are inter-linked with the development of fixed-mobile convergence, and ultimately affect investment opportunities, HKBN considers that the TA should have a detailed plan and policy for the development of fixed-mobile convergence for the coming years ahead before introducing any BWA.

Deferment of the issue of BWA licence

26. Taking into consideration of the foregoing paragraphs, HKBN does not find that the TA has any reasonable grounds to push for the licensing for BWA service to be held in 2006 until at least 2008 if the TA considers the technology for Full Mobility would be available and the

issues concerning fixed-mobile convergence would have been sorted out by then.

Issues in the 2nd Consultation Paper

27. Before the TA provides reasonable grounds to substantiate its views in pushing the licensing for BWA services to be held in 2006, HKBN provides herein its preliminary views on questions raised by the TA in the 2nd Consultation Paper.

Deployment of BWA

28. *“The TA is of the view that the offer of BWA spectrum for deployment by the industry should be facilitated as soon as possible, with a view to assignment of the relevant spectrum to successful bidders in 2006.”*
(Para. 7 of the 2nd Consultation Paper)
29. Please refer to the above paragraphs under the title “Issues of Principles”.

Standard Issues

30. *“.....the TA is prepared to allow the deployment of any technology which conforms to recognized open standards, for the delivery of BWA services.”* (Para. 10 of the 2nd Consultation Paper)

31. Under the technology neutrality principle, HKBN believes that it is not necessary for the regulator to prescribe which technology should be applied for BWA services in Hong Kong.
32. To be consistent with the technology neutrality principle, the licensing regime of BWA should offer equal obligations/opportunities to licensees and not to favour any technology or manufacturer in any manner whatsoever.

Spectrum Issues

Suitability of 3.5 GHz Band for BWA Deployment

33. *“Nevertheless, the TA is of view that if the market considers using licence-exempt bands is a viable alternative for BWA, consideration will be given to permitting such development under a class/individual licence.”* (Para. 13 of the 2nd Consultation Paper)
34. Since BWA still rests at its early stage of development, there is lot of rooms for development in respect of the technical standards, interference control as well as frequency band allocations. In the meantime, HKBN considers it is more appropriate for the TA to closely monitor the market development of BWA. The TA may further consult the public as to whether individual or class licensees would be allowed to deploy BWA using the licence-exempt bands.

Designation of 3.5 GHz Band for BWA Deployment

35. *“..... The TA considers it reasonable and proportionate to allocate 3.4 – 3.6 GHz band to be used for BWA services on a primary basis while allowing the frequencies to be used for FSS on a secondary basis.”* (Para. 22 of the 2nd Consultation Paper)
36. Since frequency spectrum is a scarce public resource, it must be used as efficiently as possible for provision of services to the populace. Under the proposed arrangement, on one hand FSS operators are not required to withdraw the frequencies to be used for FSS and on the other hand the TA could allocate a significant portion of spectrum in the 3.4 – 3.6 GHz band for BWA services. In this respect, HKBN agrees with the TA’s proposal to allocate 3.4 – 3.6 GHz band to be used for BWA services on a primary basis.

Spectrum Sharing between FDD and TDD

37. *The TA is of the view that a band plan without specification of FDD or TDD mode will best meet market needs. Frequency blocks may be used for either TDD or FDD operation, subject to the operator’s own commercial and technical considerations.”* (Para. 26 of the 2nd Consultation Paper)

38. Under the technology neutrality principle, HKBN believes that it is not necessary for the regulator to prescribe which mode should be best suitable for the operation of BWA. In fact, there are still uncertainties surrounding the technical standards of BWA. HKBN considers it is imperative that the regulatory environment set by the TA for BWA technology should allow maximum flexibility to enable future incorporation of standards and band allocations set by the International Telecommunications Union (“ITU”), which may require changes to any existing use of certain spectrum bands.

Supply of Spectrum Resources

39. *“.....the TA is prepared to allocate 180 MHz spectrum in the 3.5 GHz band for BWA on a primary basis in the forthcoming spectrum allocation exercise. In case the market does not take up all of the spectrum, the frequency blocks which have not been assigned will be put into reserve, and will not be offered again within a certain time frame, say before end 2008. The arrangement for the reserved frequency blocks, if any, would be reviewed in due course.”* (Para. 31 of the 2nd Consultation Paper)
40. Again, we cannot emphasize more that the TA should review other spectrum issues, such as the withdrawal of CDMA and TDMA spectrum in considering the licensing of BWA.

Number of Frequency Blocks to be Assigned

41. *“The TA is of the view that a territory-wide frequency assignment is more appropriate in the context of Hong Kong.”* (Para. 36 of the 2nd Consultation Paper)
42. Regarding the issue of regional or territory-wide frequency assignment, given the small geographical size of Hong Kong and the inherent difficulties for day-to-day coordination among network operators in deploying BWA, HKBN generally agrees with the TA’s view in adopting territory-wide frequency assignment.

Licensing Issues

Number of Licences

43. *“Based on the band plan proposed in paragraph 39 above, a maximum of six territory-wide BWA licences for public telecommunications services can be issued.”* (Para. 37 of the 2nd Consultation Paper)
44. Again, it depends very much on any findings after a review on the withdrawal of CDMA and TDMA spectrum, before we could consider how many licences should be granted.

Scope of Permitted Services

45. *“The TA proposes that the scope of permitted services of the future BWA licences should be restricted to fixed telecommunications services initially and be expanded to include full mobility services after 1 January 2008. Fixed telecommunications service will include the conventional fixed services and telecommunications service of “limited mobility” nature. “Limited mobility” means no cell handoff capability will be permitted before 1 January 2008.”* (Para. 42 of the 2nd Consultation Paper)
46. HKBN is of the view that the introduction of BWA shall only be made upon the availability of the BWA technology. In this respect, if mobile carrier licensees are allowed to utilize BWA technology to offer fixed type of services, successful BWA licensees who are currently granted with a fixed carrier licence should also be entitled to offer mobile type of services. This can ensure a fair playing field among the fixed and mobile operators.
47. As noted from the 2nd Consultation Paper, the present proposal would cause fixed operators like us being placed in a position far less favourable than any mobile operators who are now more ready to offer full mobility in the market and inevitably lead to unfair competition between mobile operators and fixed carriers. If mobile operators and fixed carriers were to face with the same bidding/ license conditions for

offering Full Mobility BWA, fixed carriers would just be hampered without doubt.

48. Given the above, HKBN believes subject to the development of BWA technology, the TA should provide a comprehensive review of the BWA when full mobility is feasible and by then further terms and conditions could be discussed. It could also allow the service offered by a fixed carrier licence through BWA in the early phase to have “limited mobility” with an option to be upgraded to “full mobility” as far as it should be supported by technology advancement.
49. HKBN could not apprehend any reasons for the TA to go further than its original proposal to offer BWA as a wireless extension of the conventional wireline based fixed network service of fixed carriers in Hong Kong, if the original intention of the offering of BWA is to cope with the expiry of the mandatory Type II interconnection agreement in 2008. HKBN reiterates that the TA should reserve the BWA spectrum to be dedicated only for fixed carriers in Hong Kong who are currently holding a fixed carrier licence.

Unified Carrier Licence

50. *“It is therefore proposed that a new Unified Carrier Licence will be introduced. The validity period of this new licence will be fifteen (15) years, which is the same as that for the existing fixed/mobile carrier licences. Any interested party, including existing fixed/mobile*

carriers and new entrants, may bid for the BWA spectrum and, if successful, will be licensed under the Unified Carrier Licence which will permit the licensee to provide fixed telecommunications service using the BWA spectrum from the start of the licence and to provide both fixed and mobile telecommunications service starting from 1 January 2008.” (Para. 43 of the 2nd Consultation Paper)

51. For the introduction of BWA in the market, HKBN noted that the TA had proposed to introduce a new Unified Carrier Licence to the industry. Under the proposed arrangement, existing fixed/mobile carrier licensees and new entrants who successfully captured the BWA spectrum should apply for a Unified Carrier Licence.
52. In the meantime, before considering whether a Unified Carrier Licence is appropriate for the rollout of BWA service in Hong Kong, HKBN would like the TA to provide reasonable grounds to substantiate its views in pushing the licensing for BWA service to be held in 2006.
53. HKBN further submits that the detailed licence conditions, period of validity and fees etc. of the mentioned Unified Carrier Licence have not been provided in this 2nd Consultation Paper. In this regard, HKBN refrains from providing comments on the license conditions to be applied on the proposed BWA licences.

Assignment of Telecommunications Numbers and Interconnect Regime

54. “.....the TA intends to allocate telephone numbers with prefixes of “2” and “3” for telecommunications services using the BWA spectrum, including fixed telecommunications services and telecommunications services of limited mobility.” (Para. 45 of the 2nd Consultation Paper)
55. According to the *Code of Practice Relating to the Use of Numbers and Codes in the Hong Kong Numbering Plan*, (“**CoP on Numbering**”) telephone numbers with prefixes of “2” and “3” should be assigned to fixed type of services. In this respect, HKBN believes that allocating telephone numbers with prefixes of “2” and “3” for telecommunications services using the BWA spectrum for fixed telecommunications services and telecommunications services of limited mobility would be consistent with the CoP on Numbering.
56. Whilst taking into account the Fixed-Mobile Convergence (“**FMC**”) arrangement currently discussed in a separate consultation issued by the TA, in the event that the circumstances warrant, HKBN believes that the TA should conduct a review in the future as to whether telephone numbers with prefixes other than “2” and “3” should also be applicable to BWA services.
57. Since telephone numbers are scarce resources, the allocation of number for any service or technology should adhere to the principles as stated in paragraph 6(b) “competition is to be promoted” and 6(d) “there is to be efficient use of numbers and codes” of the *Code of Practice*

Relating to the Use of Numbers and Codes in the Hong Kong Numbering Plan.

58. Last but not least, HKBN agrees with the TA's approach in adopting a similar mechanism on the interconnection charging regime to be imposed on BWA licensees.

Spectrum Utilisation Fee ("SUF") and Assignment of Spectrum

Imposition of Spectrum Utilisation Fee

59. *"The TA therefore considers that the 3.4 – 3.6 GHz band shall be subject to SUF where it is used for provision of primary services."*
(Para. 47 of the 2nd Consultation Paper)
60. Since the frequency range assigned to BWA licensees would be an independent frequency block rather than spatial sharing of the same frequency block across geographic boundaries, BWA licensees would enjoy the privilege of protection from interference by virtue of its primary allocation status.
61. In this respect, HKBN considers that the existing SUF adopted on FTNS/Fixed Carrier Licensees/MNO should be applicable to the 3.4 – 3.6 GHz band where it is used for provision of primary services.

Spectrum Assignment Method

62. *“.....the TA remains of the view that BWA spectrum should be assigned by a hybrid selection method including elements of pre-qualification and spectrum auction.”* (Para. 49 of the 2nd Consultation Paper)
63. Regarding the issue of assignment of spectrum, HKBN would like to reiterate that auction may not be the most appropriate mechanism for promoting competition in the broadband market in Hong Kong. Such an approach would require significant pecuniary commitment by service providers in the form of spectrum right, licence fee payments and network investment at a time when there are still uncertainties as to the technical and commercial viability of the underlying technologies.
64. Besides, if the TA is to promote service and/or technology innovation, the award of new licences should be based on a ‘selection by merits’ approach, rather than by auction or the right of first refusal, as mentioned in our earlier submission. The selection criterion should by all means require new industry players to introduce the greatest economic benefit to the community and to promote wider range of innovative services to the public.
65. In this connection, HKBN believes that fixed carriers who are interested in deploying BWA will evaluate the amount of investment

involved, its technical strength, network rollout, financial capability and proposed innovative services. New licenses should be granted to those who can demonstrate the capability to run a business with new types of applications and services to the consumers. It should be emphasized that these factors, which could be assessed objectively, are all important for the development of BWA technology in Hong Kong.

Spectrum Utilization fee Payment Method

66. “.....*the TA considers that an up-front lump sum payment basis should be adopted for the SUF for usage of spectrum for BWA.*” (Para. 54 of the 2nd Consultation Paper)
67. Regarding the payment of SUF, HKBN does not agree with the TA’s proposal to adopt an upfront lump sum payment approach. HKBN is of the view that the payment of SUF over the term of the licence, rather than having an upfront lump sum amount, would enable innovative operators with limited financial resources to enter into the market and to compete with incumbent operators who possesses significant financial resources.
68. Under this scenario, the potential new entrants may not be necessary to raise an extensive amount of capital to pay for the spectrum and also rollout of the network. This is considered to lead to favorable result to consumers as a whole since, after all consumers would be able to benefit from the competition with the entry of new service providers.

Spectrum Usage Period

69. “.....*the TA proposes to grant a successful bidder of BWA spectrum a usage right of 15 years.*” (Para. 57 of the 2nd Consultation Paper)
70. Regarding spectrum usage period, HKBN would like to reiterate that the tenure of BWA spectrum rights would influence the certainty with which right holders can plan for their investment to recoup their commercial investment – particularly for new entrants who are likely to take significantly longer period to achieve commercial viability.
71. Given the above, HKBN agrees with the TA’s proposal and believes that the proposed 15 years tenure period would provide sufficient time for network rollout, service improvement and recouping investment for the adoption of BWA.

Basic Auction Rules

72. “.....*the TA proposes a hybrid selection process including elements of pre-qualification and spectrum auction.*” (Para. 61 of the 2nd Consultation Paper)
73. Regarding the issue of allocating spectrum by auction, as expressed in paragraph 63 to 65 above, HKBN would like to reiterate our view that

auction may not be the most appropriate mechanism for promoting competition in the broadband market in Hong Kong.

Maximum Number of Frequency Blocks per Bidder

74. Since the number of frequency blocks available in the 3.4 – 3.6 GHz band is rather limited, HKBN considers that the TA should define rules/policies to prevent spectrum hoarding in the spectrum assignment exercise. In this respect, the TA may consider taking into account various approaches adopted by regulators around the world, for example:

- in New Zealand, a cap of 15 MHz was placed on bidders participating in the 3G auction;
- in the UK, in the 3G spectrum auction, bidders were limited to bid for one of the five licences, with the spectrum limit set in advance; and
- in Australia, in the 3G spectrum auction, no bidder could acquire more than 25% of the available spectrum in any metropolitan area or more than 50% in any regional area.

75. Given the above, HKBN agrees with the TA's approach only to allow one frequency block (15 MHz x 2) will be assigned to each BWA licensee. However, to avoid spectrum hoarding, the TA should be mindful in outlining the rules and definition of "related applicants" before the assignment of spectrum.

Authorization under Section 14

76. *“If the installation concerned is not solely for serving the occupiers of the building concerned, the operators should negotiate commercially with the person having a lawful interest in the land for access to the land and the provision of section 14(1) will not be applicable.”* (Para. 72 of the 2nd Consultation Paper)
77. Under the current regulatory regime, where an installation is a telecommunications line or ancillary equipment of a telecommunications line placed solely for serving the occupiers of the building to which access is sought, the TA may consider granting an authorization under section 14(1) of the Telecommunications Ordinance (“**Ordinance**”). HKBN believes the provision of section 14(1) should be technology neutral, and the licensees who are rolling out services through different access technologies should be subject to equal obligations and opportunities. Therefore, the said section 14(1) should be applicable, if the services provided are solely for serving the occupiers of the building concerned.

Roll-out Obligations

78. *“The TA proposes that the successful bidders will be required, under one of the licence conditions, to start offering public services within 24 months after being awarded the BWA spectrum.”* (Paragraph 73 of the 2nd Consultation Paper)

79. Since the number of frequency blocks available in the 3.4 – 3.6 GHz band is limited, BWA would become a highly demanded solution for wireless last-mile access by fixed carriers, especially upon the expiry of mandatory Type II interconnection in 2008. Thus, HKBN is of the view that no specific roll out obligation and time frame for such roll out obligation should be implemented since successful bidders would roll out its service if the environmental conditions permits.

Part D – Conclusion

80. While the fixed operators view that the BWA could present a viable access alternative to the mandatory Type II Interconnection which will be phasing out gradually by 2008, the 2nd Consultation Paper has obviously portrayed the TA's deviation from such objective without any concrete underlying policies to support such deviation in just less than a year's time and to rush for auctioning and licensing of the BWA spectrum in 2006 where the surrounding circumstances including the withdrawal of CDMA and TDMA spectrum, experience of deploying BWA in other countries and the preliminary stage of consultation of fixed-mobile convergence etc. are perceived to be premature to discuss about full mobility by deployment of BWA.
81. Unless and until the TA could substantiate with reasonable grounds to push for the licensing for the BWA service to be held in 2006, HKBN is of the view that such licensing arrangement should be deferred to 2008 at least if the TA considers the technology for Full Mobility BWA would be available and the issues concerning fixed-mobile convergence would have been resolved by then.