

## **Review of Type II Interconnection Policy**

### **Statement of the Telecommunications Authority**

**6 July 2004**

#### **Government's Decision on Type II Interconnection Policy**

The Government announces today the conclusion on the review of Type II interconnection policy. The Legislative Council Brief (LegCo Brief) entitled "Review of Type II Interconnection Policy" dated today sets out the decision that:

The regulatory intervention under our current Type II interconnection policy applicable to telephone exchanges for individual buildings covered by such exchanges should be withdrawn, subject to the following conditions –

- (a) the withdrawal should be fully implemented by 30 June 2008;
- (b) in the run up to 30 June 2008, the withdrawal should be implemented on a building-by-building basis and apply to buildings already connected to at least two self-built customer access networks;
- (c) the withdrawal at buildings already connected to at least two self-built customer access networks should be subject to a two-year transitional period to ensure no disruption of choice and service to consumers and a one-year "grandfather" period thereafter to protect the regulated interconnection terms (including charges) for lines connected before and during the transitional period;
- (d) after the "grandfather" period, or 30 June 2008, whichever is earlier as the case may be, interconnection terms (including

charges) should be subject to commercial negotiations between the carriers concerned; and

- (e) buildings meeting the “essential facilities” criterion that justifies mandatory interconnection in the consumer interest should be exempt from the withdrawal arrangement.

## **Introduction**

2. In 2003, the Government initiated a public consultation of the Type II interconnection policy. Two rounds of public consultation have since been conducted. The first round of consultation commenced on 23 May 2003 and ended on 22 August 2003, with 11 submissions received. The second round of consultation commenced on 16 December 2003 and ended on 2 March 2004, with 17 submissions received from the following parties:

- Paul Ho
- Hong Kong Internet Service Providers Association (HKISPA)
- John Ure
- Pacific Supernet Limited (PSL)
- Wharf T&T Limited (Wharf T&T)
- Rediffusion Satellite Services Ltd (RSS)
- New World Telecommunications Limited (NWT)
- Hong Kong Broadband Network Ltd (HKBN)
- Hutchison Global Communications Limited (HGC)
- Trident Telecom Ventures Limited (TTV)
- Hong Kong Cable Television Limited (HKCTV)
- Hong Kong Telecommunications Users Group (HKTUG)
- PCCW-HKT Telephone Limited (PCCW-HKT)
- Consumer Council
- ExTV o/b Galaxy Satellite Broadcasting Limited (Galaxy)
- Hong Kong Small and Medium Enterprises Association (HKSMEA)
- Macquarie Corporate Telecommunications Limited (MCT)

All submissions can be downloaded from the website of the Office of the Telecommunications Authority: [www.ofta.gov.hk](http://www.ofta.gov.hk).

3. The Government has considered the submissions received and taken a number of policy decisions. The Government's decision set out in the LegCo Brief focuses on the Type II interconnection of copper-based local loops from telephone exchanges to customer premises (i.e. the interconnection at Point A as indicated in the diagram in Annex 1). In this statement, the Telecommunications Authority (TA) will address the policy decisions not covered in the LegCo Brief. These decisions include those in relation to interconnection at the street level (Point B) and the in-building level (Point C), as well as those relating to issues raised by the respondents to the Second Consultation Paper dated 16 December 2003.

4. With immediate effect, the Type II interconnection arrangements set out in the following TA Statements will be modified by this Statement:

- TA Statement No. 6 entitled "Interconnection Configurations and Basic Underlying Principles" in the series of "Interconnection and Related Competition Issues" issued on 3 June 1995 and modified on 18 March 2002;
- TA Statement No. 7 entitled "Carrier-to-Carrier Charging Principles" in the series of "Interconnection and Related Competition Issues" issued on 10 June 1995 and modified on 18 November 1997 and 18 March 2002;
- TA Statement No. 8 entitled "Point of Interconnection" in the series of "Interconnection and Related Competition Issues" issued on 10 June 1995 and modified on 18 March 2002;
- TA Statement entitled "Broadband Interconnection" issued on 14 November 2000;
- TA Statement entitled "Review of the Telecommunications Authority's Statements No. 4, 5, 6, 7 (Revised) and 8 on Interconnection and Related Competition Issues" dated 18

March 2002;

- TA Statement entitled “Type II Interconnection for the Conveyance of Narrowband Services Using the Lower Portion of the Bandwidth Available over Copper-based Local Loops” issued on 4 April 2002;
- TA Statement entitled “Interconnection and Related Competition Issues – Applicability of Statement No. 7 (Second Revision) Issued on 18 March 2002 to Broadband Interconnection” dated 18 June 2002.

### **Type II Interconnection at Telephone Exchange Level (Point A)**

5. The Government’s decision on the Type II interconnection policy at the telephone exchange level (i.e. Point A), and the reasoning for the decision, have been set out in the LegCo Brief entitled “Review of Type II Interconnection Policy” issued today. The TA will have regard to this policy in the performance of his regulatory functions under the Telecommunications Ordinance.

### **Type II Interconnection at the Street Level (Point B)**

6. Type II Interconnection at the street level (namely at distribution points under the streets) has all along generated little discussion among the parties. In fact no operators are currently using this interconnection. We proposed in the Second Consultation Paper that Type II interconnection at the street level should be retained, for although it might not appear to be a feasible or necessary choice for operators for the moment, it might become attractive as it could be used to provide higher bandwidth broadband services using VDSL technology in future.

7. There were very few responses to the proposal. Wharf T&T agreed that the interconnection policy should be retained for the time being to allow for future flexibility, and PCCW-HKT considered the interconnection was entirely impractical and unnecessary and should be

ended immediately.

8. Interconnection at Point B reduces the length of the local loops to the customers and therefore permits the operation of higher bandwidth technologies such as VDSL. Apart from this purpose, interconnection at the street level may also serve as an alternative to interconnection at the in-building level (i.e. Point C) in cases where genuine bottlenecks exist within the in-building systems. Where economic or technical constraints do not allow the termination of fibres in individual buildings, it might be economically viable and technically feasible to terminate the fibre at Point B close to a cluster of buildings and interconnect it with the copper-based local loops leading to the individual buildings. On balance, therefore, we decide that the interconnection at the street level should be retained to allow flexibility for future. The situation can be reviewed in a few years' time taking into account the evolution of technology and market needs by that time.

### *Conclusion*

9. The conclusion is therefore that Type II interconnection at the street level (Point B) to copper-based local loops will be maintained.

### **Type II Interconnection at In-building Level (Point C)**

10. Interconnection at in-building level refers to interconnection to the in-building wiring part, including in-building coaxial cable distribution system (IBCCDS), of a fixed carrier's customer access network. We proposed in the Second Consultation Paper that the existing right and obligation of local fixed carriers, including fixed carriers (restricted), to demand and / or provide Type II interconnection to copper-based in-building blockwiring systems and IBCCDS should continue to exist, on the grounds that:

- (a) there existed physical and economic constraints in the installation of wiring systems within buildings;
- (b) the continuation of the policy would facilitate the efficient

use of and investment in in-building systems – an operator which did not have a business case to install yet another in-building system could put the systems already installed by other operators into better use by interconnecting to their lines, and channel its own resources into other areas of network or services development;

- (c) multiple in-building systems installed in buildings generally used the same technology (i.e. copper wires and coaxial cables) – even if Type II interconnection at the in-building level were to be abolished, the carriers would not be forced to install fibre-based in-building systems in the buildings. Therefore the argument of the interconnection policy undermining investment in fibre-based in-building wiring systems did not apply.

11. In coming to this preliminary conclusion, we also noted that operators had mutual needs to interconnect to in-building blockwiring systems of each other, and most of them had entered into voluntary bilateral interconnection agreements for such interconnection. We considered that the Type II interconnection policy had played a crucial part in the smooth operation of the commercial arrangements. Without the backing of a regulatory policy that mandated the interconnection, carriers might not readily enter into reciprocal interconnection agreements.

12. Comments on the Government's proposal to continue the interconnection policy can be grouped into two broad categories, one related to interconnection to in-building blockwiring systems in general, the other to interconnection to IBCCDS.

#### *Interconnection to in-building blockwiring systems*

13. Respondents commenting on the interconnection policy applicable to in-building blockwiring systems did not raise any new arguments. PCCW-HKT and HKBN reiterated their claim that there were no bottlenecks at Point C and hence the mandatory interconnection policy should be lifted. On the other hand, Wharf T&T and NWT

supported the Government's proposal.

14. The arguments raised by PCCW-HKT and HKBN in support of the abolition of the interconnection at the in-building level were already addressed in the Second Consultation Paper. PCCW-HKT persisted on its claim that interconnection at the in-building level should only be mandated in cases where the "essential facilities" test is met. To this claim, we reiterate that the consideration is whether the interconnection would best achieve the Government's policy objectives of facilitating effective competition and enhancing consumer interest. It is not an application of a pure "essential facilities" test. We do not agree with claims from PCCW-HKT and HKBN that there are no bottlenecks at Point C. We understand that the vast majority of buildings in Hong Kong have one to two blockwiring systems. Even if there is no space limitation for the installation of the vertical sections of the systems, there are bound to be constraints in the installation of the horizontal wiring leading into individual premises. Economic considerations may also be against the installation of additional wiring systems beyond two. In some buildings, the policy of the developers, the landlords or managers may restrict the number of in-building blockwiring systems. The number of such systems provided is therefore less than the number of local fixed network operators in the market.

15. We consider that competition among local fixed network operators should be on the basis of price, quality, innovation and responsiveness to customers' needs, rather than control of the in-building blockwiring systems. The Government has the policy that residents in a multi-storey building should have unrestricted access to telecommunications services of their choice. We consider that the continuation of the interconnection policy at the in-building level would best serve the policy objectives, and the grounds upon which we relied on to support this policy in the second round of consultation (see paragraph 10 above) remain relevant and applicable.

16. We are pleased to note that operators have managed to enter into commercial agreements for the mutual access to in-building blockwiring systems under their respective control. However, we have also received from time to time complaints and requests for intervention concerning

difficulties in accessing in-building blockwiring systems. We are not convinced that without mandating Type II interconnection at Point C, problems with access can always be resolved on a commercial basis. As such, interconnection to copper-based in-building blockwiring systems of fixed carriers should continue to be mandated. The interconnection can be made at any technically feasible point of the in-building system. However, the powers of the TA will be a reserve one, to be exercised only when operators cannot reach commercial agreements.

### *Interconnection to IBCCDS*

17. IBCCDS is a form of copper-based in-building wiring systems for the conveyance of telecommunications and broadcasting services and some amenities or security services for the buildings, and is currently subject to Type II interconnection. In the Second Consultation Paper, the Government's proposal to continue the Type II interconnection at the in-building level expressly covered interconnection to IBCCDS.

18. HKCTV, RSS and Galaxy focused their comments on the interconnection to IBCCDS. We shall deal with them in turn.

19. HKCTV's submission referred to the Government's proposal to withdraw Type II interconnection where at least two self-built customer access networks have been rolled out to a building. HKCTV submitted that the meaning of "self-built customer access networks" should also apply to all wireline-based networks like in-building blockwiring, IBCCDS, in-building fibre cable distribution systems and power lines using power line communications technology. Consequently, HKCTV disagreed with the Government's proposal to exclude HKCTV's self-built customer access network portion of its HFC network from the meaning of "self-built customer access network". HKCTV submitted that its IBCCDS should no longer be subject to Type II interconnection obligation as this constituted unfair treatment. It claimed that, on the one hand, HKCTV would not, like other fixed carriers, be entitled to enjoy the benefit of the withdrawal of Type II interconnection when there was an alternative access network, while on the other hand, HKCTV would continue to be subject to the burden of Type II interconnection obligation.

20. We find HKCTV's argument confusing as it was misconceived. HKCTV appears to have mixed up the Government's proposal with regarding to interconnection at the telephone exchange level (Point A) and interconnection at the in-building level (Point C). What the Government proposed in the Second Consultation Paper, and what the Government now confirms to be the policy is the phased withdrawal of Type II interconnection when at least one alternative access network is installed is applicable to Point A only. That is to say, for a building to which an alternative self-built customer access network has been rolled out, only the withdrawal of Type II interconnection at Point A will be triggered, the Type II interconnection to the in-building system(s), including IBCCDS (Point C) of these buildings, will not be affected.

21. Therefore, the IBCCDS systems of HKCTV's network, being copper-based in-building systems, will remain subject to Type II interconnection obligation at the in-building level. The same obligation applies to the copper-based in-building blockwiring systems installed by other fixed carriers. It is therefore misleading and misconceived for HKCTV to claim that other operators will be relieved of the obligation to provide interconnection at the in-building level whilst HKCTV is always made subject to the obligation.

22. HKCTV and RSS also claimed that there was no bottleneck problem for installing in-building systems as many buildings have already been installed with more than one in-building telecommunications systems. Hence IBCCDS should not be subject to mandatory interconnection. On the other hand, Galaxy supported the Government's proposal to maintain interconnection at the in-building level.

23. The crucial question for the Government is whether Type II interconnection at the in-building level would best serve the Government's policy objectives. The same consideration applies irrespective of whether the system is an ordinary blockwiring system or an IBCCDS. We do not agree with claims from HKCTV and RSS that there are no bottlenecks for the installation of IBCCDS in buildings. Although HKCTV and RSS have managed to install in many buildings an

additional IBCCDS, such installations have been confined to the provision of an additional vertical coaxial cable. There are bound to be constraints in the installation of the horizontal drop cables leading into individual premises. At present, in many cases, the horizontal drop cables are simply disconnected from one IBCCDS and reconnected to the other. This has caused confusion to and complaints from consumers.

24. As competition develops in the telecommunications and broadcasting markets, the number of IBCCDS provided would invariably be less than the number of telecommunications and broadcasting operators who wish to gain access to the residents in buildings through the IBCCDS. Economic and technical constraints may not allow operators to install their individual IBCCDS in the buildings. To require each operator to install the IBCCDS before gaining access to the residents would also be a wasteful duplication of resources, as this would not increase capacity available to the residents because the overall bandwidth is restricted by the bandwidth over the horizontal drop cable. It is generally difficult to duplicate the horizontal drop cable without causing undue disturbance to the decoration and finishing of premises and common areas.

25. We consider that competition among telecommunications and broadcasting operators should be on the basis of price, quality, innovation and attractiveness of their programmes, rather than control of the IBCCDS. It is Government's policy to promote effective competition in the provision of telecommunications and television programme services. To achieve this policy objective, residents in a multi-storey building should have access to telecommunications and broadcasting services of their choice without undue restriction. The continuation of the interconnection would best serve the Government's policy objectives, and as such, IBCCDS being a form of in-building systems, should continue to be subject to mandatory interconnection. We are not convinced that without mandating Type II interconnection at Point C, problems with access to IBCCDS can always be resolved on a commercial basis. Like interconnection to in-building blockwiring systems, the powers of the TA will be a reserve one, to be exercised only when operators cannot reach commercial agreements.

26. HKCTV, RSS and Galaxy also raised technical and costing issues such as how interconnection to IBCCDS should be effected (tap-to-tap method or otherwise), and the charging model to be applied. We would emphasise that the overriding principle is that, consistent with the principle that applies to interconnection to in-building blockwiring systems (see paragraph 16 above), interconnection to IBCCDS can be made at any point that is technically feasible. As for the details on the actual implementation of the interconnection, the issues involved are somehow different from interconnection to blockwiring systems. The TA will separately study the issues peculiar to IBCCDS and issue codes of practice or guidelines as appropriate.

### *Conclusion*

27. To sum up, our decision is that mandatory Type II interconnection to copper wires of in-building systems (including blockwiring systems and IBCCDS) will be maintained.

### **Charging Principles**

28. PCCW-HKT submitted that the Second Consultation Paper did not address the issue of charging principles, which was first raised in the First Consultation Paper. PCCW-HKT considered that the consultation presented an ideal opportunity for the TA to review the charging principles.

29. The Type II interconnection policy will continue to exist (subject to the withdrawal policy applicable to interconnection at the telephone exchange level). The terms and conditions, including the charges, for Type II interconnection will therefore continue to be regulated. At present, the charging principles applicable to Type II interconnection are laid down in TA Statement No 7 (Second Revision) dated 18 March 2002. The authority of the TA to determine the charges ultimately derives from section 36A of the Telecommunications Ordinance, in which section 36A(3B) requires that the charges for interconnection shall be based on the relevant reasonable costs attributable to interconnection. The TA will follow section 36A(3B) in deciding the charges for Type II

interconnection, or revising the charging principles laid down in TA Statement No 7 (Second Revision) if and when the circumstances require.

30. It should also be pointed out that the TA's power under section 36A of the Ordinance is not limited to determining the charges of the interconnection. Section 36A(3) expressly provides that the terms and conditions may include any technical, commercial and financial terms and conditions that the TA considers fair and reasonable. Section 36A(3A) further illustrates the kind of terms and conditions that the TA may make in the determination proceedings.

### *Conclusion*

31. The TA will apply section 36A in determining the charges, charging principles or other terms and conditions relating to Type II interconnection where circumstances are justified.

### **Extension of Type II Interconnection to Fibre Networks**

32. We proposed in the Second Consultation Paper that Type II interconnection should not be extended to the fibre-based customer access networks of the fixed carriers. The responses to this proposal were positive. In view of the Government's policy objective to encourage investment in the rollout of competitive fibre-based telecommunications infrastructure to provides choices of innovative and high capacity telecommunications services to suit the needs of the consumers, we maintain our view that Type II interconnection will not be extended to the fibre-based customer access networks of the fixed carriers.

### **Wholesale Access Regulation**

33. The service-based operators, namely HKISPA, TTV, PSL and MCT, took the opportunity that this review exercise offered to argue for the case of wholesale access regulation on the fixed network operators. They made a similar claim that the Type II interconnection policy had

failed to take into consideration the interest of non-network affiliated service providers. They advocated that some form of wholesale access regulation similar to the “open network access” requirement for the 3G operators<sup>1</sup> should be imposed on the fixed network operators to ensure that non-affiliated service providers would have a choice of access to networks at reasonable price.

34. The Type II interconnection policy is not applicable to service-based operators. At present, regulation of wholesale services provided by local fixed network operators is based on the fair competition provisions in the Telecommunications Ordinance and the relevant licence conditions concerning tariff regulation. The fair competition provisions prohibit a dominant operator from discriminating among operators in the supply of services with the purpose or effect of preventing or substantially restricting competition in a telecommunications market. Therefore, where a dominant operator offers wholesale services to its affiliated company, it has to offer the services to other operators on a non-discriminatory basis. Under licence conditions, the tariffs of the dominant operator for the wholesale service are subjected to the approval of the TA and to be published after approval, and the criterion for approving or not approving a proposed tariff is whether it has anti-competitive purpose or effect. For non-dominant operators, the tariffs of wholesale service are subject to publication only. The existing regulatory framework for wholesale services provided to service providers is based on the policy intention of promoting effective competition in the provision of network services and using market forces to drive network operators to supplying wholesale network services on terms acceptable to service providers.

35. Having said that, we recognise the difficult conditions in which some service-based operators operate due to the fact that, up to now, sufficient competition has not yet emerged at the wholesale level. This is attributable to the fact that the network coverage of PCCW-HKT’s competitors is still not sufficiently extensive, and that HKCTV’s network is not yet open for access by non-affiliated operators for technical reasons. The new policy on Type II interconnection promulgated today would

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<sup>1</sup> The four 3G licensees of Hong Kong are under a licence obligation to offer 30% of their network capacity to non-affiliated virtual mobile network operators or content service providers.

encourage network operators to roll out competitive self-built customer access networks, which in turn would improve competition in the wholesale market through market forces. We will closely monitor the future market development and will consider taking appropriate measures if and when the circumstances are justified.

### **Implementation of New Type II Interconnection Policy**

36. The TA will oversee the implementation of the new Type II interconnection policy promulgated today and shortly issue a statement announcing the details of the implementation plan (Implementation Statement).

37. In respect of interconnection at the telephone exchange level, the Implementation Statement will, *inter alia*, cover the following issues:

- (a) Details of the three objective assessment criteria for qualifying alternative customer access network;
- (b) Preparation of lists of the buildings to which alternative customer access networks have been rolled out, with a view to publishing the first building list in October 2004;
- (c) Other regulatory issues (including technical issues) in relation to interconnection at the telephone exchange level because, subject to the withdrawal policy, interconnection at the telephone exchange level will continue to exist.

38. With the withdrawal of Type II interconnection at the telephone exchange level in an orderly manner, we shall see increased self-built customer access networks being rolled out. There will also be increased migration of service provision from relying on interconnection at Point A to using end-to-end self-built networks, as well as migration of interconnection at Point A to interconnection at Point C. OFTA will work closely with the industry on the measures that facilitate the rollout and migration. The details will be announced in the Implementation Statement.

39. As stated in paragraph 26, the TA will separately study the issues peculiar to the implementation of Type II interconnection to IBCCDS and consult the industry on the technical codes of practice or guidelines as appropriate.

**Office of the Telecommunications Authority**

6 July 2004

### Type II Interconnection Points

