

**WHARF T&T LIMITED
SUBMISSION IN RESPONSE TO THE
CONSULTATION PAPER ON
PROPOSED SPECTRUM POLICY FRAMEWORK**

31 January 2007

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INTRODUCTION

- 1 In October 2006 the Communications and Technology Branch, Commerce, Industry and Technology Bureau (“CITB”) issued a consultation paper on “Proposed Spectrum Policy Frameworks” (the “Consultation Paper”).
- 2 In the Consultation Paper CITB invite views from the industry and other interested parties on the proposed spectrum policy framework for Hong Kong. The Consultation Paper proposes a spectrum policy framework that covers spectrum policy objectives, guiding principles in spectrum management, spectrum rights, spectrum supply (including spectrum trading and liberalization), spectrum for government services and spectrum pricing.
- 3 WTT welcomes the opportunity to respond to the Consultation Paper and sets out its response to the various issues raised in the Consultation Paper in this submission. However we should make it clear at the outset that the views expressed by WTT in this submission is without prejudice to its position and contention in relation to a separate consultation initiated by the Telecommunications Authority (“TA”) on Deregulation for Fixed-Mobile Convergence on 14 July 2006. Specifically WTT maintains its views that the TA’s consultation on Deregulation for Fixed-Mobile Convergence is unlawful and prejudicial.
- 4 WTT agrees that it is timely to undertake a fundamental review of the spectrum policy in order that Hong Kong would have a responsive and transparent policy that enables the community to reap maximum economic benefits from the deployment of spectrum. We also agree that in considering the spectrum policy we should bear in mind its relationship with the telecommunications and broadcasting policy as spectrum plays an important role in supporting the wider telecommunications and broadcasting policy and objectives.

PART II CONSIDERATIONS FOR A SPECTRUM POLICY FRAMEWORK

- 5 We agree in principle with the various considerations discussed in the Consultation Paper that should be taken into consideration in formulating the spectrum policy framework for Hong Kong. Other considerations that CITB should also take into account are the competition landscape of the

telecommunications and broadcasting industry, regulatory changes affecting the developments of the industry and technological developments.

- 6 We caution the danger of a narrow and rigid approach. We believe the spectrum policy framework should be subject to regular review to take into account market, economic situation and technology developments.

Do you agree that the above considerations, i.e. future shape of radiocommunications, international developments, encourage investment, strategic considerations and fair compensation for the community, should be factored in Hong Kong's spectrum policy framework and the supporting spectrum management arrangements? Are there any other factors or considerations that should be taken into account?

- 7 WTT agrees with the above considerations. Other considerations to be included are enhancing regulatory certainty for industry players to confidently plan their businesses and innovate and improvement of quality and reliability of infrastructure services.

PART III PROPOSED SPECTRUM POLICY FRAMEWORK

Spectrum Policy Objectives

- 8 CITB proposed to adopt the following spectrum policy objectives for Hong Kong:
- (a) To facilitate the most economically and socially efficient use of spectrum with a view to attaining maximum benefit for the community;*
 - (b) To achieve technically efficient use of spectrum to facilitate the introduction of advanced and innovative communications services and strengthen Hong Kong's position as a telecommunications and broadcasting hub;*
 - (c) To fulfil Hong Kong's regional and international obligations relating to the use of spectrum;*
 - (d) To strengthen Hong Kong's strategic position as a world city and the gateway between the Mainland of China and the world by facilitating the provision of key services in Hong Kong which are deployed, or will be deployed, globally or in the mainland of China; and*
 - (e) To ensure that necessary spectrum is reserved for government services.*

Do you agree with the proposed spectrum policy objectives? Are there other spectrum policy objectives that the TA should take into account when making spectrum management decisions?

- 9 We agree with the proposed spectrum policy objectives as set out above. In particular, it is important to achieve technically efficient use of spectrum, which will require introduction of appropriate regulation that ensures flexible use of spectrum. In respect of the proposed policy objective of supporting Hong Kong's

strategic position as a world city, Hong Kong needs to take into account global market potential for radiocommunications. An EU public consultation in 1999 found that to ensure that such potential is taken into consideration, there needs to be a constant monitoring of developments in the technology, market and policy in other markets.¹ The proposed policy objective of fulfilling Hong Kong's regional and international obligations relating to spectrum will also involve actively negotiating, promoting and enforcing international standards, treaties and mutual recognition agreements that will benefit industry players.

- 10 The other spectrum policy objectives that the TA should take into account are: (a) to foster the healthy development of competition in the telecommunication and broadcasting industry; and (b) to encourage investment. There must be a proper balance between benefits to community and the healthy development of the industry for the longer term interests of the Hong Kong economy.
- 11 Achieving a balance of public and private policy objectives would bring sufficient and timely access to the essential spectrum needed to satisfy local socio-cultural and economic interests, at the same time enable consumers to enjoy world-class information and telecommunication networks and services.²

Guiding Principles in Spectrum Management

- 12 CITB proposes that, as a publishing guiding principle under the spectrum policy framework, that the TA should use market-based approach in spectrum management when there are competing commercial demands for the spectrum, unless there are overriding public policy reasons to do otherwise. Those public policy reasons should be published for transparency to the industry.

Do you agree with the proposed guiding principle in spectrum management, especially that market-based approaches should be considered first for spectrum where there are compelling commercial demands?

- 13 We support the adoption of a market-based approach in spectrum management where there are compelling commercial demands, subject to areas where public policy is at stake. OFCOM in the UK for instance has adopted the regulatory principles of operating with a bias against intervention and intervening only where required to achieve public policy goal that cannot be achieved by market forces alone. This approach limits the dangers of over intervention whilst allowing some room for intervention if it is necessary to safeguard public interest.
- 14 In the context of the current dynamic environment created by convergence of communications products and services, the traditional approach of managing

¹ European Commission "next Steps in Radio Spectrum Policy – Results of the Public Consultation on the Green Paper" Brussels, 10 November 1999 COM(1999)538

² Industry Canada "Strategic Directions for Canada's Spectrum/Telecom Program – "Five Year Vision" April 2004

spectrum by planning who can use spectrum and how it runs the risk of discouraging innovation by restricting the benefits brought to society by this new environment in which spectrum is an increasingly important resource. Such traditional approach for instance puts Europe at risk of becoming a user of technology developed in other markets rather than innovating themselves. One response to the spectrum policy review in Europe was to use a market-based model that would bring more freedom for industry players to choose how spectrum should be used, and lower the entry barriers to spectrum rights by introducing spectrum trading.³

- 15 The traditional approach of command and control will still have a role to play to ensure that public interests are served. It is also important to ensure that sufficient radio spectrum is available for emergency services, distress calls, defence and other institutions serving the public interest.
- 16 Other important guiding principles should be:
- (a) a transparent regime of spectrum regulation;
 - (b) a policy of recouping administrative costs of spectrum management incurred by the regulator; and
 - (c) provision of planning certainty.

All aspects of spectrum regulation should be transparent. The regulator will also need a clear policy on recouping costs incurred during the spectrum assignment process and other administrative expenses such as preparation of frequency usage plan etc. In terms of planning certainty, the spectrum framework should enable companies to plan for the future with confidence, by having clearly defined licence periods and type of licenced usage, spectrum usage rights and extend to which the spectrum can be traded.⁴

Spectrum Rights

- 17 We agree that there should be a reasonable period of notice given to spectrum assignees if the TA intends to vary or withdraw the assigned spectrum. A reasonable notice period will enable spectrum assignees to plan their businesses with greater certainty. Also, since withdrawal of assigned spectrum is an action relating to spectrum regulation and hence should be transparent, there should be prior publication of the period of notice of withdrawal.

³ Commission of the European Communities “Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee and the Committee of the Regions – A market-based approach to spectrum management in the European Union.” Brussels, 14.9.2005 COM(2005) 400 final

⁴ ITU New Initiatives Workshop on the Regulatory Environment for Future Mobile Multimedia Services “Towards More Flexible Spectrum Regulation and Its Relevance for the German Market” (Mainz, 21-23 June 2006)

Spectrum Rights Before Expiry of Assignment

- 18 CITB propose to state explicitly under the proposed spectrum policy framework that the TA should not vary or withdraw frequencies assigned to a licensee before the expiry of the spectrum assignment except in circumstances where public interest, or government policies and international obligations so require, or where interference between legitimate spectrum users, render it necessary to exercise such powers. It is also proposed to make clear under the spectrum policy framework that there should be minimum notice periods to be given to affected spectrum assignees to enable them to plan ahead.

Do you agree with the proposal to prescribed the circumstances under which spectrum assignment may be varied or withdrawn before the assignment expires? Are there other circumstances for variation or withdrawal of spectrum assignment before expiry that should be taken into account? What are your suggestions on the appropriate minimum notice periods?

- 19 We agree with the prescription of grounds for modifying or withdrawing a licence prior to spectrum licence expiration.
- 20 As with any telecommunications licensing in general including mobile licensing, the licensing or assigning body's discretion to revoke or modify the conditions of spectrum rights should be curtailed by conditions set out in the regulatory framework or relevant legislation and be subject to checks and balances. This would achieve the necessary regulatory certainty for spectrum assignees to ensure compliance with the conditions necessary for maintaining their spectrum rights and to make long-term business plans with confidence. Any unrestricted power to modify or revoke spectrum rights even after they have been assigned and the assignee has started its activities would reduce the possibility for assignees to predict future returns on investments. By way of example, in Kenya, CCK, the regulator has the power to modify mobile licence conditions after the granting of the licence and this lowers the possibility to predict future investment returns.⁵
- 21 Besides public interest, or government policies and international obligations, other circumstances for withdrawal of spectrum should include serious breach of assignment conditions by the assignees and failure to rectify the breach following a direction to do so.
- 22 In respect of suggesting the appropriate minimum notice period for withdrawal of variation of spectrum licences, it should be long enough for licensees to adjust its business plans and investments accordingly. As pointed out in the consultancy report, overseas examples show that notice periods range from two to five years.

⁵ Global Information an Communication Technologies Department Policy Division, World Bank Policy Research Working Paper 3729 by Coutheina Guermazi and Isabel Neto "Mobile License Renewal: What Are the Issues? What Is at Stake?" (October 2005)

However, the type of service provided under the licence, which is variable, will also impact the time needed for a user of spectrum to plan its business. We suggest a period of 3 years as notification would be reasonable.

Spectrum Rights at the end of Assignment

- 23 CITB do not consider that there is a strong need to change the current arrangement where no legitimate expectation for spectrum right after the end of a spectrum assignment and do not propose any change in that regard. However, for licences (in particular carrier licences) where substantial investment in the underlying infrastructure is required, CITB accept the consultant's recommendation that a sufficiently long notice period should be given before the expiry of the spectrum assignment, if the TA intends to change or not to renew the spectrum assignment. This should be stated explicitly under the spectrum policy framework. The TA should have regard to the practices in other jurisdictions and the duration of the service licences and draw up the appropriate notice periods for different types of spectrum assignments.

Do you agree with the proposal of status quo for spectrum right after the expiry of a spectrum assignment, i.e. no legitimate expectation for renewal? What is your suggestion of the minimum notice period for the intention to change or not to renew the spectrum assignment of a licence where substantial investment in the underlying infrastructure is required?

- 24 We disagree with the existing position that there should be no legitimate expectation on renewal. "No legitimate expectation for renewal" creates regulatory and investment uncertainty, which in turn would adversely affect investment decisions of spectrum assignees.
- 25 We are of the view that renewal should only be refused under certain restricted circumstances, since refusal to grant renewal may have serious financial impacts on existing spectrum assignees and serious disruption to users. It is important that Hong Kong's regulatory framework and legislation explicitly state the reasons and justifications for non-renewal and require reasons to be published for non-renewal.
- 26 Again looking at overseas examples of mobile licensing, Hong Kong may consider the example of Bahrain, where the regulator has the right not to renew, amend, or revoke spectrum licences for reasons including repeated violation of a basic licensing condition by a licensee, a licensee's failure to pay licensing or other applicable fees or repeated failure of the licensee to comply with the regulatory decisions.⁶ In devising the circumstances for revocation or variation of spectrum, consumer interests should be taken into account. It is important also to

⁶ Ibid.

strike a balance between regulatory certainty, preservation of investment confidence and consumer interests.

- 27 Another example is the French Code of post and Telecommunications, which limits the possibility of refusing renewal of mobile licence to four areas, namely “(a) public order, national defense and national security concerns, (b) good use of spectrum resources, (c) technical or financial incapacity of the licensee to sustain its obligations under the licence, and (d) operators that have been sanctioned for specific serious breaches and violations.”⁷ Hong Kong may consider adopting the same reasons for refusal to renew a spectrum assignment
- 28 An alternative means to allowing operators the opportunity to protect their investment other than limiting the circumstances for non-renewal would be to grant licensees the right to challenge any refusal through an appeal mechanism. In Kenya, for instance, if it refuses to renew a licence, it has to notify the applicant its reasons for the decision within 30 days, and an aggrieved applicant can appeal to the court against the decision.

Spectrum Refarming

- 29 It is proposed that the TA should be required to undertake an appraisal of the impacts of different options, including an option of “do nothing”, so as to provide a firm and transparent basis for his consideration in the exercise of statutory powers for spectrum management purposes.

<i>Do you agree that the TA should be required undertake impact appraisals before initiating spectrum refarming exercises? What other arrangements should be put in place for spectrum refarming exercises?</i>

- 30 We agree that impact appraisals are necessary prior to any spectrum refarming.
- 31 Re-farming will usually cause existing assignees to incur costs, which may exceed the costs of operating their radio-communications service. Such costs could derive from various sources, such as any necessary re-tuning of equipment, extent to which depends on size of the change of frequency; replacement of equipment that cannot be re-tuned as required, procurement of new equipment, or from having to use any non-wireless based solution due to any unavailability of alternative spectrum.⁸
- 32 Comprehensive impact assessments are necessary because the said costs may not be immediately apparent until after re-farming has been completed. An effective impact assessment should include considerations such as who will bear or share

⁷ Ibid.

⁸ InterConnect Communications “Radio Spectrum Management and Monitoring – Spectrum Refarming”

the costs or whether the regulator needs to come up with the necessary fund to implement a re-farming process. A comprehensive impact assessment will enable the regulator to decide whether a refarming exercise should be carried out and how. Such assessment will bring greater accountability and should be supported by economic interest statements, and impact analysis.

Spectrum Rights for Non-licensees

- 33 CITB do not propose to cover this issue in the proposed spectrum policy framework at this time. If there is strong demand for the introduction of some form of spectrum rights for non-licensees, the TA could consider this possibility.

For non-licensees under the TO, do you have demand for spectrum rights? If so, what kind of spectrum rights would you seek? For licensees under the TO, what are your views on our proposal not to cover spectrum rights for non-licensees in the spectrum policy framework?

- 34 We agree that the issue of spectrum licence rights for non-licensees should not be covered in the proposed spectrum policy framework at this time. Whilst Hong Kong should adopt a framework that should avoid under-use of or over-restricted spectrum, it also needs to provide the necessary protection to licensees against interference. This issue could only be considered thoroughly once the level and extent of non-licensees' demand for spectrum is established.

Spectrum Supply

- 35 We welcome the proposed departure from an absolute command and control approach towards a market-based model, which in our view and as found in various overseas spectrum policy review will allow spectrum assignees to plan their businesses with more certainty and confidence.

Spectrum Release Plan

- 36 CITB propose that, under the proposed spectrum policy framework, the TA should publish a spectrum release plan for the supply of spectrum to the market through an open, competitive bidding process in the following 3 years. In drawing up the plan, the TA should have regard to a host of factors, including the availability of spectrum for assignment, the international spectrum allocation, technology and equipment availability, feedback and proposals from the industry as well as policy objectives and strategies. The plan should be updated by the TA annually on a rolling basis taking into account the latest developments, so that the industry will always have a three-year horizon of likely spectrum supply.

Do you support the proposal to publish 3-year rolling spectrum release plans for spectrum to be released to the market through open, competitive bidding processes? What types of information would you propose to include in the plans?

- 37 We support the proposal to publish 3-year rolling spectrum release plans for spectrum to be released to the market through open, competitive bidding processes. The spectrum release plan will be crucial as a best form of forecast to be published by the TA of available spectrum and will be beneficial to users of spectrum. As stated in the consult report, a 3-year duration for the spectrum release plan is common international practice and any period beyond 3 year may render demand forecasts unreliable and it is beyond most business planning cycles. For instance OFCOM in the UK published a list of frequency band to be released over the next 2 years.
- 38 The spectrum release plan will provide the valuable and updated information that existing users or new entrants will need to plan their business and in this light, WTT is of the view that the TA should produce this plan as soon as possible before any other further consultative or information documents.
- 39 The TA may consider including other information in his spectrum release plan including how the spectrum frequency bands will be packaged for auction, for instance whether the blocks of spectrum to be made available will be offered in commercially useful sizes. Whilst incumbent or large users may prefer large lumps to maximize their chance of deploying data services requiring high throughput, smaller spectrum blocks facilitate more competition, greater technological innovation, and more niche services.⁹ The spectrum release plan could also include a discussion of whether the licensing processes will encourage new market entrants, and set an estimate timeline for any introduction of spectrum liberalization.

Secondary Trading of Spectrum

- 40 CITB propose, as a broad direction under the proposed spectrum policy framework, that consideration should be given to introducing secondary trading of spectrum in the longer term future, subject to a study on the feasibility of this proposal in Hong Kong.

Do you agree that the introduction of secondary trading of spectrum in Hong Kong can improve the efficient use of spectrum? How should potential anti-competitive behaviour in the spectrum market be addressed? How should gains in spectrum trading be treated? What are your views on other implementation issues identified by the consultant?

- 41 We support the introduction of secondary trading of spectrum in Hong Kong because it can improve the efficient use of spectrum. Secondary trading of spectrum could avoid higher costs of using spectrum incurred from administrative transfer procedures. It enables spectrum buyers to transfer the burden of their

⁹ groupe intellex “bringing together business brainpower” 2005

payments for spectrum onto consumers.¹⁰ Moreover, as shown in the consultant report, countries such as Australia and New Zealand show that the costs of implementing a spectrum trading regime is not too high, and under this regime licensees are expected to take on more responsibility for sorting out interference issues.

- 42 Any potential anti-competitive behaviour in the spectrum market would be addressed by the relevant provisions under the Telecommunications Ordinance prohibiting the abuse of dominance, and anti-competitive behaviour.
- 43 In respect of the treatment of gains from spectrum trading, we agree with the consultant report that gains from trade are not taxed specifically so that trading activity is not unduly inhibited. Any taxing would serve as a disincentive to trading; resulting in the loss of economic benefits and would run the risk of undermining investment decisions.¹¹ The loss of such revenue would be more than offset by the benefits to the Hong Kong economy from greater dynamic efficiency.
- 44 Taxing windfall gains would also raise the issue of whether compensation should be made to licensees whose spectrum turns out to be less valuable than expected.
- 45 We agree in general with the implementation issues identified by the consultant. However, whilst we agree that under trading licensees are expected to actively sort out interference disputes prior to approaching the regulator, the regulator should be expected to actively assist and expedite conclusion of disputes that the parties concerned are unable to solve.

Spectrum Liberalisation

- 46 Given the potential complication involved, CITB do not propose to introduce spectrum liberalization under the proposed spectrum policy framework at this juncture, but to monitor its development in other jurisdictions and consider further study for its general introduction in Hong Kong.

Do you agree that we should further monitor developments in other jurisdictions regarding spectrum liberalization before considering whether we should introduce it to Hong Kong?

- 47 Whilst we agree with the complications involved, we believe in principle spectrum liberalization could be introduced with appropriate proviso to deal with interference to protect existing spectrum users.

¹⁰ Siemens response to the European Radio Spectrum Policy Group's public consultation on secondary trading of rights to use radio spectrum.

¹¹ A Summary of the responses to the consultative document on spectrum trading May 1999
<http://www.ofcom.org.uk/static/archive/ra/topics/spectrum-strat/consult/spectrad/summary.htm>

Spectrum for Government Services

- 48 CITB propose that the spectrum policy framework should include an element whereby spectrum reserved for government spectrum users should be subject to a regular administrative review mechanism whereby the TA would review, once every 3 years and taking into account technological development and international best practices, with the users of spectrum reserved for government services how efficiently the spectrum assigned has been put to use, ways to improve the efficiency and the future spectrum requirements for such uses and users.

Do you agree that the command and control approach for spectrum management should continue to be applied to spectrum for government services?

- 49 We agree with the continuing application of the command and control approach for management of government services spectrum. As stated above, the traditional approach of command and control will still have a role to play to ensure that public interests are served. Use of spectrum for government services is an important spectrum policy objective. Under the existing command and control approach, exclusive spectrum use is an expedient arrangement that effectively meet operational requirements for minimised conflicts from interference.

Spectrum Pricing

- 50 CITB indicated that they are inclined to propose for consultation that users of spectrum should be required to pay SUF irrespective of whether there is competing commercial demand for the spectrum unless there are public policy considerations. As most spectrum users currently do not have to pay SUF, if the proposal is to be implemented, careful consideration would be given to detailed arrangements and adequate lead time would be allowed for parties concerned to get prepared for it.
- 51 CITB indicated that they accept the consultant's recommendation and propose that in the case where spectrum is not auctioned, under the spectrum policy framework, the SUF should be set to reflect the opportunity cost of the spectrum. Such opportunity cost may be determined by taking reference from outcome of a similar spectrum auction in Hong Kong or elsewhere conducted recently, or by considering the least cost alternative method to the use of spectrum.

Do you agree that SUF should be applicable to commercial use of spectrum irrespective of whether there is competing commercial demand? Do you agree that SUF for spectrum not released through auction should be set to reflect the opportunity costs of the spectrum?

- 52 WTT is of the view that SUF would be applicable to commercial use of spectrum irrespective of whether there is competing commercial demand. For spectrum not

released through auction, we agree that SUF should be set to reflect the opportunity costs of the said spectrum.

CONCLUSION

- 53 WTT is largely in support of CITB's proposals on a policy framework for radio spectrum. We agree with the spectrum policy objectives that CITB propose to adopt and support the proposed adoption of a market-based approach in managing spectrum.
- 54 To create a transparent spectrum policy framework, WTT is in support of the prescription of strict circumstances under which spectrum assignment may be modified or revoked prior to licence expiration, and for refusal of renewal upon licence expiration. The regulator should not have absolute discretion to revoke, modify or refuse to renew, otherwise spectrum users will not be able to plan their businesses and make investments with confidence.
- 55 WTT acknowledges the possible costs that would result from spectrum refarming and hence agree that impact appraisal of different options, including the option of doing nothing, should be carried out before any refarming can be carried out.
- 56 The TA should make it a top priority to produce a spectrum release plan, and should not need to decide on the issues of spectrum rights for non-licensees and introduction of liberalisation at this moment. It is only when a spectrum release plan is made available to industry players that they would be in a better position to make business plans and investments with more certainty. More time and specific consultation may be required to make a better assessment of issues relating to expanding spectrum rights to non-licensees.
- 57 In principle we believe Hong Kong should introduce spectrum liberalisation with appropriate proviso and the TA should make continuing observation of overseas implementation and assessment of impact for Hong Kong as required.
- 58 We do not object to the continuation of using the command and control approach to manage government services spectrum.

Submitted by Wharf T&T Limited

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