DEREGULATION FOR FIXED-MOBILE CONVERGENCE

Statement of the Telecommunications Authority

27 April 2007

EXECUTIVE SUMMARY

The Telecommunications Authority (TA)'s concluded views and the regulatory changes that will be adopted as a consequence of the review in relation to fixed mobile convergence are summarized below:

Fixed Mobile Interconnection Charge (FMIC)

(1) The TA will de-regulate the existing FMIC arrangement. The regulatory guidance in favour of MPNP contained in the TA's Statement No.7 (Second Revision) on Interconnection and Related Competition Issues will be withdrawn, subject to a transition period.

(2) The TA will also withdraw the regulatory guidance on interconnection links subject to the same transition period as for FMIC.

(3) There will be a transition period of 2 years starting from the date of issue of this Statement before the changes in (1) and (2) are implemented.

(4) The TA will not issue replacement regulatory guidance upon the withdrawal of the existing regulatory guidance. The TA will continue to monitor market developments and will re-consider the need for regulatory guidance should market conditions change and/or indications of likely market failure emerge.

(5) For the avoidance of doubt, there will be no change to:

(a) the existing "Any-to-Any" ("A2A") regime which is preserved in its entirety by virtue of the relevant powers in the Telecommunications Ordinance ("Ordinance") and made a condition of all licences granted to operators. The TA will

intervene, on a case by case basis, where commercial negotiations between operators fail to achieve A2A connectivity; and

(b) the TA's power under section 36A of the Ordinance as a last resort to intervene, on an ex post basis, if commercial negotiation fails to produce agreed terms of interconnection between FNOs and MNOs within a reasonable period of time.

(6) The TA Statement No. 7 will be modified at the end of the transition period to reflect the above changes.

Local Access Charges (LAC)

(7) The existing LAC arrangement will be maintained.

(8) If and when there is a complete and valid application for a modification or withdrawal of the existing determination of LAC, the TA will consider the request in separate proceedings.

Unified Carrier Licence (UCL)

(9) The TA will make a recommendation to the Secretary for Commerce, Industry and Technology (SCIT) concerning the creation of the UCL by subsidiary legislation which will cover the general conditions, period of validity and licence fee of the UCL.

(10) If SCIT approves the creation of the UCL, the TA may carry out further consultation (if necessary) at the appropriate time to solicit views on the special conditions for issue of the UCL.

Fixed Mobile Number Portability (FMNP)

(11) The TA will conduct market research to understand the extent of consumer demand for FMNP and thus facilitate an assessment of the costs and benefits of FMNP before deciding whether to implement FMNP.

(12) If having made this assessment the TA decides to implement FMNP, a

FMNP Working Group, consisting of members from the stakeholders, will be formed to address:

(a) the technical and operational issues arising from the introduction of FMNP

(b) the feasibility and detailed arrangements for a centralised database to support number portability

(13) All carriers (fixed or mobile) should have access to all number porting data (fixed number porting and mobile number porting). OFTA will convene a technical working group to examine the technical issues arising from MNOs having access to the ONP database.

(14) The TA will request the NAC to review the remaining availability of numbers with the prefix ‘6’ and ‘9’ for mobile services and any differential treatment for FNOs and MNOs in the distribution of new number blocks.

Road Opening and Building Access Rights

(15) The existing arrangement for road opening will be maintained, i.e. the right will only be given to those operators that are authorized under their licence to provide public wireline-based services.

(16) The existing arrangement for building access will be maintained.

The TA wishes to emphasize that nothing in this document should be taken to suggest that he is fettering his discretion in relation to his powers under sections 36A and 36B of the Ordinance. The TA will continue to exercise these powers where necessary.

INTRODUCTION

1. In Hong Kong, fixed and mobile telecommunications services[1] have been regulated under separate licensing regimes, with different licensing rights and obligations for these two types of operators. With dynamic market and technological developments, the distinctions between fixed and mobile networks and services are increasingly becoming blurred. This phenomenon is commonly referred to as Fixed Mobile Convergence (FMC)[2].

2. The Office of the Telecommunications Authority (OFTA) formed a working group (the "Working Group") in early 2005 to study and analyse issues arising from FMC, to liaise with any external consultants who may be appointed to review the matter, to prepare consultation papers to seek the industry's comments on these issues and to consider the submissions received in response to the consultations.

3. On 20 April 2005, OFTA published a list of "Major Tasks and Projects", indicating that the creation of a new carrier licence and the review of other regulatory issues pertinent to FMC were among its priority tasks/projects.

4. OFTA issued a paper on 8 July 2005 entitled "Review of the Need for Regulation and Methodologies for the Calculation, of Interconnection Charges for Interconnection between Local Fixed Carriers and Value-Added Services and Mobile Services". This was followed by a consultation paper entitled "Revision of Regulatory Regimes for Fixed-Mobile Convergence" on 21 September 2005 (the "First Consultation Paper"). All of the major stakeholders were invited to make submissions on the First Consultation Paper and express their views.

5. Given the complexity of economic issues associated with FMC, OFTA also appointed Ovum Limited ("Ovum" or "the Consultant") as an independent consultant to conduct economic studies on the existing regulatory arrangements and to assess and advise the TA on the extent to which they would affect FMC.

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[1] Typical fixed services include the traditional fixed line services and broadband Internet access services. Mobile operators, on the other hand, offer the popular cellular mobile phone services.

[2] In the FMC environment, users can be served by one network and one service provider. They can be reached through one number, receive one bill and stay in contact with one terminal irrespective of whether they are stationary or on the move. FMC is expected to bring innovation in services and convenience to customers.

6. On 28 April 2006 Ovum issued a report entitled "Review of the Regulatory Framework for Fixed-Mobile Convergence in Hong Kong" (the "Ovum Report"), which was jointly presented at an industry forum by OFTA and Ovum on 16 May 2006.

7. After taking into consideration the submissions from the stakeholders to the First Consultation Paper and the recommendations in the Ovum Report, the TA issued a second consultation paper on 14 July 2006. This was entitled "Deregulation for Fixed Mobile Convergence" (the "Second Consultation Paper"). In the Second Consultation Paper, the TA set out his preliminary views and proposals in order to solicit comments from the various interested parties and thereby arrive at a fully informed decision.

8. After receiving submissions on the Second Consultation Paper, OFTA reconvened the Working Group to assess the submissions, with assistance from Ovum where necessary, and formulate recommendations to the TA.

SUBMISSIONS IN RESPONSE TO THE SECOND CONSULTATION

9. In response to the Second Consultation Paper, the TA received written submissions from the following parties[3] (listed in alphabetical order):

(1) AT&T Global Network Services Hong Kong Limited
(2) China Mobile Peoples Telephone Company
(3) Dr Lui Hon-Kwong
(4) Eagle Technology Trading Co. Ltd
(5) Hong Kong Broadband Network Limited
(6) Hong Kong Cable Television Limited
(7) Hong Kong CSL Limited and New World PCS Limited
(8) Hong Kong Telecommunications Users Group, Hong Kong Management Association
(9) Hutchison Global Communications Limited

[3] OFTA also received two letters from PCCW-HKT Telephone Limited and Wharf T&T Limited posing questions in relation to the Second Consultation Paper. OFTA's written responses were also published on OFTA's website.

(10) Legislative Councillor Albert W.Y Chan
(11) Legislative Councillor Leung Yiu Chung
(12) Metro Broadcast Corporation Limited
(13) New World Telecommunications Limited
(14) PCCW-HKT Telephone Limited[4] ("PCCW")
(15) Peter CS Choi
(16) Senior Citizen Home Safety Association
(17) Shinetown Telecommunication Limited
(18) SmarTone Mobile Communications Limited
(19) Sonic Teleservices
(20) Television Broadcasts Limited
(21) TVB Pay Vision Limited
(22) Wharf T&T Limited[5] ("WTT")
(23) WINET Engineering Limited

All of these submissions, which are referred to collectively as the "Submissions" in this Statement, have been published on the website of OFTA.

10. The Submissions have been analysed by the Working Group. In order to obtain an independent analysis of them, OFTA also instructed Ovum to assist in considering the submissions, and particularly the comments which were made in relation to the Ovum Report. In preparing this Statement, the TA took into account the Submissions, the views and recommendations of Ovum, as well as the views and recommendations of the Working Group. As is explained in this Statement, the TA has not accepted all of Ovum's recommendations.

BACKGROUND CONSIDERATIONS

11. The Government of the Hong Kong SAR has, for many years, adopted policies that emphasise the importance of promoting competition for consumer benefit. This policy was formalised in the May 1998 *Statement on Competition Policy* which states that:

[4] PCCW and WTT did not file submissions in response to the Second Consultation Paper. Instead they both chose to exhibit to their affidavit evidence (in support of challenges to the fairness of the consultation process) the submissions that they would have filed, but for their objections to the manner in which the consultation was conducted. Both PCCW and WTT were advised that the TA would consider these submissions and neither objected to this.
[5] See footnote 4

"*All government entities, and public- and private- sector bodies are encouraged to adhere to the following pro-competition principles for the purpose of enhancing economic efficiency and free trade –*

(1) *maximising reliance on, and minimizing interference with, market mechanism;*
(2) *maintaining a level-playing field;*
(3) *minimizing uncertainty and fostering confidence in system fairness and predictability by –*
 (i) *consistent application of policies;*
 (ii) *transparent and accountable operations;*
 (iii) *adherence to equitable and non-discriminatory standards and practices*"

12. These pro-competition principles have been adopted by the Government in setting policy for the telecommunications sector in Hong Kong. The "*Government response to the Consumer Council's Report on Achieving Competition in the Liberalised Telecommunication Market"* dated September 1996[6] states[7]:

> "*The Government is fully committed to the promotion of fair trade and competition. We firmly believe that market forces and minimum Government intervention bring greatest benefit to the community by enhancing competition and efficiency while keeping costs and prices down. This notwithstanding, where necessary, we will use appropriate measures to rectify any unfair business practices, safeguard competition and protect consumer interests.*"

13. The same document sets out[8] the following specific objectives for the telecommunications sector in Hong Kong:

- *that the widest range of quality telecommunications services should be available to the community at reasonable cost;*

- *that telecommunications services should be provided in the most*

[6] Published by the Economic Services Branch of the Hong Kong Government in September 1996
[7] At paragraph 1.4
[8] At paragraph 1.5

economically efficient manner possible; and

- *that Hong Kong should serve as the pre-eminent communications hub for the region now and into the next century.*

14. These policies have been widely publicised and remain current[9]. As the regulator for the telecommunications sector in Hong Kong, the TA must make decisions having due regard to the Government's telecommunications policies when making decisions, such as those he is required to make in relation to the matters covered by the Second Consultation Paper.

15. In line with this market-driven policy, the telecommunications industry in Hong Kong has been progressively liberalized since the 1990's. The TA has implemented government policy by promoting competition in the telecommunications market, removing regulatory entry barriers and restrictions and minimising regulatory intervention wherever possible in order to let market forces serve the public interest.

16. The practical implication of this policy was set out in a speech by Mrs Carrie Yau, the then Secretary for Information Technology and Broadcasting on 30 May 2002[10] :

> "*We are keenly aware that our market liberalization policy will only be successful if we level the playing field so that no one player, be it an incumbent or a newcomer, enjoys advantage over others <u>either by design or default</u>*". (emphasis added)

17. It follows therefore that an objective assessment should be made of whether the market can serve the public interest not only when considering the need for regulatory intervention but also when considering whether to dispense with implemented regulatory measures. Regulation will be justified only if the market (without regulatory intervention) fails to deliver the public interest, and it is demonstrable that regulation can do better.

18. Under a market-driven approach, it is not for the TA as the regulator

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[9] See for instance the website of Communications and Technology Branch, Commerce Industry & Technology Bureau (http://www.citb.gov.hk/ctb/eng/telecom/tp.htm)

[10] Speech entitled "*Telecommunications Policy and Market* Regulation" made to the APEC TELMIN5 Plenary Session 2

to decide whether there should be FMC, or the extent or pace of it in Hong Kong; these matters should be properly determined by the market. As explained in the Second Consultation Paper, the role of the TA in this respect is to ensure that the regulatory environment is conducive to the development of new technologies, products and services which may include those related to FMC. A regulatory environment which would be conducive to FMC should include the following elements: minimum barriers to the market and technological developments, minimum distortion to competitive processes, and a clear and a predictable regulatory framework to facilitate informed investment decisions. In such a regulatory environment, operators will be able to respond promptly to consumer demand for FMC or technological advances promoting FMC without unnecessary regulatory constraints.

19. Whilst any decision to regulate or deregulate should have regard to these policy considerations, the overriding principle is whether it would be in the public interest. The appropriate balance between regulation and market competition should be struck having regard to the interests of various stakeholders, including consumers and the operators of telecommunication services.

MARKET DEVELOPMENT OF FMC IN HONG KONG

Proposal

20. The Second Consultation Paper proposed that the market and not the regulator should determine whether FMC happens, and the extent and pace of it. The regulator's role should be to ensure that the regulatory environment is conducive to the development of FMC if and when there is demand for it. It was also suggested in that paper that the existing regulatory framework would be unsustainable if and when FMC happens, and that a regulatory review should be conducted without delay to remove regulatory uncertainties that might discourage investment in FMC initiatives. In relation to these issues, interested parties were asked for their views on the following questions:

Question 1: *Do you agree that the extent and pace of development of FMC should be decided by the market and the TA's role to ensure that the regulatory environment is conducive to the development of FMC?*

Question 2: *Do you agree that the review on the regulatory environment for FMC should be commenced now without delay in order to facilitate informed investment decisions?*

Submissions

21. Generally, all Submissions supported the view that regulatory certainty would facilitate informed investment decisions. However, the fixed network operators (FNOs) and mobile network operators (MNOs) had different views on how to achieve regulatory certainty. The FNOs considered that the FMC review had caused regulatory uncertainty and discouraged investment, given the possibility of income redistribution between industry stakeholders. On the other hand, the MNOs considered that the existing regulations caused asymmetries between fixed and mobile licensees which discouraged investment, and that regulatory certainty could be achieved by removing such asymmetries without delay.

22. In general, the Submissions supported the principle that cross-platform competition between fixed and mobile networks should not be inhibited. The MNOs considered that some existing regulatory arrangements like the "Mobile Party's Network Pays" (MPNP) arrangement for fixed-mobile interconnection charges (FMIC) had distorted cross-platform competition. On the other hand, the FNOs considered that the MPNP arrangement had not reduced competition, citing the high degree of competition in the market today (particularly in relation to fixed-mobile substitution (FMS)). They also submitted that to be consistent with the market-driven policy which is applied to the telecommunications industry, the TA should not proactively "ensure" that the regulatory environment is "conducive" to FMC, because the prospects for and timing of FMC are uncertain. Some FNOs suggested that it was difficult to make submissions without a clear definition of "FMC".

Consultant's Views

23. In the Ovum Report, the Consultant identified a significant efficiency gain[11] which would result from removing the existing regulatory

[11] The efficiency gain of moving to NGN was estimated to be at an order of HK$ 3 billion per annum by 2011 in Hong Kong. Assuming that removal of regulatory asymmetry would bring forward NGN investment by two years, the net present value of no such delay is HK$ 4.5 billion.

asymmetries between fixed and mobile networks. Taking that step would minimise distortions and/or delay in investment in next generation networks (NGNs). Having considered all the submissions filed in response to the Second Consultation Paper, the Consultant remains of the view that the current MPNP model distorts both competition and investment decisions. In particular it limits infrastructure based competition between FNOs and MNOs, weakens the incentives for broadband investment by the FNOs, limits the ability of MNOs to fund future investments, and weakens incentives for FNOs to combine with MNOs to offer converged services. The Consultant considers that the net economic benefit could even be higher than its original estimate[12].

Response and Analysis

24. The FMC regulatory review is intended to identify and address possible regulatory impediments and distortions to the market development of FMC (in whatever form it may occur), as well as the possibility of consequential market failure that may require regulatory attention. It is only in relation to these matters where the TA has a role to play. Other FMC matters are outside the scope of this regulatory review as they can be determined by the market.

25. It is not the TA's intention to promote FMC as a desirable development in preference to other possible developments; FMC is simply a development which is expected and which should be anticipated. The TA's role in relation to FMC is to ensure that the regulatory and business environment is conducive to spontaneous market developments, and that the regulatory environment should not distort or inhibit such developments. It is recognized that FMC is one possible market outcome, albeit not the only one.

26. Competitive pressure in the market is the key to sustained investment. A competitive market is inherently uncertain, but market uncertainty brings about both risks and opportunities. Based on past experience, market liberalization and deregulation initiatives in the telecommunications industry in Hong Kong have resulted in significant new investment. Recent examples include the phased withdrawal of mandatory Type II interconnection regulation, starting from 2004, following which competitive

[12] The latest estimate of the economic welfare for moving to NGN by the Consultant is up to HK$ 7 billion per annum, which implies that any advancement of NGN investment will have significant benefit to the society.

fixed network coverage increased from 50% to 76% of households. Following the withdrawal of *ex ante* tariff regulation on the fixed-line incumbent, there have been significant investments in "triple" and "quadruple" play services. It is therefore important to distinguish between market risk and regulatory risk – while the former can create uncertainty, experience indicates that the removal of unnecessary regulatory intervention can be an impetus for investment notwithstanding the uncertainty this may create.

27. The TA recognizes that some of the regulatory changes proposed in the Second Consultation Paper may, depending on the market outcome, lead to a redistribution of income among the industry stakeholders, and that it is possible that this may affect the availability of funding for new investment. Nevertheless, such a redistribution of income is not a zero-sum game. Unnecessary regulation will be replaced by a genuine reliance on market forces to provide incentives to invest. With free and undistorted competition between FNOs and MNOs, all consumers are expected to benefit from a more dynamic market which will engender persistent innovation in new products and services in the long run.

28. The TA also acknowledges that regulatory change would affect the business plans of the operators in the short term. Accordingly, the TA is minded to put in place appropriate transitional arrangements for both operators and consumers to enable them to adapt to such change.

29. As for cross-platform competition, the potentially distorting effect of any prevailing regulatory arrangement (such as the regulatory guidance in favour of MPNP) on investment decisions and competition in the provision of telecommunications services, is in any event a concern that warrants review, with or without the prospect of FMC.

Conclusion

30. Having taken into account the views expressed in the Submissions and those of the Consultant, the TA considers that it is clearly in the public interest that the TA should deal with the relevant issues brought out in the two consultation papers in relation to FMC without delay.

MAJOR REGULATORY ISSUES IN RELATION TO FMC

31. The remaining sections of this Statement set out the TA's considered views on the following issues:

(A) **Fixed-Mobile Interconnection Charge (FMIC)**
(B) **Local Access Charge (LAC)**
(C) **Unified Carrier Licence (UCL)**
(D) **Number Portability**
(E) **Other Issues**

In arriving at his opinion on these issues the TA has carefully considered and taken into account the Submissions, the views and recommendations of the Consultant and those of the Working Group.

(A) FIXED-MOBILE INTERCONNECTION CHARGE (FMIC)

Current Situation

32. FMIC is an interconnection charge for circuit-switched traffic[13] exchanged between FNO and MNO. Currently, regulatory guidance is given to the industry in TA Statement No. 7[14]. That guidance assumes a payment structure based on a MPNP mechanism. This charge is paid by a MNO to the interconnecting FNO for telephony traffic both from a fixed line to a mobile phone and from a mobile phone to a fixed line. The arrangement is illustrated in Figure 1.

[13] "Circuit-switched traffic" means voice and non-voice traffic over the conventional circuit-switched networks. This is distinct from "packet-switched traffic" over the Internet Protocol (IP) networks.
[14] TA Statement, *Interconnection and Related Competition Issues Statement No. 7 (Second Revision) "Carrier-to-Carrier Charging Principles*, 18 March 2002.

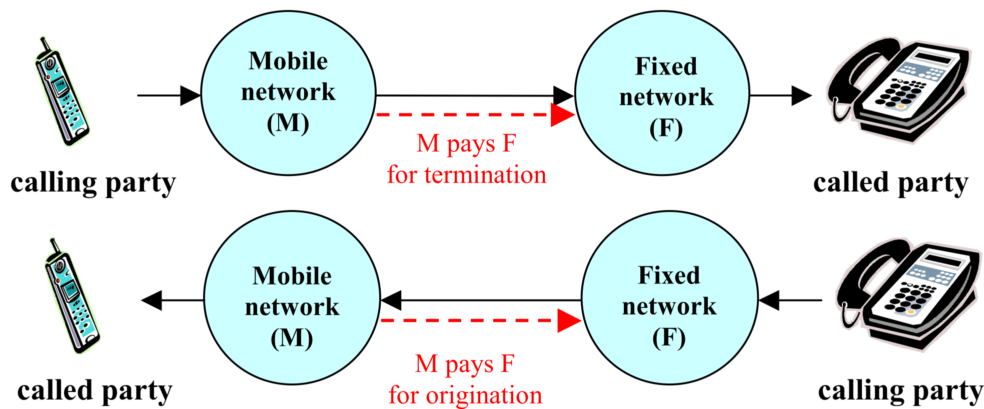

Figure 1 - The existing FMIC arrangement based on MPNP

33. The level of the FMIC levied by the incumbent FNO, PCCW is stipulated under a tariff which is approved by the TA. After the most recent review in November 2004[15], the current FMIC tariff of PCCW is fixed at 4.36 cents per minute. Apart from PCCW, the TA has not intervened in relation to the FMIC levied by other FNOs, but PCCW's tariff has largely been followed by them in settling their own FMIC.[16]

34. MPNP is neither symmetric nor reciprocal. The use of MPNP dates back to the early 1980's when mobile services were at their inception stage and were then treated as premium value-added services. At the time, the tariff for local fixed telephony service was regulated in the form of a flat-rate monthly package, which was below operating cost, and the loss was cross-subsidised by the provision of the profitable international telephone service; the price of mobile services has not been regulated in the same way. As MNOs charged their customers on a per-minute basis, it was considered reasonable in the early years of mobile use in Hong Kong for the MNOs to pay the incumbent FNO an interconnection charge, irrespective of whether a customer of the mobile network makes a call to, or receives a call from, a customer of the fixed network. If this asymmetric MPNP arrangement had not been adopted at that time, the then franchised FNO would have had to increase the flat monthly fees of their customers to cover the costs for carrying the calls to or from the MNOs.

[15] TA Statement, *Charge 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*, 12 November 2004.

[16] More recently, the TA has accepted a mutual request for determination by HKBN and Peoples Telephone in a historical dispute over FMIC.

Application of the Market-Driven Policy for FMIC

Proposal

35. In summary, the proposal in the Second Consultation Paper was that the current regulatory guidance, which assumed MPNP, should be phased out over an appropriate transition period (during which the *status quo* would be maintained). The network operators would be free to negotiate the terms and conditions of mutually acceptable interconnection arrangements to apply after the transition period. However, in recognition of the importance, to daily life and business in Hong Kong, of communications services with "any-to-any connectivity", the TA's proposal was to resort to the powers under section 36A of the Ordinance to determine terms and conditions of interconnection between particular networks after the transition period if commercial negotiations fail and when a market failure is established. This was considered to be consistent with the long established market-driven approach adopted by the TA (and consistent with the Government's policy on telecommunications) that market forces should replace regulation once sufficient competition has been established and there is no foreseeable risk of market failure resulting from this approach. The preliminary view of the TA differed from that of the Consultant in that the TA did not prefer any specific interconnection regime to replace MPNP, but would leave the market to decide whether MPNP should be retained, or whether a new settlement model should be used.

Submissions

36. In general, all the Submissions supported, in principle, a market-driven approach for FMIC. However, the FNOs and the MNOs have different interpretations of the "market-driven approach". The FNOs believe that the TA should not interfere with the *status quo* because it has not caused any significant detriment to the telecommunications market. The MNOs are of the view that the TA should remove the regulatory asymmetries between fixed and mobile licensees.

Consultant's Views

37. In the Ovum Report, the Consultant expressed the view that the current asymmetric MPNP arrangement for FMIC operated in Hong Kong is

now out of line with international best practices. The Consultant proposed withdrawing the existing MPNP rule and letting the industry parties negotiate interconnection arrangements on a commercial basis, with the TA only intervening by exercising his powers under section 36A of the Ordinance when there is a market failure. It also proposed that the TA should maintain the mandatory "any-to-any connectivity" requirement as it would be in the public interest to do so, and that it should also issue a set of "last-resort" guidelines for interconnection arrangements. The Consultant recommended "Bill And Keep" (BAK) as the "last-resort" regime for all Type I interconnections, i.e. all fixed to mobile, fixed to fixed and mobile to mobile interconnections. The Submissions have not caused the Consultant to change its views.

Response and Analysis

38. As explained in paragraph 15, the TA has consistently followed a market-driven policy in dealing with regulatory matters ever since the telecommunications industry was first liberalized in 1995. Over the years, competition has been highly effective in enhancing consumer benefits and creating business opportunities. A market-driven approach is also consistent with the "big market, small government" policy adopted by the Government[17]. None of the submissions questioned the appropriateness of this policy. The TA sees no reason for not upholding the market-driven policy in considering the appropriate regime for FMIC.

39. In response to questions raised by PCCW and WTT, the TA published on the OFTA Website a set of responses on 26 and 28 September 2006 respectively which explained the TA's view on a market driven policy[18]. In summary, market forces are presumed to serve the best interest of the public. Regulatory intervention, in contrast, is only likely to be in the public interest if and when the market mechanism is objectively demonstrated to have failed, or is likely to fail to deliver the desired public policy objectives. Generally speaking, the market process is efficient as long as the alternative – regulatory intervention – cannot demonstrably do better in terms of economic welfare.

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[17] Press Release, *Big Market, Small Government*, Sir Donald Tsang, Chief Executive, HKSAR Government, 18 September 2006.

[18] *Fixed-Mobile Convergence - Second Consultation Paper on Deregulation for Fixed-Mobile Convergence - Replies to Enquiries from Interested Parties - Issue No. 1* and *2*, dated 26 and 28 September 2006 respectively.

40. In the context of FMIC, the choice is between retaining the regulatory guidance in favour of MPNP or dispensing with it and leaving it for the market to determine the appropriate payment arrangements.

Conclusion

41. Having taken into account the views expressed in the Submissions, **the TA concludes that there is no reason why he should not follow the market-driven approach in relation to FMIC**.

The Regulatory Guidance in favour of MPNP

Proposal

42. The TA's proposal in the Second Consultation Paper was that the current regulation guidance on MPNP as specified in the TA Statement No. 7 should be phased out over an appropriate transition period during which period the *status quo* should be maintained. The network operators would be free to negotiate the mutually acceptable terms and conditions of interconnection to apply after the transition period. The following specific questions were asked in the Second Consultation Paper:

Question 3: *What is the effect of the existing regulatory guidance in favour of the MPNP arrangement on competition, including competition between fixed and mobile network operators?*

Question 4: *Should the current intervention on FMIC, based on a regulatory guidance in favour of the MPNP arrangement, be phased out in view of Hong Kong's market conditions, fair competition principles and the prospect of FMC? Please elaborate.*

Question 5: *Would the absence of regulatory intervention lead to market failure, to the detriment of competition and consumer interest? If yes, please substantiate your claim with credible evidence.*

Submissions

43. The MNOs supported the proposal to withdraw the regulated MPNP

guidance to restore a "level playing field", which they consider would be more conducive to cross-platform competition, FMC and innovation in general. Generally they believed that withdrawal of the guidance would not lead to market failure. Two submissions from LegCo members also supported removal of regulatory barriers to facilitate competition and innovation.

44. On the other hand, the submissions from the FNOs contended that the MPNP guidance should stay because it has not caused any demonstrable market failure to date. They also expressed a number of concerns arising from the effects of the potential redistribution of income on the operators and the users. While the impact of the removal of MPNP guidance will be dealt with in the later part of this Statement (see paragraphs 72-93), the following analysis will focus on whether there are valid reasons for removal of the current regulatory guidance.

45. Some FNOs submitted that insufficient economic analysis of the consequences of removal of the regulatory guidance had been performed.

Consultant's Views

46. The Submissions have not caused the Consultant to change its recommendation on withdrawing the current regulation, which favours an asymmetric MPNP model, and moving to a symmetric BAK model.

47. The Consultant has considered the allegations, which were made in some of the Submissions, of insufficient analysis in the Ovum Report. The Consultant remains of the view that its economic analysis performed in the original FMC consultancy study commissioned by OFTA is valid and that the criticism does not cause it to alter its analysis.

Response and Analysis

48. The regulatory guidance which favours MPNP was formulated in the context of the business environment prevailing in the 1980's. Since then, the business environment has changed substantially in the principal aspects summarised below.

Business environment in 1980's	Business environment today
Fixed: a necessity service Mobile: a premium service, or value added service (VAS)	Both fixed and mobile are basic and highly-penetrated services
Fixed: tariff was regulated Mobile: prices were not regulated	Both fixed and mobile prices are fully deregulated.
Fixed: tariff was regulated at below-cost Mobile: prices were expensive	Fixed: tariffs are rebalanced Mobile: prices are competitive
Fixed: tariff was regulated at flat-rates; Mobile: prices were two-tiered[19] and two-way[20]	Fixed: two-tiered structure has not been prevalent despite tariff deregulation Mobile: market prices are near-flat[21]
Fixed: need to recover network costs from mobile traffic to finance the loss-making operation in local fixed-line Mobile: depends on interconnection with fixed network; have room to recover network costs from end-users instead	Interconnection needs are mutual between fixed and mobile networks. Retail prices for both fixed and mobile services are competitive
Fixed: an incumbent monopoly Mobile: a new and liberalized sector	Both fixed and mobile sectors are fully liberalized. Both FNOs and MNOs have bargaining power.

49. Given today's business environment, is there a need to maintain the current regulatory guidance having regard also to the likely development of FMC ? As a general observation, both fixed and mobile services in Hong Kong are competitive by international standards, in terms of market concentration, price levels, network coverage, quality of service, variety of choices, service penetration, etc. Thus there is a relatively low risk of unilateral or collective exercise of market power in the negotiation of FMIC arrangements which would be the most likely cause of market failure.

50. Most of the Submissions agree that the development of FMS in

[19] Including a monthly subscription fee and a usage charge
[20] Usage charge applies for both incoming and outgoing calls
[21] More and more traffic minutes are included in bucket plans sold at flat-rates.

Hong Kong is relatively advanced. Two observations are relevant here. First, the bargaining power between FNOs and MNOs appears now to be balanced. The total number of mobile users in Hong Kong is more than double that of business and residential fixed lines combined. Therefore, a bigger market share in a smaller market segment does not necessarily translate to stronger bargaining power on FMIC negotiations. For example, in terms of number of subscribers, the biggest FNO has less subscribers (of telephony service) than the biggest MNO. The smallest pure MNO has more subscribers (of telephony service) than the smallest FNO. Second, a relatively high degree of FMS in Hong Kong implies a likely shift from a more concentrated segment (fixed) to a less concentrated one (mobile) and a balanced bargaining power, rendering market failure unlikely if the regulatory guidance is removed.

51. Admittedly, from an entry-barrier point of view, the bargaining power between the incumbent operators and potential new entrants may not necessarily be balanced. While the TA considers that this concern warrants the retention of the TA's powers under section 36A of the Ordinance as a last resort, it does not warrant the retention of regulatory guidance in favour of MPNP. This is because, although MPNP strengthens the bargaining power of a new fixed entrant against a mobile incumbent, it weakens the bargaining power of a new mobile entrant against a fixed incumbent. For Fixed-Fixed Interconnection Charge (FFIC) and Mobile-Mobile Interconnection Charge (MMIC), MPNP has no effect on the bargaining power of a new entrant. Therefore, on balance, MPNP does not lead to lower barriers to entry.

52. Some of the Submissions infer from the competitive environment and the high degree of FMS in Hong Kong that the MPNP mechanism has been working well, and therefore the TA should not disturb the entrenched practice. However, this ignores the changes in justification for the regulatory guidance and the need to anticipate the development of FMC. The "entrenched practice" is based on regulatory intervention. As stated in paragraph 17, regulation will be justified only if the market (without regulatory intervention) fails to deliver the public interest, and it is demonstrable that regulation can do better. The effective working of the market is not due to the existing regulatory guidance in favour MPNP, but rather due to a host of other factors, such as successful market entry by multiple operators, the rollout of competitive infrastructure, the availability of technologies that meet users expectation, etc. These factors leading to the effectiveness of the existing

market will remain after withdrawal of the existing regulatory guidance. There is therefore no evidence to show that without the existing regulatory intervention the market would fail to deliver the public interest that it is delivering now.

53. Some of the submissions consider the MPNP arrangement to be inappropriate because it is asymmetric, unfair, discriminatory, anti-convergent, etc. The TA considers these reasons to be relevant but not sufficient for the deregulation of FMIC. Instead, the primary concerns for the regulator are the effects on competition, investment and innovation; and ultimately better services and wider choices from the perspectives of end users/consumers.

54. The MPNP arrangement involves a cross-subsidy between FNOs and MNOs (ultimately between fixed and mobile users). MNOs are required by regulation to pay FMIC regardless of their bargaining power. There are two principal consequences. MNOs have fewer resources to invest in innovation in order to compete against the FNOs and the MPNP guidance distorts the investment decisions of FNOs and MNOs. Withdrawing the MPNP guidance would leave the telecommunications industry to compete, invest and innovate on the basis of market incentives, instead of having to adapt to prescriptive regulatory distortion of the market. To be consistent with the market-driven policy, the TA should remove unnecessary regulation unless he is satisfied that the public interest cannot be better safeguarded by deregulation.

Conclusion

55. Having considered the Submissions and the Consultant's views, **the TA has come to the conclusion that it is unnecessary and inappropriate to retain the regulatory guidance in favour of MPNP. Accordingly, the guidance is to be withdrawn, subject to a transition period** as further discussed below.

Replacement Regulatory Guidance

Proposal

56. No specific proposal was made, but the following specific questions

were asked in the Second Consultation paper:

Question 9: *Without prejudice to any position held by respondents in preceding questions, if the TA decides to eventually withdraw the regulatory guidance in favour of MPNP and let the parties negotiate, should the TA issue guidelines on for the "last-resort" charging arrangement that may be adopted in the event of a determination under section 36A?*

Question 10: *Without prejudice to any position held by respondents in preceding questions, if the TA decides to issue guidelines on the "last-resort" regime, should the guidelines apply to FFIC, FMIC and/or MMIC?*

Question 11: *Without prejudice to any position held by respondents in preceding questions, if the TA issues guidelines on the "last-resort" charging arrangement in the event of a determination under section 36A, should the option reflect caller sovereignty, receiver sovereignty, or both, in allocating end-to-end connectivity cost?*

Question 12: *Apart from the charging options identified by the Consultant, can you identify any additional option?*

Question 13: *What are the merits and demerits of the options identified by the Consultant, and other options identified by you?*

Question 14: *Which option is in your opinion in the best interest of the consumers and the users, and the industry as a whole?*

Submissions

57. There was no consensus among the Submissions as to whether replacement regulatory guidance should be issued. Some operators (both FNOs and MNOs) objected to any regulatory guidance because they believe it distorts commercial negotiations, while others supported regulatory guidance because they believe it assists commercial negotiations.

58. There was also no consensus among those who filed Submissions on the choice of a last-resort regime, if new guidance were to be issued. The FNOs generally preferred MPNP because it is the *status quo*. Some MNOs preferred

"Calling Party's Network Pays" (CPNP) while others preferred BAK. Whilst some of the submissions somewhat acknowledged the existence of both caller and receiver sovereignties, they did not treat this as indicating what sort of payment regime might replace MPNP.

Consultant's Views

59. The Consultant considered that a "last-resort" guidance (based on the BAK model) upon the withdrawal of MPNP guidance should be issued in order to minimize regulatory uncertainty and reduce transaction costs in commercial negotiations.

Response and Analysis

60. Again, the main considerations in deciding whether or not to issue regulatory guidance are necessity (i.e. whether having a guidance would improve the chance of commercial agreement on FMIC) and appropriateness (i.e. whether the guidance would distort commercial negotiations on FMIC).

61. The TA considers that the absence of regulatory intervention on FMIC is unlikely to result in a market failure. In other words, the market is likely to settle FMIC by itself. There is no compelling evidence to indicate that replacement regulatory guidance would improve the chance of commercial agreement on FMIC. Accordingly, the TA considers that replacement guidance is unnecessary.

62. If the TA were to issue regulatory guidance, it would have to specify within it a settlement mechanism for FMIC. A regulatory guideline will not guarantee a competitive market outcome, and indeed it may work against this by affecting the process of commercial negotiations which in turn may inhibit economic efficiency that would be otherwise attainable through competition. For the reasons above, the TA concludes that replacement guidelines are inappropriate.

63. The TA has also considered the implications of possible uncertainty arising from not having regulatory guidance for FMIC. The TA considers that the likely outcome would be that interconnecting parties will have stronger incentives to mutually agree on FMIC, because each would like to avoid the

risk of a possibly unfavourable outcome of regulatory intervention. Besides, the possibility of regulatory distortion to any commercial agreement reached in this kind of environment would be minimized, because the consequence of regulation is unknown to the parties beforehand (which is not the case under the present regime). Accordingly, the uncertainty of not having guidance for FMIC is likely to be positive. Interconnecting parties are likely to be under competitive pressure to reach commercial agreements in today's market environment.

64. Given the TA's view that replacement regulatory guidance for FMIC is neither necessary nor appropriate upon the withdrawal of the assumption favouring MPNP in TA Statement No.7, it becomes unnecessary to consider the various options for the "last-resort regime" which might be stipulated in any replacement guidance. However, one cannot rule out the possibility in the future of a genuine need for regulatory guidance on FMIC, should market conditions change and/or indications of likely market failure emerge. In that event, the interested parties would be fully consulted about the need to issue regulatory guidance on FMIC.

Conclusion

65. Having considered the views set out in the Submissions and those of the Consultant, **the TA has concluded that he will not issue replacement regulatory guidance upon the withdrawal of the MPNP guidance.** However, the TA will monitor market developments after the withdrawal of the MPNP guidance. Should market conditions change and/or indications of likely market failure emerge, he will re-consider the need for regulatory guidance on FMIC. The interested parties will be fully consulted if the TA intends to issue regulatory guidance on FMIC in the future.

Interconnection Links

Proposal

66. The existing arrangement of establishing interconnection links between a fixed network and a mobile network is also asymmetric in the sense that the MNO is required to bear the cost of all interconnecting links connecting with the fixed counterpart. In the Second Consultation Paper, the

TA proposed withdrawal of the regulatory guidance in favour of MPNP with regard to interconnection links. The following questions were specifically raised in the Second Consultation paper:

Question 15: *Should the existing regulatory asymmetry in relation to interconnection links between fixed and mobile operators be removed? Should the TA issue guidelines for facilitating commercial negotiation?*

Question 16: *Without prejudice to any position held by respondents in preceding questions, if the TA decides to remove such an asymmetry, should the TA set a last-resort regime that each interconnecting party, irrespective of fixed, mobile or integrated network operators, should bear the cost of interconnection links for delivery of traffic to the terminating networks? If not, please detail your alternative proposal.*

Submissions

67. The Submissions specifically relating to interconnection links were relatively thin, and they largely corresponded with the views made regarding FMIC arrangements.

Consultant's Views

68. As in the case of FMIC, the Consultant recommended the removal of regulatory asymmetry for the establishment of interconnection links between fixed and mobile networks. Each originating network, irrespective of whether it is fixed or mobile, should bear the cost of the link required for delivery of traffic to the terminating network.

Response and Analysis

69. The interconnection link is a key element of the terms of conditions for interconnection and thus the regulatory approach should not be separated from or different to that in relation to FMIC.

Conclusion

70. **The TA has concluded that he will withdraw the regulatory**

guidance on interconnection links from TA Statement No.7, and he will not replace it with any new guidance[22]. However, as in the case of FMIC, the TA will monitor market developments and re-consider the need for regulatory guidance on interconnection links should market conditions change and/or indications of likely market failure emerge.

Impact on industry and users

71. The TA recognises the concerns of both industry and users as to the potential impact of the withdrawal of the existing regulatory guidance in favour of MPNP, on revenue and cost bases of the network operators as well as on the retail pricing levels and structures of telecommunications services provided to consumers. In this regard, the specific question asked in the Second Consultation Paper was :

Question 7: *What are your views on the impact of the proposed deregulation on the fixed network operators, the mobile network operators and the consumers?*

Submissions

72. The Submissions from FNOs expressed a number of concerns about the potential redistribution of income if the MPNP guidance is withdrawn. First, the reliability of fixed networks may deteriorate and the price of FNOs' services may go up. This concern is shared in the submissions made by a number of content, application and service providers who currently rely on fixed networks to do business. Second, if retail prices do increase, this may disadvantage certain consumer groups who rely more heavily on fixed-line services. Third, it will be unfair to the FNOs as retail fixed-line prices are flat while mobile prices are usage-based; the FNOs suggest that they may need to introduce usage-based prices as a result. These concerns are shared by the Senior Citizen Home Safety Association who submitted that the service reliability and pricing structure of fixed lines are particularly important to the elderly who use the Personal Emergency Link Service for life-saving calls. Fourth, the FNOs may retrench a significant number of jobs. Fifth, undoing the *status quo* may incur significant transaction costs. Sixth, it is possible that some FNOs may be forced to exit the market as a result.

[22] For the avoidance of doubt, this conclusion does not affect the existing arrangement whereby a mobile network operator under its mobile carrier licence has no authorization to open up roads to lay cables for interconnection links.

Consultant's Views

73. In the First Report, the Consultant anticipated that, in the short term, the proposed removal of regulatory guidance would lead to FNOs losing revenue which they currently receive and savings by MNOs which they would be able to pass on to consumers. In the longer term, the Consultant expected some acceleration in FMS and increased incentives to roll out NGNs for providing new services. These changes should make the average telecommunications users better off and enable them to enjoy a wider range of better services at lower prices.

74. The Consultant has revisited the impact and distributional effects in the light of the comments made in the Submissions. The Consultant considers that the costs of moving from MPNP to BAK would not be significant to the industry. In particular, it believes it is unlikely that the FNOs would introduce usage based charges at the retail level in the short term. After analyzing the distribution effects, including the possible lowering of mobile service prices, possible increase of fixed line charges, and impact on low income groups, it does not see any good reason to suggest that it would not be in the public interest to move to BAK in Hong Kong.

75. The TA has noted the Consultant's views on the impact and distributional effects of a change from the existing MPNP arrangement. However the TA would wish to leave it to the market to decide whether a move to BAK or some other arrangement will happen after the deregulation of FMIC.

Response and Analysis

Impact on the industry

76. Whilst the current total payment by MNOs to FNOs under the existing MPNP arrangement amounts to some HK$600 million per year, it does not follow that the proposed termination of the existing regulation, if implemented, would mean a redistribution of that order between the FNOs and the MNOs. The TA's recommendation is not to remove FMIC, but instead to de-regulate it. It would then be up to the market to decide without regulatory intervention whether the existing FMIC arrangements should be retained,

changed or removed.

77. The potential effect on FNOs and MNOs would depend on the replacement settlement arrangements negotiated between the operators, which could take several different forms, the longer term developments at the retail level in the form of price adjustments to reflect wholesale cost changes and the emergence of new innovative services. It should be noted that there is no regulation on the prices of the FNOs and MNOs at the retail level.

78. The objective of the TA is to achieve a sustainable and level playing environment catering for the emergence of FMC if and when there is demand for it. The financial impact on the operators is only one of the considerations to be taken into account. To allow a gradual rather than abrupt change of regulation, it is the TA's intention to provide a suitable transition period within which the FNOs and MNOs should be able to adjust their business plans and negotiate a replacement mechanism.

79. Investors in the fixed and mobile network operations cannot have a legitimate expectation that regulation will remain unchanged forever, as technologies advance and market conditions change. Instead, the legitimate expectations should be that the regulatory regime for the telecommunications industry will promote competition and seek to minimize distortion to competition and promote investment incentives. In this respect, the business environment for both mobile and fixed carriers has changed significantly and frequently in the past decade. A decision to deregulate FMIC is consistent with this.

80. Depending on the replacement mechanism adopted by the operators after commercial negotiations, it is possible that the FNOs may raise their prices to consumers or even move to usage based/time based charges. Whether or not they will do so depends on market forces. As the regulator for the telecommunications sector, the TA is entirely neutral on the issue of usage-based fixed line charges and neither supports nor opposes their introduction by the FNOs. This has been the effective policy position since retail minimum[23] and maximum[24] prices for fixed line services ceased to be

[23] The *ex-ante* fixed-line tariff approval process against the incumbent FNO was withdrawn on 13 January 2005. Prior to the withdrawal, the scrutiny against unauthorized discounts was often regarded as a form of minimum price control.

[24] The price caps imposed on the incumbent FNO's fixed-line tariffs under the Framework Agreement

controlled, save for scrutiny under the *ex post* competitive safeguards.

81. The exit of a FNO from the Hong Kong market may be attributable to a range of factors including effective competition in the market, inefficiency of its own operation, or anti-competitive conduct by some players. It is not the role of the TA to protect the FNOs or MNOs from the effects of competition. Regulatory intervention would only be justified to address anti-competitive behaviour and the existing competition provisions in the Ordinance already provide the necessary safeguards. In any case, the TA considers that deregulation would reduce barriers to and promote competition, particularly the cross-platform competition between FNOs and MNOs, rather than reducing it. The TA would not expect the FNOs to cease or slow down investment in the NGNs in response to the proposal; rather he would expect them to speed up the process in order to bring down costs and increase sources of revenue by bringing new innovative services to customers.

82. The effect on the MNOs appears uncertain. If a symmetric BAK model is adopted, their costs will go down. However whether they will pass on this saving directly to the consumers in the form of reduced prices will be dependent on market forces.

Impact on End-Users

83. In the short term, it is not certain whether and to what extent the proposed de-regulation would produce a net negative or positive impact on end users. Prices at the retail level may go up or go down or stay unchanged after the de-regulation; they are affected by a lot of factors other than regulation. Pricing structure at the retail level does not necessarily correlate directly with that of the inter-operator interconnection charge at the wholesale level. However, any change in prices will be subject to competition among the fixed carriers, FMS, VoIP services and possibly convergence services.

84. The TA has considered whether deregulation at the interconnection level would have a direct impact on retail price structure. FFIC and MMIC are not regulated at present. FFIC is settled on the CPNP mechanism which is usage-based, but retail fixed telephony prices have been flat; MMIC has long been settled on the BAK mechanism which is not usage-based. Only in recent

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between OFTA and PCCW-HKT expired on 1 January 2002.

years have retail mobile prices been migrating from usage charges towards near-flat-rates. It remains uncertain what kind of settlement mechanism the market would adopt for interconnection upon the deregulation of FMIC, but the TA is not aware of any concrete evidence indicating that retail fixed pricing would necessarily move towards a usage-based regime *because of* FMIC deregulation, especially given the apparent consumer preference for flat-rates and the intense competition in the telecommunications sector in Hong Kong. On the contrary, retail market competition is likely to provide mutual incentives for the interconnecting parties to dispense with time-based interconnection charges and exploit alternatives such as capacity-based settlement.

85. Even *if* the deregulation at the interconnection charge level would lead to usage-based pricing by FNOs at the retail level, it is also unclear whether the introduction of usage-based pricing by FNOs would in fact increase the cost of fixed telecommunication services. This is because competition may lead to users changing service providers and changing to substitute products (such as mobile and VoIP) the tariffs of which are highly competitive. It is notable that after the withdrawal of price caps on fixed network tariffs in January 2002 and the removal of *ex-ante* tariff regulation in 2005, the average tariffs of local fixed network services have in fact dropped rather than risen.

86. Furthermore, the TA observes that in the mobile segment the higher-income/higher-usage groups typically use post-paid products with monthly subscription fees. In general, such post-paid plans allow users a certain number of minutes of air-time per month before the user will start to incur any charges in excess of the monthly fee. In many cases, this package of minutes is far in excess of what is required by the consumer and is effectively a flat fee. By contrast, the lower-income/lower-usage groups typically use prepaid products which are primarily usage-based in pricing. The TA understands that the end-bills (i.e. ARPU) of prepaid services are substantially lower than those of post-paid services. As this observation reveals, one cannot simplistically equate usage-based charges with a higher monthly bill. In a competitive market, a more likely scenario is that flat-rate, usage-charge and hybrid offers will co-exist, and that each user will consider his/her own usage profile and choose the most cost-effective price structure accordingly. Market forces will dictate both flat-rates and usage-charges and keep them competitive.

87. One should not also presume that deregulation would necessarily result in minorities being neglected. For example, the Personal Emergency Link service for the elderly people is not a regulated outcome[25]. The mobile "112" emergency hotline did not originate from the TA's regulatory intervention either[26].

88. At present, the Comprehensive Social Security Assistance Scheme provides allowances for the actual expenses for renting a residential telephone line and a standard telephone set to those applicants who have justifiable reasons for independent telephone lines, such as the elderly living alone or disabled people who need to make external calls in case of emergency. OFTA has also discussed the matters with the Senior Citizen Home Safety Association and has studied the feasibility of measures to alleviate the negative impact on less privileged users like the elderly and low-income groups. The TA will closely monitor market developments and will discuss with operators the possible offer of special service plans to the needy if charges do rise materially upon deregulation.

89. In the longer term, consumers are likely to enjoy better services at competitive prices, driven by free-market innovation. The TA believes that the market is the best safeguard for consumers' interests.

Other Effects

90. Some of the Submissions highlighted the risk of potential disputes in negotiating FMIC that might disrupt service continuity. The TA considers that the anxiety over commercial disputes leading to market failure is unjustified. Firstly, the TA considers that the FNOs and MNOs are generally well resourced, and accordingly have comparable bargaining power in conducting commercial negotiations. Secondly, in a competitive market, the interconnecting parties have every incentive to avoid and shorten any dispute, because disputes lead to business uncertainty. Thirdly, the preservation of the "any-to-any" connectivity regime, as explained below, would prevent service disruptions as a result of breakdown of interconnection.

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[25] Despite being a non-profit initiative

[26] Support of the "112" emergency code originated from the inherent technical design of the GSM. Subsequently, the TA incorporated it into the numbering plan, which is mandatory for compliance under mobile carrier licence condition.

91. Some of the Submissions suggested that the reliability of fixed networks might deteriorate with the loss of revenues from FMIC. However the quality of service will be dictated by competition; an operator will lose any competitive advantage if it fails to provide a reliable service. The market should provide incentives for the operators to compete in the quality of the service they provide; it should not be for the TA to favour, or discriminate against, individual operators or groups of operators, based on his perception of their quality of service, by rewarding or penalizing them by regulatory intervention. Market incentives (such as cross-platform competition) will always be more effective than regulation in driving continued improvements in the quality of the service offered by both the FNOs and the MNOs.

92. Similarly, some of the Submissions expressed worries that a regulatory change may lead to increases in fixed telephony and leased line prices, scale-back of fixed network investments and job losses. The impact of deregulation of FMIC on users has been addressed in detail in the above section. The TA recognises that to the extent that these concerns materialise, they may be offset by developments in the opposite direction, for instance reduced mobile prices and job gains in the mobile segment. Therefore , the TA is of the view that he must set policy in order to maximise aggregate economic welfare.

Conclusion

93. Having taken into account the Submissions, and the views of the Consultant, the TA has concluded that on balance the benefits of allowing the market to prevail outweigh those of maintaining the existing regulated MPNP regime . **Therefore, the considerations on this aspect do not alter the TA's view that the regulatory guidance in favour of MPNP should be withdrawn.**

Any-to-Any Connectivity (A2A)

Proposal

94. Even though he proposed that the regulatory guidance favouring

MPNP be withdrawn, the TA proposed in the Second Consultation Paper to maintain the obligation on the FNOs and MNOs to interconnect with each other (A2A) in order to meet the expectation of the public that anyone can communicate with anyone else, regardless of which network the users belong to. The specific question asked in the Second Consultation Paper was:

Question 8: *Should the regulatory requirement of "any-to-any connectivity" be retained?*

Submissions

95. None of the Submissions fundamentally disagreed with the need for A2A from a public interest point of view. However, one FNO objected to *per se* regulation of A2A in protecting the public interest and suggested instead a market failure test to be applied so as to be consistent with FMIC. Its view was that if the TA considers that FMIC can be deregulated in the absence of market failure, then there is no reason why A2A cannot be deregulated on the same basis. The Submissions also raised the question whether A2A connectivity can operate effectively in the absence of MPNP or any other regulated charging methodology.

Consultant's Views

96. In the Ovum Report, the Consultant emphasised that A2A is a fundamental principle of interconnection that provides a high level of certainty for both operators and users. For users, it ensures that they can enjoy the continual benefit of the network externalities that interconnection provides. For operators, it prevents re-monopolisation of markets. The absence of the A2A requirement would put new entrants at a strong disadvantage to the incumbents because the consequence of a failed negotiation will be much more serious for them.

Response and Analysis

97. The policy objective of A2A is founded upon the long-standing expectation of the public that any telecommunications user can communicate with any other user. A2A is, in any event, an internationally recognised

principle (it is supported by the latest moves of the UK[27] and Australian[28] regulators to introduce mandatory "any-to-any connectivity" regulation) and all interested parties acknowledged in their submissions that the public has this legitimate expectation.

98. A2A connectivity is an important public-interest objective. It would be confusing and frustrating to the public if a user connected to one public switched telephone network (PSTN) could not call, or be called by, any other user connected to any other PSTN in the market. The absence of a universal ability to call any other person would severely undermine Hong Kong's position as a regional telecommunications hub and more broadly, Hong Kong's position as an international finance and commerce centre. It would also effectively prevent any new market entrant from offering a service which any customer would wish to use. Interconnection among the networks and services so as to achieve A2A is therefore clearly in the interest of the public. As a matter of policy, it would have been a retrograde step if the liberalisation of the market in 1995 had led to a fragmentation and deterioration of service through loss or weakening of the A2A features of the pre-liberalisation system. Accordingly, the Government took steps to implement this objective by enacting the necessary provisions in the Ordinance and incorporating the necessary conditions in the licences.

99. A2A connectivity can also promote and maintain a competitive telecommunications industry. Operators have a common commercial interest to connect as many users as possible between their networks. The greater the number of users to which telecommunications services can connect, the greater the benefit he enjoys from the service he has purchased.

100. Under the existing regime, operators are expected to ensure A2A connectivity and the TA is granted powers to compel them to do so by intervening as a last resort. Under the Ordinance, interim terms can be specified by the TA in a section 36B direction which may be replaced by a subsequent section 36A determination which is capable of being applied retrospectively.

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[27] See OFCOM's consultation on end to end connectivity at http://www.ofcom.org.uk/consult/condocs/end_to_end/

[28] See Schedule 1, Part 7 "Any-to-any connectivity" of the Australian Telecommunications Act 1997 at p.422

101. The power of the TA to enforce A2A will be exercised sparingly leaving the market to resolve as many of the issues as it can without regulatory intervention; it is therefore fully consistent with the market-driven policy. Should an intervention to achieve A2A be necessary, the TA may direct interconnection pursuant to section 36B of the Ordinance, on terms and conditions (subsequently) determined by agreement or the TA pursuant to section 36A of the Ordinance.

102. The Submissions also raised the question whether the A2A principle could exist without the MPNP policy or any other regulated settlement mechanism. Given that the existing A2A regime is market-driven, there is no reason why it cannot exist if the MPNP guidance is withdrawn.

Conclusion

103. Having considered the Submissions and the Consultant's views, **the TA has concluded that the existing A2A regime prescribed in the relevant powers in the Ordinance and the licence conditions should be preserved in its entirety.**

Transition Period For Withdrawal of Regulation on FMIC

Proposal

104. Noting that any change to the interconnection settlement arrangement will have implications to the cash flow, service deployment plan and market strategy of the relevant operators, the TA has proposed a transition period in the Second Consultation Paper for phasing in such changes. The proposal in that paper was that a two-year transition period should apply for withdrawal of the current regulatory guidance on FMIC concerning MPNP, from the conclusion of the FMC review. The specific question asked was :

Question 6: *Without prejudice to any position held by respondents in preceding questions, if the TA decides to implement the proposed deregulation, should a transitional period be provided? If yes, for how long?*

Submissions

105. There were comments on this issue from 12 respondents to the Second Consultation Paper. Broadly speaking, MNOs and Legislative Councillors preferred a shorter or no transition period while FNOs preferred a longer transition. Three submissions considered the suggested 2 year period to be appropriate.

106. In terms of specific comments, three FNOs suggested that the past transition periods provided by the TA should be used as a reference to determine the proposed transition period. One FNO further suggested that the monetary impact to the industry should be used to assess the length of transition periods provided by TA. This FNO also considered it inappropriate that no transition period has been proposed for deregulation of the level of LAC.

Consultant's Views

107. In the Ovum Report, the Consultant recommended a transition period. However Ovum considered that the length of time that the MPNP arrangement has been in place is largely irrelevant to the issue of length of the transition period. It believes that the key consideration should be that the operators should be allowed reasonable time to adjust their business plans to ensure that the responses that the operators make to the changes are not short term or reactive.

Response and Analysis

108. Having considered the Submissions and the Consultant's views, the TA has determined that there is a need for a transition period. The TA recognises that the arrangement assuming MPNP has been in place for 20 years and it influences the revenues, business plans, strategies and inter-network payment mechanisms of the industry. Accordingly, the TA considers it would be disruptive to implement reform without a reasonable transition period.

109. It is the TA's view that the length of the transition period should be set by reference to the following considerations:

(a) Withdrawal of current arrangements should not be too abrupt so as to avoid unnecessary disruption to the market, consumer choice and services;

(b) A reasonable period should be allowed for the affected operators to make adjustments to their business plans to cope with the impact of the regulatory changes. Operators, who have formulated business strategy and investment decisions based on current policy, need time to adapt their operations. However, it may be fair to assume that given the fast moving highly competitive telecommunications market and the continuing emergence of new technologies the operators will be used to adapting quickly to change;

(c) Sufficient time should be allowed for commercial negotiations of interconnection charges to be completed before the de-regulation. A period of two years should be long enough for parties to conclude good faith negotiations and will create a proper incentive for parties to negotiate. The TA is conscious of the risk that a much shorter period might encourage some operators not to negotiate in the hope that at the end of the transition period they can seek regulatory intervention to achieve what they might not have been able to achieve in ordinary negotiation. Equally, a much longer period might reduce the incentive to reach a prompt agreement on new terms and conditions of interconnection. A balance has therefore to be struck in setting the duration of the transition period;

(d) A reasonable period should be allowed for operators to implement any new billing/metering systems and to address any other practical issues arising out of the new arrangements;

(e) Appropriate balance should be struck between the interests of different participants in the market;

(f) An excessively lengthy transition period would prolong the retention of a regulatory intervention, which, for the reasons stated in paragraphs 48 to 54, is inappropriate and unnecessary;

(g) The transition periods granted by the TA in the past may be used as a reference but they may not be applicable because of different circumstances and considerations. The longest transition period granted by the TA was 4 years for the withdrawal of Type II interconnection. However, the justification for this relatively long transition period was to allow operators time to build secondary access to buildings (so that consumers would have a choice of customer access networks). There are no comparable considerations for deregulation of FMIC where infrastructure is already in place for making fixed-mobile calls. (In previous cases of important fixed line deregulation, there was no transition period at all, such as for the removal of the presumption of PCCW's dominance and related *ex ante* tariff control by means of a new form of fixed carrier licence in 2005); and

(h) The monetary impact on industry participants should be one factor to be considered when assessing the length of the transition period, but the exact monetary impact on the industry participants from the deregulation cannot be ascertained before commercial negotiation between participants are concluded and before the resultant adjustments, if any, of retail prices in the market are observed.

110. The FNOs can negotiate with the MNOs the appropriate replacement mechanisms to be applied after or even during the transition period, including any phased arrangement covering a longer period for the implementation of the replacement mechanisms. If any FNO or MNO considers that it has failed to reach commercial agreement with the other party, it may request the TA to make a determination under section 36A of the Ordinance. There is therefore a safeguard against any deliberate delay in the conclusion of an agreement by a party to the negotiation. Undue extension of the transition period is therefore neither appropriate nor necessary.

Conclusion

111. Having regard to these considerations and taking account of the Submissions, **the TA remains of the view that the transition period should be 2 years**.

112. During the transition period, the regulatory *status quo* (current regulatory guidance in favour of MPNP in the present form) will be applicable to the interconnection charges between FNOs and MNOs. In addition, subject to the creation of the proposed UCL, the same regulatory guidance will be applicable to the unified carrier licensees in the transition period depending on the services they provide. In the transition period, the TA will have to determine on a case-by-case basis whether a particular service under the new UCL is primarily a mobile or a fixed service in order to determine the interconnection arrangements with other operators. As stated in paragraph 65, the TA will not offer any regulatory guidance on the interconnection charging arrangements among fixed, mobile and unified carrier licensees after the transition period. However, should market conditions change and/or indications of likely market failure emerge, he will re-consider the need for regulatory guidance.

(B) LOCAL ACCESS CHARGES (LAC)

<u>Current Situation</u>

113. Service providers pay interconnection charges to network operators for access to their customers through the networks. The most common form is the LAC payable by external telecommunication service (ETS) providers to local network operators for conveying external telecommunication traffic to or from end-users through the local networks.

114. The existing arrangement for LAC is based on the TA Statement dated 25 November 1998[29] (the "1998 LAC Statement"), and implemented via a TA determination dated 30 December 1998[30] on the LAC of PCCW (the "1998 LAC Determination"). This determination specified that the level of LAC would be reviewed periodically. The current level of LAC levied by

[29] TA Statement, *Local Access Charge and Modified Delivery Fee Arrangements*, 25 November 1998.

[30] Telecommunications Ordinance (Cap. 106), *Determination under Section 36A*, 30 December 1998.

PCCW is that specified in 2001[31], being in the range of 10.1 to 12.6 cents per minute. Other FNOs and MNOs are encouraged to set their own LAC commercially by negotiation. In practice, the FNOs tend to levy a similar levels of LAC to that of PCCW's while the MNOs are not able to levy any LAC.

115. The 1998 LAC Statement and the 1998 LAC Determination were made some eight and a half years ago at a time when technologies in the industry were considerably less advanced than they are today. For example, the advent of IP telephony is a modern phenomenon that has evolved since the issue of the 1998 LAC Statement and 1998 LAC Determination and is something which could not be foreseen in detail in 1998[32].

116. The fact that the MNOs are not able to levy LAC is due to the regulated asymmetry in FMIC arrangement. For external calls originating from, or terminating on, a mobile network, there are two alternative routes – direct interconnection between the ETS provider and the MNO concerned, or routing the traffic through a FNO as "transit" network[33]. However, it is currently financially unattractive for ETS providers to arrange direct interconnection with MNOs. This is because FNOs are able to charge a low level of LAC for such transit traffic, which is in effect subsidised by the FMIC received from MNOs. As a result, MNOs currently are not able to charge a mobile LAC.

117. On 20 May 2005, the TA issued a consultation paper[34] seeking the views of affected parties on, amongst other things, whether regulation of LAC is needed. Three options were identified, namely:

(i) to initiate steps to make an LAC determination for all local FNOs;

(ii) to make a fresh LAC determination for PCCW, or any other local

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31 TA Statement, *Review of Local Access Charge*, 28 June 2001.

32 Although in 1998, some ETS employed IP technologies over the external transmission links, such ETS are not the same as the IP Telephony or VoIP services that have emerged over the past couple of years. The ETS in 1998 employing IP technologies over the external transmission links are accessed, by dialing the access codes as for other ETS, over the circuit-switched public telephone networks. The IP Telephony or VoIP services are accessed over the broadband internet connections of consumers and are brand new services employing different technologies compared with the ETS in 1998.

33 See Figures 5 and 6 of the Second Consultation Paper

34 Consultation Paper, *Regulation of Local Access Charge ("LAC")*, 20 May 2005.

FNO, on an individual basis if there are legitimate grounds to justify this; or

(iii) to make no intervention and let the parties to the interconnection negotiate and agree on the applicable LAC.

118. Industry comments received in response to the 2005 consultation paper were divided. ETS operators generally preferred the TA to make a unified LAC determination for all local FNOs. On the other hand, the majority of local FNOs were of the view that LAC should be set by the market.

Proposal

119. In the Second Consultation Paper, the TA set out his preliminary view that given i) the effective working of the external telecommunication services at the retail level and ii) the competitive restraints on the level of LAC of fixed networks from VoIP substitution and mobile substitution, no market failure is likely in the absence of regulation of LAC for fixed networks. His proposal was deregulation of LAC, adoption of a market-driven policy and allowing the market to decide on the level of LAC. Under the proposal, regulatory powers under section 36A of the Ordinance will be reserved as a "last resort" to protect public and consumer interests. Before deciding whether to intervene under section 36A, the TA will have regard to factors set out in section 36A(10) and follow due process. An open position was taken as to whether guidelines are necessary on the principles and methodology which are likely to be adopted in the event of a section 36A determination.

120. In making his proposal, the TA recognized that, unlike the case of network-to-network interconnection, LAC involves a large number of interconnecting parties, both facilities-based and services-based. Licensees may incur significant transaction costs in conducting multilateral negotiations. Some of the services-based operators have relatively fewer resources to back them in commercial negotiations as compared with facilities-based operators. Tariffs published by facilities-based operators tend to reduce transaction costs in commercial negotiations as published tariffs often serve as a starting point for commercial negotiations. Therefore whether published tariffs are available, at what levels, and their impact on the effective working of the ETS market and on consumers are relevant factors to be taken into consideration if

the TA is requested to exercise his powers under section 36A of the Ordinance to make a determination on LAC.

121. The TA also considered that any change should take place in an orderly manner and without upsetting the "any-to-any connectivity" regulatory regime which is already in place.

122. In relation to these proposals in the Second Consultation Paper, the following questions were asked :

Question 17: *Should the existing regulatory asymmetry between fixed and mobile network operators in relation to LAC be removed?*

Question 18: *Should any regulatory changes increase or reduce the intervention on LAC?*

Question 19: *Should the TA determination for PCCW in 1998 and all its subsequent revisions be withdrawn in accordance with established procedures*[35] *to facilitate the migration to a market-driven environment in the setting of LAC?*

Question 20: *What are your views on the importance of published tariffs by network operators before the TA consider withdrawal of the current determination for PCCW in 1998 and all its subsequent revisions?*

Question 21: *Would the market for ETS access to end-customers be competitive without the TA's intervention?*

Submissions

123. The MNOs submitted that regulatory asymmetries between fixed and mobile networks currently exist on LAC matters, and as a result, they have been unable to receive LAC and compete with the FNOs. For this reason, they submitted that the asymmetries should be removed. The FNOs, on the other hand, submitted that it is inappropriate to deal with LAC matters under this FMC review, because there is no linkage between fixed-mobile asymmetry and

[35] *Procedures for Making Determination on Terms and Conditions of Interconnection Agreements*, 27 September 2001.

the question of whether LAC should be regulated. They also submitted that removing asymmetries in LAC would not help FMC developments.

124. The MNOs, while supporting a "level playing field" on LAC, had no consensus whether to remove regulatory asymmetry by increasing or decreasing intervention. The FNOs, while opposing deregulation, had differing views as to whether to maintain the *status quo* or increase intervention. Some FNOs raised the concern that the ETS operators may "free-ride" on their network infrastructure if LAC is deregulated. They also suggested that the beneficiaries would be overseas operators but not the consumers. One FNO submitted that only the level should be deregulated, but that the regulatory obligation for the ETS operators to pay LAC should remain in place. The same FNO also submitted that any LAC deregulation should be subject to a transition period of 4 years.

125. All but one of the Submissions, in response to the TA's question about published tariffs, considered that market failure would be unlikely, because the maturity and competitive pressures within the ETS market make it likely that LAC can be settled by commercial negotiation. Many of the Submissions either explicitly stated or implied that LAC prices are likely to decline significantly upon deregulation. The only opponent was one FNO, which asserted that commercial negotiation on LAC will be inefficient, time-consuming and costly, and that the ETS operators will be disadvantaged because they have no choices in terminating their traffic.

126. Nevertheless, none of the Submissions suggested or gave support for a deregulation of LAC. There were also no material submissions from ETS operators. They will probably be most affected by a change in the LAC regulatory regime.

Consultant's Views

127. The Consultant identified the asymmetry imposed by existing regulatory guidance between the fixed and mobile networks in the existing LAC regime and recommended that the asymmetry be removed. Its concern was not whether LAC should continue or not, but rather the negative impact of asymmetrical regulation on cross-platform competition.

Response and Analysis

128. The proposed deregulation of the LAC for fixed networks could take place at either one of two levels:

(a) Complete deregulation i.e. removing the obligation for the ETS providers to pay LAC to the originating/terminating FNOs for external traffic as well as deregulating the level of any form of interconnection charges payable between the FNOs and the ETS providers; or

(b) Maintaining the obligation for the ETS providers to pay LAC to the originating/terminating FNOs for external traffic, but deregulating the level of LAC payable.

The TA notes that there was no support in the Submissions for the approach of complete deregulation, and this has prompted him to re-consider the appropriateness of this approach.

129. The rationale for regulating LAC is that a FNO with an end-user directly connected commands a certain degree of market power in that all external calls from or to the end-user must pass through that FNO. The regulation of LAC should be removed if no market failure is expected to result from this. However the market can work properly only if there are effective competitive restraints on the LAC.

130. The original rationale for the proposal to deregulate the LAC was that competitive restraints on LAC from VoIP substitution and mobile substitution (which were not contemplated at the time of issue of the 1998 LAC Statement) were developing. The TA also expects mobile substitution to become a more effective competitive restraint on the LAC of fixed networks once the regulatory asymmetry in relation to FMIC is removed. In principle, the complete deregulation could allow an even more competitive landscape for LAC to develop. For example, if the regulatory obligation to pay LAC to the originating/terminating FNO was withdrawn, other FNOs in the market could offer transit services as an alternative to direct access to the originating/terminating FNO, thus restraining the level of LAC that could be charged by the originating/terminating FNO.

131. The TA however recognises that there are still uncertainties concerning the pace of development and therefore the effectiveness of competitive restraints on LAC if the complete deregulation approach is adopted. In the mean time, the originating/terminating FNO could still exercise its market power unless the competitive restraints from VoIP substitution and mobile substitution are sufficient.

132. Without sufficient competitive restraints on LAC, complete deregulation at this stage could create uncertainty and significant transaction costs due to the need to conduct multiple bilateral negotiations. In this regard, interconnection between carriers and service providers should be distinguished from the interconnection between carriers. In the former case, there are a large number of interconnecting parties, both facilities-based and services-based. Most of the services-based operators have relatively fewer resources for commercial negotiations as compared with facilities-based operators. Unlike interconnection between facilities-based operators (e.g. between FNOs and MNOs) in which case the need for interconnection tends to be mutual, facilities-based operators in general have little incentive to interconnect with the services-based operators when the interconnection is to enable the latter to compete with the former for customers. The extent of bargaining power in a negotiation for interconnection between a facilities-based operator and a services-based operator is therefore quite different from that between facilities-based operators.

133. The TA considers that consumer interest is promoted by a competitive environment in which services-based operators are able to conclude interconnection agreements with the incumbent facilities-based operators and enter the market with the minimum of uncertainty and delay. The success or failure of services-based operators should be decided by the market on the bases of the prices and quality of their services and their efficiency instead of whether they are able to conclude interconnection agreements with the incumbent facilities-based operators. The TA considers that there is substantial risk that, without sufficient competitive restraint on LAC, the market alone would fail to deliver this consumer interest if the regulation on LAC is completely withdrawn at this stage. It would be more prudent for the effectiveness of the competitive restraints on LAC to be further observed before considering the approach of complete deregulation.

134. As regards the approach of deregulating the *level* of LAC payable to the fixed networks, the TA proposed in the Second Consultation Paper that VoIP substitution and mobile substitution are potential competitive restraints on the level of LAC for the fixed networks. The competitive restraint from mobile substitution would be more effective if the regulated asymmetry on FMIC is removed.

135. There is no disagreement in the Submissions as to the existing preference for routing of external traffic originating from, or terminating on, MNOs through FNOs as transit networks could result from regulatory distortions caused by the MPNP guidance for FMIC, which impacts not only local traffic between FNOs and MNOs, but also ETS traffic originating from, or terminating on, MNOs. As a result, it has not been cost effective for ETS operators to establish direct interconnection links with the MNOs. However, this regulatory distortion is now to be removed by withdrawing the MPNP guidance for FMIC[36]. Therefore, once the regulated asymmetry for FMIC is removed, there might be more effective competition between FNOs and MNOs for interconnection of their networks with external service providers to route ETS traffic to and from end-users, thus exerting competitive pressure on the level of LAC.

136. The TA thus considers that there is scope for deregulating the level of the LAC in due course. In the Second Consultation Paper, the TA proposed that the effectiveness of the VoIP substitution and mobile substitution should be re-assessed, at the time when a decision needs to be made on withdrawal of the existing determination on the level of the LAC for PCCW. He will also assess other relevant factors, for example whether tariffs have been published for LAC, and their impact on the effective working of the ETS market and consumer welfare.

137. The existing regulation for LAC is the consequence of a determination made in 1998, at a time when the technology was not as advanced as it is now. As a matter of procedure, deregulation would involve its formal withdrawal. For the TA to withdraw the existing regulation which sets the LAC paid to PCCW by ETS operators, due process needs to be

[36] When the regulatory guidance in favour of MPNP is withdrawn, the mobile network (M) in figures 5 and 6 of the Second Consultation Paper will be under no regulatory obligation to pay FMIC to the fixed network (F) for the ETS traffic.

followed. According to the established determination procedures such a process will include inviting representations from affected parties before deciding on modification or withdrawal. Central to the determination procedures is the requirement to give opportunities for the affected parties to make representation. Therefore, a change to the existing LAC regulation requires separate proceedings.

Conclusion

138. In the light of the Submissions, **the TA is of the view that he will not for the time being proceed with the complete deregulation of LAC under this exercise. The TA considers that there is scope for considering deregulating the level of LAC in due course. However, this is a decision which is more appropriate to make when consideration is given to withdrawing or modifying the existing determination on LAC.** In the meantime, the TA will continue to monitor the effect of withdrawing the FMIC regulatory guidance on the competitive landscape of LAC.

(C) UNIFIED CARRIER LICENCE (UCL)

Proposal

139. In the converged environment, it may be difficult to draw a clear line of demarcation between a fixed or a mobile service, or classify a carrier as a fixed carrier or a mobile carrier. There is thus a need to consider the introduction of a unified licensing framework that suits all forms of carriers and services. The proposed licensing framework, period of validity, rights and obligations, and licence fee structure of the UCL were described in the First Consultation Paper. A draft UCL, with General Conditions (GCs), Special Conditions (SCs) and the Schedules, was also attached to the paper. The Second Consultation Paper sought any further views and comments on the proposed creation of UCL. Questions asked in the Second Consultation paper were:

Question 22: *Do you have any further views and comments on the creation of UCL, the arrangements for transition to a unified licensing framework as well as the conversion of existing fixed/mobile carrier licences to UCL, as proposed*

in the First Consultation Paper? Furthermore, in response to the proposed fee of UCL, do you have any further views and comments?

Question 23: *Do you have any further views and comments regarding the rights and obligations proposed for UCL, as well as the general conditions and special conditions of the UCL as proposed in the First Consultation Paper?*

Submissions

140. Many operators made the general comment that the proper order of proceedings should be Spectrum Policy Review (SPR) and FMC consultations first, followed by the Broadband Wireless Access (BWA) consultation and UCL consultation. They argued that, in the absence of a clear Spectrum Policy and policies on the substantive FMC issues, they were not in a position to respond fully to the detailed questions in relation to the UCL. Accordingly, they requested that any decisions on UCL should be held in abeyance until completion of both the SPR and the FMC consultations, reserving their rights to submit further comments later. On the other hand, some respondents have given explicit support to the proposed creation of UCL in their submissions.

Response and Analysis

141. In the first place, the TA is not convinced that operators should withhold their detailed comments on the UCL until the completion of the SPR and FMC consultations. The First Consultation Paper in respect of the UCL sought comments specifically on the creation of a new carrier licence, and in particular the conditions and the fee structure of the new licence. The Second Consultation Paper dealt with interconnection arrangements and other issues that were identified as potential regulatory constraints on the development of convergence. Once these are resolved the proposed GCs would apply to existing fixed and mobile carriers as well as the future unified carrier licensees. The conditions of the proposed UCL, like those in the fixed or mobile carrier licences, are general in nature and can accommodate whatever might be the outcome of this review. For example, the licence conditions on interconnection do not provide for the details of the direction or level of payment. In fact, the FMC review and the proposal to create UCL are complementary and forward-looking exercises which can be and should be done in a holistic manner. On the other hand, the SPR is a strategic policy

review affecting the way radio spectrum as a scarce public resource is managed in the future and it does not have a direct relationship with the licensing of telecommunication services and the detailed licence conditions like interconnection arrangements. The TA cannot see any valid reasons as to why the operators should not be in the position to make comments on the UCL before the completion of the SPR and FMC consultations. Since the issue of the First Consultation Paper in September 2005, operators have been given reasonable opportunities to make comments on the UCL and some have indeed done so.

142. Furthermore, the TA perceives that there is a real need for UCL and that the existing licensing regime might not be able to address the forthcoming convergence environment. As mentioned in the First Consultation Paper, in the environment of FMC, it may become difficult, if not impossible, to classify a service in the market as a fixed or a mobile service, and a carrier as a fixed carrier or mobile carrier, as the service may be used by customers at fixed locations at some times and in motion at other times. There is an increasingly urgent need to address this issue as licences are being sought for new technologies which have the potential capability of evolving from a fixed or limited mobility setting to a full mobility setting. Given the technical features and characteristics of these new technologies and services, neither the Fixed Carrier Licence nor Mobile Carrier Licence is perfectly suitable. Instead, the TA considers that the proposed UCL would be a better licensing regime. The TA foresees that more and more convergent services would be developed in the near future and the need for UCL would come to the fore.

143. Under section 7(2) of the Ordinance, the SCIT has the statutory power to prescribe by regulation a new form of carrier licence, including the GCs, period of validity and licence fee. Before making the regulation, the SCIT is required to conduct consultation in accordance with section 7(3). Therefore operators that did not properly respond to the UCL issues raised in the Second Consultation Paper would have another opportunity to make submissions on them before a decision on the regulation for the UCL is made. The SCs of a UCL would be outside the regulation to be made by the SCIT and separate consultation can be conducted by the TA after the UCL regulation is made and before UCLs are actually issued.

Conclusion

144. After having fully considered the submissions on UCL received in the two rounds of consultation, **the TA will recommend to SCIT that a regulation be made under section 7(2) of the Ordinance prescribing a UCL**. If the SCIT, after considering the TA's recommendation, is of the view that it is appropriate to pursue with the proposed UCL, he will need to publish under section 7(3) of the Ordinance a notice in the Gazette to consult on the creation of UCL as well as the GCs, the period of validity and the licence fee of the UCL. Under the Ordinance, the TA is empowered to attach SCs, consistent with the Ordinance and not inconsistent with the prescribed GCs, to a licence he is empowered to issue. Subject to the decision of the SCIT to create the proposed UCL, the TA may consider further consultation on the SCs at a later stage before finalising them for the issue of the UCL.

(D) NUMBER PORTABILITY

Fixed Mobile Number Portability (FMNP)

Current Situation

145. At present, numbers can be transferred between fixed networks and between mobile networks, but not between fixed and mobile networks.

Proposal

146. In the Second Consultation Paper, the TA's proposal was that market research should be conducted to assess the consumers' demand for FMNP prior to carrying out a further regulatory review on the subject.

Submissions

147. One FNO considered that the FMNP implementation might provide a level playing field for all FNOs and MNOs. The MNOs generally supported the implementation of FMNP without delay. The same view was held by one academic and two Legislative Councillors who believed that FMNP might remove the barriers in the market, promote competition in the home telephone market and allow customers to have more choice of services. Other

respondents agreed with the TA that the introduction of FMNP will need to be considered in greater detail and that market research should be conducted to collect more information on the demand for FMNP.

Consultant's Views

148. The Consultant considered that in the context of FMC, there is no evidence which suggests that the lack of FMNP is a significant barrier to the development of FMC. As a result, there is no imperative need to proceed with FMNP. The Consultant recommended that the TA should postpone any decision for FMNP for 2 years before reviewing it again, by which time the key proposals on FMC would have been implemented and the effects on users better appreciated. Meanwhile, the Consultant recommended that the TA should carry out market research on the issues in relation to FMNP. The Consultant believed that the TA needs to examine the expectations of a widely representative set of users on the use of telephone numbers before taking the almost irreversible step of introducing FMNP.

Response and Analysis

149. The TA shares the Consultant's view that the likely consumer demand for FMNP is uncertain. Callers may value the segregation of fixed and mobile numbers for other reasons. For example, a caller may value the knowledge that he/she is calling a mobile terminal, so that he/she can decide whether to make a call when the called party is not necessarily in a position to talk immediately.

150. On the other hand, the introduction of FMNP allows customers to have a greater choice to port their fixed and mobile numbers to any FNOs and MNOs. The experience of Operator Number Portability (ONP) and Mobile Number Portability (MNP) in Hong Kong should indicate that FMNP should promote competition in the telecommunications market and provide a level playing field for all FNOs and MNOs offering services to customers based on the existing fixed and mobile numbers.

151. However, given that FMNP involves the imposition of new regulatory intervention which is hard to retract once implemented, the TA needs to be satisfied that there is considerable market demand and net benefits

flowing from it that would make the undertaking justified before embarking on it.

Conclusion

152. **The TA will conduct market research, as suggested by the Consultant, to collect information on, for example, consumer demand for FMNP, and the likely costs and benefits of FMNP, before deciding whether to introduce FMNP**.

153. If the TA decided to implement FMNP, a new FMNP Working Group, consisting of members from all FNOs and MNOs, will be formed to review the technical and operational issues of introduction of FMNP. As there are a number of differences between ONP and MNP, the new FMNP working group would be expected to make recommendations to harmonize the communications networks and the operational procedures currently adopted by MNP and ONP for the support of cross-platform porting under FMNP.

MNOs Access to ONP Database

Current Situation

154. Currently, MNOs do not run their own databases on the ported fixed numbers so they cannot directly terminate the calls to the correct FNOs. MNOs can either route the calls to their directly-connected FNOs, whereby the FNOs will make a "database dip" to check the terminating network operator, or alternatively, batch-purchase porting database information from one of the FNOs for direct routing. In the first scenario, a significant portion of the calls will be routed via the directly-connected fixed network to the terminating network, so the MNOs are required to pay the additional transit charge. As such, MNOs cannot route fixed calls efficiently. This asymmetric arrangement may put MNOs in a less favourable position when they compete with FNOs. In the second scenario, the MNOs' efficiency in routing fixed calls depends on whether the market for the buying and selling of database information is competitive.

Proposal

155. In the Second Consultation Paper, the TA's preliminary view was that MNOs may now have access to ONP database through an FNO as maintenance agent. This addresses the issue of inefficient call routing of FNOs, without the need for MNOs to build their own ONP databases. The technical feasibility for MNOs to have access to the necessary number porting information to build their own ONP databases should best be handled outside this consultation through technical working groups convened by OFTA.

Submissions

156. Some MNOs submitted that regulatory asymmetry should be removed by giving all FNOs and MNOs the same rights and obligations on MNP and ONP, and that they should be able to receive information about ported numbers at no cost. One FNO considered that the MNP porting and dipping process will still be required by the FNOs even if the ONP databases are shared with MNOs, and it questioned whether OFTA proposed to remove MNP porting and dipping charges or not. Other respondents supported the TA's view that access to ONP database by MNOs can be handled outside this consultation.

Consultant's Views

157. The Consultant proposed that in the long term all FNOs and MNOs should be required to facilitate both ONP and MNP, with the corresponding rights to receive information on all ported numbers free of charge so that both MNOs and FNOs can efficiently route the calls.

Response and Analysis

158. Under the existing licence conditions, all FNOs are obliged to facilitate ONP. The FNOs that entered the market after MNP was implemented (in 1999) are obliged to facilitate MNP. The four FNOs that entered the market before 1999 have provided services under tariffs to facilitate MNP. Under the existing licence conditions, MNOs are obliged to facilitate MNP only. Since the implementation of ONP in 1995, MNOs have relied upon the FNOs for routing correctly the calls to fixed line customers.

159. To enable the operators to discharge their licence obligations

concerning number portability, the FNOs have access to number porting data for the construction of the ONP databases and MNP databases, while MNOs so far have access to the data for the MNP databases only. However, this does not necessarily mean that MNOs cannot gain access to ONP information on a commercial basis. Some MNOs may now have access to the ONP database through an FNO as maintenance agent. The TA has confirmed with the industry players that competitive supply exists in the market for providing MNOs with access to ONP databases. With this commercial arrangement, the issue of inefficient call routing can be addressed as these MNOs are able to identify the terminating fixed network and deliver the calls without the need to transit another fixed network.

160. The TA considers the existing patchwork of rights and obligations on ONP and MNP is largely the result of players entering the market at different times and implementation of ONP and MNP. The existing arrangements are not necessarily logical and should be rationalized. To discharge their obligations on A2A connectivity, in an environment in which ONP and MNP is implemented, all carriers should have access to all number porting data (fixed number porting and mobile number porting) so that they can route all calls correctly. All carriers should have the choice of "build or buy" in the access to the ONP/MNP databases. Although the option of gaining access to the ONP database through an FNO as a maintenance agent is available, MNOs should not be forced to use the "buy" option.

161. Under the existing licence conditions, the FNOs have the obligation to facilitate ONP in such manner as the TA may direct. At present, the manner is specified in a specification issued by the TA on the procedures to handling number porting[37]. To facilitate ONP, the fixed number porting data should be made available to all carriers participating in implementing ONP by amending this specification. If the MNOs are currently denied the right to have access to the ONP data simply because they do not have licence obligation to facilitate ONP, it would be a relatively straightforward matter for MNOs licences to be amended, if the MNOs so wish, to include the obligation to facilitate ONP so that they are entitled to the ONP data. It may well be that the FNOs need fair compensation, probably based on cost, for the supply of the initial batch of ONP data, which has been accumulated by the FNOs over the past years of

[37] HKTA Specification HKTA 2102 entitled "*Procedures for Handling Number Porting by Database Solution*" as revised from time to time.

operation[38].

162. The TA recognizes that there are a number of technical issues that need to be resolved before MNOs can have access to the necessary number porting information to build their own ONP databases. These issues have not been dealt with in this consultation. OFTA will convene a technical working group to examine these technical issues.

Conclusion

163. **The TA concludes that all carriers (fixed or mobile) should have access to all number porting data (fixed number porting and mobile number porting). OFTA will convene a technical working group to examine the technical issues concerning the requirement from MNOs to have access to ONP database.**

Centralised Databases

Current Situation

164. At present, both ONP and MNP databases are implemented by a distributed configuration. Every FNO/MNO needs to set up its own number portability database which needs to be synchronised with the databases of other operators. The cost of the interworking tests which are required before a new operator can enter the market and the daily cost of updating the number porting databases would be lower under a centralised database solution. Implementation of a centralised database would lead to productivity gain if this solution is cheaper and operators are willing to cooperate on developing and operating such solution.

Proposal

165. In the Second Consultation Paper, the TA considered that the benefits to be achieved by the initiative of centralised databases will be subject to when the FMNP is to be introduced. The TA proposed to have meetings with the relevant network operators, under the existing ONP/MNP working groups

[38] Similar arrangement has been made for the supply of the first batch of customer directory data by one FNO to another when the latter FNO wishes to implement its own telephonic directory service after relying on the former FNO for the service in the past years.

or a new working group embracing FMNP, to canvass the number portability issues in view of the development of FMC.

Submissions

166. One MNO considered that the proposed centralised database approach would require a lengthy discussion among the industry players and may have substantial cost implications that would inevitably delay the implementation of FMNP. The issue of centralised databases may be considered by the industry as an option to further enhance network efficiency. Another MNO supported the TA's proposal to have discussion with the relevant operators on centralised databases for number portability. One FNO agreed that OFTA should initiate discussion of this matter in the existing ONP/MNP working groups in due course to canvass views from the industry as to the pros and cons of implementing such a centralised database.

Consultant's Views

167. The Consultant considered that the TA should explore with network operators the migrating of the existing number portability databases to centralised ones for cost-saving and system expandability in the long run. Such a centralised database solution for ONP and MNP can be discussed with the relevant network operators in an industry working group.

Response and Analysis

168. There are now 7 databases for ONP and 11 databases for MNP. ONP and MNP adopt the decentralised database approach but operate on two separate platforms. Over the past years, some network operators have expressed concerns over the resources and efforts incurred in interworking tests whenever there are additional databases being set up. Another possible concern is that the increase in the number of databases will increase the number of communications sessions for exchange of the operators' porting information exponentially under the current decentralised database approach. If FMNP is implemented, it is likely that at least 13 databases (i.e. 7 FNOs and 6 MNOs) will exchange information over a single communications platform.

169. Hong Kong had early introduction of ONP and MNP in 1995 and

1999 respectively. Since the centralised database approach can overcome the deficiencies as mentioned above, it is now commonly adopted by those countries which have implemented number porting. To meet the changing environment due to FMC and other future demand, there is a need to examine whether the centralised database approach should be used to handle the number porting to overcome the deficiencies in the existing decentralised database configuration from an engineering point of view. From an economic point of view, however, a centralised database eliminates competition, and thus the incentives to improve efficiency over time on database management, and in the longer term, the incentives to innovate on possible substitutes to telephone numbers. Above all, since a centralised database might need to be mandated or mediated by the regulator, there may be a concern over whether the possible benefits of a centralised database and the demand are able to justify the resources incurred by the industry in the migration.

Conclusion

170. **The TA is of the view that if the FMNP Working Group should be set up, it will also review the details of the centralised database option in support of FMNP**.

Numbering Plan

Current Situation

171. At present, Hong Kong adopts an 8-digit numbering plan. Though there is capacity in the current numbering plan for further growth in the number of both fixed and mobile numbers, there is a need to monitor the utilisation of the numbering plan so as to identify any numbering exhaustion problems at an early date.

Proposal

172. In the Second Consultation paper, the TA was of the preliminary view that there is no imminent need to alter the numbering plan. The prospective development of the numbering plan will be the subjects of consultation in the Telecommunications Number Advisory Committee (NAC) in due course.

Submissions

173. Some MNOs submitted that prefix 6 and 9 numbers for mobile services will be used up soon, so there is a need to have a review on this issue. One MNO considered that the numbers under the existing Numbering Plan are not efficiently used at present with the leading digit "8" block being under utilized. Another MNO considered that the need to have distinct fixed and mobile number ranges is obsolete and is of little value to the public. It considered that the existing asymmetry in relation to the numbering utilization rate of FNOs and MNOs required for assignment of new numbering blocks has caused unfair treatment between FNOs and MNOs. One FNO considered that the implications of fixed line and mobile services sharing the same number range require more extensive discussion by the industry. Another FNO agreed that the development of a numbering plan should be subject to further consultation in NAC.

Consultant's Views

174. The Consultant considered that the current numbering plan with the use of the level of numbering for identification of services should be maintained until any necessary change for FMC has been implemented.

Response and Analysis

175. The TA considers that there is no imminent need for a fundamental change to the existing 8-digit numbering plan. However, he agrees that the numbers with leading digits of "6" and "9" for mobile services might be used up in the near future and there is a need to allocate new number blocks to meet future growth. For historical reasons, there are different "threshold levels" for FNOs and MNOs in applying for new telecommunication numbers. As the market situation is now quite different from the time when these threshold levels were set, the TA should review these, in the light of the most updated market situation and deployment of telecommunications numbers.

Conclusion

176. **The TA will not make any immediate change to the 8-digit**

numbering plan. Instead, he will ask the NAC to review the consumption of the '6' and '9' numbers for mobile services and propose the recommendation to the TA. The NAC should also review the differential treatments for FNOs and MNOs in the allocation of new number blocks.

(E) OTHER ISSUES

Road Opening Right

Current Situation

177. At present, only FNOs are permitted access to road openings so MNOs are required to either make arrangements with fixed carriers for the provision of backhaul and interconnection links with the FNOs, or obtain fixed carrier licences themselves. The result of this differential treatment may to some extent reduce the cross-platform competition and redistribute costs and revenues between FNOs and MNOs.

Proposal

178. In the Second Consultation paper, the TA's preliminary view was that to optimize the frequency of road opening activities and to ensure that the social benefits to the public have been maximized through the sharing of space beneath public roads, there is a need to maintain the existing policy that road opening works should be reserved to those that are authorized under their licence to provide public wireline-based services.

Submissions

179. Some MNOs submitted that road opening rights should be granted to all facility based operators in order to create a level playing field between FNOs and MNOs. One MNO further submitted that the TA is reluctant to grant wide band link licences so MNOs are forced to obtain backhaul from FNOs at the moment. FNOs generally supported the TA's position that road opening works should be reserved for FNOs or those that are authorized under their licence to provide fixed line services, in order to minimize the frequency of road opening activities.

Consultant's Views

180. The Consultant considered that the current regulatory asymmetry should be removed and recommended that the TA grants the road opening right to MNOs so that they are entitled to lay their own backhaul and interconnection links.

Response and Analysis

181. In order to reduce the frequency of road opening activity so as to minimize disruption to the public, there is a need to restrict such work to those carriers that are authorised under their licences for the provision of public telecommunications services, i.e. not just self-provision of trunks. The granting of rights to a licensee, such as road opening, use of numbers etc, should be commensurate with the scope of service under the licence.

Conclusion

182. **The TA has concluded that the original proposal in the Second Consultation Paper be followed, i.e. road opening works should be reserved to those that are authorized under their licence to provide public wireline-based services.** MNOs should not automatically get road opening rights. They would have to apply for them as if they were applying for a fixed carrier licence and submitting a proposal for the rollout of a network that needs road opening for the provision of public telecommunications services. The TA is also minded to define clearly the right of road opening for unified carrier licensees when UCL is created in future.

Building Access Right

Current Situation

183. Section 14(1) empowers any licensee to place and maintain a telecommunications line and to enter upon any land for the purpose. The telecommunications line refers to fixed access service infrastructure. Section 14(1) gives FNOs power to require building owners to permit access for installation and maintenance, but does not extend to MNOs in similar

circumstances.

Proposal

184. In the Second Consultation paper, the TA's preliminary view was that the respective building access rights of FNOs and MNOs are governed by the legislation which shall prevail unless and until legislative amendment is made to section 14(1). The TA considered that there is no urgent need to pursue the legislative amendment as he does not envisage any requirement in the near future for MNOs to access common parts of a building for the purpose of serving only the residents and occupants of that building. The access into the interior of buildings for serving customers within them is beyond the scope of this purpose because the customers are members of the public rather than residents or occupants of the buildings concerned.

Submissions

185. One MNO submitted that the terms of section 14(1) do not mention, and are not tied to any concept of, providing services to the residents and occupants of a building, nor restricted to a particular part of the land. Therefore the TA has the power to grant authorizations to MNOs to provide and maintain mobile services, which are similar to the authorizations provided to FNOs to place and maintain telecommunications lines. It also submitted that MNOs install many communications systems in the residential and commercial buildings such as in lifts and confined areas so as to provide services to residents and occupants of the buildings. It considered that the current regulations relating to rights of access are anti-competitive, technology specific and not necessarily sustainable over the long term. It did not agree with the TA's view that there is no urgent need to pursue the legislative amendment. Another MNO considered that the existing building access rights governed by section 14(1) have little effect for MNOs. As any reform requires legislative amendment, one MNO recommended a separate industry consultation on this matter. FNOs generally agreed with the TA's view on building access rights under section 14 regarding the rights of MNOs and that the right to access and install telecommunications equipment in the common parts of a building at no charge should be restricted to FNOs. One FNO considered that buildings would not be able to cater for the MNOs' requirements as the FNOs are already competing for limited space.

Consultant's Views

186. The Consultant considered that both existing MNOs and FNOs should be given the right to request the TA's authorization under section 14(1) to gain access at no cost to "common parts" of a building to install telecommunications lines, when the purpose of the concerned installation is to serve the residents and occupants of that building.

Response and Analysis

187. For access to common parts of buildings to roll out services to the residents of the building, the Ordinance provides FNOs with a statutory right of access without paying an access charge. This is necessary because, without other technical alternatives, the cables must be routed through the common parts to reach the customers and the access to the common parts is for the benefit of the residents in that particular building. For access to rooftop sites for the base stations of an MNO, however, there may be a number of choices of rooftops available through commercial acquisition of sites. Therefore, the law has not provided for a statutory right of building access for MNOs and the access has to be negotiated on a commercial basis. In the FMC environment, the TA continues to see the justification for this distinction. The only difference is that a converged operator may deploy multiple technologies, some of which may allow a choice of buildings for the installation for serving proximate customers and some of which may not. The same principles as currently applied to FNOs and MNOs will be applied in deciding whether the licensee under UCL should have authorization to gain access to the building.

Conclusion

188. **The TA maintains his view given in the Second Consultation Paper that he does not envisage any requirement in the near future for MNOs to access common parts of a building for the purpose of serving only the residents and occupants of that building**. The building access right to be granted under the UCL will follow the same principles as applied to the existing FNOs and MNOs depending on the nature of the particular installation.

Additional Issues Raised by Respondents

Claim of Lack of Spectrum

189. Some FNOs commented that the lack of spectrum is a main obstacle for them to have fair competition with MNOs. One FNO claimed that lack of availability of radio spectrum is actually the regulatory obstacle to FMC, rather than the interconnection charging arrangement, and that OFTA has been delaying the release of spectrum for BWA.

190. The TA does not agree that there is any sustained regulatory obstacle created artificially by the current spectrum management of the TA. It should be noted that the supply of suitable spectrum is limited not by regulatory restrictions but rather by whether and when spare spectrum as a scarce resource is available which would be subject to constraints like international allocation rules, existing assignments, feasibility of sharing new technologies with existing uses, difficulty of re-farming spectrum used by existing users etc. The TA's intention is to make available the spectrum for application / bidding by interested parties as soon as the technical hurdles are cleared, and there is no deliberate delay of supply.

191. As far as spectrum suitable for providing mobile services is concerned, spectrum in 850 MHz for CDMA2000 service will be made available. Both FNOs and MNOs, as well as any interested investors, are welcome to make bids in the auction which is expected to be carried out within 2007.

192. To implement the Spectrum Policy Framework promulgated by CITB on 24 April 2007, the TA has published on 26 April 2007 a spectrum release plan about the potential supply of spectrum for the coming 3-year period. Such spectrum release plan will be updated annually on a rolling basis. From the spectrum release plan, the industry will be better informed of the availability of spectrum suitable for provision of any fixed, mobile or converged services. This will enable the industry players, including the FNOs, to plan ahead in their bidding for spectrum necessary to provide wireless access services.

Removal of regulatory intervention for ICFS

193. One FNO mentioned that the Ovum Report does not mention the ICFS charge imposed by MNO on FNOs for forwarding international bound call traffic originated on mobile networks. It considered it logical to remove the ICFS charge in the event that the TA decides to remove the fixed-mobile asymmetry.

194. The ICFS charges were set by a TA Determination and would remain in force until it is modified or withdrawn by the TA in accordance with the law and the determination procedures. This means that the TA must follow the due process and invite representations from the parties affected by the ICFS Determination before deciding to modify or withdraw it. The reason why the Second Consultation Paper did not cover ICFS charges is that so far we have not received any request from the industry for review of the charge level, or for a review on whether or not the charge should be maintained (the request for review we have received so far is about the implementation arrangements of ICFS charges). The Consultant was not asked to look at ICFS charges and therefore its report does not contain analysis on the subject. The TA is open-minded as to whether the ICFS charges 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.

CONCLUDING REMARKS

196. The conclusions set out by the TA above are consistent with the "market leads, government facilitates"[39] philosophy of the Government under which regulation as a form of intervention should be introduced or retained only when the market fails to serve the public interest.

197. The TA wishes to emphasize that nothing in this document should be taken to suggest that he is fettering his discretion in relation to his powers under the Ordinance, including those under sections 36A and 36B. The TA

[39] see the Budget Speech of Mr. Henry Tang, the Financial Secretary, delivered to LegCo on 10 March 2004.

will continue to exercise these powers where necessary.

Office of the Telecommunications Authority
27 April 2007

Annex

Glossary of Acronyms

Abbreviation	Definition
A2A	Any-to-Any Connectivity
ARPU	Average Revenue Per User
BAK	Bill And Keep
BWA	Broadband Wireless Access
CPNP	Calling Party's Network Pays
ETS	External Telecommunications Services
FFIC	Fixed-Fixed Interconnection Charge
FMC	Fixed Mobile Convergence
FMIC	Fixed-Mobile Interconnection Charge
FMNP	Fixed Mobile Number Portability
FMS	Fixed-Mobile Substitution
FNO	Fixed Network Operator
GC	General Condition
ICFS	International Call Forwarding Service
IP	Internet Protocol
LAC	Local Access Charge
MMIC	Mobile Mobile Interconnection Charge
MNO	Mobile Network Operator
MNP	Mobile Number Portability

MPNP	Mobile Party’s Network Pays
NAC	Telecommunications Number Advisory Committee
NGN	Next Generation Network
OFTA	Office of the Telecommunications Authority
ONP	Operator Number Portability
PSTN	Public Switched Telephone Network
SC	Special Condition
SCIT	Secretary for Commerce, Industry and Technology
SPR	Spectrum Policy Review
TA	Telecommunications Authority
UCL	Unified Carrier Licence
VAS	Value Added Service
VoIP	Voice Over Internet Protocol