SMARTONE

SMARTONE'S WRITTEN SUBMISSION TO LEGISLATIVE COUNCIL SUBCOMMITTEE ON

DRAFT TELECOMMUNICATIONS (METHOD FOR DETERMINING SPECTRUM UTILIZATION FEES) (THIRD GENERATION MOBILE SERVICES) REGULATION

AND

DRAFT TELECOMMUNICATIONS (DESIGNATION OF FREQUENCY BANDS SUBJECT TO PAYMENT OF SPECTRUM UTILIZATION FEE) ORDER

1. INTRODUCTION

1.1 SmarTone appreciates the opportunity to present its views on the Telecommunications (Amendment) Bill 2001 at the Bills Committee meeting held on 26 March 2001. Since the Subcommittee will also proceed to scrutinize the draft subsidiary legislation (reference to LC Paper No. CB(3) 536/00-01 (02)), SmarTone would like to submit its views on the draft Telecommunications (Method for Determining Spectrum Utilization Fees) (Third Generation Mobile Services) Regulation and the draft Telecommunications (Designation of Frequency Bands Subject to Payment of Spectrum Utilization Fee) Order as follows for the Subcommittee's consideration.

2. TELECOMMUNICATIONS (METHOD FOR DETERMINING SPECTRUM UTILIZATION FEES) (THIRD GENERATION MOBILE SERVICES) REGULATION

2.1 4th Leaver Rule

2.1.1 Under section 1 [Interpretation] of the draft Regulation, the term "highest common royalty percentage" is defined as "in relation to an auction, means the highest royalty percentage bids offered by all the successful bidders at the auction". SmarTone believes the definition is drafted to reflect the Government's policy intention that the common royalty percentage paid by the 4 successful bidders is determined by the highest price offered by the 4th leaver instead of at the point when the 5th bidder withdraws from the auction. The 4th leaver rule would be implemented through the auction rules in the Information Memorandum defining bidders as only being "successful" when the fourth of them leaves the auction.[1]

[1] The ability to determine the shape of the auction through the requirements in the Information Memorandum illustrates the significance of the IM and therefore the importance of consultation over its terms.

2.1.2 SmarTone is of the view that the proposed mechanism would be appropriate for allocating 3 licences, but is economically unsound and distortionary to allocate 4 licences. The current design would capture the maximum value willing to be paid by the weakest successful bidders instead of setting the market price of the 3G spectrum where demand equals supply. The 4th leaver rule will inevitably produce a price higher than that produced under the 5th leaver rule, in which the incremental above the market price would become a tax to 3G mobile operators which is likely to be borne by the consumers of 3G mobile services eventually. It would significantly hamper the development of 3G services and adversely affect the long-term benefit to consumers in Hong Kong.

2.1.3 In this context, SmarTone proposes the following amendments to the draft Regulation:

Under draft section 1 [Interpretation]:-

Original Wording:

"highest common royalty percentage, in relation to an auction, means the highest royalty percentage bids offered by all the successful bidders at the auction"

Proposed Amendment:

"final common royalty percentage, in relation to an auction, means the royalty percentage bids offered by all the successful bidders at the auction when the number of remaining bidders is first equal to or less than four"*

Accordingly, the term "highest common royalty percentage" may be revised to "final common royalty percentage" whenever appears in the draft Regulation.

*The number of successful bidders may be less than 4 under the circumstances of insufficient bidders and tied bid. The former will be dealt with by section 4 of the draft Regulation. The latter will be dealt with by the terms and conditions of the auction which will be specified by the TA.

2.2 Spectrum Utilization Fee

2.2.1 Draft section 3 specifies that successful bidders shall pay a spectrum utilization fee based on the relevant minimum fee for the first 5 years and thereafter a royalty based on the network turnover of the licensee or the relevant minimum fee whichever is the highest. In order to avoid the problem of double charging the 3G operators, SmarTone submits that licence fee currently charged for the carrier (mobile) licence (as stipulated in Schedule 1 of the Telecommunications Regulation (Cap 106A)) should not be levied in addition to the spectrum utilization fee.

2.3 Insufficient Bidders

2.3.1 Draft section 4 specifies that the auction shall not be held "where there are not more than 4 bidders". As such, each of the bidders (4 or less than 4) shall be a successful bidder and the spectrum utilization fee shall be the relevant minimum fee. SmarTone is in support of this arrangement, which is consistent with the international practice.

2.4 Connected Bidders

2.4.1 Draft section 5 requires the connected bidders, if any, to participate in a second phase "connected bidder" cash auction to determine the successful bidder amongst the connected bidders. SmarTone submits that it is unfair if a connected bidder is penalised by losing the licence or having to pay more by bidding in the proposed cash auction in the "Dark Room" approach where the bidders may not even know they are connected until the list of successful bidders is revealed. The potential consequence of this is significant as connected bidders may think that they have won the licence and then be forced to bid in a cash round against a bidder with a distant connection.

2.4.2 SmarTone has noted the connected bidder issue can be avoided if the "Dark Room" approach is modified by announcing the identity of the bidders publicly and requiring any connected bidders to resolve the problem within a defined time period prior to the commencement of the auction. This would not only increase the efficiency of the auction process but also reduce uncertainty to the bidders, and so would encourage entry to the 3G market. Further, if the 4th leaver rule is abandoned, there is no reason to disguise the number or identity of bidders prior to the auction.

2.4.3 At the least, any connected bidders should at least be given the opportunity to resolve the problem in concern prior to the stage of "connected bidders" cash auction. This idea is consistent with OFTA's proposed auction framework (which was released together with the latest consultation paper on "connected bidders" rule) where it was proposed that if any two or more provisional winners are connected bidders, they must commit to separate within a defined period. If unable to make this commitment, they must pay up-front cash sums to determine who is allowed to win a licence. Hence, only when the connected bidders are unable to resolve the problem among themselves, a "connected bidders" cash auction should then be held. This may help to resolve the connection without requiring the connected bidder to pay a higher spectrum utilization fee than the other non-connected successful bidders.

2.4.4 As such, SmarTone would like to propose that the draft Regulation should include two additional statements, preferably after section 5(a), as follows:-

Proposed Amendment (To be added after section 5(a))

(b) In the first instance, connected bidders shall collaborate to cease being connected;

(c) In the event that the collaboration mentioned in paragraph (b) fails, a cash auction would then be held to determine the successful bidder;

2.3.5 Besides the above, SmarTone would like to point out that there is no clear provision in the draft Regulation to address the issue on how to allocate the licence(s) that is (are) returned from the unsuccessful connected bidder(s) after the "connected bidders" cash auction is being held.

2.5 Auction to determine frequency band allocation

2.5.1 Draft section 6 stipulates that:-

*"**Subject to section 7 (Secretary may specify minimum fee of spectrum utilization fee)** and compliance with the relevant terms,…… , an auction shall be held –"*

*(b) (ii) "**the spectrum utilization fee** to which the auction relates shall be a cash amount **payable by each of the successful bidders** immediately upon demand by the Authority."*

2.5.2 SmarTone's interpretation of the above provisions is that all successful bidders would be required to pay a minimum fee for spectrum allocation. Clarification is required because SmarTone understands that it is not the objective of ITBB to raise substantial cash payment from the successful bidders through this cash auction. SmarTone holds the view that there should be no minimum fee for this cash auction in which if a successful bidder is indifferent to the 4 lots of frequency bands, it may choose to submit a $0 bid in this round of cash auction.

2.6 Revenue Definition

The definition of the revenue stream against which the royalty will be calculated has a direct bearing on the financial cost of the licence and therefore on what each party is prepared to bid. Mobile businesses derive revenue from a range of different streams. 3G services also will have a more complex revenue profile because of the wider range of content and e-commerce services which can be offered. Operators may form alliances with content and service providers, and transfer pricing issues will be important. Some operators may decide to develop content and services in-house rather than rely on outside providers, and this should not produce different royalty outcomes.

These are all very important issues which are not addressed through a definition of the revenue base in the subsidiary legislation. Instead, the Government says this is to be left to the IM, but the Government does not propose to carry out public consultation on this document.

2.7 Public Consultation

2.7.1 Under draft sections 7 and 8, the Secretary for Information Technology and Broadcasting (SITB) and the Telecommunications Authority (TA) may specify the minimum fee of spectrum utilization fee and the terms and conditions of an auction respectively without going through the consultation exercise. SmarTone believes that the draft sections should be amended to include explicit provisions requiring the SITB and the TA to conduct consultation before they exercise their power to specify the minimum fee of spectrum utilization fee and the terms and conditions of an auction.

2.7.2 Although two rounds of public consultation and an industry workshop regarding 3G general licensing and regulatory framework have been conducted by the TA, the detailed auction design and the terms and conditions have not yet been disclosed nor available for public consultation.

2.7.3 SmarTone notes that the Government aims to issue 3G licences in mid-2001 and hence the auction design process is subject to a very tight timeframe. However, from SmarTone's point of view, of equal importance is that the industry and the public are given the opportunity and sufficient time to fully consider and express views on the detailed auction process and design prior to the auction. It is particularly important where the proposed 3G licensing and regulatory framework in Hong Kong is an untested and unprecedented model. To ensure that Hong Kong, as a leading telecommunications hub in the region, will continue to flourish in the new 3G era, it is essential to get the right 3G licence allocation process.

3. TELECOMUNICATIONS (DESIGNATION OF FREQUENCY BANDS SUBJECT TO PAYMENT OF SPECTRUM UTILIZATION FEE) ORDER

SmarTone has the following comments and recommendation:

3.1 PHS Band Interference

PHS band occupies 1895 – 1906.1 MHz. It overlaps with Block B spectrum in Government's current proposal. The interference from PHS band will definitely degrade the system capacity of Block B spectrum.

3.2 TDD-FDD Guard Band

The Government proposes 400kHz guard band between TDD and FDD uplink spectrum. This 400KHz narrow guard band may not be enough to minimize the interference between TDD and FDD carriers. The capacity loss on the FDD uplink is potentially up to 11% in the worst case.

3.3 Consequences

Blocks A and B frequency spectrum cannot be 100% utilized due to the interference from PHS band or TDD interference. Compared to Blocks C & D, the spectral capacity of Blocks A and B will suffer more severe interference.

Hence, there will be substantial difference in the spectral capacity of the different frequency blocks.

3.4 Recommendation

SmarTone proposes that OFTA should consult the industry including major equipment vendors and mobile operators on the frequency band allocation before finalizing the designation. In this way, OFTA can work out a proposal fair to all successful licensees. SmarTone would be happy to provide technical information and data on such issue.

4. OTHER COMMENTS

SmarTone has submitted its comments on the connected bidders rules as well as the broader auction framework in response to 23 March 2001 OFTA's consultation paper "Auctioning of Spectrum for Third Generation Mobile Service (3G) – Proposed Rules on "Connected Bidders" on 9 April 2001. The executive summary of SmarTone's submission paper to OFTA is attached (Appendix 1) for the Subcommittee's reference.

SmarTone considers that the subsidiary legislation cannot be considered in isolation from the broader auction framework proposed by OFTA's advisers. SmarTone encourages the Legislative Council to seek industry input on the auction design.

SmarTone would be happy to provide any further clarification or information in relation to the above and further discuss with the Legislative Council members.

Appendix 1: Executive Summary of SmarTone's Response to OFTA's Consultation Paper issued on 23 March 2001 : Auctioning of Spectrum for 3G - Proposed Rules on "Connected Bidders", *Date of Submission : 9 April 2001*

EXECUTIVE SUMMARY

- SmarTone welcomes the opportunity to comment on the connected bidder rules, but these issues cannot be considered in isolation from the broader auction framework proposed by OFTA's advisers. SmarTone encourages OFTA to seek industry input on the auction design. International experience shows that the fine detail of the auction rules is critical and that design defects which cause disastrous auction outcomes can be easily overlooked. In particular, specific comments on OFTA's draft "Connected Bidders" rules are detailed in Appendix A.

- For the process to be seen as successful, price-based allocation of licences should be open; transparent; robust to challenge; produce viable, economically efficient results; and establish a sound basis for the future 3G industry in Hong Kong. The open auction model, rejected by OFTA's advisers, is regarded as world's best practice in meeting these criteria. It has been continuously tested and improved over the last 15 years in more than a dozen countries.

- Hong Kong's goal to ensure that consumers have access to reasonably priced, leading edge 3G services could be put at risk by the experimental, untested model proposed by OFTA's advisers. The use of a royalty payment could be seen as a positive development to solve the "winner's curse" problem seen in Europe. However, the problem is that almost every key element of OFTA's advisers' model is both novel and the opposite of the prevailing international approach:

    - there has **never** been an auction which conceals from bidders all information about the bidders, identities, bid levels and bid volumes (which we have called a 'Dark Room')[2];

[2] It was stated at the industry briefing on March 23, 2001 that the number and identity of bidders is to be suppressed. Although some indication of a bidding threshold will be necessary, it will not be possible to reveal all bid amounts without disclosing the number of bidders. For this reason, we assume that bid information will be minimal or suppressed and hence the description Dark Room.

- **no** multi-round auction has involved licence allocation by random factors;

- **no** multi-round auction has required bidding to continue beyond the point where all the provisional winners are identified;

- **no** multi-round auction has involved up to two further cash stages;

- **most** multi-round auctions conducted have been in respect of specific auction lots – this is a fundamental design feature of the US FCC auction design; and

    - **no** bidding case has ever had to include revenue royalty calculations, or deal with a mandatory requirement for MVNOs – this complexity increases the critical need for market information which would not be disclosed under the model proposed by OFTA's advisers.

- By contrast, open auctions produce efficient, fair outcomes because bidders can test their business case assumptions against the price views of other bidders and adjust their views on value as the auction progresses. This dynamic of price discovery, which is found in any "real world" market, is particularly important in setting the value of 3G spectrum given its technical and service uncertainties and the widely different prices paid overseas.

- A feature of the Dark Room is that it lets the designers wait until any stage that they choose before closing the auction. In this case they have said it will close when the 4th last bidder leaves. This '4th leaver rule' allows the royalty rate to be pushed to an inefficient and unpredictably high level. The rule makes the spectrum seem artificially scarce, as if only three licences were being issued. Auctions are designed to replicate an efficient market by finding the price at which demand and supply are equalised (the exit of the 5th leaver). The justification for the 4th leaver rule is that it will extract 'the highest common price that the four winners are willing to pay'. That the 4 successful bidders continue to bid although, unknown to them, they have already won licences only shows that they have over-estimated the fair market value in the absence of market information about prices. The Dark Room denies the bidders information and the 4th leaver rule exploits this lack of information to extract an extra amount of royalty above the market price.

- This extra amount of royalty derived by constructing the auction to create artificial scarcity and exploit the lack of bidding information represents a transfer (tax) from future consumers to the government. As it is a recurring royalty, any distortion caused by

the tax will exist for 10 years[3]. Consumers are likely to be adversely affected by higher prices, less innovation or lower quality. The 4th leaver mechanism devised by OFTA's advisers undermines OFTA's attempts to avoid the effects of the high cash prices paid in overseas auctions by using a royalty approach.

- The artificial requirements of the Dark Room produce consequential design problems which OFTA's advisers can only resolve by resorting to mechanisms which distort processes and add to uncertainty. Tied bids would be resolved by arbitrary processes, with the result that a licence could be allocated purely by chance. Connected Bidder issues cannot be resolved in the pre-qualification stage because this would require bidder identity and numbers to be revealed. Bidders who innocently bid without knowing a Connected Bidder was also in the Dark Room may lose their licence or have to bid more in the "Connected Bidder" auction. Bidders cannot bid on individual spectrum lots because this would reveal identities and number of bidders and the 4th leaver rule could not be applied to artificially constrain supply and increase the royalty.

- The justification for the Dark Room is that it prevents collusion, but in SmarTone's view the cure is worse than the problem. Innocent bidders are penalised by depriving them of valuable market information because of the risk that some bidders might use the information to collude. As some bidders may obtain information through other channels (such as pre-auction MVNO negotiations, or even through the process of the auction, such as with a tied bid), OFTA cannot guarantee that the auction will be uniformly dark for all bidders. International experience shows that the risks of collusion are low and that those risks are outweighed by the benefits of bidders having access to the bidding information. The best antidote to collusion also is to ensure that all conduct is out in the open where collusion can be detected as it takes place.

- The Dark Room approach is also said to promote entry. However, uncertain and unfamiliar regulatory processes themselves can be barriers to entry. Closeted processes also lead to suspicion that valuable assets are being awarded in accordance with hidden criteria. International investors may feel more comfortable entering markets which use stable, tested spectrum allocation processes with which they have experience.

- The design is unlikely to promote entry because of its uncertainties. If anything, uncertain features are more likely to dissuade entry, particularly by wavering potential new entrants. This is more so with a troubled global economy and given there are other investment opportunities. However the design may encourage entry by mere arbitragers,

[3] There will be a distortion caused by a higher minimum payment for years 1-5 and then a distortion caused by the tax from years 6-15

with no commitment to 3G in Hong Kong, who can exploit the weaknesses in the design to ludicrously overbid a committed operator who would be forced to acquire a licence after the auction.

- In conclusion, SmarTone recognises that the auction design is at an early stage and we would welcome the opportunity to discuss these issues further with OFTA and OFTA's advisers. However, SmarTone has concerns that the proposed auction model does not meet OFTA's announced policy criteria as summarized as the following table:

OFTA OBJECTIVE	DOES THE AUCTION DESIGN MEET OFTA'S CRITERIA?	COMMENT
Transparency	No	no consultation on auction rules; and bidders and the public, provided with no information about bidder identities, bid levels or bid volumes as the auction proceeds.
Efficiency	No	efficient market price requires auction to conclude when demand and supply equalise (5th bidder leaves); any excess royalty above the efficient market price represents a transfer (tax) to government from future consumers, and will mean higher prices, lower quality or slower innovation.
Fairness	No	a tied bid for a licence is resolved by arbitrary mechanisms or chance, which is not a rational or fair way to allocate such a critical asset; an innocent bidder will not know until after conclusion of auction if unknown participation of another bidder places it in breach of connected bidder rules; and as 3G is such a new and untried technology, an open auction process would help parties fairly value the spectrum based on the market information generated by the auction.

OFTA OBJECTIVE	DOES THE AUCTION DESIGN MEET OFTA'S CRITERIA?	COMMENT
Avoid problems in other countries of "winner's curse" and adverse effect to consumers' price of services	At risk	this is the purpose of using a royalty rather than cash bid, but the 4th leaver rule may result in higher cost base for operators, which may result in higher consumer price or lower quality.
Revenue not main objective	No	4th leaver rule and separate cash rounds could escalate price substantially above efficient market price; and the practical outcome could be a significant revenue transfer to government to the detriment of consumers through high prices or poorer innovation
Promotes entry	Uncertain	uncertainty arising from complexity and untried nature of the model may deter entry particularly if other investment opportunities have more familiar allocation process.