

# **Variation of the Determination of the Terms and Conditions of Interconnection for International Call Forwarding Services**

## **CONSULTATION PAPER**

**19 March 2009**

### **INTROUDCTION**

This paper seeks views and comments on the proposed variation of the “Determination under Section 36A of the Telecommunications Ordinance in respect of the Terms and Conditions of Interconnection for International Call Forwarding Services”<sup>1</sup> issued by the Telecommunications Authority (“TA”) on 3 November 2003 (the “ICFS Determination”).

### **BACKGROUND**

2. International Call Forwarding Service or ICFS is a value-added service (“VAS”) offered by fixed network operators<sup>2</sup> (“FNOs”) and external telecommunications services (“ETS”) operators<sup>3</sup> (“ETS Operators”) (collectively referred to as the “ICFS Providers”) which provides an affordable alternative to mobile roaming services for mobile users to receive calls destined to their Hong Kong mobile numbers while they are overseas. ICFS makes use of the call forwarding service of mobile network operators<sup>4</sup> or mobile virtual network operators<sup>5</sup> (“MVNOs”) (hereinafter collectively referred to as “MNOs”) to forward

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<sup>1</sup> Available at <http://www.ofta.gov.hk/en/ta-determine/de031103.pdf>.

<sup>2</sup> Fixed network operators refer to the holders of Fixed Telecommunications Network Services (“FTNS”) Licences, Fixed Carrier Licences and Unified Carrier Licences with provision of local fixed service authorized.

<sup>3</sup> ETS operators refer to the holders of Public Non-exclusive Telecommunications Service (“PNETS”) Licences and Services-Based Operator (“SBO”) Licences for the provision of ETS.

<sup>4</sup> Mobile network operators refer to the holders of Mobile Carrier Licences and Unified Carrier Licences with provision of mobile service authorized.

<sup>5</sup> A mobile virtual network operator is an operator who provides a public radiocommunications service to customers through interconnection with, and access to, the radiocommunications infrastructure of an operator licensed under a mobile carrier licence (or a unified carrier licence with provision of mobile service authorized) and assigned with the radio spectrum through which the public radiocommunications service is provided.

incoming calls destined to mobile users' Hong Kong numbers to ICFS Providers, via transit FNOs where appropriate, using numbers with the prefix "305 – 309" for ETS Operators and numbers allocated for "personal numbers" with the prefix "8" for FNOs. The ICFS Providers will then deliver the calls to users' selected overseas fixed or mobile numbers. A typical call setup of ICFS is depicted in Figure 1 below.

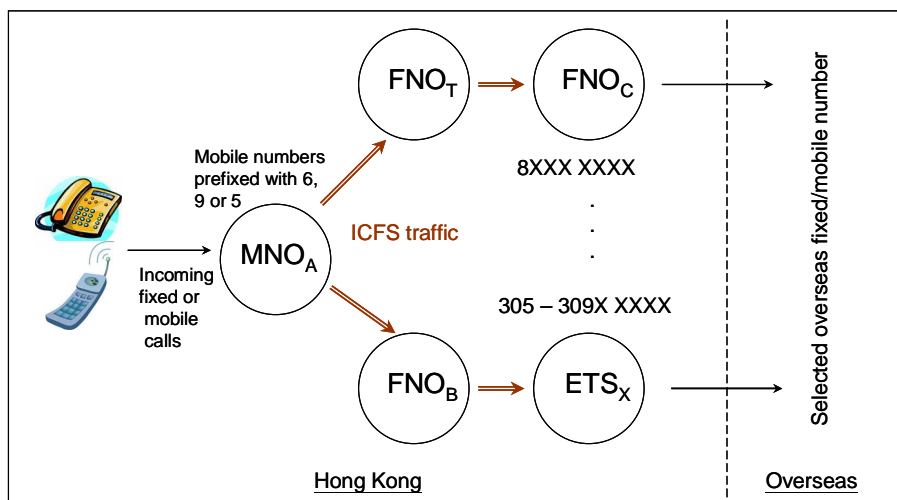


Figure 1: A typical ICFS call setup

3. ICFS Providers are regarded as competitors to MNOs in respect of the “mobile roaming” market. As ICFS Providers make use of MNOs’ network to route calls to their service platforms before delivering them outside Hong Kong, MNOs as the providers of the conveyance service (besides being their competitors) may recover from the ICFS Providers the costs incurred for the delivery of ICFS traffic in accordance with principles set out in the TA Statements entitled “Charging Arrangements for International Call Forwarding Services”<sup>6</sup> and “Implementation Issues on the Charging Arrangements of International Call Forwarding Services”<sup>7</sup> issued in 11 June 2002 and 25 January 2003 respectively. However, MNOs and ICFS Providers failed to reach agreements on the charging arrangement on ICFS despite efforts of commercial negotiation and regulatory guidance set out in the said TA Statements. With the public and consumer interests in mind, the TA decided<sup>8</sup> on 16 April 2003 to proceed with making an industry-wide

<sup>6</sup> Available at <http://www.ofta.gov.hk/en/tas/interconnect/ta20020611.pdf>.

<sup>7</sup> Available at <http://www.ofta.gov.hk/en/tas/interconnect/ta20030125.pdf>.

<sup>8</sup> TA Notice entitled “Notice of Telecommunications Authority’s Decision to Proceed with a Determination Pursuant to Section 36A(2) of the Telecommunications Ordinance” issued on 16 April 2003 (<http://www.ofta.gov.hk/en/ta-notices/notices20030416.pdf>).

determination on the terms and conditions for the provision of ICFS.

4. On 3 November 2003, based on the relevant reasonable costs of MNOs attributable to interconnection of ICFS and other essential terms for the ICFS arrangement, the TA issued the ICFS Determination setting out the levels of the access charge or the origination charge (“ICFS Charge”) which would be levied by MNOs on ICFS Providers. A summary of the determined levels of the ICFS Charge and the associated cost components is given at **Annex A**.

5. As can be seen from paragraph 2 of Annex A, the ICFS Charge determined by the TA comprises a fixed part *plus* an adjustable part denoted as “outpayment of fixed/mobile interconnection charges” which contributes about 35% to 37% of the total value. The latter is more popularly known as fixed-mobile interconnection charge (“FMIC”). FMIC is an interconnection charge based on a regulatory guidance in favour of mobile party’s network pays (“MPNP”) as stipulated in the TA Statement entitled “Interconnection and Related Competition Issues Statement No. 7 (Second Revision) ‘Carrier-to-Carrier Charging Principles’”<sup>9</sup> issued on 18 March 2002. For fixed-mobile calls conveyed through a transit FNO, an additional interconnection charge known as fixed-mobile transit charge (“FMIC<sub>T</sub>” or “transit charge”) is levied by transit FNOs on MNOs for conveyance of transit traffic originated from or terminated on MNOs. In the rest of this consultation paper, the term “FMIC” will include FMIC<sub>T</sub> unless specifically stated otherwise.

6. Under the MPNP arrangement, FMIC is levied by originating or terminating FNOs on MNOs for conveyance of public-switched telephone network (“PSTN”) traffic terminated on or originated from MNOs respectively. The levels of FMIC adopted in the ICFS Determination in 2003 were the prevailing rates of PCCW-HKT Telephone Limited and Hong Kong Telecommunications (HKT) Limited (formerly PCCW-HKT Telephone Limited) (hereinafter referred to as “HKT”) in the relevant periods, and were subject to future revision of FMIC by the TA. As a general practice, HKT’s FMIC was largely adopted over the years by other FNOs as their own rates.

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<sup>9</sup> Available at [http://www.ofta.gov.hk/en/tas/interconnect/table\\_0318/ta20020318\\_s7.pdf](http://www.ofta.gov.hk/en/tas/interconnect/table_0318/ta20020318_s7.pdf).

7. Since the issuance of the ICFS Determination in November 2003, there have been significant changes in the regulatory framework and the market environment, including the deregulation of FMIC promulgated by the TA in the Statement “Deregulation for Fixed-Mobile Convergence”<sup>10</sup> on 27 April 2007 (the “FMC Statement”); regulatory changes in respect of HKT and more particularly the change of how the tariff of the company is regulated; and the emergence of different levels of FMIC in the market, particularly after the issuance of the “Determination under Section 36A of the Telecommunications Ordinance on Terms and Conditions for Interconnection between Hong Kong Broadband Network Limited (“HKBN”) and China Mobile Peoples Telephone Company Limited”<sup>11</sup> by the TA on 28 June 2007 (the “2007 Determination”). Highlights of these changes are summarised at **Annex B**.

### **Recent developments**

8. Between October 2008 and January 2009, the Office of the Telecommunications Authority (“OFTA”) received three requests from the industry concerning the ICFS Charge. Separately but invariably, they considered that the ICFS Charge should be updated in the light of the impending deregulation of the FMIC arrangement. As one of the requesting parties, HKBN was of the view that its interests were undermined by a negative balance of payment of FMIC for ICFS traffic, because it is paying some MNOs the ICFS Charge at the determined level (with FMIC set by reference to HKT’s then published rate<sup>12</sup>), but receiving from them FMIC at another determined but lower level<sup>13</sup> under the 2007 Determination for the same ICFS traffic. On the other hand, an MNO considered that all ICFS Providers should be liable to pay the same level of the ICFS Charge under the ICFS Determination.

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<sup>10</sup> Available at <http://www.ofa.gov.hk/en/tas/others/ta20070427.pdf>.

<sup>11</sup> Available at <http://www.ofa.gov.hk/en/ta-determine/de20070710.pdf>.

<sup>12</sup> The published rate of HKT’s FMIC and FMIC<sub>T</sub> in October 2003 were 4.36 and 1.2 cents per minute respectively. See also paragraph 2 of Annex B. Hereinafter in this document these rates will be referred to as the “legacy FMIC rate”.

<sup>13</sup> The determined levels are 4.5, 4.21 and 2.89 cents per minute for the period from 1 April 2002 to 31 August 2002, 1 September 2002 to 31 August 2003, and 1 September 2003 to 31 August 2004 respectively.

9. In the consultation of the “Fixed Mobile Number Portability”<sup>14</sup> (“FMNP”), the industry was invited to give comments and views on the way-forward relating to ICFS. The TA has subsequently received seven written submissions with views and comments on the ICFS in the FMNP consultation. The majority of these submissions supported a review of the existing ICFS arrangement but none of them gave any specific comment on how the review should be conducted.

10. In view of the substantial changes in the regulatory framework and the market environment that have taken place since November 2003, the TA agrees with the industry that there is a need to review the existing arrangement for ICFS with a view to providing a practical approach to cope with those changes in a prudent manner.

11. This consultation paper sets out the preliminary views of the TA on possible options for the way-forward as well as a proposal for variation of the terms and conditions of the ICFS Determination. For the avoidance of doubt, all the views expressed in this consultation paper are for the purpose of discussion and consultation with the industry only. Nothing in this consultation paper represents or constitutes any decision made by the TA and the consultation contemplated by this consultation paper is without prejudice to the exercise of the TA’s power under the Telecommunications Ordinance (Cap. 106) (the “Ordinance”) or any subsidiary legislation.

## **CONSIDERATIONS FOR CHANGE TO THE EXISTING ICFS ARRANGEMENT**

12. As stated in the FMC Statement (see paragraph 1 of Annex B), the existing ICFS arrangement (including the level of the ICFS Charge) under the ICFS Determination shall remain in force until it is modified or withdrawn in accordance with the law and the determination procedures. On the face, it appears that a variation of the ICFS Determination by the TA may be warranted in the light of all those changes stated in paragraph 7 above and the fact that FMIC is a cost component of the ICFS Charge.

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<sup>14</sup> Consultation paper entitled “Fixed Mobile Number Portability” issued on 31 October 2008 (<http://www.ofta.gov.hk/en/report-paper-guide/paper/consultation/cp20081031.pdf>).

13. Regarding the existence of different levels of FMIC in the industry, the TA is of the preliminary view that this factor alone would not be sufficient to warrant a variation of the ICFS Determination prior to 27 April 2009 for the following reasons:

- (a) All the existing FMIC arrangements, unless commercially agreed between the relevant parties, will become obsolete after the deregulation on 27 April 2009;
- (b) So far, there is no adverse impact on the settlement of the ICFS Charge at the determined level set out in the ICFS Determination between ICFS Providers and MNOs. This may suggest that the relevant parties do not find the legacy FMIC rate as intolerable as one may have thought before the deregulation of FMIC on 27 April 2009;
- (c) The ICFS Determination was an industry-wide determination and the determined ICFS Charge was expected to have been factored into the relevant operators' business model and service pricing;
- (d) ICFS Providers would have been setting retail tariffs for ICFS based on the charging arrangement and levels stipulated in the ICFS Determination. Maintaining the determined levels before the deregulation would provide market stability and avoid abrupt change to the industry and the market; and
- (e) The industry would be more concerned with the deregulation of FMIC because the amount involved is much more substantial than that involved with the ICFS Charge, and that the issues associated with ICFS would naturally be resolved once the way-forward of FMIC is clear.

As such, this consultation paper will hereinafter concentrate on the discussion of the arrangement for ICFS to be applied consequential to the deregulation of FMIC on 27 April 2009.

14. As a matter of fact, following the deregulation of FMIC on 27 April 2009 and depending on the individual outcome of commercial negotiation between MNOs and FNOs, the charging arrangement for fixed-mobile interconnection traffic may be very different. If the ICFS arrangement remains unchanged, certain negotiated outcomes may not be properly addressed and handled, for example in the case where an arrangement of FMIC other than MPNP is agreed bilaterally by two concerned parties. Thus, in order to prevent possible disputes among MNOs, FNOs and ETS Operators in the provision of ICFS and the associated settlement, the TA considers it appropriate to take a forward-looking approach and develop an updated charging and settlement arrangement for ICFS to cope with the deregulated regime, while not prejudicing the ongoing commercial negotiation between concerned parties. There are four possible options for achieving this objective and they will be discussed in the following paragraphs.

### **Options to Deal with the ICFS Matter**

15. The TA has identified the following options as a result of the changes in the structure and the level of FMIC after its deregulation on 27 April 2009:

- (1) Option 1 – the ICFS Charge would be revised by the TA according to the prevailing market level of FMIC;
- (2) Option 2 – the ICFS Charge with all the components and levels would remain unchanged;
- (3) Option 3 – the FMIC component in the ICFS Charge would vary in accordance with the agreed or determined level of FMIC, if any, between the parties concerned; and
- (4) Option 4 – the ICFS Charge would be deregulated and the ICFS Determination be withdrawn.

16. For Option 1, the level of the ICFS Charge would be revised by the TA in accordance with the prevailing market level of FMIC after April 2009. A uniform level of the ICFS Charge would then be

determined and applied across the board to the industry. However, this arrangement would imply that the TA would set an industry-wide FMIC, a measure that is inconsistent with his decision to deregulate FMIC as set out in the FMC Statement. Furthermore, different FMIC levels already exist in the market and the arrangement of FMIC is subject to the ongoing commercial negotiations between the concerned operators. The setting of a uniform ICFS Charge is therefore not a realistic option.

17. For Option 2, the *status quo* would be maintained. The advantage of this option is that the TA may monitor the progress of the commercial negotiation between the FNOs and the MNOs on the FMIC arrangement before deciding whether to change the ICFS Charge (including the FMIC component) and if so, what the appropriate changes would be. Such arrangement is also consistent with the TA's decision on deregulating FMIC. Another advantage of this option is that the TA may take a more holistic approach (which may include the review of the cost model) on how to deal with the ICFS Determination after agreement has been reached between FNOs and MNOs on the FMIC arrangement. The drawback of this option is that ICFS Providers would need to continue paying the ICFS Charge with FMIC at a historical level that was stipulated in the ICFS Determination in 2003, when the rationale for including the FMIC component and adopting such a level for the ICFS Charge has already disappeared. Such approach would disadvantage the FNOs and hinder the negotiation process between MNOs and FNOs in respect of FMIC. This option is not in line with the principle of fair competition and is therefore not preferred. Nonetheless, the TA is mindful that a full review of the ICFS arrangement may only be possible after the industry has settled on the FMIC arrangement. He is therefore open-minded on the need to choose this option as a transitional measure for a reasonably short period pending the completion of the full review.

18. For Option 3, FMIC would become a variable component in the ICFS Charge according to the formula  $(10.3\text{¢}/\text{min} + \text{FMIC} + \text{FMIC}_T)$  stated in paragraph 27 below (see also paragraph 4 of Annex A). New FMIC rate which is commercially agreed between interconnecting FNOs and MNOs on or after 27 April 2009 when the existing regulatory guidance is removed should automatically be reflected in the ICFS Charge payable. The advantage of this option is that the FMIC



component would be determined by market force and consistent with the decision made by the TA to deregulate the FMIC. If this option is adopted, there is no longer a uniform ICFS Charge to be paid by ICFS Providers. The ICFS Charge will be the outcome of market forces as far as FMIC is concerned, when different structure and levels of FMIC begin to emerge in the market. This option is considered practical and will be discussed further in paragraphs 21 – 25.

19. For Option 4, the ICFS Determination would be withdrawn and that the levels of ICFS Charge between ICFS Providers and MNOs would be determined by market force. As mentioned in paragraph 3 above, ICFS offered by ICFS Providers is regarded as a substitute to, and indeed competes with, the mobile roaming services offered by MNOs, which are also providers of the wholesale conveyance service for ICFS. Moreover, ICFS Providers, particularly those small-medium sized ETS Operators, may not have sufficient resources and countervailing bargaining power to negotiate with individual MNOs on the ICFS Charge if so deregulated. Accordingly, this option is considered infeasible at this stage unless there is compelling evidence showing that the public interest would not be undermined if the ICFS Determination is withdrawn.

20. Among the four options, the TA considers that Option 3 is the only practical option at this stage. The following paragraphs set out further his considerations on Option 3 and provide a detailed proposal for a variation of the ICFS Determination.

## **VARIATION OF THE ICFS DETERMINATION**

21. To implement a change to the ICFS arrangement consequential to the deregulation of FMIC under Option 3, the ICFS Determination will need to be varied. The procedures for variation of an interconnection determination have been laid down in paragraphs 30 to 32 of the “Procedures for Making Determinations on the Terms and Conditions of Interconnection under Section 36A of the Telecommunications Ordinance” issued on 27 September 2001 (the “Procedures”).

22. Section 36A(2) of the Ordinance states that –

*“The [Telecommunications] Authority may make a determination on the request of a party to the interconnection or, in the absence of a request, if he considers it is in the interest of the public to do so.”*

The power of making a determination includes the power of amending it pursuant to section 46 of Interpretation and General Clauses Ordinance (Cap. 1).

23. In considering whether or not a determination should be varied, the TA shall take into account all the relevant factors pursuant to section 36A(10) of the Ordinance, namely (a) the Government’s policy objectives for the telecommunications industry; (b) consumer interest; (c) encouraging efficient investment in telecommunications infrastructure; and (d) the nature and extent of competition among the parties to the interconnection concerned and their respective abilities to compete with each other fairly; and (e) such other matters as the TA considers appropriate in the particular circumstances of the case.

24. Without prejudice to future submissions to the contrary made by interested parties, the TA is of the preliminary view that the proposed variation is consistent with the above factors. The TA’s considerations for each of these factors are given below.

*(a) The Government’s policy objectives for the telecommunications industry*

Customers using ICFS are able to receive incoming calls made to their Hong Kong mobile numbers while they are outside Hong Kong. Accordingly, ICFS can be regarded as a substitute for the mobile roaming services provided by the MNOs. Variation of the ICFS Determination consequential to the deregulation of FMIC from 27 April 2009 will more accurately reflect the actual cost incurred in the provision of the ICFS, thus maintaining the competitiveness of the ICFS. This is consistent with the policy objectives that the widest range of quality telecommunications

services should be available to the community at reasonable cost, and that telecommunications services should be provided in the most economically efficient manner possible.

*(b) Consumer interests*

Even before the ICFS Determination was made in 2003, there was an observable market demand for a more affordable alternative to the mobile roaming services provided by the MNOs. According to the market information, ICFS tariffs at the retail level are generally much lower than mobile roaming services charges and hence the service attracts a substantial number of users. A survey of those charges for typical countries is provided at Annex C. A variation of the ICFS Determination is considered to be in the consumer interest because it would reflect more accurately the fair cost to the ICFS Providers. Given that there is competition in the market for ICFS, the ICFS Providers would reasonably be prepared to price their services more efficiently *vis-à-vis* the cost and value to their customers.

*(c) Encouraging efficient investment in telecommunications infrastructure*

A variation of the ICFS Determination in accordance with Option 3 should reflect the fair and reasonable interconnection charges for ICFS. This would facilitate and encourage ICFS Providers to make informed investment decisions in telecommunications infrastructure.

*(d) The nature and extent of competition among the parties to the interconnection concerned and their respective abilities to compete with each other fairly*

Without varying the ICFS Determination, MNOs may continue to charge the ICFS Providers at the current level of the ICFS Charge because all parties concerned are bound by the terms and conditions of the ICFS Determination. Under such a situation,

the ICFS Providers cannot compete on a level-playing field with the mobile roaming services provided by the MNOs.

25. For the reasons stated in the preceding paragraph, the TA is of the preliminary view that it would be in the public interest to vary the ICFS Determination. The following paragraphs set out in detail the TA's proposal for implementing Option 3.

## **PROPOSED MODIFICATION TO THE ICFS DETERMINATION**

### **Modification to the ICFS Charge**

26. The TA would like to propose varying the ICFS Determination by treating the FMIC (and FMIC<sub>T</sub>) component as a variable, instead of a fixed value, in the ICFS Charge (the "Proposal"). The value of this variable would be subject to the agreement reached between the respective FNOs and MNOs by commercial negotiation.

#### *Proposed Levels of the Modified ICFS Charge*

27. In the ICFS Determination, the ICFS Charge is determined to be  $(10.3\text{¢} + \text{FMIC} + \text{FMIC}_T)$  or  $15.86\text{¢}/\text{min}$ <sup>15</sup> in total. From 27 April 2009 onwards, it is proposed that the modified ICFS Charge to be computed by the formula  $(10.3\text{¢}/\text{min} + \text{FMIC} + \text{FMIC}_T)$ , where the structure and levels of FMIC<sup>16</sup> (plus FMIC<sub>T</sub> where applicable), shall be agreed commercially between the respective FNOs and MNOs. Moreover, the TA proposes to cap the modified ICFS Charge for ETS Operators at an appropriate level with reference to the levels stipulated in the ICFS Determination in order to provide extra safeguard and clarity to the stakeholders, including potential ICFS Providers which would like to make informed decision

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<sup>15</sup> The determined level of the ICFS Charge is 15.86 cents per minute for the period starting from 1 October 2003. The levels of FMIC and FMIC<sub>T</sub> used in the ICFS Determination for this period were the legacy FMIC rate i.e. 4.36 and 1.2 cents per minute respectively. See paragraph 2 of Annex A for details.

<sup>16</sup> In the formula of the modified ICFS Charge, FMIC would be zero for bill-and-keep ("BAK"), while a positive value for MPNP and calling party's network pays ("CPNP") arrangements for recovery from ICFS Providers the cost incurred. For receiving party's network pays ("RPNP") arrangement, FMIC would be a negative value i.e. ICFS Providers pay MNOs for fixed-mobile interconnection traffic and thus the ICFS Charge should be reduced by such amount (or plus the "negative amount") to avoid over-compensation.

before entering the ICFS market (see paragraphs 28 and 29 below for details).

#### *Direct interconnection*

28. For direct interconnection, the net level of the modified ICFS Charge to be paid by FNOs providing ICFS or hosting FNOs to MNOs in respect of delivery of ICFS traffic would become 10.3¢/min given that the “FMIC” part ( $FMIC_T$  is zero in this case) would be effectively cancelled out, regardless of its payment direction (positive or negative) and actual value. For ETS Operators, the charge to be paid via the hosting FNO to MNOs would be set equal to the level of their hosting FNO (i.e. 10.3¢/min) plus FMIC ( $FMIC_T$  is zero in this case), if any, at a level determined by the commercial arrangement between the hosting FNO and the respective MNOs. In order to ensure the competitiveness of ETS Operators as well as to provide them with some degree of certainty and predictability, the level of the modified ICFS Charge for ETS Operators would be capped at the level stipulated in the ICFS Determination but with  $FMIC_T$  taken out (i.e. 14.66 cents per minute). The TA considers that such a cap would provide the necessary safeguard and clarity to all the stakeholders.

#### *Indirect interconnection*

29. If a FNO providing ICFS or a hosting FNO does not have direct interconnection with an MNO, the net level of the modified ICFS Charge to be paid by the FNO (as an ICFS Provider itself) or the ETS Operator would be set equal to the level set out in paragraph 28 plus  $FMIC_T$ , which will be the rate agreed commercially between the transit FNO and the MNO. Similar to the case of direct interconnection, the level of modified ICFS Charge for ETS Operators would be capped at the level stipulated in the ICFS Determination (i.e. 15.86 cents per minute). To improve network and administrative efficiency, inefficient indirect interconnection should be discouraged and the TA would only allow a maximum of one transit leg in an indirect interconnection configuration i.e.  $FMIC_T$  would be payable only once to MNOs for indirect interconnection with FNOs.

30. The respective modified levels are summarised in the table below.

ICFS Providers	Direct interconnection	Proposed net level of the modified ICFS Charge	Remark
(a) FNOs providing ICFS or hosting FNOs	Yes	10.3¢/min	● FMIC would be effectively cancelled out, regardless of the payment direction and the actual value
	No	10.3¢/min + FMIC <sub>T</sub> (if any)	● The level of FMIC <sub>T</sub> depends on commercial arrangements between the interconnecting transit FNO and the MNO.
(b) ETS Operators	Yes	10.3¢/min + FMIC (if any) or 14.66¢/min, whichever is lower	● Subject to a cap, the actual levels of FMIC and FMIC <sub>T</sub> depend on the commercial arrangements made by MNOs with the hosting FNOs and the transit FNOs respectively.
	No	10.3¢/min + FMIC (if any) + FMIC <sub>T</sub> (if any) or 15.86¢/min, whichever is lower	

## **Other Relevant Matters**

### *Billing and Settlement*

31. The TA considers that the existing billing and settlement arrangement under the ICFS Determination should continue to apply if the Proposal is adopted. As for the existing arrangement, FNOs would remain responsible for collecting the billing information from the MNOs. If the FNOs host ETS Operators, they are responsible for billing their ETS Operators, subject to the terms of the contracts between them and based on MNOs' billing information. Under the Proposal, ICFS Providers may be billed at a different level of the modified ICFS Charge by individual MNOs (via the hosting FNO in the case of ETS Operators) according to paragraph 30 above. Subject to a cap in the case of ETS Operators, the applicable levels of FMIC and FMIC<sub>T</sub> will depend on the respective commercial arrangements of MNOs with FNOs and transit FNOs respectively.

32. Therefore, irrespective of whether or not the FNOs are directly interconnected with the MNOs, and irrespective of whether the FNOs themselves are ICFS Providers or they are just hosting some other ICFS Providers, FMIC will be effectively cancelled out. Since the computation of the net level of the modified ICFS Charge has already taken into account the FMIC part, settlement of FMIC (excluding FMIC<sub>T</sub> in the case of indirect interconnection) between the MNOs and the FNOs should no longer be necessary in respect of ICFS traffic.

### *Implementation of the Modified ICFS Charge*

33. To align with the deregulation of FMIC and without prejudice to the commercial negotiation, the TA is of the preliminary view that the Proposal should take effect on 27 April 2009.

34. For the avoidance of doubt, the ICFS Determination continues in force until it is amended after the due process.

## INVITATION FOR COMMENTS

35. The TA invites views and comments on the issues discussed above, and representations pursuant to section 36A(4) of the Ordinance as to why the proposed variation of the ICFS Determination should not be made. All representations, comments and suggestions should be made in writing, and should reach OFTA, preferably in electronic form, on or before **18 April 2009**. The TA reserves the right to publish all views and comments as well as the identity of the source.

36. Any part of the submissions, which is considered commercially confidential, should be clearly marked. The TA would take such markings into account in making his decision as to whether to disclose such information or not. Submission should be addressed to:

Office of the Telecommunications Authority  
29/F Wu Chung House  
213 Queen's Road East  
Wanchai  
Hong Kong  
[Attention: Regulatory Affairs Manager (R11)2]

Comments may also be sent by fax to 2803 5112 or by email to [wcwlee@ofta.gov.hk](mailto:wcwlee@ofta.gov.hk).

**Office of the Telecommunications Authority**  
**19 March 2009**



**ICFS Charge Determined by the TA  
in the ICFS Determination**

1. In paragraph 4 of the ICFS Determination, the TA “*determines that –*

*(1) the access charge or origination charge for interconnection necessary for the provision of ICFS shall be –*

*(a) 16.4 cents per occupancy minute for the period from 11 June 2002 to 30 September 2002;*

*(b) 16.1 cents per occupancy minute for the period from 1 October 2002 to 30 September 2003; and*

*(c) 15.86 cents per occupancy minute for the period starting from 1 October 2003 and subject to further revision of fixed/mobile interconnection charge and transit charge;*

*(2) the access charge or origination charge shall be applied concurrently with the fixed/mobile interconnection charge and fixed/mobile transit charge as illustrated in Diagram 1 and Modified Diagram 2 in the Final Analysis ...”.*

For ease of reference, the diagrams are reproduced in paragraph 3 of this Annex.

2. The ICFS Charge for the above three periods is calculated in accordance with the two tables below, which are extracted from paragraphs 162 and 163 of the Final Analysis of the ICFS Determination (“Final Analysis”). As can be seen from the second table below, FMIC and FMIC<sub>T</sub> together contribute about 35% – 37% of the ICFS Charge.

*“162. The following table shows the determined level of fixed/mobile interconnection charge and transit charge as from 11 June 2002<sup>17</sup>.*

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<sup>17</sup> According to the ICFS Determination, FMIC and FMIC<sub>T</sub> listed in this table were the “prevailing market prices” at the material time with reference to the TA Statement entitled “Charges for

	<i><b>Fixed/mobile interconnection charge (FMIC)</b></i>	<i><b>Fixed/mobile transit charge (FMIC<sub>T</sub>)</b></i>
<i>From 11 June 2002 to 30 September 2002</i>	<i>4.80 cents/min</i>	<i>1.30 cents/min</i>
<i>From 1 October 2002 to 30 September 2003</i>	<i>4.50 cents/min</i>	<i>1.30 cents/min</i>
<i>From 1 October 2003 until further revision of fixed/mobile interconnection charge and transit charge</i>	<i>4.36 cents/min</i>	<i>1.20 cents/min</i>

163. Accordingly, the access/origination charge for the three periods should be as follows:

	<i>11 June 2002 to 30 September 2002</i>	<i>1 October 2002 to 30 September 2003</i>	<i>From 1 October 2003 onwards (Note 4)</i>
<i>Cost of Mobile Switching Centre (MSC) and Home Location Register (HLR)</i>	<i>4.6</i>	<i>4.6</i>	<i>4.60</i>
<i>Sharing of relevant leased line rental</i>	<i>1.3</i>	<i>1.3</i>	<i>1.30</i>
<i>Sharing of relevant common operating costs</i>	<i>0.9</i>	<i>0.9</i>	<i>0.90</i>
<i>Additional costs for ICFS</i>	<i>3.5</i>	<i>3.5</i>	<i>3.50</i>
<i>Outpayment of fixed/mobile interconnection charges for ICFS (i.e. FMIC + FMIC<sub>T</sub>)</i>	<i>6.1<sup>18</sup></i>	<i>5.8</i>	<i>5.56</i>
<b><i>TOTAL</i></b>	<b><i>16.4</i></b>	<b><i>16.1</i></b>	<b><i>15.86</i></b>

*Note 1: All costs in Hong Kong cents per occupancy minute.*

*Note 2: The cost component of “outpayment of fixed/mobile interconnection charges for ICFS” is subject to further revision of fixed/mobile interconnection charge and transit charge.*

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Interconnection between Public Mobile Radiotelephone Services (PMRS), Personal Communications Services (PCS) and Value Added Services (VAS) and the Public Switched Telephone Network (PSTN) Operated by PCCW-HKT Telephone Limited” issued on 24 October 2003 (<http://www.ofta.gov.hk/en/tas/interconnect/ta20031024.pdf>).

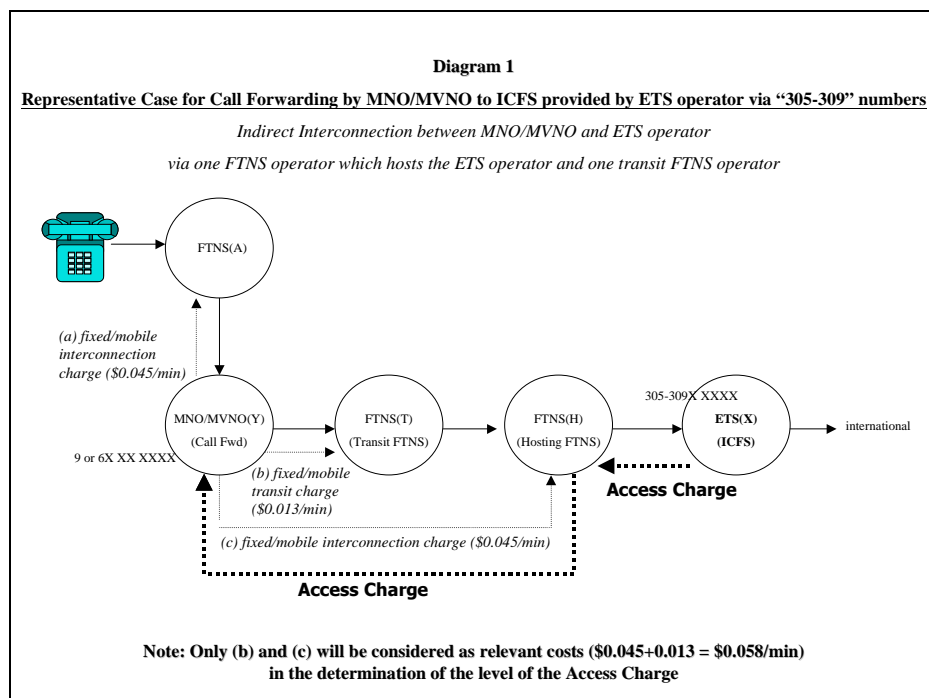
<sup>18</sup> In accordance with the TA Statement entitled “Charges for Interconnection between Public Mobile Radiotelephone Services (PMRS), Personal Communications Services (PCS) and Value Added Services (VAS) and the Public Switched Telephone Network (PSTN) Operated by PCCW-HKT Telephone Limited” issued on 29 September 2001, FMIC was revised from 5.1 cents to 4.8 cents per occupancy minute with effect from 1 October 2001 and the transit charge remained at 1.3 cents per occupancy minute (<http://www.ofta.gov.hk/en/tas/interconnect/ta20010929.pdf>).

*Note 3: The above access or origination charge is to be applied simultaneously with the normal fixed/mobile interconnection/transit charges depicted in Diagram 1 and Modified Diagram 2 [in paragraph 3 below].*

*Note 4: Until further revision of normal fixed/mobile interconnection charge and transit charge.”*

3. Based on the paragraphs of the Final Analysis reproduced below, it is noted that same level of FMIC (and FMIC<sub>T</sub>) should be applied for access or origination of ICFS (payable by FNOs providing ICFS or hosting FNOs), and for conveyance of normal fixed-mobile calls (payable by MNOs) –

- (a) Within ICFS access charge – with reference to Diagram 1 (the representative case) and paragraph 124 below, it can be seen that FMIC and FMIC<sub>T</sub> of the ICFS access charge is to compensate MNOs for the cost incurred in respect of the same levied by the hosting FNO and the transit FNO (indicated as “(c)” and “(b)” in the diagrams) respectively; and



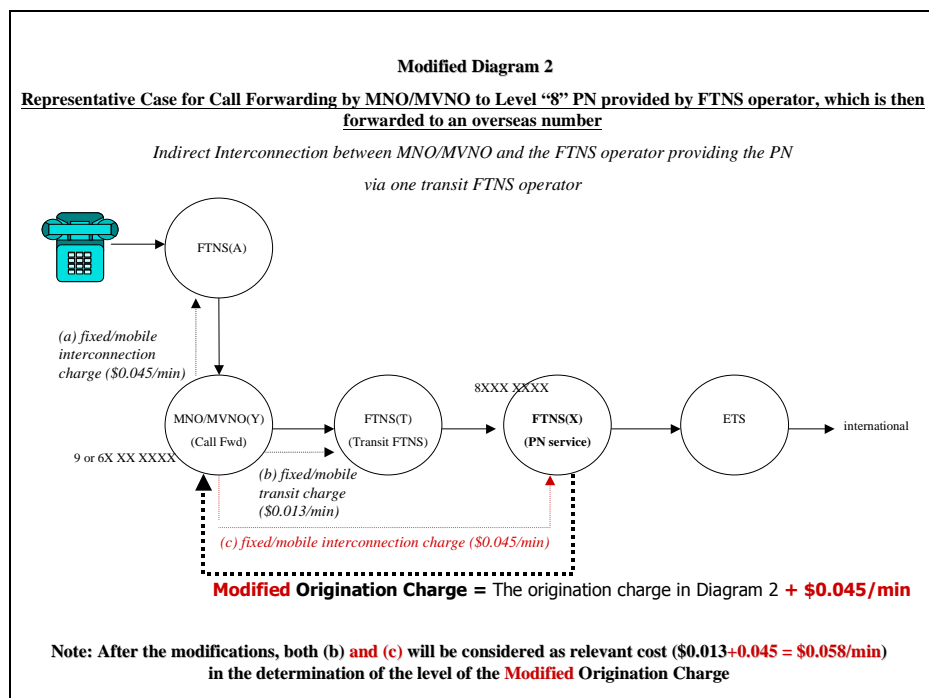
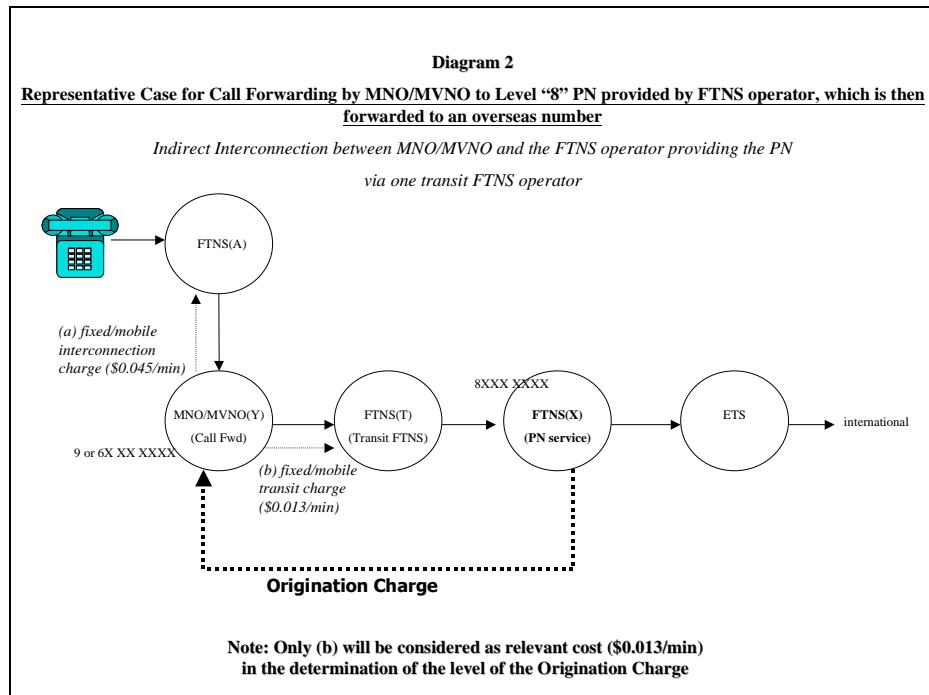
- (b) Within ICFS origination charge – in paragraphs 123 and 124 of the Final Analysis, FMIC (excluding FMIC<sub>T</sub>) is specifically added to the ICFS origination charge to align with the level of the ICFS access charge for resolving implementation difficulties –

*“123. In order to resolve the implementation difficulties arising from different levels of access charge and origination charge as well as the measurement difficulties encountered by the FTNS operator interconnecting directly with the ETS operator, the IDC proposed in the Preliminary Analysis to modify Diagram 2 as follows.*

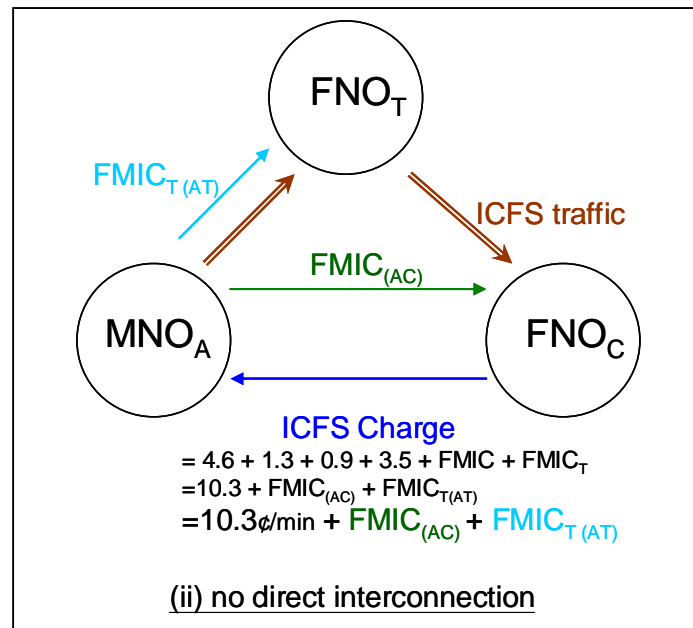
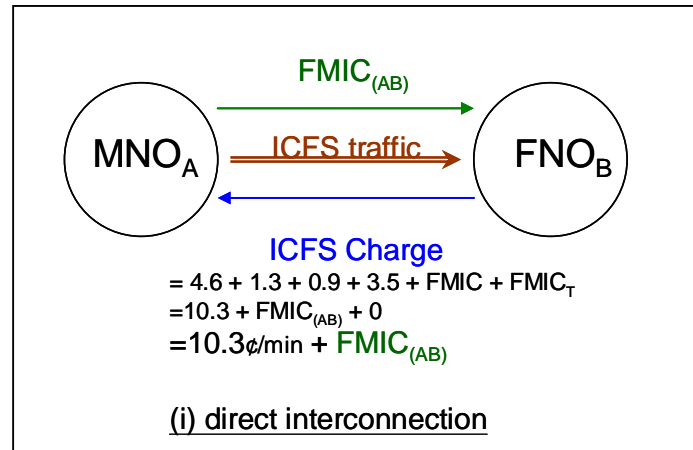
- Modification 1 – MNO/MVNO(Y) in Diagram 2 is required to pay fixed/mobile interconnection charge of 4.5 cents/min to FTNS(X) operator ... for ICFS (This means that normal interconnection charges between fixed and mobile networks would continue to apply for calls to PN.)*
- Modification 2 – FTNS(X) operator in Diagram 2 is required to pay an origination charge plus fixed/mobile interconnection charge of 4.5 cents/min to MNO/MVNO(Y) ...*

*124. In fact, the net effects on FTNS(X) and MNO/MVNO(Y) in both Diagram 2 and Modified Diagram 2 are actually the same ... Furthermore, the interconnection charge to be paid by FTNS(X) operator to MNO/MVNO(Y) in Modified Diagram 2 (i.e. the modified origination charge) would be of the same level as the access charge in Diagram 1 ... since both the ... transit charge (denoted as (b) in the [below] Diagrams) ... and fixed/mobile interconnection charge ... (denoted as (c) in the [below] Diagrams) would be considered as relevant costs of the access charge and the modified origination charge ...*

125. With the two modifications made, the outpayment costs of fixed/mobile interconnection charges in both Diagram 1 (representative case for call forwarding to ICFS provided via “305-309” numbers) and Modified Diagram 2 (representative case for call forwarding to ICFS provided via level “8” PN) would be 5.8 cents per minute [for the period from 1 October 2002 to 30 September 2003].”



4. The following simplified diagrams summarise the relationship and payment direction under the ICFS Determination of FMIC and FMIC<sub>T</sub>, and the ICFS Charge between an MNO/MVNO and an FNO (either as an ICFS Provider itself or a hosting FNO) when they are under (i) direct interconnection; and (ii) indirect interconnection via a transit FNO.



## **Relevant Regulatory Changes after Issuance of the ICFS Determination**

### Deregulation of FMIC

1. On 27 April 2007, the TA issued the “FMC Statement announcing his decision to deregulate the existing FMIC arrangement. Specifically, the regulatory guidance in favour of MPNP will be withdrawn, subject to a 2-year transitional period which will end on 26 April 2009. As regards his decision on the regulation of ICFS, the TA has stated in paragraphs 194 and 195 of the FMC Statement that –

*“194. The ICFS [Charge] ... would remain in force until it is modified or withdrawn by the TA in accordance with the law and the determination procedures ... The TA is open-minded as to whether the ICFS [Charge] should be de-regulated or re-regulated in the context of removing asymmetric regulatory treatment of fixed and mobile networks to minimise distortion to competition.*

*195. The TA will consider initiating a review of ICFS in accordance with the established procedures, if the industry submits a request to do so.”*

### Regulatory Changes to HKT

2. Historically, HKT’s FMIC and FMIC<sub>T</sub> were subject to *ex ante* tariff approval by the TA. The last reviewed<sup>19</sup> HKT’s FMIC and FMIC<sub>T</sub> were made in November 2004, maintaining the level of October 2003 i.e. at 4.36 and 1.2 cents per minute respectively. These rates were also adopted by the TA in the ICFS Determination. In January 2005, the

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<sup>19</sup> Statement entitled “Charges for Interconnection between Public Mobile Radiotelephone Services (PMRS), Personal Communications Services (PCS) and Value Added Services (VAS) and the Public Switched Telephone Network (PSTN) operated by PCCW-HKT Telephone Limited” issued on 12 November 2004 (<http://www.ofta.gov.hk/en/tas/interconnect/ta20041112.pdf>).

TA lifted<sup>20</sup> the prior approval requirement on HKT's tariffs. This was effected by replacing HKT's licence with a new fixed carrier licence ("FCL"). Under the FCL, HKT's tariffs are regulated *ex post*.

3. In respect of interconnection charges (such as FMIC, interconnection charge for valued-added services (also known as PNETS charge), etc.), the tariffs are subject to Special Condition ("SC") 3.4 of the FCL, whereby "*... any such amendment shall be deemed to be approved unless the [Telecommunications] Authority notifies the licensee in writing, within 30 days after receiving the proposed amendment from the licensee, of the [Telecommunications] Authority's opinion that the amendment would contravene section 7K, 7L or 7N of the [Telecommunications] Ordinance*". On the other hand, tariffs published by HKT after January 2005, such as the "Unified Interconnection and Local Access Services" ("UILAS") tariff, are not subject to SC 3.4.

4. On 17 April 2008, HKT filed an application under SC 3.4 of its FCL to the TA for approval to amend its FMIC tariff (excluding FMIC<sub>T</sub>) between it and MNOs. Specifically, HKT sought approval for an increase of the tariff from 4.36 cents per minute to 5.45 cents per minute ("HKT's new FMIC Tariff") until 26 April 2009 (i.e. the end of the 2-year transitional period for deregulation of FMIC). On 23 May 2008, with more than 30 days elapsed, the TA deem-approved<sup>21</sup> HKT's new FMIC Tariff. One FNO has followed suit. Shortly after, two MNOs filed appeals<sup>22</sup> to the Telecommunications (Competition Provisions) Appeal Board against the TA's approval decision and lodged judicial review proceedings, while another MNO lodged an application to the TA for an investigation under sections 7K, 7L and 7N of the Ordinance. These proceedings are ongoing.

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<sup>20</sup> Statement entitled "Implementation of ex post Regulation of the Tariffs of PCCW-HKT Telephone Limited under a New Fixed Carrier Licence" issued on 13 January 2005 (<http://www.ofta.gov.hk/en/tas/ftn/tas20050113.pdf>).

<sup>21</sup> Statement entitled "Increase in Charges for Mobile Network Interconnection by PCCW-HKT Telephone Limited" issued on 23 May 2008 (<http://www.ofta.gov.hk/en/tas/ftn/tas20080523.pdf>).

<sup>22</sup> Appeal cases 27 and 28 ([http://www.cedb.gov.hk/ctb/eng/telecom/appeal\\_list.htm](http://www.cedb.gov.hk/ctb/eng/telecom/appeal_list.htm)).



## Emergence of Different Levels of FMIC in the Market

5. Unlike the networks of other FNOs, the fixed network of Hong Kong Broadband Network Limited (“HKBN”) is based on the next-generation network (“NGN”) architecture, not public-switched telephone network (“PSTN”). After failing to reach commercial agreement with the MNOs, HKBN requested the TA in 2004 to determine the level of FMIC between it and China Mobile Hong Kong Company Limited (formerly China Mobile Peoples Telephone Company Limited) (hereinafter referred to as “CMHK”) for the period from 1 April 2002 to 31 August 2004.

6. On 28 June 2007, the TA issued the “Determination under Section 36A of the Telecommunications Ordinance on Terms and Conditions for Interconnection between Hong Kong Broadband Network Limited and China Mobile Peoples Telephone Company Limited” (“2007 Determination”) setting out the level of FMIC (excluding FMIC<sub>T</sub>) between HKBN and CMHK to be –

- (a) 4.5 cents per occupancy minute for the period from 1 April 2002 to 31 August 2002;
- (b) 4.21 cents per occupancy minute for the period from 1 September 2002 to 31 August 2003; and
- (c) 2.89 cents per occupancy minute for the period from 1 September 2003 to 31 August 2004.

7. Upon issuance of the 2007 Determination, HKBN conducted fresh rounds of commercial negotiation with other MNOs with a view to reaching commercial agreements on FMIC for the same periods and the period thereafter, but its effort was in vain. In September 2008, the TA accepted HKBN’s request for determination with MNOs (except Hong Kong Telecommunications (HKT) Limited (formerly PCCW Mobile HK Limited)) in respect of FMIC and alleged interest accrued for the period from (a) 1 April 2002 to 31 August 2004; and (b) 1 September 2004 to 26 April 2009. The determination proceedings are still in progress.

8. Thus, after the issuance of the 2007 Determination and with HKT increasing its FMIC Tariff in May 2008, there exist different levels of FMIC in the industry, namely (a) HKBN's FMIC determined under the 2007 Determination and to be determined by the TA in the current proceedings, (b) HKT's new FMIC Tariff at 5.45 cents per minute, (c) the new rate of another FNO mentioned in paragraph 4 above and (d) the legacy rate at 4.36 cents per minute applied by the other FNOs.

9. It is worth noting that, in accordance with the principles laid down in the FMC Statement, these different levels of FMIC only last until 26 April 2009, unless they are commercially agreed between the relevant parties. New level of FMIC, if any, to be applied from 27 April 2009 will be subject to the commercial negotiation between the relevant parties.

## Annex C

### Mobile Roaming Service Charges

(as at 1 March 2009)

#### Incoming Voice Calls from Hong Kong (\$ per minute)

	MNO A	MNO B	MNO C	MNO D	MNO E
Australia Sydney	11.48	15.5	15.3 - 16.24	11.48 - 15.5	15.5
China Beijing	12.78	12.78 - 25	12.78	12.81 - 15.27	12.8
UK London	13.8 – 17.8	17.8 - 28	16.24 – 17.8	13.80 - 23.12	17.8 – 20
USA New York	15.74	16.5	16.1	13.16 - 18.92	16.2

### ICFS Tariffs

(as at 1 March 2009)

#### Call Forwarding of Voice Calls from Hong Kong (\$ per minute)

	FNO U (note 1)	MNO V	MNO W	ETS X	ETS Y	ETS Z
Australia Sydney	1.89	4.97	3	0.98 (F) 2.59 (M)	0.98 (F) 2.49 (M)	0.99 (F) 1.99 (M)
China Beijing	1.69	0.97	7.2	0.98	0.98	0.68
UK London	1.89	5.3	4	0.98 (F) 12.59 (M)	0.98 (F) 2.49 (M)	0.99 (F) 2.99 (M)
USA New York	1.89	2.94	1.5	0.98	0.98	0.9

F: fixed telephone number; M: mobile telephone number

Note 1: A monthly fee applies

## IDD Service Charges

(as at 1 March 2009)

### Outgoing Voice Calls from Hong Kong (\$ per minute)

	FNO A	FNO B (note 1)	FNO C (note 1)	MNO X (note 1)	MNO Y	MNO Z	ETS D (note 1)	ETS E	ETS F
Australia Sydney	7.15 - 7.92	0.14 + free 120 min (note 2)	0.24	0.38 (F) 3.49 (M)	0.38 (F) 1.79 (M)	0.79 (F) 1.79 (M)	1 <sup>st</sup> 30 min: free; 31-40 min: 0.01; 41-60 min 0.24 (note 2)	0.63 (F) 2.09 (M)	0.79 (F) 1.99 (M)
China Beijing	10.45		0.38	1.88	0.38	2.98		0.96	2.5
UK London	9.02 - 9.68		0.24 (F)	0.38 - 2.3 (F) 1.99 - 4.18 (M)	0.38 (F) 1.97 (M)	0.55 (F) 1.97 (M)		0.63 (F) 2.09 (M)	0.55 (F) 1.99 (M)
USA New York	7.48		0.24	0.38 - 1.45	0.38	0.55		0.63	0.55

F: fixed telephone number; M: mobile telephone number

Notes:

1 New customer promotion rates

2 Not applicable for calls made to mobile phone numbers in UK and Australia