

# **Comments**

*to the*

**Office of the Telecommunications Authority  
Discussion Paper for Industry Workshop**

*titled*

**“Open Network” Regulatory Framework  
for Third Generation Public Mobile Radio  
Services in Hong Kong**

**Issued - 28 December 2000**

*submitted*

*by*

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**23 January 2001**

## **I. Introduction**

Cable and Wireless HKT CSL Limited (CSL) welcomes this opportunity to further participate in the establishment of a viable framework for the licensing and operation of Third Generation (3G) mobile services in Hong Kong. CSL is pleased that OFTA conducted an industry workshop on 5 January (the Workshop) and these comments are submitted in response to that workshop. CSL would also support the holding of additional workshops and a further industry consultation. While the length of the framework process may be a concern, it is obviously most important to get the process right.

In this submission CSL will address OFTA's regulatory approach, the technical issues surrounding the establishment of MVNOs and particularly the establishment of capacity set aside requirements. CSL will also address the pending capacity pricing proposal and a large number of still unresolved issues.

CSL would note that it generally supports the statement made by the TA at the end of the workshop which appeared to support a more market driven (and less regulatory) approach to 3G.

## **II. Regulatory Approach**

As a preliminary matter, CSL must emphasise its continuing disappointment (until the TA's workshop ending comments) that OFTA has proposed a framework which is long on OFTA regulatory involvement and short on reliance on market forces. This is certainly contrary to the government's clear and strong preference to rely on market forces. This is also contrary to how OFTA has approached the current mobile services market.

OFTA's light handed regulatory approach to the existing mobile services market has promoted competition and maximised consumer benefits in terms of available services and service provider choices. Users in Hong Kong of mobile services enjoy a variety of service options at extremely low rates, and Hong Kong has the highest mobile penetration rate in Asia (over 70%).

This light handed regulatory approach by OFTA is attributable to an analysis that market forces, not regulation, could best benefit users. Behind this analysis is the critical recognition that no licensee or licensees would have market power. That is, without a clear indication that market forces will or have failed, the heavy hand of detailed regulation is inappropriate. There is no economic or legal basis to believe that market forces will not work equally well for 3G. There is no basis to believe that a market with at least four 3G licensees, one or more remaining 2G and 2.5G licensees, and options for future 3G licensees based on additional spectrum allocations will be any less competitive than the existing 2G market.

Heavy OFTA regulation may be appropriate in markets where one or more licensees have significant market power. Historically, but not now, that may have been the case in the narrowband fixed wireline market in Hong Kong. The presence of carriers with market power in developing markets or the existence of subsequent “market failures” (i.e. where market forces alone have not worked) can justify heavy regulation. The absence of carriers with market power as in the 2G market and in the future 3G market refutes the need for such intrusion and regulation.

***Accordingly, there is no economic, legal or public policy basis for OFTA to impose its heavy regulatory hand on the 3G market.***

Instead, OFTA should rely on market forces to determine the level of capacity provided by MNOs to MVNOs, NSPs, resellers, etc. OFTA should equally rely on market forces to determine the price, quality and other terms of this capacity. It is relevant to note that the 2G licensees today have agreements with a large number of agents, distributors, resellers, etc to provide content and applications. This is done in a competitive market, successfully, without OFTA directives or intervention. 3G represents an evolution of the mobile market which is expected to bring a set of unknown and innovative services, the development and use of new technologies, and the evolution of user demand for these services. CSL cannot be optimistic that OFTA could successfully anticipate and pre-determine the regulation for this new market. No other regulators in any other developed mobile 3G markets are attempting to replace consumer choice and market forces.

Of course, under the Telecom Ordinance and in each 3G license, there will be competition provisions which permit OFTA’s intervention if there is anti-competitive conduct or other market failure. However, there is no need and indeed there is no rational basis for OFTA to assume now that a market failure will occur. The evidence from the 2G market does not support this, overall government policy does not support this, and the industry does not support this (except perhaps those that see advantage to obtaining guaranteed capacity at LRIC based pricing while taking no auction, build-out or other risks).

CSL believes that there is a significant difference between the two options before the government. In one case, as outlined above and preferred by CSL, market forces will drive the process and OFTA intervention will only occur if there is market conduct which would prevent or substantially restrict competition. This approach would not set aside a specific capacity percentage, describe the pricing of capacity or otherwise distort the market. In the second case, market forces will have absolutely no role. Everything will be prescribed, directly or indirectly as in the current OFTA consultation paper.

While the current proposal does state a preference for market forces, the lesson from the FTNS market is that those who favour the OFTA position will simply push for Determinations, negating in full any commercial negotiations. Why, for example, would a purchaser of capacity negotiate on price when OFTA has already promised or at least intimated at a LRIC solution? And of course, very few entities will desire to bid and build as MNOs when all the risk resides with the MNOs and all the

rewards reside with the non-MNOs. CSL would not believe it to be an over-statement to submit that the choice is between market forces, preferred government policy and successful 3G, on the one hand, and a regulatory driven quagmire of disputes, litigation and harm to users from a failed 3G policy, on the other. CSL would pray that government chooses wisely.

### **III. Business Concerns over Open Network**

As explained in Section II, CSL does not support any approach to set aside 3G network capacity for MVNOs other than to rely on market forces. Market forces remain the best tool to achieve a fair allocation of network capacity. CSL submits that there is no evidence that any future 3G market player(s) will be in possession of significant market power or even be dominant. Accordingly, CSL does not believe any heavy-handed regulatory approach over open network is justified. Nonetheless, should OFTA choose otherwise then the following points must be adequately addressed in any policy undertaken.

#### Measurement of Network Capacity

CSL submits that any percentage of open network subject to regulation must be based on designed utilization, not on actual utilization. A scheme which measures actual utilization at any given time ignores the obligations of accepted and good business practice – network capacity is built based on business plan requirements, and that business plan will call for the consumption of that capacity over a given period of time. Regulatory intervention using calculations based on actual utilization will introduce unacceptable investment risks into an MNO's business model and unfairly jeopardize MNOs in favour of MVNOs.

CSL finds the notion of “short-term capacity” not to be a practical one. Instead, we consider a more realistic lead-time for MNOs to build capacity which can be used by MVNOs is 6 to 9 months. The required provision of capacity to MVNOs within a short time period of, say, one month cannot always be done. It would more likely be realised only through the reallocation of capacity which was built for other business purposes. Such a requirement will therefore unfairly harm the MNOs and their other MVNO customers, as their original business plans cannot then be carried out. It is inappropriate to assume that any responsible business can readily sustain such an assault on its commitments to shareholders.

In developing its business plan, an MNO may assess the market potential for MVNOs or other NSPs which may represent a revenue opportunity, and may choose to take a calculated risk by building additional capacity, in advance of contractual commitments, to serve this market. Alternatively, an MNO may judge the market less optimistically and as such take a more conservative approach by building capacity only to fulfil contracts for which it has firm commitments. Such choices can only be made by the MNO free of regulatory interference, as these decisions will be determined by a wide variety of market indicators and other forces,

including availability of technical resources and investment capital, as well as shareholder policies and priorities, at any given time.

Based on the current approach as proposed by OFTA, CSL is very concerned that the only way MNOs can satisfy the percentage requirement, and particularly the “short-term” expectations, of open network remains to be the over-building of capacity and to let it sit idle. This is obviously contrary to OFTA’s stated policy that no MNO will be compelled to leave network capacity idling, awaiting demand from MVNOs. We do, however, note the TA’s positive statement on this issue at the Workshop but our concern remains until this matter is fully explained by OFTA.

#### Financial Commitment from MVNOs

In an unregulated market driven largely by market forces such as the existing 2G market, agreements between different parties are reached basing on commercial negotiations. In particular, MNOs and MVNOs are free to negotiate on different aspects of their respective business plans. As mentioned previously, they may also decide to accept risk in manners which are not allowed, available or appropriate in a regulated market.

However, should OFTA insist on regulating the 3G market by mandating the reservation of network capacity for MVNOs, then the rules for its intervention must be based on sound financial practices as previously expressed and as follows:

- MNOs must be allowed to require MVNOs to undertake to pay for the capacity for which they contract.
- MNOs must be allowed to require MVNOs to provide satisfactory financial guarantees.

Under the current proposal, MNOs are asked to bear all the risks associated with network construction and operation. While MNOs are required to build up to 100% more capacity than what it plans for its own operation under OFTA’s 50% capacity proposal, it is clear to CSL that MVNO demand for network capacity is totally unknown. The risk allocation should not be one-sided. Instead, to be fair, MVNOs should be subject to all financial and regulatory requirements to be placed on MNOs, a view shared by Hutchison Telephone (see Hutchison’s presentation at the Workshop).

#### Wholesale pricing of Network Usage

In a market with at least four 3G licensees, one or more remaining 2G and 2.5G licensees, various NSPs, plus any further 3G licensees to be issued, CSL agrees with OFTA’s view that the best approach in such a competitive market would be to leave capacity pricing decisions to market forces and commercial negotiations between the multiple “buyers” and “sellers” of content and capacity.

Should OFTA ultimately decide to regulate the MVNO marketplace, CSL agrees that the “retail-minus” approach should be adopted as it is capable of adequately capturing the real market value of network capacity in most of the circumstances. However, in order to cater for abnormal situations, adequate safeguards must be built in to preclude an MNO from having to sell its network capacity at a rate which is below its cost. Further, the cost which must be recovered also includes a commercial rate of return which is commensurate with the reasonable expectation of any enterprise.

The cost here also refers to the “fully distributed cost” of licensing, building and supporting the operation of the network and all related supporting functions; as there is no basis for applying the “long run incremental cost” regime normally associated with legacy dominant monopoly wireline networks. This view is shared by Hutchison Telephone (see Hutchison’s presentation at the Workshop). CSL is disappointed that OFTA has notably avoided providing any justification as to why anything other than a “fully distributed cost” regime would be applied.

In addition, CSL believes it is necessary for OFTA to clarify the definition of a “distorted market” and the approach that OFTA will take if the market in fact turns out to be a “distorted” one.

#### Non-discriminatory Treatment

The straight regulatory requirement for “non-discriminatory” treatment will have the effect of depriving MNOs of the ability to provide any differentiated quality or type of service, even though such differentiation is in some cases justifiable and/or requested by users. MNOs will lose the discretion over an important element of their business plan.

It follows that the proposed non-discriminatory treatment is actually tantamount to “non-differentiation” of service quality which, in turn, limits competition and deprives consumers of choice and reliability. This result is completely contrary to the government’s objectives of both building a world-class telecommunications industry in Hong Kong and for allowing its public the right to choose.

Consequently, it will not be possible for MNOs to provide any commitment in terms of quality because any one MVNO who over-consumes capacity will inevitably affect the quality of service provided by the MNO to other MVNOs, and their customers. Complaints from customers will be answered with finger-pointing by one MNO/MVNO to another, with the obvious explanation that such an unsatisfactory situation is actually mandated by the government itself.

Accordingly, MNOs must be able to make different performance commitments on capacity and quality to different MVNOs. Further, 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.

#### **IV. Technical Issues**

This section deals with the technical issues as raised in OFTA's Discussion Paper of 28 December 2000. The paragraph numbers quoted correspond to those used in the Paper. These issues have been addressed here without reference to CSL's business policy positions as previously stated.

*Paragraph 8 - MNOs to meet higher capacity whenever the "Actual NSP Traffic Occupancy Percentage" is less than the "Open Network Percentage"*

Actual NSP traffic occupancy percentage may vary from time to time. Furthermore, actual NSP traffic occupancy cannot reflect actual commitment, i.e. the NSP traffic may not reach the volume purchased, and therefore already set aside, for any or all served NSPs. It is therefore recommended that an MNO will be required to supply higher capacity only when the projected/committed NSP Traffic Occupancy Percentage is less than ONP.

*Paragraph 14 - Non-discriminatory Treatment*

MNO and other NSPs using the same network will experience service degradation due to uncontrolled up surging of a single NSP's traffic.

*Paragraph 19 - The Measurement Time – weekly time consistent busy hours within the report period*

The busy hour for various NSP, MNO and entire 3G system may be different. The measurement of actual NSP Traffic Occupancy Percentage should be based on NSP busy hour.

*Paragraph 20 - The Measurement Area*

CSL recommends 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 limitation of CDR, it is not possible to specify measurement areas down to cell level.

*Paragraph 21 - Ability of the NMS to Associate Call Detail Records (CDR) with Geographic Areas.*

It is not possible to associate CDR with geographic area for packet data services.

Paragraph 22 - Geographic Areas not Limited to Small Areas of Anticipated High NSP Traffic Occupancy

This somewhat contradicts paragraph (20), “The size of each geographic area within the measurement Area needs to be small enough to prevent a high occupancy in part of the area being obscured by excess capacity elsewhere within the area”.

Paragraph 28 - Detailed Measurement Method

- Determine the average uplink loading:  
The accuracy for determining uplink-loading value based on “Rise Above Thermal” value is significantly questionable. External interference or other factors could affect the RAT value.
- Uplink available capacity:  
The capacity may be vary significantly at various points of Occupancy and Uplink load.
- Estimate of Downlink Available capacity:  
The assumption that the uplink and downlink loading of a carrier are equal is not valid and not appropriate. Since capacity of a 3G system could be downlink limited, estimation of downlink capacity is essential.

Recommendation

One of the primary purposes of this latest OFTA Discussion Paper is to propose an approach to estimate the available capacity in 3G networks so as to ensure that the MNOs can be monitored and regulated to supply a certain amount of “data volume” to NSPs to fulfil the ONP (Open Network Percentage) requirements.

Further to our discussion with OFTA and the appointed consultant on 19 January, it is agreed that there is no reasonably available or simple method to measure network capacity with any meaningful accuracy. However, the usage ratio or data volume usage ratio of NSP compared to total network usage can be measured..

Although the NSP usage ratio **is not relevant to network capacity**, it is recommended that this method could be used to demonstrate that the MNO has implemented and conformed to the “open network” policy.



## **V. Outstanding Issues from Previous Consultations and Areas Requiring Further Clarification**

Prior to finalizing the 3G licensing framework, OFTA and ITBB should release clear and precise detail and then allow sufficient discussions on the following outstanding issues:

- 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 will OFTA exert to facilitate interconnection? OFTA should ensure that an MNO’s normal business practices will not be jeopardized as a result.
- What are the terms and conditions for the extension of the 2G spectrum granted to existing licensees? There will be no basis for OFTA to impose mandatory roaming onto 2G networks if an automatic extension of 2G licences under current terms and conditions are not granted.
- Will OFTA revise the open network percentage upward after five years from the date of award of the 3G licence?
- Will there be additional 3G licences issued in the future? If so, when and how many additional licences will be issued? OFTA should provide sufficient relevant information for the consideration of potential 3G licence bidders.
- What are the details of the licensing process?
- What is the chosen auction fee payment method? CSL is in favour of an upfront cash payment system as this is simple to administer and represents no risk to the Government. On top of this, there will not be any administrative costs to be incurred by the Government and licensees.
- Is accounting separation between 3G licenses, MVNOs and resellers necessary at this premature stage? Accounting separation carries with it significant cost and generally only applies to a dominant operator. There is no evidence that either any of the existing incumbent 2G operators are dominant or will become one in a 3G environment.
- Will the amount of capacity that can be sought by any one MVNO from all network operators be subject to regulatory review? OFTA should be mindful that a super MVNO could be created without any investment in network construction.

It should be noted that many of the above issues, which were raised by various parties during previous consultation phases, were again raised by other mobile operators during the Industry Workshop on 5 January 2001.

## **VI. Conclusion**

There being no economic or legal rationale to presume a failure in the 3G market, CSL would accordingly urge the Government to seriously reconsider its proposed heavy-handed reliance on predetermined regulatory intervention and revert to one which is based on market forces and commercial negotiations. In such an approach, reliance on market forces and competition law would be strongly emphasized, not heavy regulatory actions as currently constructed.

There remains a handful of unresolved issues which must be addressed even in an environment which relies on market forces. If Government opts for a heavy regulatory approach, it must further address the critical issues which surround establishment of MVNOs and how the setting aside of network capacity for MVNOs can be implemented. The number of unresolved issues and the complexity of some of these issues call for the holding of additional workshops and a further full consultation. It is far more important to get the process right in the first instance than simply to rush ahead in pursuing a time table which itself has not been adequately examined.