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21 November 2005

Office of the Telecommunications Authority
29/F Wu Chung House
213 Queen's Road East
Wan Chai
Hong Kong
Attention: Telecommunications Engineer (R21)3
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Dear Madam/Sir:

Response to OFTA's Consultation paper
"Licensing framework for deployment of Broadband Wireless Access" Issued on 31 August 2005

STAR Group Limited is pleased to provide comments in this proceeding.

Should you have any questions, please let us know.

Sincerely

Joe Welch

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STAR Group Limited

Comments on the Telecommunications Authority's Consultation Paper Concerning

The Licensing Framework for Deployment of Broadband Wireless Access Preliminary Conclusions and Further Consultation

Introduction

STAR Group Limited (STAR) provides this submission in response to the Telecommunications Authority's (TA) 31 August 2005 Further Consultation Paper seeking comment on the Authority's preliminary conclusions with regard to license and spectrum allocation for broadband wireless access (BWA) services in Hong Kong.

STAR is a leading media and entertainment company in Asia, providing more than 58 television services in eight languages to countries throughout the region. Hong Kong serves as STAR's pan-Asia headquarters for corporate and broadcasting functions.

We comment in this proceeding in order to explain to the TA the significant level of interference we have already begun to experience from BWA trials. STAR is not a telecommunications service provider and thus we take no position on the other issues raised in Consultation Paper.

Background - The C-Band and STAR

We understand that the 3.4 – 4.2 GHz band is allocated by the International Telecommunications Union's Radio Regulations to fixed satellite services (FSS) for downlinking.[1] This band is usually referred to as the "C-band" and is subdivided by satellite users into the *standard* C-band (3.7 – 4.2 GHz) and *extended* C-band (3.4 – 3.7 GHz).

Commercial satellite applications around the world, as the TA is aware, typically operate in the C-band or "Ku-band" (bands around 10-15 GHz). The C-band is more resistant to attenuation from heavy rainfall, as is prevalent in many parts of Asia. Thus, satellite users in Asia, particularly those requiring a highly reliable service, remain dependent on the C-band for transport of their services.

STAR, for example, is a significant user of the C-band (extended and standard) to downlink television programming to Hong Kong. With earth stations located in Hunghom, Stanley and Tai Po, we downlink and uplink thousands of hours of programming a year in this band in support of the television channels we in turn broadcast throughout the region.

[1] ITU Radio Regulations Article 8 – Frequency Allocations, 1990. We further note that footnote 136 of the Hong Kong Table of Frequency Allocation notes that "[a]ccording to the ITU, administrations shall take all practicable steps to protect the fixed satellite service and coordination requirements shall not be imposed on the fixed satellite services in this band [3.4-3.7 GHz]."

The TA, in this proceeding, proposes to allocate the 3.4 – 3.6 GHz extended C-band for use by BWA services on a primary basis. The proposal includes the relegation of fixed satellite services to a secondary allocation in this band.

The TA notes that "with the re-arrangement of the 3.4 - 3.6 GHz band allocation, some end users currently subscribing to FSS operating in this band *may possibly* be affected to a *certain extent* after the deployment of the BWA systems"(emphasis added).[2]

STAR in fact is *already* experiencing interference to a *significant* degree.

Instances of Interference

The following table summarizes the terrestrial-based interference Star has experienced from July through November of this year.

Table 1: Incidences Of Interference Experienced By STAR To Date

Date	Satellite & Hong Kong Frequency Band	Extent of the Interference
13 July 2005 (case no. 2005-7142)	Thaicom-3 3.4 - 3.6 GHz	Significant interference lasting 8 days and impacting Star's broadcast signal for STAR News India and STAR News International.
25 July 2005 (case no.: 2005 - 7270, 7320, 7321)	Thaicom-3 PAS-7 Apstar VI 3.4 - 3.6 GHz	Significant interference lasting 5 days and impacting Star's broadcast signal for STAR News India and STAR News International
3 August 2005 (case no.: 2005 - 8041)	Asiasat-3S 3.7 -4.2 GHz	Significant one-time interruption of Star's broadcast signal for ESPN STAR Sports.
9 Nov 2005 (case no.:2005-11100)	PAS-7 3.4 – 3.6 GHz	Significant interruption lasting several hours of Star's broadcast signal carrying a third party's news channel from India.

STAR understands, from communication with the TA and our satellite service providers, that these instances of terrestrial interference stem from BWA trials in the 3.4 – 3.6 GHz extended C-band. This is a substantial record of interference with a significant impact on our business.

Impact of the Interference

The interference described is affecting our ability to operate our business in Hong Kong. Of particular concern is interference caused by BWA with the live news channels that we broadcast from Hong Kong to India. These channels are downlinked to Hong Kong using

[2] The TA's 31 August 2005 Consultation Paper at page 11.

the 3.4 – 3.6 GHz extended C-band before being uplinked back to India. As real-time live channels, any interference is a significant occurrence in which we and our customers are at risk of significant revenue loss and damage to reputation.

Should such interference from BWA continue, we would be forced to consider a move out of the 3.4 – 3.6 GHz extended C-band. We have estimated the economic impact for this move, considering the re-occurring transponder costs and the one-off charges related to earth station re-furbishing. The cost estimates are substantial.[3] Further, we suspect that other regional and global companies with broadcast headquarters in Hong Kong would be in a similar position and incur similar costs if forced to move out of the extended C-band.

The TA's Interference Analysis

We appreciate that the TA has done an initial consideration of interference issues, as summarized in paragraphs 17 – 21 of its 31 August Consultation Paper. We believe, however, that the operations of regional broadcasters have not yet received sufficient consideration. For example, we note with concern the TA's indication (expressed in paragraph 20 of its Consultation Paper) that interference with broadcast signals that are not Hong Kong licensed programmes are of reduced concern to the Authority in its interference analysis.

A number of regional and global companies have located their pan-Asia broadcasting headquarters in Hong Kong, based in part on the established ability to up and downlink programming in the C-band. In turn, these headquarter offices have increased infrastructure investment and employment levels in a dynamic sector of the economy. Hong Kong, in turn, has gained a reputation as a world-leading media and communications hub. We therefore ask that the TA afford the broadcast signals of these companies significant consideration in its interference analysis.

Further, we note that the TA in its analysis of interference issues has considered the possibility that users of the 3.4 – 3.6 GHz extended C-band (such as STAR) might be forced by the TA's decision to migrate to a different frequency band. The TA's paragraph 19 raises this point, stating that "there should be little technical constraint to the changeover" such that the "impact of the re-classification of the frequency allocation to FSS in the 3.4 – 3.6 GHz [band] from 'primary' to 'secondary' for the earths station is therefore considered relatively small."

STAR agrees - there should be little technical constraint to such a changeover. There will, however, be a *substantial cost* associated with such a move for end users such as ourselves. The costs incurred will be the direct result of the TA's somewhat unusual move to relegate an existing service to a secondary allocation in favor of primary status for the new entrant. We therefore ask that the TA (assuming it does not alter its preliminary decision) agree at the very least to consider the extent of the migration costs more fully in this proceeding. In particular, we suggest that a migration timeline be examined and that the TA propose that the related costs for migration be assigned to the new entrant licensees. We believe this is a reasonable request based upon our understanding of generally accepted principles of spectrum allocation.

[3] We are prepared to discuss detailed cost estimates with the TA at its request.

Conclusion

STAR as mentioned is in fact is *already* experiencing interference to a *significant* degree from BWA trials in the 3.4 – 3.6 GHz extended C-band.

With commercial launch of BWA services in this band, we suspect that this interference will increase to an unacceptable level and that other broadcasters with regional headquarters in Hong Kong will be similarly impacted.

Migration out of the 3.4 – 3.6 GHz extended C-band will not be a panacea, since the costs associated with migration will be significant – much more significant than the TA has considered in its consultation papers to date.

We therefore urge the TA to either (a) consider alternative bands for BWA; or at the very least to (b) perform an expanded interference analysis in co-operation with affected parties including regional broadcasters such as STAR.