REVIEW OF DELIVERY FEE ARRANGEMENTS

Further Considered Views of the Telecommunications Authority for Industry Consultation 30 September 1998

Introduction

1 The "Framework Agreement" signed between the Government of the Hong Kong Special Administrative Region (HKSARG) and Hong Kong Telecommunications Limited (HKT) on 20 January 1998 drew to an end the exclusive franchise of Hong Kong Telecom International Limited (HKTI). The surrender of the exclusive licence for certain external[1] circuits and services of HKTI on 31 March 1998[2] paved the way to full liberalisation of the Hong Kong's external telecommunications sector. This was more than eight years ahead of the scheduled expiry date of HKTI's exclusive licence in 2006.

2 According to the Framework Agreement, external services competition will precede facilities-based competition. Between 1 January and 31 December 1999, licensed service providers will be able to provide public external services over the facilities of HKT. From 1 January 2000, public external services which bypass completely HKT's gateways and circuits may be operated over the infrastructure (e.g. satellite earth stations and cable capacity) provided by licensed facilities-based operators. It is against this competitive market environment for external services that the existing interconnection arrangements between the external network and local network operators need to be revisited.

3 Before services competition to be introduced on 1 January 1999, interconnection between the external network and local network operators has been governed by the delivery fee arrangement, which was first introduced on 1 August 1993 and then revised on 1 October 1995. The delivery fee arrangement was basically a revenue sharing agreement designed to use revenue obtainable from external services under the international accounting rate system to subsidize the operation of the local networks. However, this kind of international-to-local cross subsidization could no longer be sustained as competition takes place in the market for external services and

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1 "External" means communications with places outside the Hong Kong Special Administrative Region and includes places in and outside mainland China.

2 According to the Framework Agreement, after 31 March 1998, the external gateways and other facilities originally operated by HKTI will be jointly and severally provided by a group of companies comprising HKTI, Hong Kong Telephone Company Limited and Hong Kong Telecom CAS Limited. The reference to "HKT" in this paper means the group of the three companies mentioned either in whole or in part.

alternative services bypassing the international accounting system drive the rates of payments under that system towards costs.

4 In order to work out the arrangements for interconnection between the external services/gateway operators and local network operators which will be suitable for the liberalised external telecommunications sector post 1 January 1999, the TA has embarked upon a consultative process with the industry. The first consultative paper was issued on 14 February 1998. The preliminary findings of the TA were discussed in the second consultative paper issued on 28 May 1998. In response to the second consultative paper, submissions were received from nine organisations, including both network operators and service providers. Responses of the TA to the issues raised in these submissions are given in Annex 1 to this paper.

5 Views and comments of the industry have provided valuable insight to the TA in developing the local interconnection arrangements for external services from 1 January 1999 onwards. The purpose of this paper is to elaborate on the further views of the TA on the following issues -

- Categorisation of external traffic routes;
- Local access charge for the Category A routes;
- Modified delivery fee arrangements for the Category B routes; and
- Interconnection arrangements for the mobile network operators.

Because of the complexity of the above issues, the TA invites further comments from the industry on the views expressed in this paper before the TA finalises the local interconnection arrangements.

Categorisation of External Traffic Routes

6 It is expected that while many of the external traffic routes would be competitive from 1 January 1999, others would remain non-competitive during 1999 and even thereafter, depending on the opportunities for alternative physical connections and genuine price competition to be established. As the operating economics would likely be different for the competitive and non-competitive routes, it necessary to apply different arrangements for local interconnection charges for these two categories of external traffic routes.

Criteria for route categorisation

7 From 1 January 1999, Hong Kong's external traffic routes would be divided into the following two categories -

- Category A will contain those locations for which certain tests concerning the status of competition over the routes to and from the locations are met; and

- Category B will contain those locations which do not meet the tests.

The tests concerning the status of competition would be -

- whether a service provider in Hong Kong may physically establish connections to and from a particular location without transiting the gateway of HKT, for example, by international simple resale (ISR) operation over available leased circuit capacity, or by separate correspondent relationship in bypass of HKT's gateway. In considering whether alternative connections could be made the TA would consider direct and indirect routings (e.g. using refile or transit arrangements) and all technologies capable of providing a reasonably substitutable service; and

- whether the costs of utilising the connections identified in the first test would allow genuine price competition in the supply of external services to and from that location.

8 In a nutshell, the distinction between Category A and Category B routes would be based upon whether effective competition can take place on those routes. Category A routes include those competitive ones, while Category B are those with services remaining to be provided by the gateway of HKT. In assessing whether effective competition can take place on the routes, consideration will be given to whether effective competition has actually taken place or can potentially take place. Based on the consideration of potentially effective competition, Category A would include those routes for which operators other than the incumbent choose not to establish physical connections, even though it is possible for such connections to be established. Category B will consist of those routes for which connections to and from the external locations remain to be provided only through HKT's gateway and competition from direct or indirect ISR (refile) operation or alternative correspondent relationship (direct or through transit arrangements) over these routes is not available.

Route categorisation under services competition (1 January - 31 December 1999)

9 During 1999, alternative physical connections could be provided mainly through direct ISR or indirect ISR (i.e. refile) connections. With traffic delivered through these channels, the external gateway of HKT, and hence the accounting rate settlement system, would be completely bypassed. In addition, correspondent relationships with overseas carriers entered into by the new entrants through leasing the international facilities of HKT would also be regarded as alternative physical connections. However, the TA would not expect these services-based correspondent relationships to be able to allow significant genuine price competition to the gateway services of HKT due to the still monopolistically-owned international facilities and the dominant position of HKT in accounting rate negotiations.

10 In the last two rounds of consultation, doubts were raised on whether the existence of alternative physical connections through direct ISR or indirect ISR over a route would automatically qualify the route for Category A classification. The traffic delivered through an ISR channel should command lower tariffs, as the ISR connections would avoid the payment of the generally above-cost settlement rates to the overseas correspondents. However, the benefits of ISR connections may not be fully realised when competition in the provision of external facilities is absent, as prices of the international private leased circuits (IPLC) would normally be more than full cost recovery, including cost of capital. With IPLC prices held above costs, there is no guarantee of the availability of genuine price competition with the gateway services of HKT even on the ISR routes, let alone the indirect ISR routes, as HKT, being the IPLC operator, could negotiate settlement rates under the international accounting rate system closer to the underlying costs.

11 Another issue raised was whether or not the TA should ascertain whether the direct ISR or indirect ISR connection to a particular location is in conformity with international law and national law or policy at that location. It was suggested that, for some locations at which the administrations do not openly declare their position towards ISR, it would be difficult and time consuming for the TA to attempt to ascertain the legality or conformity with national policy of ISR operation at the far end.

12 Therefore, in assessing whether the alternative physical connections may be established for a particular external location and whether the alternative connections would allow genuine price competition over the routes, the TA would have to rely on some objective tests which could be carried out efficiently using information available to him. The TA will examine the levels and past trends of retail tariffs of the services provided through HKT's gateway and those of the services provided through the

alternative means. Significantly lower retail prices for services through the alternative means compared with those for the services through the HKT's gateway, or downward trends of the prices for services through HKT's gateway to match the prices of the services through the alternative means, would be objective indications of the competitive pressure on the services through the HKT's gateway.

13 The approach of route categorisation based on the examination of tariff levels and trends could be applied only after 1 January 1999 when services based on ISR commence operation. In the initial route classification to be conducted in the last quarter of 1998, the TA would first establish a list of locations for which it is confirmed that direct ISR to and from those locations is permitted by the overseas authorities concerned. The TA would then critically examine the retail tariffs that could be supported by the ISR operators on these routes. Effectively, this would involve a comparison between the per minute cost of using HKT's gateway in order to deliver traffic to a particular external location and that of using leased circuit capacity connected to the same location coupled with the domestic interconnection charge imposed by carriers at the far end.

14 The sources of information that the TA would rely on to establish the initial list of locations which permit direct ISR would include the schedules of specific commitments filed with the World Trade Organisation under the basic telecommunications agreement, official pronouncements or documents issued by the administrations concerned and other confirmed sources of information. This initial list of locations is expected to include the countries in North America, Australasia, many countries in Europe and countries implementing market liberalisation in Asia. These routes taken together are expected to account for more than half of Hong Kong's external traffic to/from locations outside China. Once it is confirmed that leased circuit connections to these destinations would be able to allow lower retail tariffs to customers than those using HKT's gateway, these routes would be formally declared as belonging to the Category A. Otherwise, they would be kept under the "observation list" to be created under Category B.

15 The procedures for identifying the routes with effective competition from refile would be less straightforward and deserve more prudent consideration. A fundamental difference between the direct ISR and refile routes is that the latter does not allow direct leased circuit connections. Normally, the traffic would be delivered to a refile hub before it is routed by the resellers to the final destinations. Thus, the refile rates that could be offered by the ISR operators would depend on the costs of delivering the traffic to a particular refile hub and the onward transmission rates charged by the resellers in that hub. In some cases, rates offered by the resellers are volume dependent.

16 Notwithstanding the above concerns about the economics of refile, it has to be pointed out that there are certain external routes which are potentially open to services competition through refile as evidenced by the call-back rates currently offered in the market. However, it would be premature to immediately classify them as belonging to Category A until it is firmly proved that the tests on competitiveness over these routes are satisfied. The traffic on these potentially competitive routes is expected to account for a significant percentage of the traffic to/from locations outside China.

17 To ensure that the route categorisation would not lag behind market reality, the potentially competitive routes referred to in the preceding paragraph would be placed on the "observation list" under Category B. Traffic routes on the "observation list" would be subject to a fast track approach for reclassifying into Category A when effective price competition is firmly established. In the initial route categorisation to be conducted in the last quarter of 1998, a number of locations are expected to be placed on the "observation list" based on a study of the rates currently offered by callback operators in the market. These potentially competitive traffic routes, together with the direct ISR routes referred to in paragraph 14 above, are expected to account for over 90% of Hong Kong's outgoing traffic to non-China destinations and bothway traffic to/from locations outside China.

<u>Route categorisation under facilities-based competition (post 1 January 2000)</u>

18 From 1 January 2000 onwards, apart from considering direct ISR and refile connections, the tests for inclusion in Category A will include consideration of whether physical connections could be established to and from gateways in Hong Kong competing with HKT's gateway. Such connections include both direct correspondent relationships and indirect correspondent relationships via transit arrangements. Again, both types of connections must be able to meet the second test of providing genuine price competition in order to be classified as Category A.

19 All the external gateway operators, including both HKT and the new entrants, would be required to file with the TA their agreements reached with overseas correspondents once they have been signed. This filing requirement would also apply to the agreements signed by HKT with their overseas correspondents before 1 January 2000. With the availability of this information, the TA would decide whether a route reclassification exercise would need to be initiated, or whether it would be suitable to put a particular route on the observation list.

Procedures for route reclassification

20 The initial route categorisation should include at the maximum the confirmed direct ISR routes under Category A, depending on whether genuine price competition would be allowed, and produce an "observation list" under Category B. The routes listed on the observation list would be subject to a fast track approach in the future route reclassification process. From time to time, the TA could expand the coverage of the observation list to include the potentially competitive routes by taking into account the trend of traffic flow and any other relevant information, such as the establishment of alternative correspondent relationship.

21 From 1 January 1999 onwards, the TA would monitor on a monthly basis the volume of incoming and outgoing gateway traffic over the routes on the observation list, and also the retail tariffs offered by the gateway operator and resellers in the market. The existence of effective competition on a particular traffic route due to the availability of indirect ISR connections could be reflected by significant decrease in the volume of bothway gateway traffic on that route from the monthly average recorded in the twelve months ending December 1998. Besides, significantly lower prices for competing services compared with the retail tariff of HKT's gateway services, or downward trend of the prices of HKT's gateway services to match those of competing services, could also be indications of genuine price competition over the route. Once evidence of this kind has been established, the TA would initiate an industry consultation to reclassify the route from Category B to Category A. The parties opposing such reclassification would be given five working days to raise their objections. Unless the objections are proved to be valid, the TA would reclassify the route from Category B to Category A in the following three working days.

22 In the reclassification of routes from Category B to Category A under the fast track approach, no retrospective adjustment of the delivery fee payments would be required as the expedient reclassification process is unlikely to impose an unfair amount of financial burden on HKT. During the time when competitive pressure is building up, HKT would still receive payment at the wholesale rate for outgoing traffic and the settlement inpayment for incoming traffic through the gateway.

23 On the treatment of traffic routes outside the observation list, a normal procedure for route reclassification would be adopted. Under this procedure, the party wishing to reclassify the routes from Category B to Category A should put in applications supported by justifications. Should it be determined that the justifications provided are valid, the TA would initiate an industry consultation on route reclassification. The TA could also initiate the consultation on the basis of his own

observation. In either case, the industry would be given 15 working days to respond to the reclassification proposal. The TA would then conclude his view within another 15 working days. Should a particularly long time be required for reaching the conclusion, the TA would inform the industry about the probable lead time expected and the reasons for delay. Depending on the issues involved, retrospective adjustment of delivery fee payments would be considered on a case by case basis.

24 As the trend worldwide is moving towards liberalisation in the telecommunications sector, it is unlikely that any future route reclassification would change the classification from Category A to Category B. This is even more unlikely when facilities-based competition in the market for external services becomes available from 1 January 2000 onwards. Competition in the provision of external facilities should put heavy downward pressure on the prices of the circuit capacities, while competition in the market for hubbing services would push down the rates charged by the resellers. Therefore, reclassification of external routes from Category A to Category B is unlikely to occur.

Local Access Charge for the Category A Routes

25 From 1 January 1999, effective competition is expected to occur first in the form of direct ISR or refile connection, and also in the form of facilities-based correspondent relationships one year after. The effect of competition is to force prices to align with the underlying costs of production. As such, the non-cost based delivery fees would have to be replaced by a cost-based local access charge. In the outgoing direction, competitive pressures from the ISR and alternative gateway operators would determine the wholesale prices of HKT's gateway services. It would no longer be necessary for the TA to set the wholesale prices of HKT's gateway for the Category A routes. In the incoming direction, HKT's gateway will compete with the ISR and alternative gateway operators for the termination of traffic and the terminating charge of HKT's gateway would also be determined by market forces.

Principles for setting the local access charge

26 The purpose of the local access charge is to compensate the fixed telecommunication network services (FTNS) operators for the use of their local network facilities for the delivery of external traffic to and from customers in Hong Kong. Therefore, the charge should on the one hand reflect a fair charge to the external services

operators (including ISR or other services-based operators and gateway services operators) for their use of the local networks, and on the other a fair and adequate compensation to the FTNS operators. This would ensure continuous and sufficient commercial incentive for investment in the local infrastructure and at the same time no wasteful duplication of facilities.

27 In order to meet the above costing objectives, the local access charge should represent the costs that would be incurred by the external services/gateway operators if they construct the local networks themselves. The local access charge would be calculated based on the forward-looking cost standard, including a cost of capital which is commensurate with the risk faced by the FTNS operators in the local fixed network market. To ensure sufficient funding would be available for the development of the local networks, the local access charge should also include the costs of using the customer access facilities (i.e. the local loops).

28 New entrants into Hong Kong's telecommunications market are expected to face higher business risk than the incumbent. This would be the case at least from the investors' perspective. The new entrants would have to compete for market shares from the incumbent and also among themselves. To erode the incumbent's market share would not be an easy task for the new entrants given the solid customer base of the incumbent and inertia of the customers. In addition, the incumbent would have better knowledge of the local market. A complete customer profile and their spending pattern would also be invaluable to the incumbent in targeting its promotional activities. That said, the incumbent may also face higher business risk when competition in the telecommunications market is intensified. With these considerations in mind, the cost of capital for investment in the local fixed network industry has been estimated to be in the range of 16% to 27%. The industry average of 21.5% would be adopted in the calculation of the local access charge.

29 The interconnection charges for public mobile radiotelephone services and value-added services under the approved tariffs of Hong Kong Telephone Company Limited (HKTC) have been calculated on the basis of historic costs and have not included the costs of the customer access facilities (i.e. the local loops). The omission of the local loop costs was based on the consideration that such costs were to be covered under the rental of the telephone lines and any deficit had traditionally been funded from the revenue of external telephone services. The adoption of the interconnection charges based on the historic costs approach and without inclusion of local loop costs is considered not appropriate for the delivery of external traffic as such cost bases if applied to external traffic would not provide the commercial incentive for operators to invest in and develop the local network infrastructure including the customer access facilities.

Some fair apportionment of the local loop costs to the external traffic has to be made in calculating the local access charge.

30 In addition to the local access charge, the total cost of using the local network would include a universal service contribution (USC) payment.[3] Under the existing regulatory framework for the provision of universal service, all the external gateway operators and external services providers, apart from the international value-added network services (IVANS) providers and internet service providers (ISP), are required to pay to the network operator with the universal service obligation the USC on a per traffic minute basis. The USC was provisionally estimated at 13.4 cents (Hong Kong) in 1997/98.

31 The levels of the USC and local access charge are interrelated in the sense that, like the delivery fee, the local access charge would be a component of the relevant revenues in determining whether a customer is economic or not. Therefore, the local access charge which includes a compensation for the use of the local loops should work in the direction of reducing the USC.

Level of the local access charge

32 On the bases of the principles and considerations for setting the local access charge discussed in the foregoing section, the local access charge would consist of the following cost components -

Traffic sensitive costs
- switching and transmission costs;
- cost of fixed network number portability incurred in routing the external calls; and
- traffic metering costs relating to the provision of interconnection services to the external gateway/services operators.

Non-traffic sensitive costs
- billing costs relating to the provision of interconnection services to the external gateway/services operators;
- administrative costs of the FTNS operators; and

[3] As implied by the nature and purpose of the USC, it is to be paid to the universal service provider. But it is apparent that a proportion of the external traffic would be originated or terminated by FTNS operators other than the universal service provider. This means that under the current USC settlement mechanism, the external services/gateway operators would need to pay a local access charge net of USC to the FTNS operator providing the external service origination and termination services, and the USC to HKTI which collects the USC on behalf of the Hong Kong Telephone Company Limited, the universal service provider.

- costs of the customer access network (i.e. the local loop costs).

As discussed in paragraph 30 above, the cost of using the local network should also include the per minute USC (which is determined by the TA on an annual basis and payable to the network operator with the universal service obligation) in addition to the local access charge.

33 The traffic sensitive costs and the billing costs would be calculated based on the relevant cost drivers, while the administrative costs of the FTNS operators would be added to the estimated long-run incremental costs according to a general proportionate mark-up. The local loop costs per minute of traffic would be calculated based on the capital and operating costs of the average local loop per month divided by the total number of outgoing and incoming traffic minutes (including local and external traffic) carried by the average local loop per month.

34 The local access charge thus arrived at would be applied to all the external traffic delivered over the Category A routes, since the costs of carrying the traffic to and from different external locations over the local networks would be the same. The local access charge should be applied to all telephonic and non-telephonic traffic delivered over "IDD-type of services". The "IDD-type of services" would include all existing and future services similar to the existing "00X" services, callback services and calling card services. This type of services would therefore include the existing ISR services for facsimile and data and the future ISR services for voice. It would also include telephonic and non-telephonic services based on the Internet or other technologies (e.g. Frame Relay, ATM, etc.) where the interface with the customers is similar to that for the existing IDD services. The level of the local access charge should not vary by the direction of traffic either as there should not be significant difference between the resources used for routing outgoing traffic and incoming traffic (unless the provision of number portability is a significant cost component of the local access charge).

35 One of the principles for setting the local access charge is that the charge should approximate the costs that would be incurred by the external services/gateway operators if they construct the local networks themselves for the delivery of external traffic. Therefore, the cost of the networks of the new entrants should apply. But for these new entrants to be able to enter and compete in the local market, they should aim to be more efficient than the incumbent or their costs should be at least comparable to those of the incumbent. If the costs of the new entrants are higher, there is no reason for the setting of a higher local access charge to reward inefficiencies. Furthermore, as the incumbent's network is mature, the costs associated with it are more stable and more

data on the costs of this network has been made available to the TA for regulatory monitoring. Based on these considerations, the construction and operating costs of the HKTC's network would be adopted as the industry average costs in calculating the local access charge.

36 The TA will set only the level of local access charge that could be imposed by HKTC on the external services/gateway operators, due to its dominant position in the market for local services. The other FTNS licensees could set their own levels of local access charge, although they would normally use the charge level of HKTC as a reference point. Should the external services/gateway operators find the levels of local access charge imposed by FTNS licensees other than HKT unreasonably high, as they may regard themselves as owning the bottleneck facilities of direct connection with the access customers, the external services/gateway operators could seek a determination of the interconnection charge by the TA under section 36A of the Telecommunication Ordinance.

37 The preliminary level of the local access charge based on the methodology discussed in the preceding paragraphs is given in Annex 2. The TA will make a determination under section 36A of the Telecommunication Ordinance to specify the level of the local access charge applicable to HKTC's network. The level of the local access charge will be reviewed on an annual basis to take into consideration the current level of the cost components of the charge.

38 From 1 January 1999, it is expected that external traffic of HKT's competitors over the Category A routes would be provided mainly through direct ISR or refile operation. Some of the ISR operators would be pure services resellers, while others are also FTNS operators at the same time. The local network operators should charge these two types of ISR operators the same level of local access charge, unless it could be established that the costs of providing the local interconnection services for them are substantially different. From 1 January 2000, the facilities-based gateway service operators should also be subjected to the same local access charge as the services-based operators in the use of the local networks.

Settlement of the local access charge

39 In general, an external service may or may not be connected to the same local network as the customer of the service in Hong Kong. A customer of an external service may be accessing a service connected to the local network to which the access line of the customer is connected, or the customer may be accessing a service connected to another local network. In the latter case, the outgoing external traffic from the customer

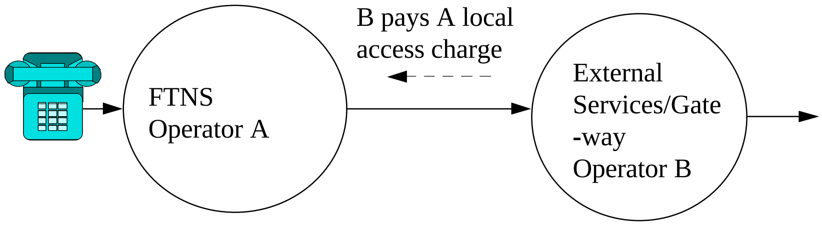
connected to one local network would have to be delivered to another local network before it could be delivered to the service operator. In the reverse direction, incoming external traffic received by an ISR or external gateway service may be destined for a customer connected to the same local network as the ISR or external gateway service, or the traffic may be destined for a customer connected to another local network. In the latter case, the incoming external traffic would have to be delivered to another local network before being terminated at the called customer. The settlement of local access charge would be straightforward where only one local network is involved in the delivery of the external traffic. Where the traffic is delivered through more than one local network between the customer and the external service operator, it is necessary to determine how the local access charge is to be settled among the local network operators involved.

40 One of the principles for setting the local access charge is that it should fairly and adequately compensate the FTNS operators for the provision of local network facilities in the delivery of external traffic to and from customers in Hong Kong. Therefore, it would be logical for the local access charge to be payable to the network directly connecting the customers, so that the local network operators would have sufficient commercial incentive to maintain and develop the local networks. This would be the fairest arrangement particularly because the local access charge would include a share of the local loop costs. For the avoidance of doubt, the network connected to the customers through Type II interconnection would be regarded as the "network directly connecting the customers" for the purpose of the payment of the local access charge.

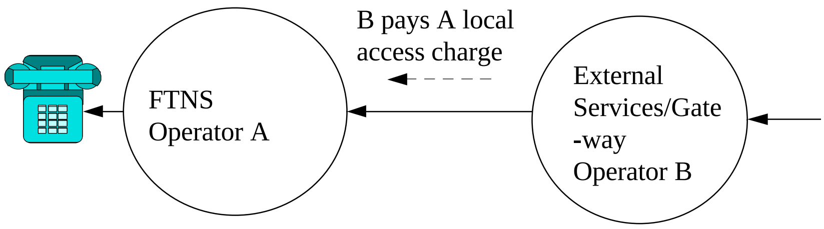
41 The intermediate network between the network with the access line of the customer and the external service operator would be the "transit" network in the routing of the traffic. The transit carrier which does not really provide the customer access facilities for the delivery of external traffic should be entitled to a transit charge, instead of the local access charge. This transit charge payable to the intermediate network operator is to reflect the consumption of additional resources when the calls have to pass through one more network. To ensure cost-based local access, the TA would also set the transit charge that could be imposed by HKTC as an industry benchmark for the delivery of external traffic over its interconnect gateway. The transit charge should be at a lower level than the local access charge as the traffic needs only to pass through the interconnect gateway of the transit carrier, without the need to reach the originating and terminating customers.

42 Figures 1 and 2 depict the flows of payments among the external services providers and the local network operators for direct and transit carriage of external traffic respectively, for both outgoing and incoming traffic.

Figure 1

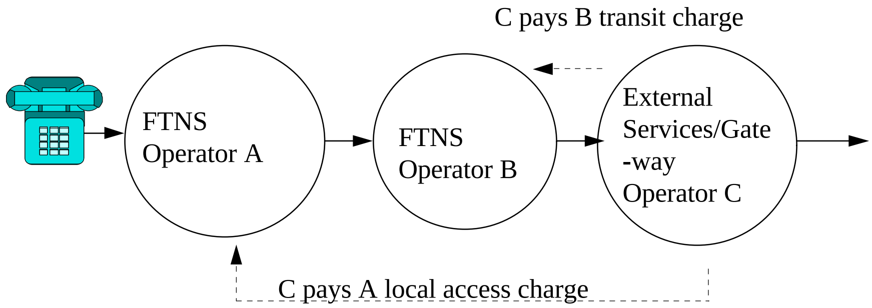


Outgoing



Incoming

Figure 2



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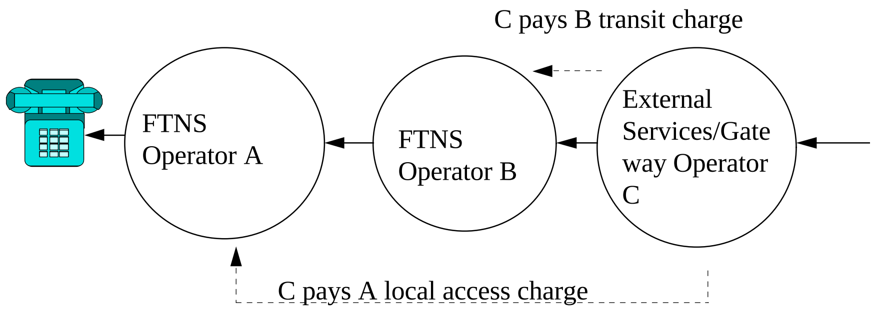

Incoming

43 The settlement arrangements discussed in this section should not be interpreted as a break from the present delivery fee system. Rather, these are arrangements designed for a new regime applicable to the Category A routes only. These arrangements would not affect the current flows of payments relating to indirect IDD access under the delivery fee system to be retained for Category B routes.

Modified Delivery Fee Arrangements for the Category B Routes

44 Given the facts that the Category B routes would continue to be supplied by a single external network operator, and that extra profits would be generated by the more than cost recovery settlement rates, a modified delivery fee system would be enacted for the Category B routes. Under the new arrangement, the extra profits would be shared equally between the sole external network operator and the local network operators. The rationale behind this profit sharing proposal is that the sole external network operator and the local network operators collaborated in the routing of the incoming traffic. Therefore, the extra profits generated due to the more than full-cost recovery settlement rates should be shared between the sole external network operator and the local network operators.

45 From 1 January 1999, the delivery fees applicable to the incoming traffic over the Category B routes would be set by the TA and equal to

> 50% x (settlement inpayment - the costs of external switching and transmission - the costs of domestic connection (i.e. the local access charge set by the TA for the Category A routes)) + local access charge.

This means that the delivery fees would be different for each external route under Category B and depend on the level of settlement inpayment. In calculating the costs of domestic connection for the Category B traffic, the local access charge set for the Category A routes should be adopted, because it reflects the cost of constructing and operating the local network.

46 As to the outgoing traffic over the Category B routes, the TA would only stipulate the wholesale prices for delivering traffic through the single external gateway operator which is a monopolistic carrier in practice. Through a determination under section 36A of the Telecommunication Ordinance, the wholesale prices for payment to the external gateway operator would be set equal to the rate of settlement outpayment plus the costs of external switching and transmission.

47 In setting the wholesale rates that could be charged by the external gateway operator, it would be fair to adopt the same costing principles as for calculating the local access charge. While the wholesale prices for delivering the outgoing external traffic are revenues to the sole external gateway operator, the local access charge is a cost to it in the delivery of incoming external traffic. Therefore, in calculating the costs of external switching and transmission, the forward looking cost standard would apply coupled with a cost of capital which reflects the industry average risk of investment in the external facilities. These are the costs that would be incurred by the newly licensed facilities-based external network operators if they construct the external facilities themselves.

48 Once the wholesale prices of the external gateway operator are set, all the local network operators could effectively compete for the outgoing traffic through direct or indirect access to the external gateway. Thus, the setting of a delivery fee for the conveyance of outgoing traffic over the local network becomes unnecessary. Market forces would be able to set the retail prices for the Category B traffic, which should be equal to the wholesale rate imposed by the external gateway operator plus a margin to be received by the respective local network operators to cover their network costs, including the cost of capital, and other operating expenses. However, the retail prices to be charged by HKT will be monitored by the TA to guard against predatory pricing by comparing the retail prices with the wholesale prices.

Interconnection Arrangements for Mobile Network Operators

49 For the Category A routes, the external services and gateway operators would compete for the outgoing traffic from the mobile networks. The mobile network operators may also apply for licences to operate external services. With the availability of competition, the charges levied by external services or gateway operators for delivering outgoing traffic from the mobile networks could be left to the market. As the costs of investing in the mobile networks are recovered from the usage charges paid by the mobile customers, it would not be necessary for the TA to determine a local access charge for the outgoing traffic. As to the incoming external traffic under Category A directed to the mobile customers, the external services and gateway operators could either terminate the traffic directly on the mobile network or terminate it through a fixed network operator. Again, market forces would be able to set the access charge to be imposed by the mobile network operators. The absence of local access charge set by regulation for the mobile networks should not undermine the operation of the local access charge arrangement for the local fixed networks because the mobile operators, not being permitted to provide telecommunications services between fixed points under their licences, would not have the right to deliver external traffic to or from fixed network customers.

50 Given the fact that extra profits would continue to be earned by the sole external network operator for the Category B routes, the modified delivery fee arrangement set for the incoming traffic over the Category B routes and applicable to the fixed network operators would also apply to the mobile network operators. The mobile network operators should also pay the same wholesale prices as the fixed network operators when they deliver outgoing Category B traffic through the single external gateway. As for Category A traffic, the setting of local interconnection charge for Category A traffic in the outgoing direction would not be required as the costs of the mobile networks are covered by usage charges paid by mobile customers and the mobile operators are not authorised under their licences to deliver traffic to and from fixed line customers.

51 It should be noted that according to the Statement of the TA on the cost recovery for mobile number portability[4], the terminating mobile network operators would be responsible for the database interrogation charge incurred in terminating the incoming external traffic. This means that the mobile network operators should fund the

4 Statement of the TA, "Number Portability for Public Mobile Services in Hong Kong: Cost Recovery Framework", 28 August 1998.

number portability charge out of the delivery fees received for the incoming traffic delivered over the Category B routes. As regards the incoming traffic delivered over the Category A routes, the market determined local access charge to be paid by the external services/gateway operators to the terminating mobile operators should be net of the database interrogation charge.

Summary of the New Local Interconnection Arrangements

52 Discussion in this paper has elaborated on the interconnection arrangements between the external services/gateway operators and the local network operators which will be suitable for the liberalised external telecommunications sector post 1 January 1999. This will replace the existing delivery fee arrangements as the current level of international-to-local cross subsidization embodied in the delivery fees could no longer be sustained as liberalisation gradually takes place in the market for external services both in Hong Kong and elsewhere.

53 From 1 January 1999, locations external to Hong Kong would be divided into two categories depending on whether genuine price competition or effective competition could take place on those external routes. Category A routes include those competitive ones, while Category B are those remaining to be provided by a single external gateway operator. Effectively competitive routes could be established by HKT's competitors through alternative services or facilities connections either directly or indirectly.

54 In the initial route categorisation to be conducted in the last quarter of 1998, the external locations which permit direct ISR connection with Hong Kong would be classified as belonging to Category A if genuine price competition to the gateway services of HKT could be established. Otherwise, they would be put on the observation list under Category B. Potentially competitive external traffic routes as evidenced by the call-back rates currently offered in the market would also be put on the observation list, although initially they would be classified as belonging to Category B.

55 Route reclassification in the future would be made after consultation with the industry. For the traffic routes which are already on the observation list, the reclassification from Category B to Category A would be made under a fast track approach. From time to time, the TA would closely monitor the traffic flows and retail tariffs of external traffic routes which are on the observation list. If it is found that indirect ISR connections could allow effective competition to HKT's gateway services, the TA would initiate a fast track consultation with the industry. As regards the traffic

routes which are outside the observation list, the party wishing to reclassify the routes from Category B to Category A would need to put in applications supported by justifications. Then the TA would initiate industry consultation following the normal reclassification procedures.

56 For the delivery of outgoing and incoming Category A traffic over the local networks, a local access charge should be paid by all the external services/gateway operators to the local network operators. In order to reflect the costs that would be incurred by the external services/gateway operators if they construct the local network themselves, the local access charge would be calculated using the forward looking cost standard. The local access charge would also include the costs of using the customer access facilities. USC will be paid to the network operator with universal service obligation as part of the cost of using the local network. The local access charge thus arrived at would be a fair charge to the external services/gateway operators for their use of the local networks, and also a fair and adequate compensation to the FTNS operators.

57 The TA would only set the level of local access charge that could be imposed by HKTC on the external services/gateway operators, due to its dominant position in the market for local services. To ensure cost-based local access, the TA would also set the transit charge that could be imposed by HKTC as an industry benchmark for the delivery of external traffic over its interconnect gateway. Should the external services/gateway operators find the levels of local access charge imposed by the other FTNS licensees unreasonably high, they could seek an interconnection charge determination by the TA.

58 As the local access charge is to fairly and adequately compensate the FTNS operators for the provision of local network facilities in the delivery of external traffic to and from customers in Hong Kong, it should be payable to the network directly connecting the customers. The intermediate FTNS operator should be entitled to a transit charge. This would ensure sufficient commercial incentive for the FTNS operators to maintain and develop their local networks. However, this would not affect the current flows of payments relating to indirect IDD access under the delivery fee system.

59 From 1 January 1999, a modified delivery fee arrangement would be enacted for the Category B routes. This involves sharing of the extra profits generated by the more than cost recovery settlement inpayment rates between the sole external network operator and the local network operators. As such, the delivery fees applicable to the incoming traffic over the Category B routes would be set by the TA and equal to 50% of the rate of settlement inpayment after deducting the costs of external switching and transmission and domestic interconnection, plus the local access charge. This means that

the delivery fees would be different for each external traffic route under Category B, depending on the levels of settlement inpayments.

60 As to the outgoing traffic over the Category B routes, the TA would only stipulate the wholesale prices for delivering traffic through the single external gateway operator. This would be set equal to the rate of settlement outpayment plus the costs of external switching and transmission. Given the fact that all the local network operators could effectively compete for the outgoing traffic through direct or indirect access to the external gateway, no setting of a delivery fee for the conveyance of outgoing Category B traffic over the local networks would be required.

61 In respect of the interconnection arrangements for the mobile network operators, the access charge for the delivery of outgoing and incoming Category A traffic over the mobile networks would be set by market forces. For the Category B routes, the modified delivery fee arrangement set for the incoming traffic over the Category B routes and applicable to the fixed network operators would also apply to the mobile network operators. They should also pay the same wholesale prices as the fixed network operators for the delivery of outgoing Category B traffic through the single external gateway.

Invitation of Comments

62 Views and comments on this paper should be made in writing and should reach the Office of the Telecommunications Authority **on or before 17 October 1998**. The TA reserves the right to publish all views and comments and to disclose the identity of the source. Any part of the submission which is considered commercially confidential should be clearly marked. The TA would take such markings into account in making his decision as to whether to disclose such information or not. Submissions should be addressed as follows:

Office of the Telecommunications Authority
29/F Wu Chung House
213 Queen's Road East
Wanchai, Hong Kong

(Attention: Senior Controller of Telecommunications (Franchised Services))

Fax: (852) 2803 5112 E-mail: elam@ofta.gov.hk

Office of the Telecommunications Authority
30 September 1998

<u>**Annex 1**</u>

"Review of Delivery Fee Arrangements - Preliminary Findings -"

Consultative Paper Issued by the Office of the Telecommunications Authority on 28 May 1998

Summary of Comments and Responses of the Telecommunications Authority

Introduction

Relating to the early termination of the exclusive licence of the Hong Kong Telecom International Limited (HKTI) for certain external circuits and services, the Office of the Telecommunications Authority (OFTA) has initiated a consultative process with the industry concerning the delivery fee arrangements as from 1 January 1999. The second consultative paper was issued on 28 May 1998 (May paper) which has taken into account the views expressed by the industry on the first consultative paper issued on 14 February 1998. Having been benefited from the submissions collected in the last two consultative exercises, the Telecommunications Authority (TA) has developed his further views on the future local interconnection arrangements for external traffic as elaborated upon in the main part of this consultation paper.

2. The purpose of this Annex is to give a summary of the major comments on the proposals contained in the May paper along with the TA's responses. These comments were raised in the submissions received from the following nine organisations -

- AT&T Asia/Pacific Group Limited (AT&T)
- City Telecom (H.K.) Limited (CTI)
- Fourseas Telecom Limited (Fourseas, an international calling card service operator)
- Global One Communications Limited (Global One)
- Hong Kong Telecommunications Limited (HKT)
- Hutchison Telecommunications (Hong Kong) Limited (Hutchison)
- New T&T Hong Kong Limited (New T&T)
- New World Telephone Limited (New World)

- WorldCom Asia Pacific Limited (WorldCom)

Categorisation of External Traffic Routes

3. Global One was in general supportive of the route categorisation criteria proposed by the TA and its relationship to the delivery fee arrangements. New T&T emphasized in particular on the availability of genuine price competition in the categorisation of external routes, notwithstanding the existence of direct and/or indirect international simple resale (ISR) on certain routes. It was concerned about HKT setting very low collection rates for the Category A routes and thus causing demise of the smaller ISR operators.

4. TA's response - The TA would ensure that HKT would not be able to engage in anti-competitive conduct in the market for the Category A routes. In particular, in considering whether the collection rates of HKT are below costs, the TA would take into account the gateway prices of HKT which should be applied on a non-discriminatory basis to its arm providing the retail services and to its competitors.

5. HKT advocated a system that before 2000, all external routes, except China, should be classified as competitive routes belonging to Category A. Global One found this approach generally correct but might be somewhat overstated. Nevertheless, it admitted that direct and indirect ISR, and direct and transit correspondent relationships may permit a competitive marketplace warranting the quick movement of most routes from Category B to Category A. On the other hand, New World supported the adoption of Category B presumption rule in both 1999 and after and suggested that the burden of proof should be borne by the party which initiated the reclassification. For an external route to be classified as belonging to Category A, New World proposed the criterion of lower costs being generally available to operators on a non-discriminatory basis for services of comparable quality, taking into account the delivery fees currently enjoyed by the fixed telecommunication network services (FTNS) operators.

6. TA's response - In the route categorisation process, the TA would consider not just the availability of alternative physical connections, but also the availability of genuine price competition. Thus, he would not directly put those ISR permitted routes under Category A and the rest under Category B. If it is proved that refile could also allow viable competitive alternatives, non-ISR routes would be moved from Category B to Category A. The valid criterion for assessing the availability of genuine price competition on a particular route should be the retail tariff for the services provided over

the alternative means compared with the tariff for delivering the corresponding traffic over HKTI's gateway. Paragraphs 9-16 of the paper refer.

7. HKT was concerned that it would be required to comply with the International Telecommunication Union (ITU)'s regulation for accounting rates, while other operators could deliver the traffic by refile.

8. TA's response - The concern was considered unnecessary given the fact that OFTA would make reference to the market reality in approving HKT's tariffs for external services. This has also been the practice of OFTA in approving HKT's call-back rates.

9. Global One commented that facilities entry took time and would not be a reality on 1 January 2000. It was concerned about new entrants facing constraints in the bottleneck facilities and urged the TA to free up those constraints. In particular, Global One pointed out that the China route might still remain non-competitive after the introduction of facilities-based competition on 1 January 2000 and cautioned about premature move.

10. TA's response - In the reclassification of routes from Category B to Category A after facilities-based competition has been allowed, the TA would conduct detailed assessment of the market environment in order to determine whether effective competition could actually take place. This would be done on a route by route basis taking into account the volume of traffic, the contractual relationship between the incumbent and its overseas correspondents and any other relevant factors. In respect of the concern about bottleneck facilities in the provision of external telecommunications services, the Government has already made available a site at Chung Hom Kok for satellite earth stations. In future, the TA would also facilitate sharing of the existing cable landing stations if these are proved to be bottleneck facilities. However, in the years leading to 1 January 2000, potential facilities entrants are expected make their best effort in building their own facilities rather than relying on the existing external facilities of the incumbent.

11. On the proof of the existence of alternative correspondent relationship, HKT was concerned that the entire burden of proof would lie with it due to the Category B presumption rule proposed in the May paper. Therefore, it suggested that the evidentiary threshold should be low.

12. TA's response - It would be the responsibility of all the external gateway operators to report to OFTA that alternative correspondent relationship has been

established. They should have every incentive to report as once a route is reclassified as belonging to Category A, the local access charge instead of the delivery fee would apply. Paragraph 19 of the paper refers.

13. On the proposal that for the routes with more than one gateway operator would be classified as Category A routes, New World suggested that this should be applied only to the outgoing traffic since HKT would still be the dominant carrier of the inbound traffic. Incoming traffic over these routes should be put under Category B so that HKT would not retain all the monopoly profit derived from the settlement inpayments.

14. TA's response - It would neither be necessary nor suitable to set differential local interconnection arrangements for incoming and outgoing traffic over the same route. When there is competition on a particular traffic route, competitive pressure should drive settlement rates to cost levels. Monopoly profits through the HKT gateway would not be sustainable. From 1 January 2000, all the FTNS operators could compete to set up their own gateways. On the local interconnection side, they have been provided with the suitable environment for attracting access customers, particularly with the accelerated type II interconnection arrangements enabled by the Framework Agreement. Further, if differential local interconnection charges were to be set for the incoming and outgoing traffic over the same route, Hong Kong would be accused of conducting anti-competitive practices by overseas carriers.

15. WorldCom disagreed with any form of external route categorisation, as termination of HKTI's exclusive franchise would negate the need for any delivery fee regime. It was of the view that the market should be allowed to determine how traffic should be routed and arbitrary route categorisation would only limit competition.

16. TA's response - The entire route categorisation exercise is to recognise the fact that even with the early surrender of HKTI's exclusive licence, some of the external routes would remain non-competitive. The modified delivery fee regime would be applied only to the incoming traffic over the non-competitive routes in order to share the revenues earned by the sole external gateway operator due to its *de facto* monopolistic status. In all circumstances, the categorisation of external routes into Categories A and B would not limit competition, as it would be the results of competition.

17. HKT commented that the route reclassification procedures (i.e. after the first route classification decision has been made) proposed in the May paper was cumbersome and would impose on it an additional regulatory burden. It proposed a "self supporting application" in which the TA would take a decision within 14 days without consulting

the industry, or an "ordinary application" in which the TA should adopt a system of active decision making principles. Even for the ordinary application, HKT was of the view that the 30 days industry consultation was too long, as it would be paying delivery fees which are not simply not warranted. Meanwhile, New T&T was also concerned about the route reclassification process as being too long, so they would be deprived of the receipt of delivery fees.

18. TA's response - It is understood that HKT was concerned about the reclassification of routes from Category B to Category A, while New T&T was concerned about the reclassification from A to B. Taking into account the trend movements in the costs of carrying external traffic over alternative channels, route reclassification in the future should more likely be moving from Category B to Category A. Moreover, the TA is of the view the reclassification in both directions should be made as efficient and fair as possible. Therefore, there would be both fast track and normal procedures in dealing with route reclassification. Paragraphs 20 - 24 of the paper refer.

19. HKT disagreed with the 5% rule on the identification of potentially competitive routes as refile would enable competition even for routes with very thin traffic. It interpreted the 5% share as relative to the total non-China traffic. It suggested a classification threshold of much lower than 5% or basing the classification on the comparison between the per minute cost of an international private leased circuit (IPLC) and the gateway charges on the corresponding routes. Global One was concerned that the rule would inappropriately classify China as a potentially competitive route. It emphasized on the competitive nature of a route. New T&T did not agree that Category A should include any potentially competitive routes.

20. TA's response - As direct and indirect ISR could significantly change and distort the distribution of traffic, the TA will adopt an objective and transparent procedures in route reclassification, including the categorisation of potentially competitive routes. If there is obvious potential for an external route to become competitive, it has to be placed under Category A, as HKT should not the victim of its own success. Nevertheless, before such reclassification is made, the TA would make sure that there are equal and fair opportunities for alternative operators to compete.

Local Access Charge for the Category A Routes

21. Hutchison claimed that the new operators would not be able to survive an overnight withdrawal of the delivery fees, which had been their major source of revenues and investment funding. It suggested a delay of three years until the end of 2001 to replace the delivery fee by the local access charge. Similarly, New World reflected that the delivery fees had been a critical element in their business plan. It did not believe that tariff rebalance would help due to its small customer base and higher cost level. Fourseas opined that the payment of delivery fees should continue, especially for the Category B routes, and suppression on the payment of equitable delivery fee would only create additional competitive barriers to the advantage of HKT.

22. TA's response - As mentioned in the May paper, an above cost delivery fee would not be sustainable in a competitive external market environment with accounting rates moving towards costs. Even if the operating environment in Hong Kong were going to remain unchanged, there have been pressures for accounting rates to be reduced since the early 1990s. In their business plans for operating the FTNS business, they should have taken these factors into account. The type II interconnection arrangements have provided the new operators with the opportunity to roll out their networks quickly and to enjoy the economies of scale originally belonged to the incumbent operator. Furthermore, the local loop costs embodied in the local access charge is to provide for a fair sharing of the costs of the customer access facilities. Paragraph 27 of the paper refers.

23. On the setting of the local access charge, Hutchison suggested that the charge should allow the FTNS operators to recover their full cost of allowing overseas carriers to use the local networks for accessing Hong Kong's customers. As such, the local access charge should be calculated based on the cost structure of the new operators rather than that of HKT. New World suggested that the local access charge should be set based on the cost structure of the whole industry. WorldCom criticised the principle of making adequate compensation to the network providers mentioned in the May paper for setting the local access charge. It urged the TA to adhere to the charging principles established in the Statement of the TA No. 7 on carrier-to-carrier interconnection. HKT agreed with the setting of cost-based local access charge and was of the opinion that it should be set equal to the local interconnection charge between FTNS licensees. Its purpose was to prevent any arbitrage and traffic manipulation incentives. Global One and WorldCom strongly advocated the establishment of a cost-based local access charge regime. AT&T recommended that a cost-based local access charge for HKT should be set by the TA.

24. TA's response - It is agreed that the local access charge should reflect the relevant costs of using the local networks for the delivery of external traffic. In order not to encourage wasteful duplication of infrastructure, the local access charge should represent the costs that would be incurred by the external services/gateway operators if they construct the local networks themselves. The level of charge thus established should be both fair and adequate to the providers of network access facilities. The external services operators, if they to maintain their own local networks, should aim at the cost level of the incumbent, otherwise they would not be able to survive. Therefore, it would be fair to set the local access charge based on the cost structure of the Hong Kong Telephone Company Limited (HKTC). So long as HKTC remains dominant in the market for local services, the level of its local access charge would be set by the TA. Paragraphs 25-29 and 35-36 of the paper refer.

25. New T&T suggested that the interconnection charge for the delivery of external traffic over both Categories A and B between HKT's local network and that of the other FTNS operators should be set based on the long run average incremental cost standard. The charge should not be higher than the interconnection charge for the value added services. In respect of the local access charge to be applied to the ISR operators, New T&T advocated a cost-based charge which would include the full costs of the directly connected FTNS and the terminating FTNS networks, and also the costs of the interconnect capacities between the ISR operator and the directly connected FTNS operators, and between the latter and the other three FTNS operators. On the other hand, Global One rejected any discriminatory level of interconnection charge between the ISR service providers and facilities-based providers and expected this to invite challenge by the World Trade Organisation. New World and AT&T also opined that the same rate should be applied to all external services/gateway operators. Further, AT&T expected the local access charge set by the TA for HKTC would be the maximum that other FTNS operators could impose, as it was concerned about the monopoly nature of the last mile connecting to the customers.

26. TA's response - The local access charge to be paid by the ISR operators with and without a FTNS licence should be the same, unless the different interconnection configurations would justify differential cost levels. Paragraph 38 of the paper refers.

27. Global One recommended that the cost-based local access charge should be calculated based on the long run incremental costs. AT&T suggested total service long run incremental cost coupled with a forward looking cost standard. WorldCom was concerned that the interconnection charge for value-added services might have overcompensated the FTNS operators as it was calculated based on historic cost standard.

28. TA's response - The local access charge would be calculated based on the forward looking cost standard. The level of charge thus calculated should reflect the costs to the external services/facilities operators if they construct and operate the local networks themselves.

29. AT&T basically agreed to the cost components for calculating the local access charge proposed by OFTA in the May paper, except that the costs of the customer access network (i.e. the local loop costs) was considered irrelevant. WorldCom questioned why non-FTNS operators should contribute towards the funding of the FTNS networks beyond the universal service contribution (USC).

30. TA's response - The reason that the local loop costs have to be included in the local access charge is that the external services are expected to bear a fair share of the customer access costs. As the local telephone line tariffs are gradually re-balanced, the level of the USC should decrease. Paragraph 29 of the paper refers.

31. To address WorldCom's concern, it should be noted that the USC only compensates HKT for the provision of universal service to the uneconomic customers. A customer would be regarded as uneconomic if the relevant costs of serving him or her exceed the relevant revenues, which include the interconnection revenues relating to the provision of external services. The revenue from local access charge will also be treated as part of the relevant revenue in calculating the amount of the universal service costs. So the local access charge would also contribute towards reducing the USC.

32. Global One commented that it would not be necessary for the universal service contribution (USC) to be added on to the local access charge, as the HK$6.7 billion compensation paid to HKT for the early surrender of HKTI's exclusive licence would replace the subsidy traditionally flowing from the external to the local sector. AT&T opined that the USC should be made explicit.

33. TA's response - This is a wrong perception. The HK$6.7 billion is a component of the compensation paid to HKT for its expected loss in income in net present value terms due to the early surrender of HKTI's exclusive franchise. The USC is a compensation paid to HKT for it serving the uneconomic customers and some of the losses arising from tariff imbalance. Nevertheless, it should be noted that the USC would decrease over time as HKT has been allowed faster pace of tariff rebalance for the residential exchange lines in return for greater local network competition. In all circumstance, the TA would ensure continued implementation of a transparent universal

service funding mechanism. The USC will now be a charge separate from the local access charge.

34. CTI commented that the local access charge should not include a charge for the physical link connecting the ISR operator to the local network operator's switch, as the charge would be paid by the ISR operators in terms of monthly rental. TA's response - Comments noted.

35. CTI suggested that should the number portability charge exceed HK$0.002 per minute, it should be reflected in the local access charge for incoming external traffic, meaning that a lower level of charge should be set for the outgoing traffic. WorldCom commented that the local access charge should not include any charge for number portability as it is the FTNS licensees' obligations to provide such services.

36. TA's response - The TA would only consider differential local access charges for incoming and outgoing external traffic if the number portability charge accounts for one-tenth or more of the local access charge. Otherwise, the charges for number portability would be spread over the incoming and outgoing traffic. It is true that the FTNS operators are obliged to provide fixed operator number portability. But the cost recovery framework stipulates that the costs should be recovered from the calling party. In the case of incoming external calls, the calling party is the overseas customers.

37. As to the cost of capital to be adopted for calculating the local access charge, CTI suggested using the bank rate.

38. TA's response - OFTA has commissioned a consultancy study to find out the cost of capital for the telecommunications industry in Hong Kong taking into account the evolving market environment. Results of the study would be adopted for calculating the local access charge. Paragraph 28 of the paper refers.

39. HKT sought clarification as to whether the local access charge would be payable to the carrier directly connected to the end customer making or receiving the external call, and that only a transit charge - if applicable - would be payable to the carrier which merely transits the call to or from the external gateway. It further suggested that as all FTNS operators could directly connect to the external gateway, transit services should be offered by the FTNS operators on a commercial basis, including the agreement on transit charges. While AT&T was of the view that a cost-based transit charge should also be set by the TA, WorldCom disagreed. New T&T asked whether the local access charge would be payable by the ISR operators to their directly connected FTNS operators for all incoming and outgoing traffic, and also whether there would be any

change to the current arrangements for interconnection charges between FTNS operators for indirect IDD access.

40. TA’s response - It is confirmed that the local access charge would be payable to the FTNS network connecting the customers, since the charge is to compensate the local network providers for providing local interconnection services to the external services/facilities operators. The intermediate carrier, if any, should be entitled only to a transit charge as it does not need a local network reaching the originating and terminating customers. The transit charge is to reflect the consumption of additional resources through passing through one more network. However, the current arrangements for delivery fee between FTNS operators for indirect IDD access over Category B routes would not be changed.

Delivery Fee Arrangements for the Category B Routes

41. HKT questioned the proposal of setting the wholesale rates for the Category B routes as breaching Clause 7.6 of the Framework Agreement, creating a chilling effect on the investment plans of its competitors, and without economic justification as bottleneck constraints were not expected to occur and the market for external services in Hong Kong would be very competitive.

42. TA’s response - It should be noted that the Category B routes are non-competitive routes. Thus, it would be necessary to restrain the wholesale rates that could be charged by the sole external gateway operator. In any case, protecting the monopoly profits of HKT would not be the best way to encourage investment by other operators. It is only necessary for the wholesale prices to fairly compensate the sole external gateway operator. Paragraph 46 of the paper refers.

43. About the Framework Agreement, Clause 7.6 stated that *“HKSARG shall not take any action which has the specific purpose and effect of reducing the prices which Hongkong Telecom may charge for External Services or External Circuits below the rates charged by HKTI as at the Execution Date”*. Clause 7.6 in fact referred to the prices which would have to be subject to TA’s approval under Clause 8 of the HKTI licence had the HKTI licence not been surrendered on 31 March 1998. The gateway prices of HKT constitute a form of interconnection charge to be determined by the TA under section 36A of the Telecommunication Ordinance. During the negotiations between the Government and HKT, delivery fee reform had been a subject on the agenda. HKT was fully aware of the Government’s intention to implement the reform upon completion of the review through a determination of the TA which would

supercede that of October 1995. Clause 19.1 of the Framework Agreement also made the intention clear that the agreement would not affect the exercise of the statutory powers of the TA under the law.

44. New T&T and New World was in general supportive of the modified delivery fee arrangements proposed in the May paper, but disagreed with the proposal to bring forward the implementation date to 1 January 1999. Fourseas was of the view that the modified delivery fee arrangements should be introduced only in January 2000.

45. TA's response - As explained in the May paper, HKT is expected to be the sole carrier in most, if not all, of the Category B routes both in and after 1999. Thus, there is no need to draw a fine difference between the operating environment for the Category B routes in 1999 and thereafter. Another reason for bringing forward the implementation date is that the existing delivery fee system would restrain the incentive of HKT in reducing the accounting rates, as all the reductions would have to be absorbed by it. Under the new system, the reductions would be equally shared between the external and local carriers. The revenue sharing arrangement has already acknowledged the concern of New T&T that before 2000, it would not be able to build their own facilities and compete with HKT on an equal basis.

46. HKT criticised the proposal in the May paper for setting the inbound delivery fees and outbound wholesale rates as removing its incentive to lowering the accounting rates before the introduction of facilities based competition on 1 January 2000. Its alternative proposal was to use the existing delivery fee as the starting point and set the wholesale rate as equal to the existing collection rate less the delivery fee, and any reduction in the settlement rate in future would reduce the inbound delivery fee and outbound wholesale rate by the same amount.

47. TA's response - The proposal of the TA in May is to use regulation to simulate the effect of competition which has not developed in the outgoing direction. On the incentive of HKT in reducing the accounting rates, international pressures and possible bypass of the accounting rate system are expected to push down the accounting rates even before the introduction of facilities-based competition in 2000.

48. New World opined that both the wholesale rate for outgoing traffic and the delivery fee for incoming traffic should be set based on the long run average incremental costs.

49. TA's response - Apart from the long run incremental costs, a reasonable share of the common costs should also be included. In particular, the principles for

setting the delivery fees should be consistent with that for setting the local access charge, as the delivery fees would be based on the settlement inpayments, the local access charge and other cost components.

Interconnection Arrangements for the Mobile Network Operators

50. New T&T agreed in principle to the interconnection arrangements proposed for the mobile network operators. TA's response - Comments noted.

51. On the payment of access charge to the mobile operators for the termination of incoming external traffic over the Category A routes, HKT was concerned that if the external gateway/services provider would be required to terminate the call directly on the mobile network connecting to the called mobile customer, then the terminating mobile operator would become a bottleneck and market forces could not actually operate.

52. TA's response - The May paper has already stated that *"the external gateway operators and external services providers could either terminate the traffic directly on the mobile network or terminate it through a fixed network operator"*, so that *"market forces would be able to set the access charge to be imposed by the mobile network operators"*.

53. HKT commented that the payment of delivery fees to the mobile operators for the incoming external calls was in effect "double-dipping" as they also received revenues from incoming calls.

54. TA's response - There is not enough reason to justify that the mobile operators should not be entitled to share the extra profit earned by the sole external gateway operator from the incoming external calls over the Category B routes, since the mobile operators would be responsible for delivering these calls to the terminating mobile customers like the fixed operators delivering the calls to the fixed customers. The practice of mobile customers paying for the incoming calls has not been a mandatory requirement, rather it is the outcome of market competition. Actually, some mobile operators have already adopted alternative arrangement by charging a fixed rate per month without placing any limit on the airtime.

Office of the Telecommunications Authority
30 September 1998

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<u>Annex 2</u>

Preliminary Calculation of the Level of Local Access Charge (LAC)

Cost items	Cost per minute	Basis of Cost Estimation
Traffic sensitive costs		
(i) Switching and transmission cost	7.3 cents	Based on OFTA's cost model for the determination of the Type I interconnection charges between HKTC and New T&T in August 1998.
(ii) Provision of number portability	0.7 cent	Based on OFTA's cost studies on number portability.
(iii) Metering cost	1.0 cent	OFTA's cost estimate.
Non-traffic sensitive costs		
(iv) Cost of local loop	4.6 cents	Current cost of local loop per month divided by the total monthly outgoing and incoming traffic minutes carried by the loop
(v) Billing	1.2 cents	Estimated from HKTC's billing and collection account.
(vi) Administrative cost	3.1 cents	Based on 30% on cost items (i), (ii), (iii) & (v).
Local Access Charge	17.9 cents	
Universal Service Contribution (payable to network operator with USO)	13.4 cents	The contribution rate for 1997/98 was 13.4 cents. The USC is expected to be reduced with revenue from local access charge and will further decline over the years when the tariff of the residential lines is re-balanced
Total Cost of Using Local Network	31.3 cents	

Source: Based on cost information available from the enforcement of the FTNS licence conditions and cost of capital at 21.5%