

**For information
On 13 December 2004**

Legislative Council Panel on Information Technology and Broadcasting

**Licensing of Mobile Services on Expiry of
Existing Licences for Second Generation Mobile Services
And Related Subsidiary Legislation**

Purpose

This paper briefs Members on the background and the key decisions and recommendations made in the Statement of the Telecommunications Authority (TA) of 29 November 2004 on the licensing of mobile services on expiry of existing licences for second generation (2G) mobile services and the proposed subsidiary legislation to implement the charging of spectrum utilization fee for the new licences.

Background

2. At present, 2G mobile services are licensed under the Public Radiocommunications Service (PRS) licences pursuant to the Telecommunications Regulations (Cap. 106A). Of the eleven 2G PRS licences, five of them operate in the 825 - 960 MHz bands, providing services based on the GSM 900 standard (GSM licences), IS-95 CDMA standard (CDMA licence) and IS-136 TDMA standard (TDMA licence). The remaining six licences operate in the 1710 - 1880 MHz bands providing Personal Communications Services (PCS) using the GSM 1800 standard (PCS licences). These licences have expiry dates ranging from July 2005 to September 2006.

3. The TA has initiated a public consultation on the licensing of mobile services on expiry of existing 2G licences. Two rounds of consultation have been launched on 1 August 2003 and 19 March 2004 respectively. Having duly considered the views and comments in response to the two rounds of consultation, the TA concludes the consultation exercise by setting out how he will deal with the relevant issues in the TA Statement issued on 29 November 2004. The key decisions and recommendations made are summarized in the following paragraphs.

Offer of New Licences to the GSM and the PCS Licensees

4. The nine incumbent GSM and PCS licensees will be offered new Mobile Carrier Licences to be issued on the date on which the relevant GSM or PCS licence expires, if they agree to the licence conditions in the new licences.

No New Licences for the CDMA and the TDMA Licences

5. Given the inefficient use of the assigned spectrum by the CDMA and the TDMA licensees, the Government decides not to offer new licences to them. But the Government will give the CDMA and the TDMA licensees a migration period of 3 years, with one-third of the original assigned spectrum (i.e. 2 x 2.5 MHz paired spectrum), for customer migration. One-third of the originally assigned spectrum will be more than sufficient to carry the existing traffic volume. The licensees should devise changeover plans to ensure minimum service disruption to their customers. During the 3-year migration period, the two licensees are required to pay SUF proportional to the assigned bandwidth and at the same level as described in paragraphs 7 and 8 below.

Spectrum Policy Review

6. Taking into account the outcome of a consultancy study commissioned by OFTA and the submissions from the industry in response to the Second Consultation Paper, the Government considers that there is no urgency in introducing a new mobile system using the spectrum vacated by the existing CDMA system. The Government intends to initiate a separate spectrum policy review on the allocation and assignment of radio spectrum for telecommunications and related services. In the light of the outcome of the review, the Government will initiate the necessary legislative and administrative procedures to implement the revised spectrum policy.

Payment of Spectrum Utilization Fee (SUF) by the GSM and the PCS Licensees Taking up the New Licences

7. The GSM and the PCS Licensees taking up the new Mobile Carrier Licences are required to pay SUF as they are using spectrum resources for business. As there will not be any bidding exercise, the SUF will be set by the Government broadly consistent with that for the 3G licensees. The first 5-year period is a transition period for the licensees to factor SUF into their cost structures and to upgrade their networks for the provision of advanced mobile services. The level of SUF will be set at a relatively low level. From the 6th year and onwards, the licensees are required to pay SUF in a similar way as the 3G licensees, i.e. 5% of network turnover with a minimum fee. Throughout

the licence period, the minimum SUF payment will be charged at a unit rate in terms on a per kHz basis. It would therefore vary with the assigned bandwidth to encourage the efficient use of spectrum.

8. For details on the level of SUF and the related subsidiary legislation to implement the SUF for the new licences, please refer to the **Annex**.

Licence Conditions for the GSM and the PCS Licensees Taking Up the New Licences

9. The GSM and the PCS Licensees taking up the new licences are required to comply with all the relevant licence conditions applicable to the existing 3G licensees. In addition, the Government will also add new licence conditions to require the licensees to comply with the mandatory Codes of Practice that the TA may issue from time to time for better protection of consumer interests.

**Communications and Technology Branch
Commerce, Industry and Technology Bureau
6 December 2004**

Spectrum Utilization Fee and Related Subsidiary Legislation

Introduction

The concept of spectrum utilization fee (SUF) was introduced when the Government auctioned four third generation (3G) mobile service licences in 2001. The rationale for charging SUF is that as radio spectrum is a scarce public resource, it is reasonable to require licensees to pay for their right to use it to provide commercial public telecommunications services.

2. The SUF for 3G licences are -

- (a) for the 1st to 5th licence year, the SUF will be a flat fee of \$50 million per year; and
- (b) for the 6th licence year onward, the annual SUF will be 5% royalty over the annual network turnover of the licensee, subject to a minimum fee that gradually increases from \$60.1 million in 6th licence year to HK\$151.2 million in 15th licence year.

3. Hitherto, we have not applied SUF to the 11 incumbent second 2G mobile services licensees whose licences date back to some 8 or 12 years ago. We consider it appropriate to start charging 2G licensees SUF in the new round of licences upon expiry of their existing ones. First, 2G licensees likewise make use of radio spectrum for commercial services. Indeed, as technology advances, the spectrum allocated to 2G licensees should be able to provide services similar to those offered by 3G networks in a few years' time. Secondly, the payment of SUF would encourage the efficient use of spectrum since it would provide financial incentives for licensees to return to the Government spectrum which is surplus to their requirement. This is particularly the case for licensees holding both 3G and 2G licences. SUF would motivate them to migrate 2G customers to 3G services and return unused or underutilized spectrum to the Government.

4. However, we do not consider it necessary or appropriate to apply the 3G SUF arrangements in entirety to the new mobile carrier licences to be issued to 2G licensees. The mobile market environment has changed substantially since the auction for 3G licences in 2001. It has become much less bullish. Besides, aspects of the SUF for 3G arising from the auction as a mechanism to

issue the 3G licences may not be suitable for 2G SUF. We should take into account these differences in setting the SUF for 2G licensees.

SUF for 2G Licensees

5. After thorough consideration, we propose the SUF for 2G licensees should be set as follows –

- (a) for the first 5 years of the new licence, the annual SUF will be \$145 per kHz of radio frequency then assigned to the licensee; and
- (b) from the 6th licence year onwards to the expiry of the licence, the annual SUF will be 5% royalty over the network turnover of the licensee, subject to a minimum fee of \$1,450 per kHz of radio frequency then assigned to the licensee.

6. The above SUF for 2G licensees achieves broad consistency with the SUF for 3G licensees. First, the SUF for both types of licences will be at 5% royalty of the network turnover of the licensee from the 6th licence year onwards. Secondly, the “unit rate” in terms of per kHz of minimum SUF for 2G licensees from the 6th licence year onwards is the same as the SUF for 3G licensees in their first five years, taking into account the amount of radio frequencies assigned to 3G licensees in 2001. This broad consistency from 2010 or 2011 onwards is considered necessary, as we expect that in several years’ time, 2G licensees should be able to provide services similar to those offered by 3G licensees after upgrading their networks.

7. The SUF for 2G licensees differs from SUF for 3G licensees in the following ways. First, the minimum SUF for 2G licensees will be proportional to the amount of radio frequencies assigned to the licensee. This feature is fairer to the 2G licensees with less spectrum assignment. It will also encourage licensees to return unused spectrum to the Government in order to reduce SUF payment. Secondly, we have set the minimum SUF at a fixed level for 2G licensees from the 6th licence year onwards, instead of a rising minimum SUF for 3G licences. We consider the feature of rising minimum SUF unnecessary for 2G licensees as it was a measure to prevent irrational bidding by bidders of 3G licences, e.g., through over-stretching themselves by submitting aggressive bids. In any event, the same 5% royalty on network turnover would enable the Government to capture upside gains. Thirdly, we have set a modest SUF for the first five licence years which is essentially a transitional period for the 2G licensees, taking into account the following factors –

- (a) 3G equipment is not yet available in the frequencies of the 2G frequency bands and the revenue generation capability of 2G licensees is more limited compared to 3G licensees;
- (b) the mobile services market is currently very competitive and imposing a high SUF at this stage would drain the licensees of resources that they will need to invest in equipment to upgrade their networks to provide advanced services to match 3G licensees in order to stay in the market; and
- (c) the Government does not charge any SUF to those 2G licensees at present and they would need some time to develop mobile data service and identify additional revenue sources to pay the SUF.

8. Based on the existing frequency allocation, the annual SUF for the first 5 licence years would be \$3.4 million for a PCS licensee and \$2.4 million for a GSM licensee. From the 6th licence year onwards, the annual SUF would be based on 5% of network turnover, subject to the minimum fee of \$34 million for a PCS licensee and \$24 million for a GSM licensee, based on the spectrum to be assigned to the six incumbent operators. When the full fee structure kicks in as from year 2012-13, the minimum SUF will generate additional revenue of around \$274 million per annum for the Government. However, this is an estimate only as licensees may well decide to return part of the assigned spectrum to the Government to reduce their SUF payment.

9. We consider that the impact of the SUF on end-users should be acceptable, particularly for the first five licence years. The modest SUF for the first five licence years will also provide time for 2G licensees to upgrade their networks in order to develop mobile data services, hence identifying additional revenue sources to pay for the SUF from the 6th licence year onwards, thereby alleviating the impact on consumers. The ability of the licensees to return unused spectrum to the Government will also help to ensure that they will not incur unnecessary expenditure for spectrum.

Subsidiary Legislation

10. To implement the SUF for the new licences, we propose to –

- (a) amend the Telecommunications (Designation of Frequency Bands Subject to Payment of Spectrum Utilization Fee) Order (Cap. 106Y) in order to include the frequency bands to be assigned to the licensees upon the issue of the new licences in the Order to be subject to the payment of the SUF. Arising from this amendment, we also need to

make some consequential changes to the Telecommunications (Method for Determining Spectrum Utilization Fees) (Third Generation Mobile Services) Regulation (Cap. 106X) to reflect the expansion of the Order to cover additional frequency bands for 2G licensees; and

(b) make a regulation to –

(i) prescribe the level of SUF to be paid for the frequency bands used by the 2G licensees incorporated in the Telecommunications (Designation of Frequency Bands Subject to Payment of Spectrum Utilization Fee) Order; and

(ii) empower the Telecommunications Authority to take remedial action should a licensee fail to keep proper accounts for the purposes of determining SUF.

Legislative Timetable

11. The legislative timetable will be –

Publication in the Gazette	10 December 2004
Tabling in the Legislative Council	15 December 2004
Commencement of the subsidiary legislation	3 February 2005

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