For Information
On 22 February 2001

Legislative Council
Information Technology and Broadcasting Panel

Licensing Framework for
Third Generation Mobile Services

Background

On 13 February 2001, the Government announced the licensing framework for the third generation mobile services (3G). A Legislative Council Brief on the subject was also issued on the same day.

2. Members are interested to know how the principal concerns of the industry have been addressed in the licensing framework announced and the general reaction to the framework. This paper briefs Members on the key concerns of the industry and how these concerns are addressed in the following areas:

(1) Upfront financing cost;

(2) Opening network capacity to Non-Affiliated Mobile Virtual Network Operators and Content Providers;

(3) Renewal of licences for second generation mobile services (2G);

(4) Additional spectrum for 3G licences.

Upfront Financing Cost

3. While operators with considerable financial resources were in support of a cash auction which would require substantial upfront payment upon conclusion of the auction, smaller operators had expressed concerns that the upfront payment would put a serious strain on their source of capital, increase their financing costs, increase their financial risk and possibly slow down 3G network rollout, as what limited capital that was available would be diverted to payment of the licence fee.

4. Hong Kong's mobile market is one of the most challenging in the world for operators. Mobile penetration rate was 77% as of December 2000 with six incumbent operators. The operating environment is very competitive due to intense price competition and most operators are making losses.

5. We are aware that financing for 3G business is increasingly expensive or difficult to obtain due to the recent downturn in technology related and telecommunications businesses. We note that the high prices paid by successful bidders in the initial European 3G licence auctions have resulted in credit downgrades as well. The outcome of the licensing in France and in Belgium reflects the recent market sentiment.

6. We are very much alert to the changing environment. The chosen auction payment method needs to be designed to promote entry by minimising the initial financial burden on licensees.

7. A number of different payment options have been considered such as the up-front cash payment as used in the United Kingdom, the deferred payment method, royalties and the hybrid method which comprises royalties and a minimum payment element. We have assessed these options, and considered the views received at the second consultation exercise, based on the following criteria:

(1) To avoid market distortion;
(2) To prevent costs being passed to consumers;
(3) To promote entry;
(4) To prevent collusion;
(5) To minimise bidders' funding requirement;
(6) To increase the Government's ability to share upside;
(7) To reduce credit risk to Government;
(8) To ensure simplicity.

8. Overall, we believe the hybrid method (that is a royalty with a minimum defined payment) in the licensing framework to be adopted is the best option for the Hong Kong market. It is "pro-entry" and best protects consumers' interests.

Opening Network Capacity to Non-Affiliated Mobile Virtual Network Operators and Content Providers

9. While operators generally supported the principle of opening network capacity to non-affiliated Mobile Virtual Network Operators

(MVNO) and content providers, they were concerned about the mandatory “open network” requirements for a number of reasons. A workshop was conducted in January 2001 to gauge the views of operators and the industry. Our technical consultant had also been consulting operators separately on technical details. Operators’ concerns and how they have been addressed are given below:

(1) Operators considered that the relationship between the network operators and MVNO/content providers should be decided by commercial negotiations, not regulatory intervention - We maintain that our preference is for the network operators and MVNO/content providers to reach commercial agreements, failing which the Telecommunications Authority (TA) may determine the relevant terms and conditions under section 36A of the Telecommunications Ordinance. We believe that the reserve power for the TA to intervene is appropriate to ensure that the “open network” requirement will be implemented within a reasonable time, thereby creating a competitive and vibrant content and e-commerce market over the 3G platforms.

(2) Operators were concerned that the mandatory opening of “30-50%” of network capacity would lead to idle capacity in the networks, degraded quality of service to the operators’ own customers or the requirement to “shed” customers from their networks - The TA explains that the “open network” percentage would not result in idle capacity in the networks. If there is no demand from MVNO or content providers, all capacity of a network may be used by the network operator for its own services and content. The network operator is required to supply the capacity up to the “open network” percentage only when there is demand, in which case the capacity made available would either be used or paid for. The “open network” requirement would also not lead to degradation of quality of existing customers or the requirement to “shed” customers because the MVNO will be required to give reasonable forecast to the network operators on their future demand so that the network operators would properly plan the expansion of the network capacity if necessary to meet the demand.

(3) Operators considered that it would be very difficult to measure accurately what the percentage of the network capacity has been opened to, or used by, the non-affiliated MVNO and content providers - After a series of discussions between the operators and consultants to the TA, the TA has proposed a practical method for measuring the network capacity open to the non-affiliated MVNO and content providers. The TA also made clear that he would be prepared to consider alternative methods proposed by the network operators if the operators are required in the future to prove that the "open network" obligation has been met.

(4) Operators were concerned about the administrative burden to report regularly the percentage of network capacity open to the non-affiliated MVNO and content providers - the TA has made clear that there would be no regular reporting requirement. The network operator would be required to measure or report the "open network" percentage only when a request by an MVNO or a content provider for access has been turned down, and network operators need to substantiate that the "open network" requirement has already been met.

(5) Operators were concerned that if each MVNO would have mandatory access to "30 - 50%" of the capacity of each network, then potentially a MVNO could have more capacity at its disposal than a network operator - The TA has reduced the percentage of open network to 30% and that he would not be prepared to intervene if a MVNO has already had access to 30% of capacity of a network (i.e. the access to additional capacity beyond the 30% limit of a network would have to be negotiated on a commercial basis).

(6) Operators were concerned whether the network operators would be able to recoup its investment if the wholesale prices were to be determined by the TA - The TA has indicated that in the determination of a cost-based interconnection charge, he would be prepared to consider the cost of the spectrum as part of the costs for setting up and operating the network, and that he would allow a return of investment of 20% for network operators.

Renewal of 2G Licences

10. Operators were concerned about reports of the media that the renewal of the 2G services would be subject to the payment of spectrum utilization fees. The existing 2G licences for systems operating in the 800/900 MHz bands will expire in 2002 or 2003, while those in the 1,800 MHz bands will expire in 2006.

11. As the equipment for 3G services operating in the 800/900 MHz bands is not expected to be available in the market before 2005, the TA has indicated that he is likely to renew the existing 2G licences for systems operating in the 800/900 MHz bands on substantially the same terms and conditions as the existing licences (i.e. without any payment of spectrum utilization fees) for three years by exercising the TA's discretion provided for under the Telecommunications Regulations. The renewed licences in the 800/900 MHz bands will therefore expire in 2005 or 2006.

12. The above renewal would enable a review and industry consultation before 2005, in the light of the development in the 3G market, on the terms and conditions for the grant of licences for operation in the 800/900 MHz bands, or renewal or grant of licences for operation in the 1,800 MHz bands, beyond 2005 or 2006.

Additional Spectrum for 3G Licences

13. The International Telecommunication Union has in 2000 allocated additional spectrum in the 2.5/2.6 GHz bands for 3G services. Operators sought clarity on the intention of the TA in assigning additional spectrum for 3G services. They would have to take such intention into consideration in their commercial decision in bidding for the spectrum offered in the forthcoming auctioning exercise this year.

14. The TA has made it clear that the additional spectrum in the 2.5/2.6 GHz bands would not be made available before 2005, and an industry consultation will be conducted before 2005 on when the additional spectrum should be assigned to 3G network operators, and whether to operators then existing or new operators to be admitted to the market.

General Reaction

15. The licensing and regulatory framework announced by the Government on 13 February 2001 is the outcome of extensive consultation conducted by the TA in March and October 2000, followed by an industry workshop on open network requirement in January 2001. We believe that the concerns of the operators have been adequately addressed in the licensing framework the Government has announced.

16. As far as we know, smaller existing 2G operators welcome the announcement. On the one hand, the upfront capital cost for the licence fee is likely to be reduced with an auction based on a royalty percentage. On the other hand, the open network requirement, and a regulatory regime that includes the operation of MNVOs, are likely to increase their flexibility in choosing to become a network operator or an MNVO.

17. General public reaction is also positive. We believe the public is generally supportive of the pre-qualification and spectrum auction process. As regards auction based on royalty with a minimum guaranteed payment, they see it as an approach that protects public interest on one hand, while taking into full account the latest development in the telecommunications market. In addition, the approach to be adopted is in line with the objective to promote the development of the telecommunications industry, and stimulate development at the applications and services level.

Office of the Telecommunications Authority
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