

立法會
Legislative Council

LC Paper No. CB(1)679/98-99

Ref : CB1/PL/ITB
Tel : 2869 9214
Date : 24 December 1998
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LegCo Panel on Information Technology and Broadcasting

Follow-up to meeting on 4 December 1998

Further to LC Paper No. CB(1)676/98-99 multi-faxed to members yesterday, I circulate for members' information its Chinese version and attachment (summary Chinese translation only).

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for Clerk to Panel

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ASG1
ALA3
H(R/L) - three copies

OFTA P028(98)

PUBLIC VERSION

**APPLICATION MADE PURSUANT TO GENERAL CONDITION 3
OF THE PUBLIC NON-EXCLUSIVE TELECOMMUNICATIONS
SERVICE LICENCE OF HONG KONG STAR INTERNET LIMITED
ON THE SALE OF ITS INTERNET RELATED BUSINESS
TO HONG KONG TELECOM IMS LIMITED**

**TELECOMMUNICATIONS AUTHORITY'S ANALYSIS AND
CONCLUSIONS**

Note: Areas marked [REDACTED] have been blacked out for
confidentiality reasons.

23 December 1998

OFTA



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EXECUTIVE SUMMARY

Background

1. The report published today sets out the background, findings and conclusions from the Telecommunications Authority's analysis of the proposed transaction, announced on 23 November 1998, between Star Telecom International Holding Limited and Hong Kong Telecom IMS Limited (HKTIMS). The transaction is for the sale by the former of certain assets and goodwill of the business in the provision of Internet services and related products of its wholly owned subsidiary Hong Kong Star Internet Limited (Star) to HKTIMS.

2. In considering the proposals for the acquisition, the TA has assessed it against the aims of the Telecommunication Ordinance but also guided by the policy objectives of the Hong Kong SAR Government. The TA started from the presumption that this involvement, in what is really a commercial transaction, must be kept to a minimum save where competition or other relevant concerns necessitate it.

3. The criteria of the TA were the terms of the appropriate legislation, the need to maintain and develop effective competition, the market position of the parties to a transaction and their economic and financial power, status of the market and the players and of course, the interest of the consumers.

4. If the transaction did not create, strengthen or abuse a dominant position as a result of which effective competition would be significantly impeded in the Hong Kong market or if there were no other legitimate concerns, the TA's consent should be given. However, after careful analysis, the TA had identified certain legitimate concerns that needed to be met. These were the possibility of HKTIMS abusing a dominant position, entering anti-competitive agreements and receiving unfair cross-subsidies after the initial investment period. The TA was satisfied that with appropriate conditions these concerns could be met.

Decision

5. The TA has therefore, today, informed Star that he will be granting his consent to the proposed transaction subject to the condition that HKTIMS unequivocally confirms that it agrees to conditions proposed and surrenders its licence for the necessary modifications. Once that is done, the transaction can be completed.

The analysis

6. For the purposes of this acquisition the TA is satisfied that the markets that are directly affected are those for dial-up Internet access i.e. using a dial-up modem through an ordinary or

ISDN telephone line to connect to an Internet service provider (ISP); and leased line access, i.e. Internet access through a leased line giving a dedicated permanent access to an ISP.

7. Market share is usually quoted as the most important single indicator of a firm's degree of market power. Although this is an indicator, which can be used as a trigger for a competition/regulatory authority to carry out a detailed investigation, it is just one of the many factors to the whole exercise. There can be cases where an entity has a substantial part of the market but is facing competition from another firm of similar size or where the acquired market share will be short lived because of technological developments or competitors coming to the market.

8. As at December 1, 1998 in the dial-up access Internet market, the combined share of HKTIMS and Star Internet was 50.8 % of a total market of 590,223 subscribers. The market has increased by 40 % since the June 1998. The TA estimates that the annual growth for the market by December 1999 will be around 60 %. The market shares of the players have been changing though. If the transaction had taken place on 1 June 1998 the market share of the two firms combined would have been 58.7 %. The loss of market share is to an extent due to the very effective campaigns of some of the major players in this market. The top five players - excluding HKTIMS and Star - have increased their subscribers by approximately 95 % compared to June 1998. Some of the market players have been even more successful in attracting new customers. One has reported an increased subscriber base from 8,600 to 63,300 i.e. by 635 %. another from 35,000 to 65,000 i.e. an increase of 86 %.

9. In the leased line market the combined shares in percentage terms on 1 December 1998 of HKTIMS and Star was 18.4% of a market with 5,205 customers. The total market size increased by 31 % since June of 1998. The combined entities, increase is again smaller than the leader in this market or even of the market average. On the figures provided, the top five players in this market (excluding HKTIMS and Star) had increased their subscribers by an average of 47% since June 1998. The market shares of the parties, the structure of the market and its characteristics convinced the TA that he needs not have any concerns arising from this transaction.

10. The TA is satisfied the market entry in the provision of dial-up access for Internet is quite easy and therefore this makes possible abuses of a dominant position more difficult. Start up costs in dial-up Internet Access business could be as low as HK \$ 200,000-300,000. Although generally speaking it would be very easy for new players to enter the market, brand name and advertising or sales intensity can be very significant in the retail dial-up market. In the current economic climate there are concerns that a market player with 50.8 % of the current market share through increased advertising, exclusive contracts for promotions, special deals and special offers, combined with the parent company's willingness to maintain a loss because for example it is still

gaining income from increased usage of its backbone capacity, PNETS charges, etc. could act to the detriment of competition in the market.

11. Hong Kong has some of the cheapest dial-up-access prices in the world and from the pricing trend that we see there are signs of strong competition. With the current prices and profitability the smaller ISPs may not be able to survive a prolong price war or the need to maintain high profile in the market through advertising. Although customers are more willing to move from one ISP to another in the Internet access market, there are a lot of individual Internet users who may be relatively less knowledgeable and more affected by brand name recognition, intensive sales network and advertisements of the suppliers. Taking all these factors into consideration HKTIMS could have the ability and the incentive to adjust its behaviour unilaterally, including pricing and advertising strategies, to squeeze, in the short to medium term, existing and potential competitors. Competition in the relevant market could therefore be impeded. Under such circumstances, imposition of conditions on the transaction would be necessary and appropriate.

12. The TA has therefore agreed to consent to the transaction subject to conditions that prohibits anti-competitive behaviour and the receipt of unfair cross subsidies.

13. The TA has considered other related markets that might be affected by the transaction such as web-posting, web-advertising and e-commerce. The TA is however satisfied that at this stage, these are in most cases part of much bigger economic markets or that they are not telecoms related markets - such as advertising - and therefore they are not within his jurisdiction. The TA is satisfied though that any agreement entered into by a licensee which restricts competition in the telecommunications market - irrespective of the subject matter - falls within the parameters of General Condition 7 of the PNETS licence and as such open to the scrutiny of the TA.

14. The TA also examined concerns expressed that after the transaction HKTIMS will enjoy considerable benefits from economies of scale in the operation of its service thus placing other ISPs in an unfavourable position to compete with HKTIMS. The TA is of the view that this will not be the case as Internet access service is not a capital-intensive business. The major operating costs are staff costs, expenses for telecommunications lines and conveyance, advertising and promotion expenditure etc., and these costs are highly variable to the number of customers.

15. Regarding the concern that the PNETS charges will be increased as a result of the transaction, the TA is satisfied that the existing controls in place mean that the current transaction could not affect the level of the PNETS charge that is being determined by him under the FTNS licence held by structurally separate companies within the Hong Kong Telecom group.

16. Concern has also been expressed about the market power that would be commanded by HKTIMS in the web-posting market mainly because any content provider, advertiser or e-commerce operator would naturally choose an ISP which provides access service to the majority of the Internet users in Hong Kong. The TA considers that this assumption is not necessarily valid because irrespective of which ISP is being used to host the website it can be accessed by all users and any delay caused by the need to route traffic intra-Hong Kong would be insignificant and not noticeable to the users. Secondly because newer web browsers allow them to "memorise" favourite websites, the advantage gained by being on the home page of the ISP with the largest access customer size would be minimal. In addition, the targets of the web-posting activities are customers who use Internet to do business transactions. This group is expected to be more comfortable with computer or Internet usage so that re-programming of the start-up page of the browsers would be relatively a straightforward task. Thus the TA does not agree that HKTIMS would necessarily command market power that its competitors could not match by virtue of the customer size if the transaction is approved.

17. Peering arrangements have also been raised as causes for concern. These arrangements are effectively Internet interconnection arrangements with no financial settlement where no money changes hands between the two ISPs. HKT has informed the TA that any such arrangements are handled by Netplus and not HKTIMS. He is therefore satisfied that any concerns that may exist concerning current arrangements are not such that he can take into account in relation to the current transaction and should be more appropriately dealt with under the relevant licence of Netplus.

18. In relation to the current Star subscribers HKTIMS has confirmed to the TA that there will be a gradual transition period during which the Star business will be absorbed and existing Star customers will be given the option of maintaining their existing e-mail accounts.

Conclusions

19. The TA is satisfied that the current transaction will not strengthen the position of HKTIMS in the leased-line access market in a way that would cause him competition or other concerns. Due to the characteristic of the consumers using it and the fact that the market is sufficiently competitive the acquisition of Star by HKTIMS will have not have significant competition effects on this market. The TA will however monitor developments in the market and particularly the consolidation that is taking place to avoid the development of an oligopoly in that market that reduces choice and competition in the market.

20. In relation to the dial-up access market, the TA is of the view that in the short to medium term the new entity could be or can become dominant. The TA is also concerned that because of the nature of the product, the users and the serious effects that a possible misuse of a

dominant position, he needs to ensure that the current conditions in HKTIMS' licence are sufficiently clear so as to prevent them. The TA therefore considers that he must impose conditions to the transaction. He has therefore made his consent conditional to HKTIMS consenting to the incorporation of the two new conditions namely one that prevents the abuse of a dominant position and anti-competitive agreements and a second one expressly prohibits the receipt of unfair cross-subsidies.

21. The TA is satisfied that the existing controls on the Hong Kong Telecom group licensees in relation to their respective services and HKTIMS in particular are adequate to deal with any concerns about bundling, discounts etc. and does not therefore consider that there is a need to impose any additional conditions.

Office of the Telecommunications Authority

23 December 1998

TELECOMMUNICATIONS AUTHORITY'S ANALYSIS AND CONCLUSIONS

INTRODUCTION

1. This report sets out the background, findings and conclusions from the Telecommunications Authority (TA)'s analysis of the proposed transaction, announced on 23 November 1998, between Star Telecom International Holding Limited and Hong Kong Telecom IMS Limited (HKTIMS). The transaction was for the sale by the former of certain assets and goodwill of the business in the provision of Internet services and related products of its wholly owned subsidiary, Hong Kong Star Internet Limited (Star), to HKTIMS.

2. The aim of this analysis, on which this Report is based, was to enable the TA to decide whether he should consent to the above-mentioned transaction and if so whether any conditions should be attached. Before Star could transfer its business, permission, any right, or benefit arising from its licence it is required to obtain the TA's consent under General Condition 3 of its licence.

BACKGROUND

3. An application for the TA's consent in relation to the aforementioned transaction was filed on 17 November 1998 and was made public on 23 November 1998 by Star Telecom International Holding Limited through a "Discloseable Transaction: sale of interest business" announcement.

4. Since the transaction was notified formally on 17 November 1998 the TA took a number of steps so as to obtain all relevant factual information but also to allow those that are interested to have an opportunity to make their views known to him. On the same day as the public announcement by Star Telecom International Holding Ltd the TA put out a press release confirming that an application for approval of the transaction had been made. In the same press release - which was also made available on OFTA's web site - he invited representations on the transaction by 7 December 1998. The TA also wrote to the parties to the transaction and other interested parties asking for specific information that he needs so as to consider the transaction. These included detailed questions about their current business, the market, how they view the future development of the industry, the effects of the transaction on their business plans etc.

The TA has also asked questions about their future plans concerning their existing customers (both Star's and HKTIMS') and in particular how will these plans affect customers in terms of price, quality etc.

5. In addition the TA attended a public meeting of the Legislative Council Panel on Information Technology and Broadcasting on 4 December 1998 concerning the proposed acquisition. The TA in reaching his decision also took into account representations and comments made to the Panel during the meeting.

6. The TA allowed for time after the closing of the consultation period for meetings with interested parties such as competitors to the parties to the transaction, the Consumer Council etc so that he could discuss with them any representations that they may have made. He also had meetings with the parties to the transaction to discuss the concerns expressed and allowed them to respond.

7. In addition to being transparent the TA hopes that this Report will assist the industry and others to gain a proper understanding of the TA's approach to this type of transaction.

PARTIES TO THE TRANSACTION

8. Star is a wholly owned subsidiary of Star Telecom International Holding Limited. The Star Group of companies is engaged in the telecommunications business and investments including radio paging, data communications and mobile telephones. Star is the Internet arm of the group. After the completion of the transaction, the Star Group will no longer carry on any Internet business in Hong Kong.

9. HKTIMS is a wholly owned subsidiary of Hong Kong Telecommunications Limited. Hong Kong Telecommunications Limited is majority owned by Cable and Wireless plc and is involved, either directly or through its subsidiaries, in the provision of telecommunications products and services. HKTIMS is the arm of the group involved in the provision of interactive and multimedia services including Internet services.

THE PROPOSED TRANSACTION

10. The parties have agreed that for a consideration of HK\$ 245.5 million in cash (subject to adjustments) Star Telecom International Holding Limited will sell to HKTIMS

certain assets and goodwill of the Star business relating to the provision of Internet related services and products. This sale will include related assets, trade names and customers. The transaction does not involve the transfer of the Public Non-exclusive Telecommunications Service (PNETS) Licence (Number 130) held by Star.

11. Once the transaction is completed the Star group of companies will no longer be involved in the provision of Internet services in Hong Kong. During the first three months after the transaction all existing Star customers will continue to use the same Star Internet packages. New customers will be offered similar packages under the Netvigator¹ brands. The two businesses will be integrated gradually within six to nine months. Star customers will be given the option of retaining the use of their existing e-mail addresses.

12. Star will stop offering their sales packages and promotional offers immediately on completion of the transaction.

BASIS FOR EXAMINATION OF THE TRANSACTION BY THE TA

13. Star is a holder of a PNETS Licence (Number 130) initially issued on 4 April 1995. HKTIMS is also the holder of a PNETS Licence (Number 219) issued on 4 April 1995.

14. General Condition 3 of Star's licence² - which is mirrored in all PNETS licences - requires that the prior written consent of the TA is required for the transfer of the licence and any permission or any right or benefit arising therefrom. The said consent may be with or without conditions. The condition applies not only to those cases that there is a transfer of the licence but also where there is a transfer relating to the rights or benefits arising from the licence. Because this transaction involved the transfer of the "Internet business of Star" this constituted a transfer from Star to HKTIMS of "rights or benefits" arising from the former's possession of a licence to the latter. Therefore the transfer can only take place subject to the

¹ Netvigator is the brand name for HKTIMS' Internet related services.

² General Condition 3(1) and (2) provides that:

"(1) Notwithstanding regulation 8(1) of the Telecommunication Regulations (Cap 106 sub. leg.) the licensee may with the prior consent in writing of the Telecommunications Authority transfer this licence and any permission or any right or benefit arising therefrom.

(2) Any such consent shall be subject to such conditions as the Telecommunications Authority may impose."

consent of the TA. In accordance with that requirement Star made an application to the TA on 17 November 1998.

15. General Condition 7³ of the licences held by Star and HKTIMS provides that the licensee shall not enter into any agreement which would in any way prevent or restrict competition in relation to the operation of the service or any other telecommunications service licensed by the TA. The TA in examining the transaction also had regard to this provision.

WHAT IS THE BASIS UPON WHICH THE TA JUDGES THESE TRANSACTIONS

16. In considering proposals for acquisitions or mergers the TA has to assess them against the aims of the Telecommunication Ordinance but also be guided by the policy objectives of the Hong Kong SAR Government.

17. The TA starts from the presumption that his involvement, in what is really a commercial transaction, must be kept to a minimum save where competition or other relevant concerns necessitate it. The TA is of the view that best regulator of the market is healthy competition. The TA therefore starts considering all cases with a presumption in favour of allowing the market to take its own commercial decisions.

18. In cases where the transaction raises legitimate concerns the TA will examine it against three criteria:

- (a) the terms of the appropriate legislation, principally the Telecommunication Ordinance, Regulations and licence conditions;
- (b) the need to maintain and develop effective competition within Hong Kong taking into account actual and potential local and international competitive pressures; and
- (c) the market position of the parties to a transaction and their economic and financial power, the alternatives available to suppliers and users, their access to supplies or

³General Conditions 7 provides:

"The licensee shall not enter into any agreement or arrangement whether legally enforceable or not which shall in any way prevent or restrict competition in relation to the operation of the service or any other telecommunication service licensed by the Telecommunications Authority."

markets, legal and other barriers to entry, supply and demand trends in the relevant goods and services, the interests of the intermediate and ultimate consumers and the developments of technical and economic progress provided that it is to the consumers advantage and does not form an obstacle to competition.

19. Where the transaction does not create, strengthen or abuse a dominant position as a result of which effective competition would be significantly impeded in the Hong Kong market or there are no other legitimate concerns, the TA's consent will be given.

20. Where, after careful analysis, there are legitimate concerns that need to be met, the TA will give consideration to what, if any, conditions he needs to impose so as to meet those concerns.

21. It is only in case where the transaction creates, strengthens or leads to an abuse of a dominant position as a result of which effective competition would be significantly impeded or where other relevant concerns cannot be met by conditions that the TA will withhold his consent to a transaction. The TA sees this as the last resort.

ANALYTICAL FRAMEWORK FOR EVALUATION

22. In conducting this evaluation the TA – in the same way as other competition and regulatory authorities dealing with these type of transactions – began by evaluating the current state of competition in the relevant markets and the likely effects of the proposed acquisition.

Definition of the relevant market

23. The first stage of this approach involves the definition of the relevant product market by reference to the demand and supply conditions associated with a particular product, together with a consideration of the geographical scope of the market.

24. A consideration of the scope for demand-side substitution involves a consideration of the choices available to customers and in particular requires a certain understanding of the product in question, e.g. how customers use the product, what factors are important to them, what alternatives are available to them etc. In parallel, the consideration of the scope for supply-side substitution considers the facilities necessary to produce a particular service and

the technical and commercial feasibility for other firms to switch their production facilities in order to supply that product.

25. A relevant product market may in some cases be composed of a number of individual products and/or services that present largely identical physical or technical characteristics and are interchangeable.

26. The geographical scope of the relevant market is the geographical area within which demand-side and/or supply-side substitution can take place so that the conditions of competition within that area are broadly similar.

Competition analysis

27. The second stage then involves assessing the extent of competition within the relevant market taking into account a range of structural and behavioural factors. These factors include (but are not limited to) changes in the patterns of market shares over time; the recent history of entry into (and exit from) the market; and barriers to entry. The aim is to build up a picture of how competition operates within the relevant market.

28. Consideration will be given by the TA to the affected markets which consist generally of the relevant product markets where:

- (a) the parties to the transaction are engaged in business activities in the same product market and where the transaction will lead to a combined market share exceeding a predefined threshold for which the TA considers 15% appropriate taking into account practices in other jurisdictions. These are horizontal relationships.
- (b) one or more of the parties to the transaction are engaged in business activities in a product market, which is upstream or downstream of a product market in which any other party to the transaction is engaged, and any of their individual or combined market shares exceed a predefined threshold for which the TA considers 25% appropriate taking into account practices in other jurisdictions, regardless of whether there is or is not any existing supplier/customer relationship between the parties to the transaction. These are vertical relationships.

29. Consideration was also given by the TA to the relevant product and geographic markets concerned by the transaction, which are closely related to the affected market(s) (in

upstream, downstream and horizontal neighbouring markets), where any of the parties are active and which are not themselves the affected markets.

30. When faced with a transaction affecting markets that are in a process of rapid change, as are the Internet related markets, the best way to analyse the likely effect of the transaction is to isolate it from all other factors affecting the development of the relevant markets over time. This is achieved by framing the analysis in a way that holds constant the effects of all changes in market conditions other than those directly caused by the transaction. This is the only way to assess the effects of the transaction at the present time. The TA however also looked at the past and the future of the market and the likely developments so as to decide whether the effects of the transaction, as identified today, are likely to have an effect in the future or whether they are short lived. The TA also sought to identify the most significant participants based on an analysis of capabilities and incentives to compete effectively in the relevant market.

31. Finally the TA weighted any potential competitive harms against its likely benefits in that a balance has to be struck between the loss of competition in the Hong Kong market and an increase in the efficiency that could be the result of a transaction. This is what is sometimes described as the "public interest" test in some jurisdictions.

THE RELEVANT MARKETS

32. For the purposes of this acquisition the TA views the relevant markets as those for:

- (a) Dial-up Internet access;
- (b) Leased line Internet access.

33. There are two main ways to access the Internet:

- a) Dial-up/modem using an ordinary or ISDN telephone line to connect to an Internet service provider (ISP); and
- b) Dedicated leased line link giving permanent access to an ISP.

34. HKTIMS provides dial-up and leased line services, allowing customers to access the Internet through Nervigator. The same services are also available from Star. About 130 operators offer Internet access generally. Most of them provide both types of access. Those that only offer one of the two types of access in effect become specialist providers for either the

consumer or commercial market. The market for Internet services has grown rapidly over the recent years.

35. Internet traffic volume is expected to grow even faster at an average rate of over 80% per annum as a result of the increase of service available over the Internet, e-commerce and other multimedia applications.

Demand-side substitution

36. Demand-side substitution involves a consideration of the choices available to consumers and the extent to which the availability of alternative products can impose a constraint on the way in which a firm prices a particular product.

37. In terms of examining the pricing constraints on a firm, the concept of the 'hypothetical monopolist' can be a useful analytical tool for identifying close demand-side substitutes. Although it is not intended to be a representation of the actual market situation, the 'hypothetical monopolist' can be constructive in trying to set the boundaries to the relevant product market in practical terms.

38. The concept of the 'hypothetical monopolist' focuses on whether alternative (not necessarily identical) products are available to customers to which they could switch, without significant effort and expense, if the supplier of the product in question, presumed to be a monopolist for the purpose of this analysis, tried to implement a small but significant and non-transitory price increase. The idea behind this concept is that if customers are able and likely to switch to other similar products in sufficient numbers for the initial price increase to be unprofitable, then that monopolist's product is in direct competition with those products identified in this way and they form part of the relevant economic market. If such products can be found, they should be included in the definition of the product market as they would constrain the price-setting behaviour of the 'hypothetical monopolist.' This analysis is then repeated for the expanded product group until a set of products is arrived at where the 'hypothetical monopolist' would be able to maintain an increase in the price it charged for these goods. The concept thus involves a series of iterations, each time involving an examination of the likely reaction of customers to the change in relative prices.

39. For practical purposes the term 'small but significant' is often translated into a

price increase in the range 5-10%. The key factor is that the price increase ought to be 'significant' from the point of view of the consumer but at the same time not so large that products which are only weakly substitutable are included in the market definition. The small but significant and non-transitory increase in price is used solely as an analytical tool and not as a judgement about what are acceptable price increases.

40. The factors that TA considered in ascertaining the extent to which demand-side substitution was likely included:

- evidence that consumers have shifted or have considered shifting purchases between products in response to relative changes in price;
- the extent to which consumers would incur costs in switching from one product to another and also the time frame which consumers would need to organise such a shift;
- evidence that suppliers base their business decisions on the prospects of consumer substitution between products in response to relative price changes.

41. In the case of dial-up-access to Internet the three main factors in the mind of the consumer appear to be quality of service, speed and price. The TA recognises that the difference in price at the extremes between leased lines Internet access and modem/ dial-up access can be significant. This means that although leased lines and modem/dial-up may not be direct substitutes for one another, the prices for these services are constrained by intermediate alternatives e.g. access via broadband network, ISDN etc.

42. Individual dial-up access customers tend to be less time-sensitive, whilst quality and price of services are more critical. In this respect, the rather expensive charges on the dedicated leased-line access appear an unlikely choice for them. The lowest monthly charge for a dedicated leased circuit Internet access was HK \$3,300 as at November 1998⁴ compared to a HK \$108⁴ for personal users. Even using the 'hypothetical monopolist' model method, combined with a substantial and sustainable reduction in the leased-line access rate, it does not seem probable that customers will switch from the retail dial-up services to subscription of the dedicated leased-line. Cross-elasticity of demand among the two services is relatively low.

⁴ Excluding PNETS charges.

43. Internet services through the broadband access constitute a separate market. The nature of the service is such that attracts a different kind of customer that is more sensitive to time than the average dial-up-customer. Also the cost of switching to broadband access in terms of cost of additional equipment (approximately \$1,000), the need to subscribe to the Video-on-Demand (Interactive Television Service) also (\$100 per month) and the subscription and access charges - which are much higher than those for dial up access (\$238 per month + \$6 per hour Vs \$108 + \$1.98 per hour) - are such that even a 10% increase in the prices of dial-up access cost would not make broadband access a realistic alternative for dial-up access consumers. The service is not offered to business users. However, although the broadband access service is not a substitutes it would act as constraint to setting of prices.

44. The TA has also give consideration to the use of prepaid access cards for access to the Internet and whether they should be included in the dial-up-access market. The TA having considered the views of the parties and the industry is satisfied that they do not form part of economic market for dial-up access. They are mainly used as back up facilities, to try the Internet for a first time, by visitors to Hong Kong that need temporary access or even as collectors' items for those issued on special occasions. Phone cards or mobile phone cards would not be included in the number for subscribers for a network similarly with the prepaid access cards they should not be included in the market for dial-up access. They are not suitable for regular access to the Internet nor do they tie a customer to an ISP even for a month.

45. It must be noted that in the past, when providing statistical figures to the TA, HKTIMS included each card as a subscriber. This had the effect of not only inflating their market share but also the number of total subscribers in Hong Kong. The TA in calculating the market share as at 1 December 1998 and past performance of all the parties to the transaction - as well as the total market - has adjusted the figures accordingly. He has also adjusted the June 1998 figures to remove an error made by an ISP in the figures it supplied to the TA at the time. However because of this exercise the TA will be considering the nature of the information to be collected in the future from the market, as well as the frequency with which he does so. This is so he can keep sufficient and accurate information about the developments in this fast moving market.

46. The same considerations apply to defining the leased line market and its alternatives. However the fact that the main elements of the service for the business user are speed and quality of service means that the user is not likely to consider dial-up-access as a real alternative. Currently there are no realistic alternatives to this service.

Supply-side substitution

47. As well as considering the behaviour of customers in response to changes in price, it is necessary to consider whether there are firms which, though they may not currently supply the product in question, would not only be able to switch some of their existing production facilities to produce that product but would also be likely to do so in the event of an increase in the price of the product by the original supplier. As well as the ability to switch production in the short term, there is also the need to consider the ability of these firms to market and distribute the product in question.

48. As with demand-side substitution, this type of analysis focuses on the response (in this instance of other firms) to a small, but significant and non-transitory increase in price. The scope for supply-side substitution would be examined by reference to the same magnitude of price increase as was used for examining the scope of demand-side substitution.

49. The sorts of factors that would be taken into account would include any evidence on the ability of other suppliers to shift production in response to relative changes in price, as well as the likelihood of such a response.

50. Providers of dial-up Internet access and dedicated link Internet access utilise similar equipment, support services and general business organisation. This appears to suggest that dial-up Internet access providers are in a good position to offer dedicated link access services as well and vice versa. Indeed a number of the most significant ISPs already offer both dial-up and dedicated link access as part of their portfolio of product offerings. The barriers facing those ISPs offering modem dial-up who wish to extend their services to dedicated links appear to be low e.g. leased lines are available to ISPs from HKT at the same price as HKTIMS and Star. Although TA recognises that investment in extra backbone capacity could be an obstacle to dial-up providers in offering dedicated link Internet access, as far as the TA is aware, smaller ISPs do not have appear to have any problems renting backbone capacity. Also small ISPs can attach themselves to larger ISPs so that they can share a bigger backbone capacity at a reduced cost.

51. It also appears that the nature of the Internet market is such that one could argue that any telecommunications related firm is in a position, very easily and with small additional expenditure, to enter the dial-up access Internet market. This can be seen by the recent move in the UK of British Telecommunications (BT) to offer the BT Click service which allows users

to access Internet at the cost of 1p a minute (in addition to the local cost charge) and pay for it through their telephone bill. This has to be considered taking into account that BT has its own Internet business (BT Internet) and that this new service could compete with it. Also CTI has been offering free Internet access to its call-back customers. The recent move by Hutchison Telecommunications Limited to enter the Internet market is also an indication that telecommunications firms are well placed to enter and compete in both the leased line and the dial-up access market.

52. However, taking into account the nature of the products and in particular their usage the TA is satisfied that the relevant product markets should be defined in terms of demand side substitution keeping in mind the ease for competitors to enter these markets if they felt that the profits made by any one firm were such to justify switching the some of their production to this area.

GEOGRAPHICAL SCOPE OF THE MARKET

53. The relevant market is defined not only in terms of the products or services but also in terms of a particular geographic area. In trying to define the geographical boundaries to a product market the aim is to identify the extent to which the proximity of rival manufacturers can impose competitive constraints on the firm in question.

54. The nature of the two markets, and in particular:

- (a) the economics of providing the service to the customers,
- (b) the fact that a licence is needed to run the service in Hong Kong, and
- (c) the need of a local access point

lead the TA to define the geographic market as that of Hong Kong. The TA has considered representations that the geographic market might be wider - Asia/Pacific or even international - he has not however been convinced that is the case.

EXTENT OF COMPETITION

55. There is no unique indicator of the degree of competition in a market. Market shares, which are often used as a means to indicate the extent of competition, only give a partial picture at a particular moment in time and also do not reveal anything about the competitive constraint imposed by the possibility of new entry into that market i.e. the contestability of the market. As a result it was necessary to look at a range of factors in order to build up a picture of the operation of competition in the two markets. It should be noted that in assessing

competition, it is not possible to remove the exercise of judgement from that assessment.

56. The factors that the TA took into account in considering the extent of competition in the two markets exists included:

- The structure of the market;
- Market shares: in particular, changes in the pattern of market shares over time;
- Barriers to entry: technical, regulatory etc, together with the history of entry (and exit) in the market;
- Price history of the market: profitability of firms in the market;
- How firms compete in the market and how they differentiate themselves to customers;
- other relevant factors.

57. Other factors that the TA took into account included customer awareness and customer inertia. These factors can also have a bearing on the definition of the relevant market.

Market Structure

58. At a very basic level this is simply the number and identity of firms in the market together with an idea of the distribution of market shares within the market: i.e. how concentrated a market is. At the same time additional information such as who the principal competitors are, whether there are different sorts of companies competing in different segments of the market (e.g. serving different customer groups) etc, is important in order to build up a picture of the market.

59. In Hong Kong there are 133 licensees that offer Internet services .
The main ISPs (in terms of subscriber numbers³) for dial up access as at 1 December 1998 were:

- | | |
|-----------------------------|----------|
| 1. HKTIMS | ████████ |
| 2. Star | ████████ |
| 3. HKNet Co Ltd | ████████ |
| 4. City Telecom (HK) Ltd | ████████ |
| 5. Asia Online Ltd | ████████ |
| 6. Chevalier (Internet) Ltd | ████████ |

³Based on the numbers provided by the ISPs.

7. Hong Kong Supernet Ltd

In the leased line market as at 1 December 1998 these were:

1. LinkAge on Line Ltd*
2. HKTIMS
3. Star Internet
4. Hong Kong Supernet Ltd
5. AT&T Easilink
6. Asia Online Ltd
7. IBM China/ HK Group

Market Shares

60. The most recent market share figures are often the first indicator that is examined but on their own they are only a partial indicator of the state of competition in a market. What is more important in the context of assessing the extent of competition is to understand how those market shares have changed over time - changes in the pattern of market shares over time provide a more significant indicator about the development of competition.

61. The calculation of market shares obviously depends on being able to set the boundaries of the relevant market and then calculate the total size of that market. In order to ascertain market shares comprehensively, The TA would generally wish to consider market share data in both value and volume terms. Discrepancies between the two can reveal that new firms may be successful at, say, winning low value customers but that the incumbent is able to retain the high value customers and thus could still retain a degree of influence in the market.

62. However, the nature of the dial-up access market and the fact that we are talking about the provision of the service at about the same price, the volume by value does not add to the current considerations of the market. The situation is similar for leased line access where the line is usually leased for a fixed fee. Details about the different services and costs are not available in any meaningful way.

63. Market share is usually quoted as the most important single indicator of a firm's degree of monopoly power. Although this is an indicator, which can be used as a trigger for a

*This number excludes companies recently acquired such as Asia On Line.

competition/regulatory authority to carry out a detailed investigation, it is nothing but a factor to the whole exercise. There can be cases where an entity has a substantial part of the market but is facing competition from another firm of a similar size or where the acquired market share will be short lived because of technological developments or competitors coming to the market.

64. In the dial-up-access Internet market, the combined entity (HKTIMS and Star Internet) would have a market share of 50.8 %, as calculated at beginning of December 1998. Following which the closest competitors, namely HKNet with [REDACTED] % ($X > 10\%$) and City Telecom with [REDACTED] % ($X > 10\%$) each of the total market share.

65. The market of dial-up subscribers as at 1 December 1998 was 590,223 dial-up-accounts calculated on the figures supplied by the ISPs. The market size had increased by 40 % since June 1998 (excluding at both dates the number of Netcards) . Therefore the respective percentage market shares for December 1998 are:

1. HKTIMS	36.9
2. Star Internet	13.8
3. HKNet Co	[REDACTED]
4. City Telecom (HK) Ltd	[REDACTED]
5. Asia Online Ltd	[REDACTED]
6. Chevalier (Internet) Ltd	[REDACTED]
7. Hong Kong Supernet Ltd	[REDACTED]

66. After the acquisition HKTIMS would have 50.7% of the market share. If the transaction had taken place on 1 June 1998 the market share would have been 58.7 %. The loss of market share is to an extent due to the very effective campaigns of some of the major players in this market. The top five players - excluding HKTIMS and Star - have increased their subscribers by approximately 95 % compared to June 1998. Some of the market players have been even more successful in attracting new customers. For example [REDACTED] has increased its subscriber base by 54,699 a 635 % increase and [REDACTED] by 30,000 or a 86 %. Taking the market share of the two companies involved in the transaction, their market shares over time were:

	Dec 97	Jun 98	Dec 98
Market share for combined entity	62.4 %	58.7 %	50.8 %
Change in market share.....		(3.7 %)	(7.9 %) ⁷
Change in total market size.....		13.7	39.7 %

67. Also the market concentration ratio for the top 4 firms in the market prior to the acquisition would be 73 % compared to 78 % if the transaction proceeds. Looking at the same figures using the HHI index the figure prior to the transaction is 1,853 and after 2,875 an increase of 1,022 points.

68. In the leased line market there has been 31 % increase in the total number of lines since June 1998 and the total lines were 5,205. The shares in percentage terms - on 1 December 1998 - were:

1. LinkAge on Line Ltd
2. HKTIMS
3. Star Internet
4. Hong Kong Supernet Ltd
5. AT&T Easiline
6. Asia Online Ltd
7. IBM China/ HK Group



69. The combined market share of HKTIMS and Star is 18.4 % which is smaller than the leader in this market - namely LinkAge with a [REDACTED] % market share, or taken with the Asia On Line, a market share of [REDACTED] %. Again on the figures provided the top five players in this market excluding HKTIMS and Star had increased on average their subscribers since June 1998 by 47 % where HKTIMS only increased its customers by 19 % and Star by 16 %.

70. The market concentration figures for the top 4 firms were prior to the acquisition 43.8 % and after 49.2 % and the HHI index was 663 points prior to the merger and 820 after.

⁷ Figures in brackets are negative figures.

Barriers to Entry

71. Examining the barriers to entry that exist in a market gives a competition authority an idea of whether certain anti-competitive practices are feasible or not. If barriers to entry are low certain anti-competitive practices such as an unfair subsidy or predatory pricing would be less feasible as a market strategy.

72. In both the markets for the provision of Internet access, barriers to entry appear to be quite low and consist mainly of capital outlay on computer equipment, i.e. routers, hosts and servers and rental of backbone capacity. It has been estimated that the start-up costs of a dial-up Internet access business could be as low as HK \$ 200,000-300,000.

73. From the examination carried out of the supply side substitution, it is clear to the TA that it would be very easy for a firm to enter the Internet access markets within a very short time scale. This is more so for a telecommunications firm that has part of the infrastructure needed to run the service or where it can use in-house expertise.

74. However, brand name recognition and advertising or sales intensity can be more significant in the retail dial-up market. On the other hand, business customers are in general more sophisticated, knowledgeable, and thus broad based brand name promotion and mass advertising appear less important.

75. The current economic climate, under which this transaction is taking place, give rise to the legitimate concern that other local or regional firms may decide to concentrate on their core activities rather than enter this market. This would be more likely where a market player with 50.8 % of the current market share through increased advertising, exclusive contracts for promotions, special deals and special offers combined with its parent company's willingness to maintain a loss (which would be compensated for by increased usage and thus income from the increased usage of backbone facilities, PNETS charges, etc.) could act to the detriment of competition in the market.

Pricing/Profitability

76. The consideration of profitability and/or pricing trends is part of the attempt to address the issue of whether there is effective competition in the relevant market.

77. The profitability of firms in the market can also be indicative of the extent of price competition – sustained excess profits across a number of firms could indicate not only that there is no serious attempt to compete on price but also that there are barriers to entry which prevent the excess profits from being competed away.

78. Hong Kong has some of the cheapest dial-up access prices around the world and there has been no evidence that any player in the market is making excess profit (e.g. excessive return on capital employed or return on sales). On the contrary the market has so far been sustaining losses. Due to the competitive pressures, the ISPs have instead been making further price reductions or offers of special deals to attract new customers. The fact is that with the current prices and profitability the smaller ISPs may not be able to survive a long price war or the need to maintain high profile in the market through advertising. It was stated to the TA that the cost of acquiring a customer is approximately \$1,300. This does not allow small ISPs any flexibility for further price reductions or increased advertising expenditure etc without an increase in the losses incurred in the short term.

79. An additional consideration is the entry into this market by the offers of some firms of dial-up access free of charge. At one end is the phenomenon seen in the UK and the USA where firms offer free dial up access to the Internet (excluding the costs of the call to the ISP for which the subscriber is charged for by the phone company he is using) covering their costs through advertising. These are similar to recent offers in Hong Kong by some providers who offer the equivalent of the cost of the subscription as credit for IDD calls.

Operation of Competition & Other relevant factors

80. The objective of gathering information was to gain a better understanding of how a particular market actually functions and that necessitates going beyond just examining the structure of the market but the sorts of factors that are important to the operation of competition, which vary from market to market. This includes factors influencing customers' purchasing decisions and how this is reflected in the way in which firms will behave and compete. For example, in a market where the product is basically homogeneous, firms are likely to compete solely on the basis of price. In other markets where customers are prepared to accept price/quality trade-offs, firms may attempt to differentiate their products and therefore other factors such as branding and advertising spend can become more significant.

81. Other issues such as:

- the extent to which customers can exercise countervailing buyer power when dealing with suppliers;
- the rate of 'churn' of customers - which could be taken to indicate that customers were actively switching between suppliers;
- length of contracts: e.g. whether long-term contracts are a feature of this particular market;
- the importance of branding (e.g. brand loyalty/reputation effects);
- the importance to firms of being able to offer a complete portfolio of services to customers;

can all be important in assessing competition in telecoms markets.

Leased line access

82. In the leased line market the major users of the service are big firms that can exercise countervailing buyer power when dealing with HKTIMS and brand name may be less important. They have in-house expertise to advise them and can negotiate terms and conditions to meet their needs. The alternative providers in the market are sufficiently big - some of them bigger than HKTIMS (even if the transaction goes ahead) - to offer customers a real choice of provider.

Dial-up access

83. The TA also took into account that the churn rate for Netvigator up to end of October 1998 for year-to-date was much higher than in other telecommunications services (it was [REDACTED]%) which shows the ease and willingness of customers to switch ISPs. This is the buyer power in this market - just to walk away if the price or service is not right. The length of contract in the Internet market is usually one month which means that customers are free to move at will.

84. In addition, we have to recognise that individual Internet users are relatively less knowledgeable and more affected by brand name recognition, intensive sales network and advertisements of the suppliers. HKTIMS has at this point access to 50 HKTCSL shops but more importantly is spending HK\$ [REDACTED] (excluding the value of the HKT brand). As such, the transaction may put the other competitors in relative disadvantages when extending their competitive forces and market shares versus the combined entity in the short to medium term.

The combined entity therefore would have the ability and incentive to adjust its behaviours unilaterally, including pricing and advertising strategies, to squeeze existing and potential competitors after the transaction. Competition in the relevant market will therefore be impeded. Under such circumstances, imposition of conditions on the transaction would be appropriate.

85. Concern has also been expressed about the market power that would be commanded by HKTIMS in the web-posting market mainly because any content provider, advertiser or e-commerce operator would naturally choose an ISP which provides access service to the majority of the Internet users in Hong Kong. This was based on the assumption that an Internet user would programme the home page of the ISP as the start-up page of its browser, either as a result of the browser provided by the ISP being so programmed or the user would normally select the ISP supplying access as the start-up page. The TA considers that this assumption is not necessarily valid. Firstly, any web site is accessible to any Internet user irrespective of which ISP is used to host the website. For a website hosted by a local ISP, any delay caused by the need to route traffic through the intra-Hong Kong Internet exchange would be insignificant and not noticeable to the users. Secondly, with the availability of facilities from browsers to "memorise" favourite websites, the advantage gained by being on the home page of the ISP with the largest access customer size would be minimal. Thirdly, the targets of the web-posting activities are presumably the group of customers who use the Internet to do transactions and this group of customers are also expected to be those who are more comfortable with computer or Internet usage. For this particular group of customers, the re-programming of the start-up page of the browsers would be a relatively straightforward task. Thus the TA does not agree that HKTIMS would necessarily command market power that its competitors could not match by virtue of the customer size if the transaction is approved.

86. Nevertheless, considering that there were a total of 131 licensed ISPs as at the end of September 1998, the number of new entrants has been increasing, and that set-up cost of the Internet business is relatively low, it remains questionable that a dominant position by the combined entity could be maintained in the long term. Well-branded and large international Internet service providers could easily set up or expand their presence in the relevant market and compete under their strong financial and technological backups. There are already indications in the market that such overseas players are planning to enter the Hong Kong market in the new year. The contestability theory supports that free or easy entry could form an effective mean to ensure competitive behaviours in the relevant market even under a current monopoly or highly dominant market structure.

87. The fast growing numbers of users and the rapid changes in the technology and liberalising regulatory environment in the relevant markets would also support the effective functioning of the contestability theory, making any anti-competitive behaviours by the combined entity less feasible not only in the long term but also not in the short or medium term. As such, the TA's constant review of the market development and adjustments on the conditions adhered to the transaction would be necessary.

88. The TA is in no way wishing to regulate the Internet market but he is satisfied that there is a realistic threat as the market currently stands, both in terms of market competition, the participants' power to inject cash into the Internet market, and the effects that this could have on the Internet market of Hong Kong and consumers if HKTIMS was to behave in a way that was aimed at reducing competition. He is therefore proposing to introduce a condition that is in the form of a prohibition of activities carried on which have, or are likely to have, the object or effect of preventing, restricting or distorting competition. The condition catches the abuse of a dominant position and clarifies the position concerning agreements and concerted practices where there is an appreciable effect on competition. The prohibition rests on the economic effect of the behaviour, not its legal form. This means that the condition does not have the effect of prohibiting specific types of behaviour. In all cases an assessment of the anti-competitive effects of the behaviour is a necessary step in deciding if a particular action is prohibited.

89. This way the TA will neither restrict the flexibility of HKTIMS to be an effective player in the market nor allow it to act anti-competitively either by abusing its power or by entering into agreements that have the object or effect of preventing or restricting competition. This second element of the prohibition is a clarification of the existing obligations that HKTIMS and other PNETS licensees have. The TA therefore proposes to introduce the following condition:

"SC 17 Without prejudice to the generality of General Condition 7 and Special Condition 13 of this licence, where the licensee is, in the reasonable opinion of the Telecommunications Authority, in a dominant position with respect to a market for the service, it shall not engage in conduct which has the purpose of preventing or substantially restricting competition in a market for the provision or acquisition of the service or telecommunication installations or apparatus."

Other Markets

90. The TA has considered what if any other markets should be classified as affected markets. He has given consideration to such possible markets as web-posting, web-advertising and e-commerce. The TA is however satisfied that at this stage they are in most cases part of much bigger economic markets or that they were not telecommunications related markets – such as advertising – and therefore they are not within his jurisdiction.
91. However the TA wishes to make it clear that any agreement entered into by a licensee which restricts competition in the telecommunications market – irrespective of the subject matter – falls within the parameters of General Condition 7 of the PNETS licence and as such open to the scrutiny of the TA.
92. Concerns have been expressed by a number of market players on the effect that the transaction could have in the future on e-commerce. They were concerned that HKTIMS would monopolise agreements, enter into exclusive deals so that it would exclude the rest of the ISPs. The TA is satisfied that if HKTIMS was to enter into commercial agreements that restrict competition etc they would be subject to the provisions of General Condition 7.
93. He is however satisfied that, in view of the market share of the new entity, if it were to enter into any such agreement, it could have a serious effect on the market and the consumers. He is therefore proposing that in granting his consent to impose a condition that would prevent the abuse of dominance by HKTIMS and clarify the position on entering into agreements that could have that effect.

Related or Vertical markets

94. The TA considers that the following are related markets to which he should have regard in considering the effects of this transaction:
 - (a) PSTN Telephony;
 - (b) Leased lines;
 - (c) Backbone access.

95. The TA is aware of the concerns expressed about the relation of HKTIMS with Hong Kong Telecommunications (HKT) group. The concern is whether HKT as the strong parent company of HKTIMS would facilitate anti-competitive behaviour, such as predatory pricing, cross-subsidisation, and vertical restrictions or give HKTIMS an unfair advantage.

96. The TA is satisfied that in relation to the telephony, leased line and backbone markets there are controls under the existing licences held by the HKT group that would prevent the existing relationship from being used anti-competitively provided they complied with their licence obligations. Telephony and leased lines are regulated services under which prices and other terms and conditions have to be published. The TA does not therefore consider that the transaction will affected the current situation. On the contrary the proposed conditions that HKTIMS has to accept for the TA to grant his consent will go to ensure that any vertical relationship that might exist cannot be abused. It is in effect an additional safeguard (bottom up) to the existing safeguards that exist in the licences of other members of the HKT group (top down).

97. The TA is more concerned about the fact that although HKTIMS is not a profit making company, and this may not be surprising taking into account the fact that it is still at the start up period. This may not be the case after some time. The TA is concerned that this investment can develop into an unfair cross-subsidy having an effect on competition. The parent company will be in a position to continue financing a loss making business where the independent competitors may not be able to do so. Although the separate accounting system of HKTIMS should help monitor such a possibility it may still possible for HKT to provide preferential loans to HKTIMS and that can be an indirect cross-subsidisation.

98. The TA therefore does not only intend to monitor more closely compliance with Special Condition 12 and 14^a of HKTIMS' licence and will give further consideration to requiring

^aConditions 12 and 14 of HKTIMS's licence provide as follows:

"12. (1) The licensee shall not enter into any agreement, arrangement or understanding, whether legally enforceable or not, with associated persons or with or in relation to an associated or affiliated service (for the purposes of this Special Condition 12 called "Agreement") unless such Agreement is at arm's length.

(2) Without limiting the generality of paragraph (1) if the licensee provides to, or acquires from, an associated person or an associated or affiliated service, any telecommunication installation, service or apparatus, the licensee shall not give any undue preference to, or receive any unfair advantage from the associated person or the associated or affiliated service, in relation to the provision or acquisition of the telecommunication installation, service or apparatus.

(3) The licensee shall furnish to the Telecommunications Authority, at such intervals and on such occasions as he may reasonably require, the financial statements and a report on the Agreement and the basis