

**APPLICATION FOR A DECLARATION OF NON-DOMINANCE  
FOR REACH NETWORKS HONG KONG LIMITED  
IN THE MARKET FOR “IP SERVICES”**

**Statement of the Telecommunications Authority, Hong Kong**

**30 December 2002**

**INTRODUCTION**

1. On 9 August 2002, the Telecommunications Authority (TA) received an application (the Application) by Reach Limited (REACH) on behalf of Reach Networks Hong Kong Limited (Reach Networks) for declaration of non-dominance in the market for Internet-protocol (IP) services. The Application is made in accordance with General Condition (GC) 16(2) of Reach Networks' Fixed Telecommunications Network Services (FTNS) Licence (the Licence) and section 7L of the Telecommunications Ordinance (the Ordinance), requesting the TA to direct under GC 44 that GC 17, 20, 21, 22 and 23 should not apply to Reach Networks in respect of its IP services.

2. REACH provided the following justifications for the Application:

- (a) External bandwidth is the single most important input for the provision of IP backbone services. With the explosive capacity growth of global and regional submarine cables, further development of telecommunications hubs and new entrants to the market, IP backbone service prices in Hong Kong have fallen 80% over the past two years.
- (b) Since Reach Networks has already been declared non-dominant in external bandwidth services, there is no barrier to entry for the IP backbone services market. 'IP backbone services' is essentially a downstream market to external bandwidth services and therefore Reach Networks should also be declared non-dominant.
- (c) Reach Networks is disadvantaged against some of its established competitors in Hong Kong which are tier 1 US Internet providers and thus entitled to preferential interconnection with the crucial US market. Reach has to pay for such connectivity while tier 1 providers do not.
- (d) The relevant market for IP backbone services should be, if not global, at least the Asia Pacific region, including the trans-pacific and

European bandwidth because ISPs are indifferent as to which hub they concentrate their radial terminal connectivity, provided that there is appropriate connectivity between hubs.

- (e) Even with the narrowest geographic market definition of Hong Kong only, and including the acquisition of Level 3's Asia business, Reach Networks' market share on IP backbone services has been consistently below 50% for the past year.
- (f) Reach Networks does not gain any advantage from its incumbency on IP backbone services, because the market is competitive and the ISPs are the most sophisticated customers.
- (g) Reach Networks does not gain any advantage from vertical integration within itself as well as with PCCW IMS, because neither company is dominant in their respective upstream (external bandwidth services) and downstream (Internet access services) markets to IP backbone services.
- (h) Reach Networks does not gain any advantage from PCCW-HKT Telephone's (PCCW-HKTC) dominant local fixed telephony operation, for similar reasons that the TA spelled out in declaring Reach Networks non-dominant on external bandwidth services<sup>1</sup>.

3. On 16 October 2002, the TA issued a consultation paper (the "Consultation Paper") seeking views from the industry on the Application. He asked the following questions in particular:

*Question 1: whether the approach set out in GC 16(2) of the Licence regarding the tests of dominance is generally valid, and any other relevant factors that the TA should take into account for the IP service in particular;*

*Question 2: relevant market definition, in particular Reach Networks' submission that the product market should be "IP backbone services" for connectivity to the Internet with no close substitutes, the functional market should be wholesale services to ISPs, and*

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<sup>1</sup> See TA Statement "Application by REACH Limited for Declaration of Non-Dominance in the Market for External Bandwidth Services" dated 15 March 2002, paragraphs 123-130.

*the geographical market should be the Asia-Pacific region including trans-Pacific and European bandwidth;*

*Question 3: the level of competition within the relevant market defined in Question 2, including market share, market concentration, entry barriers, pricing trends and Reach Networks' power in implementing decisions;*

*Question 4: the significance of external bandwidth as an input to IP services, whether there exists other factor inputs that is significant in cost and may constitute an entry barrier, and whether the TA should consider IP services as a downstream market to external bandwidth services;*

*Question 5: whether Reach Networks enjoys any advantage from its vertical relationships with its own external bandwidth operation, PCCW IMS' ISP operation and PCCW-HKTC's local fixed telephony operation; and*

*Question 6: should the TA conclude that Reach Networks is non-dominant for the IP services, whether he should waive GC 17, 20, 21, 21 and 23 of the Licence in full or in part, and any additional condition(s) he should impose on the licensee.*

4. The consultation ended on 16 November 2002. The TA received 2 submissions from the following parties (in alphabetical order):

- (a) Hutchison Global Communications Limited (“HGC”)
- (b) Reach Limited (“REACH”)

5. A summary of the comments from the respondents (with confidential information excised) is given in the **Annex**. Taking into account the views and comments in response to the Consultation Paper, the TA sets out his views and decisions in this statement on the Application.

## BACKGROUND

6. Reach Networks provides its IP services under the Licence originally issued on 29 June 1995 and subsequently amended on 31 March 1998 and 21 January 2001. ‘IP services’ is described in the Government of Hong Kong Special Administrative Region Gazette<sup>2</sup> as “*Internet Gateway Service [which] provides a data access service to support Internet Protocol (IP) based application & service at data rates of 45Mbps and 155 Mbps*”, although REACH submits that data rates above 155 Mbps are also available. REACH further elaborates on its IP backbone services as follows:

*“Reach Networks’ Internet Gateway Services are branded and more commonly known as Netplus Asia services. Netplus Asia services in turn are known more generically... as IP backbone services... Reach Networks’ Netplus Asia IP backbone services have only two customers in Hong Kong – Reach Services [3] for its Netplus service and PCCW IMS Limited for its Netvigator service. For the purpose of clarity, Reach Networks’ Netplus Asia services are wholesale offerings of external IP backbone capacity, while Reach Services’ Netplus services are distinct offerings to ISPs for connectivity to the Hong Kong Internet Exchange (HKIX) and for external connectivity to/from Hong Kong and the global Internet. External connectivity is obtained by ‘Netplus’ from ‘Netplus Asia’, and then resold to [Internet Service Providers (ISP)] in smaller quantities. Reach Services offers its Netplus services under a PNETS licence and is considered non-dominant in the supply of these services.”*

*“IP backbone services are, essentially, the acquisition of large quantities of low cost external bandwidth coupled with the deployment of a router or routers and ancillary equipment to provide wholesale IP backbone bandwidth Internet access to [ISPs].”*

## ANALYSIS OF DOMINANCE

### **General**

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<sup>2</sup> Gazette No. 14/2000 published on 7 April 2000.

<sup>3</sup> Reach Services Hong Kong Limited, holder of a Public Non-Exclusive Telecommunications Service Licence.

7. In considering the Application, the TA has followed the approach set out in the “*Guidelines to Assist the Interpretation and Application of the Competition Provisions of the Fixed Telecommunications Network Services (FTNS) Licence*” issued by the TA in June 1995. He will go through a process of market definition by examining the product, functional and geographic dimensions of the market, taking into account the availability of substitutes. In considering Reach Networks’ market power and dominance on the defined market, the TA will examine the factors stipulated under GC 16(2) of the Licence. He will also consider any vertical relationships along the upstream and downstream of IP services that may exist.

### **Legal basis**

8. Under GC 16(2) of the Licence, a licensee is in a dominant position when, in the opinion of the TA, it is able to act without significant competitive restraint from its competitors and customers. In considering whether a licensee is dominant, the TA will take into account the market share of the licensee, its power to make pricing and other decisions, the height of barriers to entry, the degree of product differentiation and sales promotions and such other relevant matters which are or may be contained in the guidelines issued by the TA.

9. GC 44 of the Licence provides that if the TA forms the opinion that the licensee is not in a dominant position within the meaning of GC 16(2) of the Licence with respect to any market for telecommunications services provided under the Licence, he may direct that the obligations, either completely or as to any particular obligations, imposed under GC 17, 20, 21, 22 and 23, shall not apply to the licensee for such period and on such conditions as the Authority may determine. Under these obligations, Reach Networks is currently required to, amongst other things, adopt certain accounting separation practices as specified by the TA (in an Accounting Manual), charge no more or no less than the published tariffs unless otherwise approved by the TA and seek TA approval for new services and changes in tariffs.

### **Relevant market definition**

#### **Product Market**

10. In the Application, REACH described the product market for IP

services as ‘IP backbone services’ offered to internet service providers (ISP) direct, or through resellers, for connectivity to the Internet. Accordingly, ‘IP backbone services’ is a standalone product market with no close substitutes. REACH also cited statements from the regulatory bodies of other major jurisdictions globally in support of its view. HGC also agreed to REACH’s definition in its submission. The TA, in declaring Reach Networks non-dominant in ‘external bandwidth services’, has already defined voice, IP and dedicated bandwidth services as separate markets<sup>4</sup>. He agrees to REACH’s definition on the product market of IP services.

### Functional Market

11. REACH submits that Reach Networks’ customers are either ISPs or resellers of IP backbone capacity. It does not have end user connectivity. The TA is satisfied that the functional market for IP services should be the wholesale market. HGC also agreed to this definition in its submission.

12. REACH further submits that IP services should be considered a downstream market to ‘external bandwidth services’. The TA observes that the single most significant cost component for the provision of ‘IP backbone services’ is the acquisition of external bandwidth. Other cost components, such as routers and ancillary equipment, are negligible compared to bandwidth cost, and Reach Networks does not apparently have any privilege in purchasing such equipment. Also, the pricing trends for IP services have closely tracked the decline in bandwidth costs. As such, he is satisfied that ‘IP services’ should be a downstream market to ‘external bandwidth services’.

### Geographic Market

13. REACH submits that the geographic market for IP services should be, if not a global market, at least the total Asia Pacific market, because ISPs are indifferent as to the ‘hub’ from which it connects to the Internet globally. However, the TA considers that, regardless of the hubbing and routing arrangements of internet traffic in-between, terminal connectivity to and from Hong Kong are essential in providing IP backbone services to Hong Kong ISPs

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<sup>4</sup> See TA Statement “Application by REACH Limited for Declaration of Non-Dominance in the Market for External Bandwidth Services” dated 15 March 2002, paragraph 53.

in competition to Reach Networks. Regional or global bandwidth without connectivity to Hong Kong are not directly available to Reach Networks' target customers. For similar reasons, the TA has previously defined the geographical market of 'external bandwidth services' as Hong Kong only<sup>5</sup>. He is satisfied that the geographic market for IP services, in terms of origin, should also be Hong Kong only.

14. In regard to destination, similar to his conclusion on 'external bandwidth services' <sup>6</sup>, the TA is satisfied that that the geographic market for IP services should not be divided into routes, given the full routing flexibility of the internet globally.

### **Market share and market concentration**

15. REACH submitted the market share of Reach Networks based on 'IP Backbone Services Market Capacity Subscription' published in the CyberMap series of the International Data Corporation (IDC). The same publication was also referred to in HGC's submission. The TA takes the view that the figures published by CyberMap are generally accepted by the industry for IP backbone services.

16. Under the geographic market definition of Hong Kong, REACH submits that Reach Networks' market share for IP services was 44% as at October 2002, and has been consistently below 50% over the prior 12 months. HGC did not challenge REACH's claim in its submission, but instead suggested that Reach Networks' IP network coverage is still the largest by far in terms of both bandwidth as well as the number of countries accessed. However, the TA considers that the amount of bandwidth should have already been reflected in the market share figures, and the number of countries accessed is irrelevant because the geographical market of IP service is not subdivided into routes.

17. In regard to market concentration, the market share of the second and third operators were around 18% and 12% respectively over the 12 months to October 2002.

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<sup>5</sup> See TA Statement "Application by REACH Limited for Declaration of Non-Dominance in the Market for External Bandwidth Services" dated 15 March 2002, paragraphs 71.

<sup>6</sup> See TA Statement "Application by REACH Limited for Declaration of Non-Dominance in the Market for External Bandwidth Services" dated 15 March 2002, paragraphs 70.

### **Entry barriers**

18. The TA, by defining ‘IP services’ as a downstream market to ‘external bandwidth services’, in which Reach Networks has already been declared non-dominant, is satisfied that there is no entry barrier for the IP services market. According to the product market definition, Reach Networks’ IP backbone services are simply value-added services to ISPs upon acquisition of its own external bandwidth.

### **Prices**

19. REACH submits that typical IP backbone prices have fallen 80% since 2000, quoting a report by Gartner Dataquest<sup>7</sup>. HGC also acknowledged the decrease in prices of external bandwidth, despite suggesting that such decline would benefit the biggest player most. The TA also observes that the price trends of IP backbone services have closely tracked the decline in external bandwidth prices.

### **Vertical relationships**

20. The TA considers that Reach Networks and its affiliated entities are non-dominant for both the upstream (its own external bandwidth services) and downstream (Reach Services’ IP backbone resale and PCCW-IMS’ ISP operation) markets of IP services. He also considers that Reach Networks does not gain any advantage from PCCW-HKTC’s dominant local fixed telephony operation, since the functional market of IP services is the wholesale market. In providing its IP backbone services to ISPs, Reach Networks is not involved in domestic end-customer connectivity.

### **Other relevant factors**

21. HGC submits that, should the TA find Reach Networks non-dominant for IP services, he should impose a condition that REACH shall not impose any condition on its provision for interconnection services to local FTNS operators (e.g. that parties bringing in cable capacity from overseas must ‘own’ the cable, etc.) at the cable landing stations controlled by Reach

Networks. However, the TA considers that this issue is more related to the ‘external bandwidth services’ which Reach Networks has already been declared non-dominant, and irrelevant to IP services which target ISPs rather than FTNS operators. The TA will deal with problems with interconnection at the cable landing stations in accordance with the relevant legal provisions and TA Statements already promulgated. As a matter of fact, a problem raised by HGC in October 2002 was satisfactorily resolved after intervention by OFTA.

22. HGC also submits that, should the TA find Reach Networks non-dominant for IP services, there is no reason for him to grant waiver of GC 17, 20, 21, 22, 23 of the Licence. However, HGC did not substantiate its position.

### Life of Direction

23. In view of the fact that Reach Networks is still subject to the competition provisions under the Licence and the Ordinance, the TA is satisfied that at any stage (since he continues to monitor the market regularly), he is in a position to deal with any anti-competitive conduct effectively and efficiently. As such, the TA is satisfied that it is appropriate not to impose an automatic expiry date for any direction issued in concluding this review. In any event, major changes in the relevant market and/or failure to comply with the obligations in other circumstances could lead the TA to review the direction issued today.

### **CONCLUSION**

24. The TA concludes that, in relation to the Application, the relevant market is the wholesale ‘IP backbone services’ to ISPs in Hong Kong for connectivity to the Internet globally.

25. For the relevant market of IP services, considering that:

- (a) Reach Networks’ market share was 44% as at October 2002, and consistently below 50% over the prior 12 months;
- (b) there is no entry barrier, given that IP services is a downstream market to external bandwidth services for which the TA has

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<sup>7</sup> *IP Backbone Opportunities in Asia-Pacific, Final Draft, August 2002*

already declared Reach Networks to be non-dominant;

- (c) typical IP service prices have fallen 80% since 2000, and closely tracked the decline in external bandwidth prices;
- (d) there is no vertical relationship concerns over Reach Networks and its affiliates for both the upstream (external bandwidth) and downstream (IP backbone resale and ISP) markets; and
- (e) there is no justification for additional conditions to be imposed,

the TA is satisfied that Reach Networks should be declared non-dominant in respect of the IP services market without additional conditions imposed. The TA has therefore issued today a direction under GC 44 of the Licence to Reach Networks to this effect. The direction will take immediate effect and will continue to be in force until such date as it may be revoked, in full or in part, in writing by the TA.

**Office of the Telecommunications Authority**

30 December 2002

## **SUMMARY OF SUBMISSIONS RECEIVED**

1. **Hutchison Global Communications Limited** – does not support the Application
  - The approach set out in GC16(2) of the Licence regarding the dominant tests remains valid and fully applicable to IP services.
  - HGC agrees with Reach Networks’ market definition.
  - Although Reach Networks’ market share on IP backbone services may be below 50% as it claims, its IP network coverage is still the largest by far. There is no competitor with comparable coverage, capacity and growth.
  - Reach Networks also benefits from external bandwidth price decline. Such decline benefits the biggest player most and does not in any way remove existing entry barriers.
  - Reach Networks still benefits from vertical relationships such as REACH’s control of most of the cable landing stations in Hong Kong, volume purchases and bilateral relationships with most countries in the world, affiliation to PCCW-IMS as the biggest ISP in Hong Kong, and ensured local connectivity through PCCW-HKTC.
  - Should the TA find Reach Networks non-dominant for IP services, there is no reason for him to grant waiver of GC 17, 20, 21, 22, 23 of the Licence. He should impose a condition that REACH shall not impose any condition on its provision for interconnection services to local FTNS operators (e.g. that parties bringing in cable capacity from overseas must ‘own’ the cable, etc.) at the cable landing stations controlled by Reach Networks.
  
2. **Reach Limited** – supports the Application
  - No additional comment to those summarized in paragraph 2, apart from a more updated set of market share figures based on the IDC CyberMap for October 2002.