

**Charging Principles and Other Relevant Issues for the
Provision of Raw Directory Information under
General Condition (“GC”) 25 of the
Fixed Telecommunications Network Services (“FTNS”) Licence or
Special Condition (“SC”) 12 of the Fixed Carrier Licence**

Statement of the Telecommunications Authority

12 January 2005

INTRODUCTION

Under GC 25 of the FTNS Licence or SC 12¹ of the Fixed Carrier Licence, the licensee’s printed directory shall be a unified printed directory and the licensee’s telephonic directory service shall be a unified telephonic directory service and shall utilise a unified directory database, containing directory information on all customers of all FTNS licensees and fixed carriers, except for those customers who request that directory information about them not be disclosed. The licensee shall provide, and regularly update, raw directory information about its customers to each other FTNS licensee or fixed carrier, for which the licensee will be able to impose a charge to fairly compensate it for providing the raw directory information.

2. To facilitate the commercial negotiations among the FTNS licensees and fixed carriers on fair compensation for the provision of raw directory information under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence, the Telecommunications Authority (“TA”) considers that there is a need to clarify the charging principles.

3. On 19 April 2004, the Office of Telecommunications Authority (“OFTA”) issued an industry consultation paper entitled *“Charging Principles and Other Relevant Issues for the Provision of Raw Directory Information*

¹ Currently, the directory information service obligation is specified in SC12 of all Fixed Carrier Licences. For the avoidance of doubt, this Statement shall apply to all existing and future fixed carriers whether the directory information service obligation is specified under SC12 or other SC of the Fixed Carrier Licence.

under General Condition 25 of the Fixed Telecommunications Network Services Licence or Special Condition 12 of the Fixed Carrier Licence” (“Consultation Paper”), a copy of which is attached as Appendix I. The Consultation Paper aimed to solicit views and comments from the industry on the charging principles. These principles will be applied by the TA in making determinations under GC 25(7) of the FTNS Licence or SC 12.7 of the Fixed Carrier Licence on the amount of fair compensation.

4. By the closing of the consultation period, the TA received a total of six submissions from the following respondents:

- ♦ Hong Kong Broadband Network Limited (“HKBN”)
- ♦ Hong Kong Cable Television Limited (“HKCTV”)
- ♦ Hutchison Global Communications Limited (“HGC”)
- ♦ New World Telecommunications Limited (“NWT”)
- ♦ PCCW-HKT Telephone Limited (“PCCW-HKTC”)
- ♦ Wharf T&T Limited (“WT&T”)

5. In addition to the six submissions, five operators (namely HKBN, HGC, NWT, PCCW-HKTC and WT&T) have provided their cost information on the one-off set-up cost incurred or to be incurred by them for establishing and maintaining the systems and making arrangements for providing raw directory information to other licensees under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence; and the recurrent operating cost incurred or to be incurred by them for providing the initial batch of raw directory information and updating the information to other licensees under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence.

6. Having considered the submissions and the cost information provided by the five operators mentioned above, the TA sets out in this Statement his views on the charging principles for fair compensation as well as other relevant issues for the provision of raw directory information under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence. The TA will take into account these charging principles in any determination of the actual charges between the operators. For the avoidance of doubt, nothing herein shall constitute any determination made, or fetter the power of the TA in the making of determination, under the said licence conditions.

7. It should be emphasised that the principles stated and elaborated in this Statement (including Appendix II) are for general applications only so as to enable the operators to agree on the fair compensation under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence. This Statement only gives an initial assessment of the issues based on the existing information submitted by the operators during the consultation and should not represent the conclusive views of the TA on the actual level of charges. In any determination of the actual charges to be made under the said licence conditions, the parties are free to substantiate their case and the TA will consider all relevant evidence submitted and apply these principles to the actual facts and circumstances of each case. Nothing in this Statement will prejudice the outcome of such determination.

CHARGING PRINCIPLES

The TA's Preliminary Views in the Consultation Paper

8. In the Consultation Paper, the TA identified the following charging principles with a view to facilitating the operators to agree commercially on fair compensation:

- (I) Relevant costs
- (II) Cost causality
- (III) Cost minimization
- (IV) Effective competition

(I) Relevant Costs

9. The principle of relevant costs means that only costs which are directly incurred as a result of the provision of raw directory information to other FTNS licensees or fixed carriers should be recovered through inter-operator or customer charges.

10. The appropriate test for what costs are relevant would be whether a particular cost would be avoided if the raw directory information were not provided to other FTNS licensees or fixed carriers.

(II) Cost Causality

11. The principle of cost causality requires an FTNS licensee or fixed carrier requesting raw directory information from other operators, thereby causing costs to be incurred by the other operators, to pay for these costs. This principle is important for ensuring efficiency of allocation because charges which are not causally related to costs will not give operators efficient price signals to decide whether to maintain their own unified directory database.

(III) Cost Minimization

12. In the course of recovering the costs relating to provision of raw directory information, only reasonable costs should be recovered. The purpose is to ensure that all FTNS licensees and fixed carriers will employ the most efficient method in providing their raw directory information to other operators. No operators should be requested to pay for the inefficiencies of other operators. Such kind of productive efficiency can be achieved if all operators are faced with the incentives to minimise costs. If an operator could recover inefficient costs from other operators, there would be little incentives for this operator to reduce these costs.

(IV) Effective Competition

13. In an effective competitive environment, FTNS licensees and fixed carriers should not be required to face any unfair arrangement (e.g. asymmetry in the costs for acquiring raw directory information) which would deter them from establishing their own unified directory databases. The principle of effective competition requires that one operator should not have the ability to raise its competitors' costs or to weaken their ability to compete in the provision of local fixed telephone services. In other words, the charging arrangements should be competitively neutral so that the ability of operators to compete in the market is governed by its own efficiency only.

The One-off Set-up Charge

14. In the Consultation Paper, the TA was of the preliminary view that, based on the relevant costs and cost causality principles, only the extra costs incurred for modifying the existing data retrieval and transfer systems, such that raw directory information can be transferred to other FTNS licensees and

fixed carriers, should be relevant. In view of the fact that such modification costs applied on a reciprocal basis to the operators exchanging raw directory information are likely to offset each other to a large extent, and having regard to the cost minimization and effective competition principles, the TA proposed in the Consultation Paper the arrangement whereby each licensee should absorb the set-up costs of making its system ready for the transfer of raw directory information to other FTNS licensees and fixed carriers.

The One-off Download Charge and the Recurrent Update Charge

15. In the Consultation Paper, the TA was of the preliminary view that, based on the relevant costs and cost causality principles, the charge for fair compensation referred to in GC 25(6) of the FTNS Licence or SC 12.6 of the Fixed Carrier Licence would be applicable only when the licensee receiving raw directory information requests functionality in excess of that required under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence for providing/updating raw directory information. Application of the cost minimization and effective competition principles favors the arrangement whereby each licensee should not charge the other licensees on a per record basis for the transfer of the raw directory information.

Submissions from Operators

16. Out of the six submissions, five operators (namely HKBN, HKCTV, HGC, NWT and WT&T) supported the TA's preliminary views that no One-off Set-up Charge or Download/Update Charge should be imposed on the requesting operator. Only PCCW-HKTC did not support the TA's preliminary views.

17. According to the submissions, HGC, NWT and WT&T have been exchanging each of their raw directory databases with each other without imposing any charges on the recipient operator. This is in fact an evidence to support the TA's preliminary views that the costs incurred by licensees exchanging information are likely to offset each other to a large extent and that the recurrent operating costs should have been recovered through the customer charges. Admittedly there are differences in costs among the operators, but the differences are insignificant to the extent that it would not justify the administrative burden brought about by imposing a charge on the recipient

operators. Otherwise, the operators would have insisted on imposing such a charge.

18. The TA has also invited all local FTNS licensees and local fixed carriers to provide cost information on (a) the one-off set-up costs incurred or to be incurred by them for establishing and maintaining the systems and making arrangements for providing raw directory information to other licensees under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence; and (b) operating costs incurred or to be incurred by them for providing the initial batch of raw directory information and updating the information to other licensees under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence. Licensees were requested to provide (a) the list of relevant cost components; (b) the level of cost of each component; (c) whether the level of cost of each component would vary depending on the size of the raw directory database (i.e. whether a licensee with a larger raw directory database would incur lower/higher one-off set up costs or lower/higher recurrent operating costs), and if yes, the detailed substantiation on how the cost of each component varies with the size of the raw directory database; and (d) the relevancy of each cost component.

19. The cost information submitted by operators showed a number of common cost components which should not vary with the size of the raw directory database. This reinforces the TA's preliminary view that the costs incurred by licensees exchanging information are likely to offset each other to a large extent, unless the licensee(s) receiving raw directory information requests functionality in excess of that required under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence for providing/updating raw directory information.

20. A summary of the main arguments raised by PCCW-HKTC and details of the cost information submitted by operators as well as the TA's responses can be found in Appendix II.

The TA's Views after the Consultation Exercise

21. Having duly considered all the submissions received before and during the consultation period, the TA maintains his views stated in the Consultation Paper that, for two FTNS licensees or fixed carriers which

exchange raw directory information with each other, the charges (i.e. the One-off Set-up Charge, the One-off Download Charge and the Recurrent Updated Charge) to be applied on a reciprocal basis between these two licensees are likely to offset each other to a large extent, unless one of the licensees requests functionality in excess of that required under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence for providing/updating raw directory information.

22. In order to facilitate the operators in applying the four charging principles (namely relevant costs, cost causality, cost minimization and effective competition) stated in this Statement for agreement on fair compensation for the provision of raw directory information under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence, the TA further elaborates in paragraphs 23 – 29 below how these principles can be applied in his deliberation of the fair compensation issue.

The One-off Set-up Charge

23. ***Applying the principles established in this Statement, each FTNS licensee or fixed carrier is entitled to charge other FTNS licensees or fixed carriers receiving its raw directory information a one-off set-up charge.*** The aggregate of these charges are to compensate the former FTNS licensee or fixed carrier for the extra capital costs incurred for modifying the existing data retrieval and transfer systems, or establishing a separate system where this is necessary, such that the raw directory information can be transferred to other FTNS licensees and fixed carriers. This is in accordance with GC 25 of the FTNS licence or SC 12 of the Fixed Carrier Licence.

24. ***The level of the one-off set-up charge imposed by an FTNS licensee or fixed carriers is likely to be the same for all the FTNS licensees or fixed carriers receiving its raw directory information.*** The reason is that the raw directory information will be sent to all the FTNS licensees or fixed carriers which request for the raw directory information. Thus, it is fair and reasonable for the set-up costs incurred by one FTNS licensee or fixed carrier to be equally shared by all the FTNS licensees or fixed carriers receiving raw directory information from the former FTNS licensee or fixed carrier.

25. ***For two FTNS licensees or fixed carriers exchanging raw directory***

information between each other, the one-off set-up charge to be applied on a reciprocal basis between the two licensees is likely to offset each other to a large extent. This is based on the consideration that the extra capital costs incurred by an FTNS licensee or fixed carrier for modifying the existing data retrieval and transfer systems, or establishing a separate system where this is necessary, such that the raw directory information can be transferred to other FTNS licensees and fixed carriers should be largely independent of the size of the raw directory database.

The One-off Download Charge and The Recurrent Update Charge

26. *Applying the principles established in this Statement, each FTNS licensee or fixed carrier is entitled to charge other FTNS licensees or fixed carriers receiving its raw directory information a download/update charge.* The aggregate of these charges is to compensate the former FTNS licensee or fixed carrier for the recurrent operating costs incurred for the actual transfer of records in the raw directory information to other FTNS licensees and fixed carriers. This is in accordance with GC 25 of the FTNS licence or SC 12 of the Fixed Carrier Licence.

27. *It is not appropriate for the download/update charge to be expressed on a “per record” basis.* This is based on the consideration that the recurrent operating costs include the costs of renting telecommunications circuits between the FTNS licensees or fixed carriers for the transfer of records, the staff costs incurred in supervising the transfer of records over the circuits and other relevant costs such as server management, system administration and maintenance costs. These costs should be largely independent of the number of records transferred.

28. *The level of download/update charge imposed by an FTNS licensee or fixed carrier is likely to be the same for all the FTNS licensees or fixed carriers receiving its raw directory information.* The reason is that (given the raw directory information will be sent to all the FTNS licensees or fixed carriers which request for the raw directory information) it is fair and reasonable for the costs of supervising staff, server management, system administration and maintenance incurred by one FTNS licensee or fixed carrier to be equally shared by all the FTNS licensees or fixed carriers which request for the raw directory information while the rental of telecommunications

circuits is likely to be the same to each of the FTNS licensees or fixed carriers which request for the raw directory information.

29. ***For two FTNS licensees or fixed carriers exchanging raw directory information between each other, the download/update charge to be applied on a reciprocal basis between the two licensees is likely to offset each other to a large extent.*** This is based on the consideration that the recurrent operating costs incurred for the actual transfer of records in the raw directory information to other FTNS licensees and fixed carriers should be largely independent of the size of the raw directory database.

APPLICABILITY OF THE CHARGING PRINCIPLES

Submissions from the Operators

30. PCCW-HKTC submitted that the charging principles to be determined by the TA would be applicable to those charges pertaining to the provision of raw directory information which would be used for the purposes defined under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence. If the raw directory information is to be used by a party for purposes outside GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence, charges should be determined by a different set of charging principles (e.g. non-cost based).

The TA's Views

31. The consultation exercise invited the concerned parties to comment on the charging principles for the provision of raw directory information ***under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence***. It is apparent that the consultation exercise has not covered the charge for provision of raw directory information for the purposes outside GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence. This is outside the scope of the consultation exercise and this Statement.

32. FTNS licensees and fixed carriers are reminded that, pursuant to GC 25(8) of the FTNS Licence or SC 12.8 of the Fixed Carrier Licence, they shall not make use of raw directory information provided by another licensee other than for discharging their obligations under the licence condition except with

the prior written approval of the TA.

SCOPE OF USE OF RAW DIRECTORY INFORMATION

Submissions from the Operators

33. WT&T submitted that the scope of use of raw directory information should include (a) reproduction of directory information to be used in printed directory in different kinds of format; (b) general directory enquiry service and its related services to be provided to customers of fixed network operators; and (c) general directory enquiry service and its related services to be provided to other operators or licensees who bear the same obligation under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence.

The TA's Views

34. Pursuant to GC 25(8) of the FTNS Licence and SC 12.8 of the Fixed Carrier Licence, the licensee shall not make use of raw directory information provided by another licensee other than for discharging its obligations under GC 25 of the FTNS Licence or SC 12 of Fixed Carrier Licence, except with the prior written approval of the TA.

35. In its submissions, WT&T did not elaborate on the “*different kinds of format*” of printed directory, general directory enquiry service and “*its related services*” to be provided to customers of fixed network operators, or general directory enquiry service and “*its related services*” to be provided to other operators or licensees. Without further elaboration or explanation from WT&T, it would be difficult to determine whether the use of raw directory information as listed out in paragraph 33 above can be considered as “discharging obligations under GC 25 of the FTNS Licence or SC 12 of Fixed Carrier Licence”. Furthermore, since the scope of use of raw directory information was not raised in the Consultation Paper, it would be unfair to other licensees if the TA provides any views on this aspect.

IMPLEMENTATION OF THE TRANSFER OF RAW DIRECTORY INFORMATION

Submissions from the Operators

36. Since the provision of raw directory information involves multi-operator cooperation, HGC and HKBN urged OFTA to set up an industry working group to establish a procedure for the prompt and efficient implementation of the transfer of raw directory information. HKBN also requested OFTA to issue a TA statement in order to set out the obligations of all FTNS licensees and fixed carriers in the provision of raw directory information.

The TA's Views

37. The TA prefers the implementation issues to be resolved through commercial negotiations. In accordance with GC 25(7) of the FTNS Licence or SC 12.7 of the Fixed Carrier Licence, where the licensee is unable to agree with another licensee on the reasonable mode of exchange and transmission format of raw directory information, the matter at issue may be referred by either licensee to the TA for determination. Apart from determination, the TA may consider setting up an industry working group to facilitate the implementation of the transfer of raw directory information if he considers necessary.

38. The TA notes HKBN's request for a TA statement for setting out the obligations of all FTNS licensees and fixed carriers in the provision of raw directory information, but he takes the view that this is not necessary when the obligation to provide raw directory information is already stipulated in GC 25 of the FTNS Licence and SC 12 of the Fixed Carrier Licence as a licence condition.

39. For the avoidance of doubt, the TA emphasises that he is in and by this Statement concerned only with the subject matters related to the TA's functions under GC25 of FTNS Licence and SC12 of Fixed Carrier Licence. As stated in paragraph 13 of the Consultation Paper, the charging arrangement should be competitively neutral such that the ability of operators to compete in the market is governed by its own efficiency only. The reference to the effective

competition consideration in this Statement is merely to ensure that the charging principles established can be competitively neutral so that the licensees may operate in a level playing field. The TA has not reached any opinion that any party has engaged, or will engage or continue to engage in conduct that contravenes one or more of Sections 7K, 7L, 7M or 7N or any licence condition relating to any such section (collectively referred to as “Sections 7K to 7N”). It follows that by this Statement, the TA is not purporting to, or intending to, exercise any of its powers or function under any of the provisions of Sections 7K to 7N in relation to any person directly or indirectly identified in this Statement.

Office of the Telecommunications Authority
12 January 2005

**Charging Principles and Other Relevant Issues for the
Provision of Raw Directory Information under
General Condition 25 of the
Fixed Telecommunications Network Services Licence or
Special Condition 12 of the Fixed Carrier Licence**

Industry Consultation Paper

19 April 2004

INTRODUCTION

Under General Condition (“GC”) 25 of the Fixed Telecommunications Network Services (“FTNS”) Licence or Special Condition (“SC”) 12 of the Fixed Carrier Licence, the licensee’s printed directory shall be a unified printed directory and the licensee’s telephonic directory service shall be a unified telephonic directory service and shall utilise a unified directory database, containing directory information on all customers of all FTNS licensees and fixed carriers, except for those customers who request that directory information about them not be disclosed. The licensee shall provide, and regularly update, raw directory information about its customers to each other FTNS licensee or fixed carrier, for which the licensee will be able to impose a charge to fairly compensate it for providing the raw directory information.

2. Currently, new entrants in the FTNS market rely on the service of PCCW-HKT Telephone Limited (“PCCW-HKTC”) to fulfill their obligation of providing the unified printed directory and unified telephonic directory service to their customers. The new entrants do not need to establish or maintain their own unified directory databases, but need to provide the raw directory information about their customers to PCCW-HKTC for it to establish and maintain its unified directory database. In other words, PCCW-HKTC as the only provider of unified printed directory and unified telephonic directory service does not provide or update its raw directory information about its customers to other FTNS licensees at present.

3. However, if one of the new entrants decides to provide its own unified printed directory and unified telephonic directory service to its customers, it

would need to establish and maintain its own unified directory database. In such case, PCCW-HKTC would be obligated to provide and regularly update its raw directory information to this new entrant. To maintain their own unified directory databases, both this new entrant and PCCW-HKTC bear the responsibility of providing raw directory information to each other. The responsibility would be mutual and any charge applicable should be applied to both PCCW-HKTC and this new entrant on a reciprocal basis.

4. GC25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence has not explicitly stated the charging principles for the provision of raw directory information. One FTNS operator proposed the following charges during commercial negotiations:

- a one-off charge for setting up the data transfer system payable by the requesting operator (“One-off Set-up Charge”) (this operator claimed that a new data transfer system would be required since its existing systems did not allow the raw directory information to be downloaded and provided to other licensees);
- a charge on a per record basis for the initial provision of the raw directory information in one batch payable by the requesting operator (“Download Per Record Charge”); and
- a charge on a per record basis for providing subsequent updates on the raw directory information payable by the requesting operator (“Update Per Record Charge”).

On the other hand, some operators advocated that no charges should be levied on operators requesting for raw directory information as the responsibility to provide such information to each other should be mutual and reciprocal.

5. To facilitate the commercial negotiations among the FTNS operators and fixed carriers on the provision of raw directory information under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence, the TA considers that there is a need to clarify the charging principles.

6. The initial views of the TA on the charging principles for the provision of raw directory information are stated in this consultation paper. The TA would like to consult the industry on his initial views before he finalises these principles. These principles will be applied by the TA in making determinations under GC25(7) of the FTNS Licence or SC12(7) of the Fixed Carrier Licence on the amount of fair compensation.

THE TA'S PRELIMINARY VIEWS

Charging Principles

7. In accordance with GC 25(6) of the FTNS Licence or SC 12(6) of the Fixed Carrier Licence, “*the licensee will be able to impose a charge to fairly compensate it for providing the raw directory information*”. In other words, any compensation demanded by a licensee must therefore be fair. The TA identifies the following charging principles with a view to facilitating the operators to agree commercially on fair compensation.

- (I) Relevant costs
- (II) Cost causality
- (III) Cost minimization
- (IV) Effective competition

8. It is not always the case that all these four charging principles would be applicable to the recovery of each individual cost component. They may conflict with one another in some cases. For example, imposition of no inter-operator charges as proposed by some operators is usually consistent with the principles of cost minimization and effective competition. However, the principles of relevant costs and cost causality imply that inter-operator charges are inevitable in a multiple network environment. Therefore, attention should be paid to the overriding objective of providing raw directory information to other FTNS operators or fixed carriers in considering the trade-off in these various principles. The overriding objective of providing raw directory information to other FTNS operators or fixed carriers is to ensure effective competition in the provision of local fixed telephone services (of which the provision of unified printed directory and unified telephonic directory service to customers will form a part) so that efficiency of the industry would be improved and consumer interest would be enhanced.

(I) Relevant Costs

9. The principle of relevant costs means that only costs which are directly incurred as a result of the provision of raw directory information to other FTNS operators or fixed carriers should be recovered through inter-operator or customer charges.

10. The appropriate test for what costs are relevant would be whether a particular cost would be avoided if the raw directory information were not provided to other FTNS operators or fixed carriers.

(II) Cost Causality

11. The principle of cost causality requires an FTNS operator or fixed carrier requesting raw directory information from other operators, thereby causing costs to be incurred by the other operators, to pay for these costs. This principle is important for ensuring efficiency of allocation because when charges are not causally related to costs, prices will not be efficient signals of operators to decide whether to maintain their own unified directory database.

(III) Cost Minimization

12. In the course of recovering the costs relating to provision of raw directory information, only reasonable costs should be recovered. The purpose is to ensure that all FTNS operators and fixed carriers will employ the most efficient method in providing their raw directory information to other operators. No operators should be requested to pay for the inefficiencies of other operators. Such kind of productive efficiency can be obtained if all operators are faced with the incentives to minimise costs. If an operator could recover inefficient costs from other operators, there would be little incentives for this operator to reduce these costs.

(IV) Effective Competition

13. The TA identifies effective competition in the provision of the local fixed telephone services as an important goal in the provision of raw directory information. In an effective competitive environment, FTNS licensees and fixed carriers should not be required to face any unfair arrangement (e.g. asymmetry in the costs for acquiring raw directory information) which would deter them from establishing their own unified directory databases. The principle of effective competition requires that one operator should not have the ability to raise its competitors' costs or to weaken their ability to compete in the provision of local fixed telephone services. In other words, the charging arrangements should be competitively neutral so that the ability of operators to

compete in the market is governed by its own efficiency only.

One-off Set-up Charge

(I) Relevant Costs

14. The One-off Set-up Charge proposed by one FTNS operator aims to recover the capital costs incurred for establishing and maintaining the systems and making the arrangements for providing the initial batch of raw directory information, as well as subsequently updating the raw directory information provided, to other FTNS licensees or fixed carriers under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence.

15. It should be noted that even if the raw directory information were not provided to other FTNS licensees or fixed carriers, there must have been some data retrieval and transfer systems in place for raw directory information (e.g. for providing the raw directory information to the publisher of the unified printed directory). The costs incurred for the setting up of these data retrieval and transfer systems are not avoidable even if the raw directory information were not provided to other FTNS licensees or fixed carriers. Therefore, only the extra costs incurred by the licensees for modifying their existing data retrieval and transfer systems such that the raw directory information can be transferred to other FTNS licensees and fixed carriers should be relevant to the One-off Set-up Charge.

(II) Cost Causality

16. PCCW-HKTC claimed that its existing systems do not allow the raw directory information to be downloaded and provided to other licensees since it has been the only provider of unified printed directory and unified telephonic directory service, and therefore up to now it has not provided or updated its raw directory information about its customers to other licensees. However, it should be noted that even if the raw directory information has not been provided to other licensees, PCCW-HKTC must have some data retrieval and transfer systems in place for providing the raw directory information of its own customers and that of the customers of other FTNS licensees or fixed carriers to the publisher of the unified printed directory. In other words, the incurring of

costs on the setting up of these data retrieval and transfer systems should be independent of other operators' requests for raw directory information. Under the principle of cost causality, these costs should not be recovered through inter-operator charges. Given that some data retrieval and transfer systems and arrangements are already in place, such systems and arrangements should be used, with modifications if necessary, for the provision of raw directory information to other licensees. Any additional costs to be covered by the One-off Set-up Charge must be confined to the extra costs incurred by PCCW-HKTC for modifying its existing data retrieval and transfer systems such that the raw directory information can be transferred to other FTNS licensees and fixed carriers.

17. New entrants relying on PCCW-HKTC for the provision of the unified printed directory and the unified telephonic directory service might argue that they have not set up any data retrieval and transfer systems for the provision of raw directory information to the publisher of the unified printed directory. However, such costs, being the costs incurred to meet the licence obligations under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence, cannot be avoided even if raw directory information were not provided by the new entrant to other FTNS operators or fixed carriers. In fact, such costs are incurred by the new entrant in the form of a service charge paid by the new entrant to PCCW-HKTC for the provision of the unified printed directory and unified telephonic directory service. Therefore, in calculating the One-off Set-up Charge, the new entrant is assumed to have set up some data retrieval and transfer systems for the provision of raw directory information to the publisher of the unified printed directory. Only the extra costs incurred by the new entrant for modifying the notional data retrieval and transfer systems, such that the raw directory information of its customers can be transferred to other licensees, should be relevant to the One-off Set-up Charge.

(III) Cost Minimization

18. Apart from PCCW-HKTC, all FTNS licensees and fixed carriers would also need to incur set-up costs for similar systems and arrangements for providing and updating raw directory information to other FTNS licensees or fixed carriers. If such set-up costs are to be recovered from other licensees, the charges will be reciprocal. Some operators may argue that such set-up costs are not equal among the operators, as the set-up costs incurred by a

licensee with a larger customer database could be higher than those incurred by a licensee with a smaller customer database. Therefore there would still be a net payment for One-off Set-up Charge between any two licensees. The TA is not convinced that the set-up costs for the systems and arrangements for providing and regularly updating raw directory information to other FTNS licensees or fixed carriers, if any, incurred on top of the costs which should have already been incurred for their existing data retrieval and transfer systems (e.g. for providing raw directory information of the licensee's own customers and that of the customers of other FTNS licensees or fixed carriers to the publisher of the unified printed directory), should necessarily be proportional to the size of the customer database. Such set-up costs applied on a reciprocal basis to the operators exchanging raw directory information are likely to offset each other to a larger extent. Instead of calculating the set-up costs to be incurred by each individual licensee, the TA considers that the approach of each licensee bearing its own set-up costs is more appropriate under the principle of cost minimization since this would encourage the licensees to adopt the most cost efficient arrangement.

19. To adopt the arrangements whereby each licensee would have to charge each other licensee for the set-up costs would be administratively cumbersome. Each licensee will have to bill each other licensee that requests the provision of raw directory information, based on the set-up costs shared by each licensee at the time of billing. Subsequently, when the number of licensees requesting the provision of raw directory information increases, the set-up costs shared by each licensee has to be re-calculated and refund has to be made to each other licensee that has over-paid its share of cost. In an environment with multiple operators, this cumbersome procedure is also cost inefficient.

(IV) Effective Competition

20. As explained in preceding paragraphs, only the extra costs incurred for modifying the existing data retrieval and transfer systems, such that the raw directory information can be transferred to other licensees, should be covered by the One-off Set-up Charge. It would not be conducive to effective competition for an FTNS licensee or fixed carrier having to pay another licensee for the set-up costs of the data retrieval and transfer systems which

would have been set up anyway even if the raw directory information were not provided to other licensees. It would also be unfair to an FTNS licensee or fixed carrier having to pay another licensee simply because the set-up costs of the latter licensee are higher for reasons of inefficiencies.

Conclusion on One-off Set-up Charge

21. Based on the relevant costs and cost causality principles, only the extra costs incurred for modifying the existing data retrieval and transfer systems, such that the raw directory information can be transferred to other FTNS licensees and fixed carriers, should be relevant. In view of the fact that such modification costs applied on a reciprocal basis to the operators exchanging raw directory information are likely to offset each other to a large extent, and having regard to the cost minimization and effective competition principles, the TA initially favors the arrangement whereby each licensee should absorb the set-up costs of making its system ready for the transfer of raw directory information to other FTNS operators and fixed carriers.

The Download Per Record Charge and Update Per Record Charge

(I) Relevant Costs

22. The Download Per Record Charge and Update Per Record Charge proposed by one FTNS operator aim to recover the costs incurred for providing the initial batch of raw directory information and updating the information to other FTNS licensees or fixed carriers under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence.

23. In principle, the One-off Set-up Charge should have covered the capital costs for making the systems ready for the transfer of raw directory information to the other licensees. The relevant costs to be covered under any Download Per Record Charge and Update Per Record Charge should be the recurrent operating costs incurred in the actual transfer of records. Such operating costs could include the rental of the telecommunications circuits and any staff cost in supervising the operation of the transfer of records over the circuits.

(II) Cost Causality

24. Each licensee is obliged to provide the unified printed directory and telephonic directory service to its customers. In fact, the costs for such service provision should have been recovered by the installation, rental and removal fees paid by the customers. The customer's payments should have covered the following two services:

- the service by which the customer can enquire about the telephone number of any fixed line customer of any FTNS licensee or fixed carrier in Hong Kong; and
- inclusion of the customer's information in a unified directory database so that any FTNS licensee or fixed carrier may respond to enquiry about the customer's telephone number.

25. The customer has therefore paid for the provision of his/her raw directory information to other FTNS licensees or fixed carriers as well as the subsequent update if any. It would not be fair for the licensee providing the raw directory information to charge the licensee receiving the data. It is fairer for it to recover the costs from its own customers. The charge for fair compensation referred to in GC 25(6) of the FTNS Licence or SC 12(6) of the Fixed Carrier Licence would be applicable only when the licensee receiving raw directory information requests functionality in excess of that required under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence for providing/updating raw directory information.

26. Conceptually, the raw directory information may be delivered to a notional mid-point of the telecommunications circuits between the two operators exchanging raw directory information. In other words, the customer's payments should have recovered the costs incurred by the operator in providing the raw directory information of that customer to the notional mid-point of the telecommunications circuits. If one licensee provides the circuits all the way to another licensee's premises for the transmission and also the reception of raw directory information, it would be fair for the former licensee to recover from the latter licensee half of the costs of establishing and maintaining the circuits.

(III) Cost Minimization

27. All FTNS licensees and fixed carriers would need to incur recurrent costs for providing and updating raw directory information to other FTNS licensees or fixed carriers. Such recurrent costs applied on a reciprocal basis to the operators exchanging raw directory information are likely to offset each other to a large extent. Instead of calculating the recurrent costs to be incurred by each individual licensee, the TA considers that the approach of each licensee bearing its own cost is more appropriate under the principle of cost minimization since this would encourage the licensees to adopt the most cost efficient arrangement.

(IV) Effective Competition

28. As mentioned before, any compensation demanded by a licensee under GC 25(6) of the FTNS Licence or SC 12 of the Fixed Carrier Licence for providing raw directory information must be fair. It is therefore important to take into account the fairness of the Download/Update Per Record Charge as well as the impact of the two charges on competition when the TA finalises his views on the charging principles.

29. Assuming a Download/Update Per Record Charge is justified and to be applied, in the situation where two FTNS licensees or fixed carriers establish and maintain their own unified raw directory databases, they need to exchange raw directory data and a Download/Update Per Record Charge will then be applied to them on a reciprocal basis. A licensee with a larger customer base is expected to transfer a larger number of records in the initial batch, and a larger number of updating records arising from amendments to the existing records. Accordingly, this licensee would always receive a net payment from the other licensee. However, the cost incurred in passing updated records to other operators for the purpose of maintaining the unified directory database, being the operating costs of the telecommunications circuits for the transfer, is basically independent of the number of records passed to other operators.

30. The licensee with a larger customer database could argue that its cost of providing raw directory information is higher because there is a higher supervisory cost due to the higher number of records to be supplied in the first

download and to be updated subsequently. Therefore, it should seek a net payment from the other licensee with smaller customer base for provision of the information. The TA, however, takes a different view. Firstly, so long as a customised programme for data retrieval and dedicated data circuits for data transfer is established, the cost is more or less fixed, irrespective of the volume of data to be exchanged. While it may be true that the cost of maintenance of a larger unified directory database could be higher, such additional cost has to be excluded from the fair compensation formula as it is the cost necessary for fulfillment of licence obligation on the provision of the unified printed directory and unified telephonic directory service, rather than the costs incurred for transferring raw directory information to another FTNS licensee or fixed carrier. Secondly, if an FTNS licensee or fixed carrier with a smaller customer base always has to make a net payment to an FTNS licensee or fixed carrier with a larger customer base for raw directory information, the cost on a per customer basis to the former licensee for establishing and maintaining the unified directory database, and providing the unified printed directory and unified telephonic directory service, would always be higher than that of the latter licensee. Once again, it should be highlighted that the cost incurred by a licensee in providing the raw directory information of its customer to other FTNS licensees or fixed carriers should have been recovered by the installation, rental and removal fees paid by the customers. Adopting a charge to the recipient licensee of the raw directory information on a per record (or per customer) basis would place the FTNS licensee or fixed carrier with a smaller customer base at a competitively disadvantageous position in maintaining its own unified directory database. This would discourage FTNS licensees and fixed carriers from adopting the most cost efficient arrangement for fulfilling the obligation under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence.

31. GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence is intended to be a competitively neutral arrangement and the charging arrangement should not result in asymmetry in the cost on a per customer basis of establishing and maintaining the unified directory database, which would deter the licensee with a smaller customer base from establishing their own unified directory database. Under the principle of effective competition, no operator should have the ability to raise its competitor's costs or to weaken their ability to compete in the provision or unified directory service. As such, the TA is concerned that the Download/Update Per Record Charge might result

in an unfair arrangement and violate the principle of effective competition.

32. The FTNS licensee or fixed carrier with a larger customer base might argue that the licensee with a smaller customer base could always rely on it to fulfill the obligation of providing unified printed directory and telephonic directory service, and thus does not need to incur any costs for acquiring the raw directory information. While it is a commercial decision for the licensee with a smaller customer base to make as to whether to rely on the licensee with a larger customer base for the unified printed directory and telephonic directory services, the TA is of the view that the cost incurred by the licensee should be affected by its own efficiency only, e.g. efficiency affected by the economies of scale in arranging the printing of the unified printed directory or staffing an enquiry centre for the provision of a unified telephonic directory service. The FTNS licensee or fixed carrier with a smaller customer base should not be required to face any unfair arrangement (e.g. asymmetrically higher costs for acquiring raw directory information) which would result in artificially escalated costs in establishing and maintaining its own unified directory database. Otherwise, the licensee with a smaller customer base would be forced to rely on the service of the licensee with a larger customer base in order to fulfill the obligation under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence for reasons other than economies of scale. This unfair situation should not be allowed and must be taken into account when the TA finalises the charging principles for the provision of raw directory information.

Conclusion on Download Per Record Charge and Update Per Record Charge

33. Based on the relevant costs and cost causality principles, the charge for fair compensation referred to in GC 25(6) of the FTNS Licence or SC 12(6) of the Fixed Carrier Licence would be applicable only when the licensee receiving raw directory information requests functionality in excess of that required under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence for providing/updating raw directory information. Application of the cost minimization and effective competition principles favours the arrangement whereby each licensee should not charge the other licensees on a per record basis for the transfer of the raw directory information.

Summary of TA's Preliminary Views

34. Based on paragraphs 14 – 33, the TA's preliminary view is that:
- it is fair for all FTNS licensees and fixed carriers to absorb their costs for establishing and maintaining the necessary systems and making the necessary arrangements in order to provide raw directory information to other FTNS licensees and fixed carriers. Such costs should only include the costs for modifying the data retrieval and transfer systems necessary to meet the licence obligations of providing the raw directory information of its customers to other FTNS licensees and fixed carriers. Such modification costs applied on a reciprocal basis between the operators exchanging raw directory information are likely to offset each other to a large extent. Consistent with the cost minimization and effective principles, no One-off Set-up Charge should be imposed on the requesting operator; and
 - it is fair for all FTNS licensees and fixed carriers to recover from their own customers the costs for providing/updating the raw directory information to other licensees. As such, no Download Per Record Charge or Update Per Record Charge should be imposed on the requesting operator

unless the licensee(s) receiving raw directory information requests functionality in excess of that required under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence for providing/updating raw directory information.

QUALITY OF DIRECTORY SERVICE

35. Currently PCCW-HKTC is the only FTNS operator providing the unified printed directory and unified telephonic directory services and other licensees rely on it services to fulfill their licence obligation under GC 25 of the FTNS Licence of SC 12 of the Fixed Carrier Licence. The unified printed directory and unified telephonic directory services so far provided by PCCW are satisfactory and customer complaints received in respect of the services are minimal.

36. While it is a commercial decision for an FTNS licensee or fixed carrier to make as to whether to establish and maintain its own unified directory

database and provide its own unified printed directory and telephonic directory service, the licensees should note that the printed directory and telephonic directory service should be provided in a satisfactory manner. In accordance with GC 25(4) of the FTNS Licence or SC 12(4) of the Fixed Carrier Licence, *“the printed directory and the telephonic directory service [...] shall be provided in a manner satisfactory to the Authority”*. In fact, GC 10 of the FTNS Licence or GC 5 of the Fixed Carrier Licence also requires the licensee to *“operate, maintain and provide a good, efficient and continuous service in a manner satisfactory to the Authority”*.

37. Consistent with the light-handed approach that he has adopted, the TA would not mandate the quality of the unified telephonic directory services provided under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence. However, the TA would require any licensee which is offering, or has a plan to offer, the unified telephonic directory services to fulfil its obligations under GC11 of the FTNS Licence of GC 6 of the Fixed Carrier Licence. Specifically, the licensees have to prepare a customer charter before the launch of any services under GC25. The customer charter has to:

- set out the minimum standards of the directory services which it would provide to its customers; and
- give guidance to its employees in their relation and dealings with customers in relation to the services provided under GC 5 of the FTNS Licence or SC 12 of the Fixed Carrier Licence.

INVITATION FOR COMMENTS

38. The TA invites comments on the proposed charging principles for the provision of raw directory information under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence. All views and comments should be made in writing and should reach the TA on or before **18 May 2004**. The TA reserves the right to publish all views and comments and to disclose the identity of the source. Any part of the submission that 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
Attn: Senior Regulatory Affairs Manager (Economic Regulation)1

Comments may also be sent by fax to 2803 5112 or by email to hyslai@ofta.gov.hk.

Office of the Telecommunications Authority
19 April 2004

Summary of Submissions and the TA's Responses

Consultation Process

Views from Submissions:

1. PCCW-HKTC alleged that the preliminary analyses (“PAs”) issued for the two TA determinations² might have already prejudiced the outcome of the consultation.

The TA's Responses:

2. The two PAs were issued for the purpose of determinations in accordance with GC 25 of the FTNS Licence as well as the timeline specified in the letters of OFTA dated 10 February 2003 and 4 August 2003 to WT&T and NWT respectively³. The PAs set out the TA's preliminary views only, which were subject to variation in the final analyses after the TA has reviewed the comments from the parties to the two determinations. The purpose of issuing the PAs was to solicit comments and views from the concerned parties to the determinations and no final views have been set out by the TA yet. In fact, the PAs were issued to PCCW-HKTC, NWT and WT&T only. In other words, all other FTNS licensees or fixed carriers were not even informed when the two PAs were issued. As such, the TA does not agree that “*the PAs issued for the two determinations might have already prejudiced the outcome of the consultation*”. Although the TA had expressed some preliminary views in the PAs sent to the parties to the determinations, the TA would not be bound by these views in this consultation. The TA has approached this consultation

² The TA Determination under GC 25 of the FTNS licence on the terms and conditions for the provision of raw directory information between PCCW-HKT Telephone Limited and Wharf T&T Limited as well as the TA Determination under GC 25 of the FTNS licence on the terms and conditions for the provision of raw directory information between PCCW-HKT Telephone Limited and New World Telecommunications Limited.

³ For determinations made under Section 36A of the Telecommunications Ordinance, PA would also be issued pursuant to the “Procedures for Making Determinations on Terms and Conditions of Interconnection under Section 36A of the Telecommunications Ordinance” revised on 27 September 2001.

with a completely open mind and would form the views on the charging principles and other relevant issues of the provision of raw directory information only after he has duly considered all submissions received during the consultation period. Furthermore, this consultation exercise was conducted in response to PCCW-HKTC's request. PCCW-HKTC persisted in requesting the TA to conduct a consultation exercise in its representation dated 6 November 2003 even though it was well aware that the PAs have been issued to the parties to the determinations. PCCW-HKTC should not have requested the TA to conduct a consultation exercise after the PAs have been issued if it considered that the PAs might prejudice the outcome of the consultation.

Views from Submissions:

3. PCCW-HKTC claimed that it would be unfair to confine the consultation to a specific sector of the telecommunications industry (e.g. the TA has omitted to include mobile operators in this consultation) and members of the public were not given an opportunity to respond to the proposed charging principles. It argued that the need for the public to be consulted was particularly important since the TA proposed in the Consultation Paper that the costs incurred by operators in downloading and updating records should be recovered from their customers. PCCW-HKTC submitted that extending the consultation to the entire telecommunications industry and all interested members of the public was the only way to ensure that the charging principles to be established would be transparent and equitable.

The TA's Responses:

4. The TA does not subscribe to PCCW-HKTC's argument that the entire telecommunications industry and all members of the public should be invited to provide views and comments in all consultation exercises. The scope of the consultation, including which parties to be consulted, should be considered by the TA on a case-by-case basis. In this consultation exercise, only the local FTNS licensees and local fixed carriers were invited to provide comments and views since the subject matter concerns the transfer of raw directory information among the local FTNS licensees and local fixed carriers. The TA could not see any justification for including other operators in this consultation exercise. The TA notes PCCW-HKTC's argument that "*the need for the public to be consulted was particularly important since the TA proposed in the*

consultation paper that the costs incurred by operators in downloading and updating records should be recovered from their customers”. In this aspect, it should be noted that, in the Consultation Paper, the TA did not propose any additional charge to be imposed on the customers for the transfer of raw directory information among the FTNS licensees and fixed carriers. The TA only gave his preliminary view that the cost incurred by a licensee in providing the raw directory information of its customer to other FTNS licensees or fixed carriers should have been recovered by the installation, rental and removal fees paid by the customers. Since the arrangement would not have direct impact on the costs to be borne by consumers on acquiring public telephone service, the TA could not see why a public consultation is required.

Charging Principles

Views from Submissions:

5. PCCW-HKTC opined that provision of raw directory information did not fall within the definition of interconnection, and hence, there was no obligation to adhere to the costing principles normally associated with the setting of interconnection charges.

The TA's Responses:

6. The four charging principles proposed in the Consultation Paper, namely *Relevant Costs*, *Cost Causality*, *Cost Minimization* and *Effective Competition*, are some generic charging principles which are not necessarily associated with interconnection charges. These four principles were proposed in the Consultation Paper because the TA considered that they were appropriate charging principles for setting the relevant charges for the provision of raw directory information under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence.

Views from Submissions:

7. While PCCW-HKTC concurred that *Relevant Costs*, *Cost Causality* and *Cost Minimization* should form part of the charging principles, it expressed that *Effective Competition* read more like a regulatory objective rather than a

relevant charging principle. The company argued that if charges were to be calculated based on the first three principles, the charges would be competitively neutral and operators would compete on the basis of their own efficiency only. It further submitted that the recovery of costs which an operator has legitimately incurred on behalf of another operator (thus satisfying the other three costing principles mentioned in the Consultation Paper) is entirely consistent with an effective competitive environment.

The TA's Responses:

8. The TA's view is not much different from that of PCCW-HKTC. As mentioned in paragraph 13 of the Consultation Paper, "*the charging arrangement should be competitively neutral so that the ability of operators to compete in the market is governed by its own efficiency only*". The inclusion of the effective competition consideration in the decision-making process will only ensure that the "fair compensation" requirement under FTNS or fixed carrier licence for provision of raw directory information is met, i.e. an inefficient operator will not be over-compensated for its inefficiency. Accordingly, the TA maintains his view that effective competition should be considered as a relevant charging principle in the context of ensuring that the charging principles established can be competitively neutral so that the licensees may operate in a level playing field.

The One-off Set Up Charge

Views from Submissions:

9. PCCW-HKTC submitted that the capital costs incurred for setting up a platform to enable the transfer of raw directory information to other FTNS licensees were extra costs for the company and should be considered as relevant costs and eligible for recovery. It explained that its existing directory database (from which the directory information is provided to the publisher of telephone directory) was separate from the data transfer system to be developed for the transfer of raw directory information to other licensees. As such, the one-off set-up costs of the data transfer system should be separate from those costs which have already been expended by PCCW-HKTC in developing systems to satisfy its own requirements (e.g. transfer directory information to

the publisher of telephone directory). Since the costs of developing the data transfer system were incurred as a direct result of other licensees' requirement, the set-up costs should be wholly attributable to the requesting licensees. PCCW-HKTC also submitted that appropriate systems would need to be developed and a certain amount of configuration, compilation and processing work would need to be undertaken in order to get the raw directory information into a format suitable for transferring to other operators, and these costs should be recovered.

The TA's Responses:

10. Based on the relevant costs and cost causality principles, extra costs incurred for modifying the existing data retrieval and transfer systems, such that the raw directory information can be transferred to other FTNS licensees and fixed carriers, should be relevant. The TA notes that PCCW-HKTC has not provided sufficient technical details to explain why the data transfer system for the transfer of raw directory information to other licensees needs to be separate from that for transfer of similar information to the publisher of telephone directory. On the other hand, the TA notes that PCCW-HKTC maintains a directory database which is being adopted for delivering the directory information to the publisher of telephone directory.

11. Given the lack of technical details, the TA does not wish to form a view as to whether a separate data transfer system is necessary for the transfer of raw directory information to other licensees in this Statement. In the charging principles for the One-off Set-up Charge (paragraphs 23-25 of this Statement), the TA has included the possibility of the licensee establishing a separate system where this is necessary. Operators are free to substantiate their case in any actual determination to be made by the TA.

Views from Submissions:

12. PCCW-HKTC then argued that it was not necessary for each operator to bear its own costs in order to ensure that reasonably efficient systems were used. On the contrary, operators would be encouraged to build minimal systems which were barely able to satisfy the FTNS licence requirements. Furthermore, requiring operators to bear their own costs was contrary to the cost causality principle. The company further submitted that, while GC 25(7)

of the FTNS Licence or SC 12.7 of the Fixed Carrier Licence empowers the TA to determine the amount of fair compensation, nothing in the FTNS licence empowered the TA to require operators to bear their own costs and there was no solid ground for the TA to assume that the one-off set-up costs of each individual operator would likely offset each other.

The TA's Responses:

13. The TA's preliminary view in the Consultation Paper was that if an operator bears its own costs, then the operator would be more concerned with efficiency as it would have to bear the costs of its own inefficiency. Having considered the submissions of the operators, the TA takes the view that (a) the "extra costs" incurred by these two licensees for setting up the data transfer system for the transfer of raw directory information to each other are to be applied on a reciprocal basis to these two licensees involved in the exchange of raw directory information; and (b) the "extra costs" could be largely independent of the size of the raw directory database. Following these, the "extra costs" are likely to offset each other to a large extent. Therefore, "bearing a licensee's own costs" is only the likely result of the implementation of the underlying charging principles between two FTNS licensees or fixed carriers exchanging raw directory information with each other. (For the detailed application of the charging principles, please refer to paragraphs 23-29 of this Statement. For the elaboration on cost offsetting, please refer to paragraphs 31-35 of this Appendix.) However, for the determination of the actual charges to be made under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence, the parties are free to substantiate their case and the TA will consider all relevant evidence submitted and apply these principles to the actual facts and circumstances of each case.

14. The TA notes PCCW-HKTC's view that the one-off set-up costs of each individual operator are not likely to offset each other. However, in its submission, PCCW-HKTC neither provided details to substantiate its view nor elaborated its rationale why it believed that the one-off set-up costs were not likely to offset each other. Under the relevant costs principle, the costs incurred for extra functionality should not be considered relevant and should be borne by the licensees who choose to equip the system with this extra functionality or those who request for this extra functionality. As such, in setting up a system with basic functionality which is sufficient to fulfill the

requirement under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence, it is reasonable to assume that the set-up costs should be more or less the same among the licensees. It may be argued that some cost differences may exist among different licensees, e.g. the licensee with a larger customer base may establish a system with higher processing power in retrieving and transferring data. However, these cost differences may be insignificant when compared to the total set-up costs.

Views from Submissions:

15. PCCW-HKTC was of the view that the sharing of costs among licensees, in case there were new entrants, would not be difficult once the total amount of costs to be shared was verified at the start. To make the process administratively easier, PCCW-HKTC suggested the cost sharing calculation exercise to be done biannually.

The TA's Responses:

16. Considering that all other FTNS licensees or fixed carriers are now relying on PCCW-HKTC for providing the unified directory services and they may opt to establish their own unified directory databases at different times, the exact amount of the set-up costs to be shared by each licensee will have to be re-calculated and refund/charging will have to be arranged whenever a licensee decides to establish its own unified directory database. The situation will be even more complicated if there are new fixed carriers entering the market. PCCW-HKTC's proposal of a biannual calculation exercise still has to involve the actual calculation of the costs and could not avoid the aforementioned difficulties in the calculation process. Accordingly, the TA does not agree that PCCW-HKTC's proposal would make the cumbersome administration process any easier. Given that the set-up costs of two licensees exchanging raw directory information are likely to offset each other to a large extent (for more elaboration on cost offsetting, please refer to paragraphs 31-35 of this Appendix), the benefits if any to be brought to the two licensees by calculating and sharing the actual costs incurred by the two licensees cannot justify the cumbersome calculation exercise and administration process.

17. Suppose PCCW-HKTC's argument that the one-off set-up costs of the data transfer system is dependent on the size of the customer database (which

was not accepted by the TA) were true, the complication is that the other licensees would have to incur additional capital costs to expand their data transfer systems as they gain market share. It would not be fair to these licensees if the subsequent re-calculations would be based on the initial set-up costs of their data transfer systems when their customer bases were still relatively small. If these licensees were allowed to recover their additional capital costs from the other licensees during the re-calculations, this would be exceedingly complicated.

The One-off Download Charge and The Recurrent Update Charge

Views from Submissions:

18. PCCW-HKTC submitted that, in addition to rental of telecommunications circuits and staff costs incurred in supervising the operation of the transfer of records over the circuits, there were other relevant costs such as server management, system administration and maintenance costs, which should be recovered from the requesting operators.

The TA's Responses:

19. Paragraph 23 of the Consultation Paper already specified that “[t]he relevant costs to be covered under any Download Per Record Charge and Update Per Record Charge should be the recurrent operating costs incurred in the actual transfer of records”. As long as the licensee can prove that the recurrent costs (e.g. server management, system administration and maintenance costs as submitted by PCCW-HKTC in its submission) have been incurred in the actual transfer of records, the TA agrees that these costs should be considered relevant ***under the relevant costs principle***.

20. The TA notes that these costs do not necessarily vary with the number of records transferred. When two FTNS licensees or fixed carriers decide to exchange raw directory information, they will have to agree mutually on the establishment of telecommunications circuits with the necessary capacity. The rental of these circuits will have to be incurred even if no records were transferred. The costs of staff supervision, server management, system administration and maintenance incurred by each licensee would be, to a large

extent, independent of the number of records actually transferred. Therefore the charge applied on a reciprocal basis between these two licensees should not be on a “per record” basis, but rather the amount should be sufficient to cover the relevant costs.

Views from Submissions:

21. PCCW-HKTC disagreed with the TA’s argument that “the costs of providing raw directory information to other licensees should have been recovered through customer charges”. It claimed that the provision of raw directory information was not related to the printed directory or the telephonic directory service provided to end customers. Therefore, it would be wrong for PCCW-HKTC to recover these costs from its own customers through retail charges.

The TA’s Responses:

22. When a customer subscribes to the fixed telephony service from an FTNS licensee or fixed carrier, it is legitimate for the customer to expect that, without having to pay any additional charges, subscribers of any other FTNS licensee or fixed carrier can enquire about his/her telephone number even they subscribe to services from different FTNS licensees or fixed carriers. To achieve this, the FTNS licensee or fixed carrier providing a fixed telephony service to that customer has to transfer the raw directory information of that customer to all other FTNS licensees and fixed carriers which establish and maintain their own unified directory databases, and the relevant recurrent costs should be considered as part of the operating costs for providing fixed telephony service to that customer. As such, the recurrent costs incurred for providing raw directory information to other licensees should have been recovered through customer charges.

23. The TA agrees that each licensee may impose a charge on the other licensee requesting for its raw directory information to cover the recurrent operating costs for the actual transfer of raw directory information. Thus if a licensee can establish that such costs for the transfer of information has not already been built-in and recovered through customer charges, these can then be included in the calculation of the “relevant costs” for fair compensation. However, the licensee who argues that such costs have not been recovered from

its customers should be prepared to accept that the other licensees have also not recovered such recurrent costs from their customers.

Views from Submissions:

24. PCCW-HKTC questioned the TA's preliminary view that "no charges should be imposed unless the licensee(s) receiving raw directory information requested functionality in excess of that required under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence for providing/updating raw directory information". It argued that there was nothing in the FTNS licence which prevented an operator from recovering the costs it has incurred as a result of complying with its licence obligations or restricted the recovery of costs to "excess functionality" only. Furthermore, it would be difficult to define "excess functionality" since the licence does not define the mode of exchange and the transmission format. WT&T also expressed a similar view that it would be difficult to define "excess functionality".

The TA's Responses:

25. Under the relevant costs principle, the costs incurred for extra functionality should not be considered relevant and should be borne by the licensees who choose to equip the system with this extra functionality or those who request for this extra functionality. "No charge imposed" is only the likely result of the implementation of the underlying charging principles between two FTNS licensees or fixed carriers exchanging raw directory information with each other. Regarding the definition of "excess functionality", it was explained in paragraph 26 of the Consultation Paper that "*the customer's payments should have recovered the costs incurred by the operator in providing the raw directory information of that customer to the notional mid-point of the telecommunications circuits*". As such, any functionality which serves purposes other than providing raw directory information to other licensees or provides raw directory information beyond the notional mid-point of the telecommunication circuits can be considered as "excess functionality".

Views from Submissions:

26. PCCW-HKTC did not subscribe to the TA's preliminary view that the

licensee with smaller customer base would always be at a cost disadvantage to the licensee with larger customer base. Volume of record updates for each licensee should not strictly depend on the size of the licensee's customer base. PCCW-HKTC therefore claimed that it would be misleading to assume that the licensee with smaller customer base would always be making a net payment to the licensee with large customer base for updating the raw directory information.

The TA's Responses:

27. It is clear that a licensee with a larger customer base would transfer a larger number of records in the initial batch. Regarding the subsequent updating of raw directory information, the licensee with a larger customer base is also expected to transfer a larger number of updating records arising from amendments to the existing records. Assuming that the probability for a customer to change his/her name, address, telephone number or request not to disclose his/her directory information is same for all FTNS licensees and fixed carriers, the absolute amount of updating records arising from amendments to the existing records must be higher for the licensee with a larger number of customers. As such, the licensee with a smaller customer base is more likely to make a net payment of Update Charge to the licensee with a larger customer base if the payment is based on number of records.

Views from Submissions:

28. PCCW-HKTC argued that "the operator with smaller customer base would carry a higher cost per customer, thus putting it at a competitive disadvantage in maintaining its directory database" was the nature of business. It would be unavoidable that the smaller operator would face higher total costs and that it was not able to take advantage of any economies of scale. It further argued that the TA should not shelter the new operators from the hardships of conducting business. The role of TA was not to assist new entrants, but to ensure fair play. It reiterated that the larger operator had legitimately incurred the costs and should be entitled to recover the costs from requesting operators. It also opined that the smaller operator could always make arrangements with another operator to provide the printed directory and telephonic directory service on its behalf if it was not viable for that operator to provide these services itself.

The TA's Responses:

29. It is agreed that the cost per customer in maintaining a directory database would be higher for an operator with a relatively smaller customer database. As it was mentioned earlier, the TA considers that the cost of operating/maintaining a directory database is not necessarily dependent on the size of the database. Therefore the cost per customer should be affected by the size of the customer base only and not be distorted by the net payment that a licensee with a smaller customer base has to make to the licensee with a larger customer base in establishing and maintaining the directory database.

30. There is also no dispute that the TA's role is to ensure fair play and not to shelter the new operators from the hardships of conducting business. There is also no question that the smaller operator could always make arrangements with another operator to provide the printed directory and telephonic directory service on its behalf if it was not viable for that operator to provide these services itself. All these, however, have not affected TA's view on the payment arrangement. If PCCW-HKTC's proposal of adopting a Download/Update Charge on a per record basis were accepted, the licensee with a smaller customer base will always have to make a net payment to the licensee with a larger customer base. This is unfair as the licensee with a larger customer database would possibly be over-compensated for the provision of raw directory information because the cost of maintaining/operating the database could be largely independent of the size of the database. Further, while it is a commercial decision for the licensee with a smaller customer base to make as to whether to rely on the licensee with a larger customer base for the unified printed directory and telephonic directory services, the cost incurred by the requesting licensee should not be more than a fair compensation based on the actual cost incurred by the requested licensee.

Cost Information Submitted by Operators

The TA's Responses:

31. As is usual with the past determinations made by the TA in which new entrants requested services from PCCW-HKTC, the one-off set-up costs and

recurrent operating cost submitted by the new entrants for this exercise are much lower than those submitted by PCCW-HKTC. Significant cost difference may arise from the difference in operators' efficiency or the fact that the providing operator (or requesting operator) may tend to overestimate (or underestimate) its costs. Having reviewed the cost information submitted by operators, the TA considers that all operators have similar cost components for establishing and maintaining systems and making arrangements for providing raw directory information to other licensees, and providing the initial batch of raw directory information and updating the information to other licensees, under GC 25 of the FTNS Licence or SC 12 of the Fixed Carrier Licence.

32. The list of common one-off set-up cost components includes hardware (e.g. server, firewall and router), software development, framelink installation, miscellaneous items (e.g. installation, testing and configuration), etc. The list of common recurrent operating cost components includes hosting, framelink monthly rental, operations and maintenance, etc.

33. HGC, HKBN and WT&T submitted that the cost level of all one-off set-up cost components as well as recurrent operating cost components (except framelink monthly rental) did not vary with the size of the raw directory database. PCCW-HKTC also submitted that its cost level was relatively fixed for the expected size of the raw directory database and for sizes that were within a reasonable range of the expected size.

34. The TA notes that the hardware cost only constitutes a minor part of the one-off set up costs of PCCW-HKTC. The bulk of the cost is for "application development for raw directory information download". This cost component largely accounts for the large difference between the costs of PCCW-HKTC and the other licensees. PCCW-HKTC did not provide any indication of the "reasonable range" within which the cost would not vary with the size of the database. It might argue that its costs would increase if the size of raw directory database increases significantly. As explained by HKBN, with the advent of new technologies, the hardware and software are expected to be more advanced and powerful, and thus capable to handle much larger volume of traffic or transactions. The TA considers that process of transferring raw directory information is a repetitive process comprising a number of basic steps. The relevant data records must be first identified from the customer database. The data records would then be converted into

messages for transmission over the telecommunications circuits. The transmission procedures might include steps for confirmation of receipt and re-transmission if error is detected. These basic steps should then be repeated for every record transferred. As such, the same application software will be required for transferring records from a relatively large customer database or a relatively small database. Therefore the cost difference in software among operators with different sizes of raw directory database should be insignificant. Costs incurred for installation, testing and configuration are relatively small in amount when compared to hardware and software and these components should not necessarily be proportional to the size of the raw directory database. Since the transfer of raw directory information is a highly automatic process, the cost difference in hosting, operations and maintenance among operators with different sizes of raw directory database should be insignificant.

35. Having taken into account the cost information submitted by the operators, the TA maintains his view that one-off set-up costs and recurrent operating cost applied on a reciprocal basis to the operators exchanging raw directory information are likely to offset each other to a larger extent.

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