



HKT CSL

3G Industry Workshop

5 January 2001

Introduction

- **HKT CSL supports OFTA’s initiative to conduct this industry workshop on “Open Network” regulatory framework for 3G services in Hong Kong**
- **However, HKT CSL believes that further industry consultation is required on all issues which remain unanswered from the previous two consultation papers and which are not being covered in this workshop**
- **These issues have a direct impact on 3G business and auction success, and need to be publicly discussed and agreed *before* licensing can begin**

Outstanding Issues From Previous Consultations

- **What are the terms and conditions for the extension of the 2G spectrum granted to existing licensees?**
- **Will there be additional 3G licenses issued in the future? If so, when and how many additional licenses will be issued?**
- **What are the details of the licensing process?**
- **What is the chosen auction fee payment method?**
- **Is accounting separation between 3G licenses, MVNOs and resellers necessary at this premature stage?**
- **Will the amount of capacity that can be sought by any one MVNO from all network operators subject to regulatory review?**

Fundamental Business Principles

- **HKT CSL takes the view that “Open Network” should be on commercial terms without regulatory interference; but under such circumstances, Government policy has to be**
 - based on accepted commercial principles which
 - can be backed by financial institutions and
 - supported by the public
- **The telecom sector has contributed significantly to the worldwide economy, and government policy towards 3G licensing has a significant impact on domestic as well as worldwide economies**
- **3G licensing in Europe has resulted in significant stock market disruptions which has led to value destruction in domestic as well as worldwide economies**
- **Part of Government responsibility is to ensure economic stability**

Areas of Concern

Measurement of network capacity

- **The notion of short term capacity is not practical. A realistic lead time to build capacity which can be used by MVNOs is 6 to 9 months.**
- **Regulated provision of capacity to MVNOs within, say one month will unfairly harm the MNOs and their other MVNO customers' business as their original business plans cannot be carried out**
- **HKT CSL submits that the percentage of open network must be based on designed utilization**
- **A scheme which measures actual occupancy at any given time ignores the obligations of good business practice - network capacity is built based on business plan requirements, and that business plan will call for consuming that capacity over a given time**
- **Based on the current proposal, the only way that MNOs can satisfy the percentage of open network requirement is to build capacity and let it sit idle, which is contrary to OFTA's stated policy**

Areas of Concern (cont'd)

Financial Commitment

- In an unregulated market, MNOs and MVNOs may negotiate to modify their business plans or take risks in ways which cannot be applied to a regulated market
- In a regulated market, the rules for intervention must adhere to sound financial practices including investment against commitment
 - MNOs must be able to make performance commitments on capacity and quality to MVNOs
 - MVNOs must undertake to use the capacity for which they contract
 - There must be satisfactory guarantees

Areas of Concern (cont'd)

Non discriminatory treatment

- **The regulatory requirement for “non discriminatory” treatment will deprive MNOs of the ability to provide differentiated quality of services**
- **As a result, it will not be possible for MNOs to provide any commitment in terms of quality because any one MVNO who over consumes capacity will affect the other MVNOs’ quality**
- **Therefore, this amounts to “non differentiation”, limits competition and deprives consumers of choice and reliability**
- **HKT CSL submits that MNOs must be given the right to enforce a partition within the network between the committed resources of the MNO, MVNO and other MVNOs**

Areas of Concern (cont'd)

Wholesale price of usage

- **HKT CSL agrees with OFTA's belief that the best approach in this competitive market would be to leave capacity pricing decisions to market forces**
- **Should OFTA decide to regulate the MVNO marketplace, HKT CSL agrees that the "retail minus" approach should be adopted, provided that adequate safeguards are included which will preclude an MNO from being required to sell its capacity at below cost**
- **HKT CSL believes it is necessary for OFTA to clarify the definition of "distorted" and the approach that OFTA will take if the market is in fact turn out to be "distorted"**

Areas for Clarification

- **Open Network Percentage**
 - Will OFTA revise the percentage upwards after five years from the date of award of the 3G license?
- **Preference for Commercial Arrangement**
 - What are the guiding principles that OFTA will apply to determine whether the market has “sufficient competition”?
 - How does OFTA define “reasonable period of time”?
 - What level of intervention that OFTA will exert to facilitate interconnection?
Will an MNO’s normal business practices be jeopardized?



Technical Annex

NSP Traffic Occupancy Percentage

(UL/DL) Actual NSP Traffic Occupancy Percentage =

(UL/DL) Actual NSP Occupancy / (UL/DL) Available Capacity

Comments / Recommendations

- **Until a reasonable downlink available capacity can be estimated, downlink traffic Occupancy percentage is not available.**
- **Measurement areas for Actual NSP Occupancy should be based on the 1% cells with highest NSP Occupancy in order to ensure that high occupancy of NSP traffic will not be obscured by excess capacity elsewhere. However, owing to technical limitation, it is not possible to derive geographical information from CDR.**

NSP Traffic Occupancy Percentage (cont'd)

Comments / Recommendations (continue)

- **Using actual NSP Traffic occupancy percentage cannot reflect the total committed Open Network capacity as there could be capacity reserved by NSP but not yet taken up by them.**
- **It is recommended to projected NSP Traffic occupancy percentage including reserved capacity by NSP. This projected percentage should be used to determine the fulfillment of ONP.**
- **In view of the difficulties and problem above, measurement and reporting of NSP Traffic Occupancy need further study.**

Uplink Available Capacity

Uplink available capacity = Uplink total occupancy * load multiplier

where load multiplier = loading limit / average uplink loading

Comments / Recommendations

- **loading limit could be different for different cells and at different time. The value need to be reviewed from time to time and agreed. OFTA's initial proposal of using 0.25 (for rural cells) and 0.5 (for urban cells) as loading limit could be used as reference only.**
- **Accuracy of estimating uplink loading based on RAT need further studied. The relationship between uplink loading and RAT should be further verified rather than adopting the theoretic graph directly.**
- **Definition, measurement method and accuracy of RAT could be different for different vendors.**

Uplink Available Capacity (cont'd)

Comments / Recommendations

- **When measuring the Uplink loading, in order to reflect the correct uplink capacity limit, a proper “measurement time” and “measurement area” should be used instead of using the average uplink loading.**
 - **It is agreed that the weekly time consistent busy hours should be used as the “measurement time”**
 - **For “Measurement areas”, it is recommended that the 1% of cells with highest uplink loading should be used.**
- **When applying the proposed formula for Available capacity estimation, the 2 parameters namely, “occupancy” and “loading” are both measured data. It is therefore not possible to calculate “available capacity” at system launch where these measured data is not available. We can only derive a reasonable estimation of available capacity when the 3G network is stable and have certain loading. We consider that reasonable data would only available by 12-months after launch.**

Downlink Available Capacity

Downlink available capacity =

Uplink available capacity *(downlink total occupancy / uplink total occupancy) which is equivalent to,

Downlink total occupancy * uplink load multiplier

Comments / Recommendations

- **Use uplink load multiplier to estimate downlink capacity is not valid. It has assumed that both the uplink / downlink loading and their loading limits are the same. However, it is well-known that data traffic will be asymmetric in nature and hence it is not possible to use uplink loading to estimate downlink capacity.**
- **3G system capacity could be downlink limited and hence estimation of downlink capacity is essential.**
- **Estimation of Downlink available capacity need further study.**

Non Discriminatory Treatment

Comments

- **Non-discriminatory treatment implying handling traffic of NSP in an unrestricted way.**
- **Uncontrolled upsurge of traffic of certain NSP will degrade the MNP itself as well as other NSP customers.**
- **MNO is therefore not able to guarantee or commit quality requirements demanded by NSP.**
- **It is therefore recommended to amended the requirement to**

“The traffic of the customers of NSPs must be handled by an MNO on a non-discriminatory basis compared with traffic of the customers of the MNO itself or its affiliated resellers or MVNOs as long as the traffic generated by the customers of the NSPs does not exceed the volume committed in the contracts.”