

REVIEW OF THE PRINCIPLES AND COSTING METHODOLOGY OF THE LOCAL ACCESS CHARGE

Statement of the Telecommunications Authority

27 February 2004

Introduction

1. Local Access Charge (LAC) is the interconnection charge for the delivery of the traffic of external telecommunications services (ETS)¹ via a local fixed network. The Telecommunications Authority (TA) first introduced the costing methodology for LAC on 25 November 1998², determined the level of LAC accordingly on 30 December 1998³ and implemented the regime on 1 January 1999 following the liberalization of the ETS market with the following policy objectives⁴:

- that efficient facilities-based competition be carried out in both domestic and external sectors;
- that productive efficiency of the operators be maximized; and
- that consumer benefits be maximized in the long term.

2. It was based on these policy objectives that the LAC was determined to fairly compensate the local fixed telecommunications network services (FTNS) operators for the network resources consumed as well as to provide investment incentives on local telecommunications infrastructure, especially the customer access networks, e.g. the local loops. In the light of the rapidly changing market landscape, the innovation of technologies and the fact that the LAC regime has been in place for more than four years, the TA considers it appropriate to conduct a comprehensive review on the principles and the costing methodology of LAC.

¹ Although international value-added network services (including Internet services) are, strictly speaking, also external telecommunications services, 'external telecommunications services (ETS)' is used by the industry to refer to the International Direct-Dial (IDD) type of voice and facsimile services.

² TA Statement "*Local Access Charge and Modified Delivery Fee Arrangements*", 25 November 1998 (the 1998 LAC Statement).

³ Telecommunications Ordinance (Cap.106) Determination under Section 36A, 30 December 1998.

⁴ Paragraph 10, "*Review of the Delivery Fee Arrangements – a Consultation Paper*" dated 14 February 1998.

3. Accordingly, the TA published a consultation paper on 1 September 2003 (the Consultation Paper) seeking industry comments on the principles and costing methodology of LAC. At the closing of the consultation period on 17 October 2003, he received a total of 18 responses from the following parties (in alphabetical order):

1. AT&T Global Network Services Hong Kong Limited and its parent corporation AT&T Corp. (AT&T)
2. Bandwidth Asia Ltd. (Bandwidth Asia)
3. City Telecom (H.K.) Limited (CTI)
4. CM Tel (HK) Limited (CM Tel)
5. Global Call Limited (Global Call)
6. Hong Kong CSL Limited (CSL)
7. Hutchison Global Communications Limited (HGC)
8. Joint Submission by Hutchison Telephone Company Limited and Hutchison 3G HK Limited (Hutch Mobile)
9. Joint Submission from 7 ETS operators (Joint ETS)
10. New World Telecommunications Limited (NWT)
11. One Tel Limited (One Tel)
12. Pacific Long Distance Telephone Corp. Ltd. (PLDT)
13. PCCW-HKT Limited (PCCW-HKT)
14. Prism Systems International Ltd. (Prism)
15. Reach Ltd. (Reach)
16. SmarTone Mobile Communications Limited (SmarTone)
17. The Society of Hong Kong External Telecommunications Service Providers (ETS Society)
18. Wharf T&T Limited (WT&T)

4. Having duly considered these submissions, the TA issues this statement setting out his final view and decision on the principles and costing methodology of LAC. While most of the industry comments have been discussed in the main text of this statement, the TA's responses to some specific issues raised by individual respondents are given in the **Annex**.

Background

5. Prior to the liberalization of the ETS market on 1 January 1999, the interconnection between external and local fixed networks was settled in the form of delivery fees payable to the local fixed network operators, which was essentially a revenue-sharing arrangement designed to subsidize the loss-making operation of local fixed networks from the rich margins of ETS operation at that time. This cross-subsidy structure could not be sustained as competition developed in the ETS market.

6. From 1 January 1999 onwards, external traffic routes were divided into two categories. Category A routes are those with genuine competition at the external gateway⁵ level and Category B routes are those reliant on a single external gateway then operated by PCCW-HKT (now by Reach Networks). Interconnection between external and local network operators is settled in LAC for Category A routes. For Category B routes, the prices of the sole external gateway were determined by the TA in the outgoing direction, while a modified delivery fee (MDF) was payable for termination of traffic in the incoming direction. LAC is cost-based, while MDF is based on LAC plus sharing of profits from the inpayment under the international settlement mechanism. Now that all the external routes have already been classified as Category A routes⁶, the MDF regime has become somewhat irrelevant.

7. On 25 October 2000, the TA concluded a review on LAC⁷ with a view that the calculation methodology should remain unchanged, but the level of LAC should be revised (i.e. updating the data input to the formula rather than modifying the formula). On 28 June 2001, he concluded the revision of LAC as shown in the table below⁸. These revised rates have been effective up to present (subject to revision upon the conclusion of this review).

The LAC review on 28 June 2001

Direction	HK cents per minute
Outgoing Direct	From 15.1 to 12.1
Outgoing via Transit	From 12.9 to 10.6
Incoming Direct	From 15.8 to 12.6
Incoming via Transit	From 12.9 to 10.6

⁵ 'External gateway' is the facility operated by an external telecommunications service provider for the delivery of traffic to external destinations or the receipt of traffic from external origins for termination at local destinations.

⁶ TA Statement "Application for Reclassification of All the Category B Observation List Routes as Category A for Reach Networks Hong Kong Limited" dated 25 August 2003

⁷ TA Statement "Review of Methodologies for Calculation of Interconnection Charges for Value-Added Services and Public Mobile Radiotelephone Services and Local Access Charges", 25 October 2000.

⁸ TA Statement "Review of Local Access Charges" dated 28 June 2001.

The existing costing methodology

8. LAC consists of the following cost components at present (subject to revision):

HK cents per minute

Cost components	Outgoing		Incoming		Remarks
	Direct	Transit	Direct	Transit	
Switching and transmission	6.4	6.4	6.4	6.4	Type I interconnection for international call type , based on efficient annual PSTN traffic
Local loop cost	4.2	4.2	4.2	4.2	Commercial agreement on Type II interconnection
Number portability			0.5		Dip charge divided by IDD call duration
Administrative costs	1.5		1.5		A 22.8% markup on switching and transmission cost
<i>Cost of capital</i>	<i>18%</i>	<i>18%</i>	<i>18%</i>	<i>18%</i>	<i>Applied and embedded to switching and transmission cost</i>
Total	12.1	10.6	12.6	10.6	

LAC for mobile networks

9. Three mobile network operators (MNO's) responded to the Consultation Paper. They essentially submit that MNO's should receive the same treatment as fixed network operators in the entitlement to LAC for the external traffic they originate or terminate, as they have also invested in customer access networks similar to the local loops of FTNS networks and the mobile infrastructure is as significant as the fixed counterpart in terms of penetration and functionality. The TA would like to clarify that the LAC regime has never precluded the MNO's from receiving LAC for carrying external traffic. However, since the mobile market is fully competitive at the facilities level without any network operator being dominant, the LAC for mobile networks should be set by market forces rather than TA intervention. For similar reasons, the TA has never determined the level of LAC for FTNS operators other than PCCW-HKTC, the dominant operator in the local FTNS market. The determination has however become the industry benchmark for similar charges levied by the other FTNS operators.

Matters reviewed

Policy objectives

10. PCCW-HKT submits that the subject of this review is not the policy objectives themselves, but rather the principles and costing methodology of LAC to best achieve such objectives. The TA concurs with this view. The policy objectives remain to be those stated in paragraph 1 and repeated below:

- that efficient facilities-based competition be carried out in both domestic and external sectors;
- that productive efficiency of the operators be maximized; and
- that consumer benefits be maximized in the long term.

11. With these policy objectives in mind, the TA stated the purpose of LAC in the TA Statement “*Local Access Charge and Modified Delivery Fee Arrangements*” issued on 25 November 1998 (the 1998 LAC Statement) as follows:

“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 the fair charge to the external services operators (including ISR or other service-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.”⁹

12. The TA considers that purpose of the LAC as stated in the 1998 LAC Statement remains consistent with the policy objectives to be accomplished by the LAC regime.

13. The TA does recognize that in the long term, continued infrastructure investment in an efficient manner is crucial in sustaining competition, quality of service and consumer choice in the market. With a view to generating

⁹ Paragraph 24 of 1998 LAC Statement

commercial incentives for infrastructure investment, the existing regulatory regime has already provided for certain privileges for facilities-based or network operators ('carriers') which are not available to service-based operators ('service providers'). The details are given in TA Statement No. 3 on "*Resale*" in the series of statements on "*Interconnection and Related Competition Issues*" issued on 19 May 1995 (the Resale Statement). For example, carriers may negotiate special terms for interconnection with other carriers on a 'carrier-to-carrier' basis, but service providers are treated as 'customers' to the network operators and must pay the terms under the published tariffs¹⁰. The service providers are not given special regulatory treatment, but there has not been any policy to discriminate against service providers.

14. PCCW-HKT submits that service-based operators merely 're-badged or resold services of the facilities-based operators with profits being made from non-sustainable resale and arbitrage opportunities'¹¹. The TA does not subscribe to such description of service-based operators or service providers. Service providers are not engaged merely in resale¹². They have to make their investment in downstream facilities (such as switches and routers) and lease international capacity from external carriers to operate their services. Apart from their role of putting competitive pressure on prices in the market, service providers can add value to the mere carriage in terms of quality, innovation and customer service. The entry barrier of service-based operation is lower and such operation can be engaged by a larger number of small and medium-sized enterprises. Service providers generate demand for capacity in network facilities and contribute towards the capital cost of network facilities. What the service providers lack is the transmission facilities which network operators are supposed to supply to service providers in their role as 'carriers'. Service providers for ETS rely on the infrastructure of local network operators as an input to the delivery of services to their customers. The purpose of the LAC is to enable the service providers to compete fairly with the network operators at the retail level of the ETS market without undermining the investment incentive for the local network infrastructure.

15. Facilities-based operators (network operators) and service-based

¹⁰ For other differences in the treatment between carriers and service providers, refer to Annex 1 to the TA Statement No. 3 on "*Resale*" issued on 19 May 1995.

¹¹ Page 7 of PCCW-HKT's submission under the heading of "*Facilities-based competition*".

¹² In Hong Kong, the regulation has not mandated the form of resale whereby carriers provide resellers services at discounted price and the resellers simply resells the service under a different brand.

operators (service providers) make contribution to the competition in the market. Service providers should be given a fair opportunity to compete. In every competitive market, service providers and network operators co-exist¹³. The policy objectives are therefore to provide a level playing field for the network operators and service providers, rather than to tilt it in favour of a particular category of operators. To ensure that there is a level playing field for competition between the network operators and service providers, the TA is protecting competition in the market rather than protecting a particular category of operators. If a particular operator, or a particular category of operators, should exit the market, it should be result of their inefficiency or inability to compete with other players in the market on a fair basis, rather than a tilted playing field. Therefore, the main purpose of this review is to ensure that the operating environment continues to be one conducive to the development of fair and effective competition to enhance consumer interest while at the same time preserving the commercial incentive to make network investment.

Incentive to make network investment

16. In the period preceding the commencement of the competition in external services market, when the local telephone service was operated with a deficit, the revenue from ETS was considered to be a significant source of incentive for the rollout of the local fixed networks. Concern was expressed at the impact of external services liberalization on the investment incentive on local network infrastructure as the service providers would compete with the local network operators at the retail level of ETS market. In particular, local fixed network operators were concerned about the ‘free ride’ on the local loops of the fixed networks by service providers. Therefore the methodology established in the 1998 LAC Statement adopted the approach of including a share of the local loop cost as part of the cost of conveyance services over the local fixed networks to be recovered under LAC. In addition, the LAC also adopts a forward-looking cost standard, including a share of the indirect fixed cost (corporate overhead) of the local network operator, and a cost of capital to reflect the investment risk in local network infrastructure. The result is that the LAC level is higher than the corresponding interconnection charge for Value Added Services (Public Non-

¹³ For example, in Australia, according to Australian Communications Authority’s “*Report on Telecommunications Performance for 2002-03*” published in November 2003, there were 94 carriers and 910 carrier service providers at the end of June 2003. In UK, according to the OfTel Report published in December 2003, in 2003, 66 International Simple Voice Resale licensees entered the market. In Japan, according to statistics of MPHPT, there were 413 Type I carriers as of the end April 2003 and 11,985

Exclusive Telecommunications Services (PNETS) charge) and fixed/mobile interconnection charge. Compared with the relatively high level of retail prices at the commencement of competition in the ETS market, however, the level of LAC was relatively insignificant and was unlikely to affect fair competition in the market at that time.

17. In the Consultation Paper, the TA identified the following major changes in the operating environment in the market since the introduction of LAC in 1999:

- Completion of the re-balancing of the tariff for local fixed telephone services;
- Significant price decline for ETS because of competition in the market;
- Emergence of broadband Internet access services and associated value-added services as new sources of revenue for investment in the customer access networks.

The TA asked (Question 1) whether LAC remains fair, necessary and appropriate in providing incentives for local fixed network investments in light of local fixed tariff re-balancing, ETS price competition, and broadband market opportunities.

18. Many submissions disputed whether LAC has been, and will continue to be, a significant factor for the investment decisions made by local FTNS operators. ETS operators submit that since the implementation of the LAC regime in 1999, ETS traffic has grown by 55% but local fixed networks, in particular the customer access networks, have not evidently expanded in the same pace. PCCW-HKT submits that local FTNS investments have actually fallen during the same period. This trend indicates that investments on FTNS infrastructure are primarily driven by the economic environment, demand and competition of local FTNS services, rather than by the investment incentives that LAC provides. One FTNS operator's submission acknowledges this fact. ETS operators submit that LAC is simply too small in providing incentives for local FTNS investments, but the impact on ETS competition is much more prominent.

19. The TA has examined the significance of LAC revenues to the FTNS business. A fixed network operator *receives* LAC when a customer connected to its fixed network makes an outgoing call, or receives an incoming call, through

Type II carriers (equivalent to 'Service Providers') as of the end of December 2003.

the ETS of another fixed network operator or ETS provider. A fixed network operator *pays* LAC when its ETS connects an outgoing call from, terminates an incoming call at, a customer connected to the network of another fixed network operator. Therefore an FTNS operator can be a net payer or receiver of LAC depending on the market shares in the local fixed telephone line market and ETS market in the outgoing and incoming directions. If the ETS routing an outgoing or incoming call is operated by the same fixed network operator, the LAC is just a notional or transfer payment within the same operator. According to the quarterly accounting manual filings by the FTNS operators to the TA, *actual* LAC revenues¹⁴ accounted for approximately 2% of total FTNS revenues during the first half of 2003.

20. PCCW-HKT submits that LAC was never established as a deficit-based charge and therefore tariff re-balancing is irrelevant. Other FTNS operators submit that tariff re-balancing is meaningful only to PCCW-HKT, and that the local FTNS market including broadband has also become very competitive. They assert that LAC should reflect the cost base of new entrants rather than the incumbent. In this regard, the TA disagrees with PCCW-HKT that the completion of the tariff-rebalancing is irrelevant to the review of the principles and methodology for the LAC. Although the LAC was not set up to address the deficit in the supply of local telephone services that existed before tariff re-balancing, LAC as a source of additional revenue was of higher significance when revenue from the local telephone services was unable to cover the full cost of service provision. Re-balancing of the tariff was also meaningful to the new entrants because the PCCW-HKT's prices set the benchmark for the market.

21. The submissions have not disputed the fact that the prices of the ETS market have declined significantly since liberalization commenced in 1999. The LAC has become a much more significant component in the prices of ETS compared with the proportion in 1999. In 1999, the weighted-average price for ETS in the market was \$3.93 per minute. Towards the end of 2003, the weighted-average was \$1.30 per minute. Prices below \$0.5 per minute are common to popular destinations such as Mainland China, USA, Canada, UK and Australia. The submissions also do not dispute the fact that broadband Internet access services have become a significant source of revenues for investment in the customer access networks. In 1999, broadband services to households were

¹⁴ Net of notational or transfer payment within the same fixed network operator, but gross of the LAC paid by the fixed network operators.

practically non-existent. The household penetration for broadband services has now exceeded 50%. The price of broadband services is typically two times or more of the prices for narrowband telephone services.

22. In view of the insignificance of LAC revenue to FTNS revenue and the emergence of other more significant sources of revenue (rebalanced tariffs for local fixed telephone services and revenue from broadband services) to drive customer access network rollout, the TA is not convinced that LAC has been, and will continue to be, a significant factor for the investment decisions made by local FTNS operators.

Level playing field

23. In the Consultation Paper, the TA asked whether ‘margin squeezing’ exists under the existing level of LAC, and whether efficient ETS operators will be driven out of the market because of that (Question 2).

24. PCCW-HKT has equated ‘margin squeezing’ as an anti-competitive conduct by a licensee prohibited under section 7K or 7L. The TA clarifies that this review is not intended to address anti-competitive conduct engaged in by a licensee, but rather a policy review to create a fair operating environment to promote competition between network operators and service providers. During an investigation on alleged breached of section 7K or 7L in 2003, the TA recognized that the existing LAC regime could lead to an environment more prone to ‘margin squeezing’. The TA accepted that since the LAC level is set by the TA, the ‘margin squeezing’, if any, is not the conduct of a licensee and it is more appropriate to address the issue in a policy review¹⁵. This policy review is for this purpose.

25. The TA has received from time to time complaints that the FTNS operators are pricing their ETS close to or even below the aggregate of the LAC and the Universal Service Contribution (USC). Details of such pricing can be found in a report published by the TA on the investigation of the complaints¹⁶. Submissions in response to the Consultation Paper have also provided examples

¹⁵ Paragraph 21 of TA’s report on “*Complaint about the IDD Fixed Fee Plans Offered by PCCW-HKT Telephone Limited*” published in August 2003 under the Competition Bulletin of OFTA’s website.

¹⁶ See Annex to TA’s report on “*Complaint about the IDD Fixed Fee Plans Offered by PCCW-HKT Telephone Limited*” published in August 2003 under the Competition Bulletin of OFTA’s website.

of such pricing¹⁷.

26. ETS operators submit that such pricing by FTNS operators would imply negative margins for ETS operators. However, FTNS operators submit that the IDD market is competitive, and they were not the price leaders. Instead, the prices could have been driven down by those ETS operators who engage in illegal bypass activities. The TA agrees that identifying the price leaders is difficult in a competitive ETS market. However, he notes that in the present market, the service providers in aggregate have only 15% of the ETS market while the rest of the market is captured by network operators or service providers affiliated with such network operators.

27. In the Consultation Paper, the TA reckoned as long as the LAC accurately reflects the local carrier's cost upon the conclusion of this review, there should be no room for 'margin squeezing'. Technically speaking, 'margin squeezing' should not exist because if the local carrier needs the LAC to cover fully the local conveyance costs, the local carriers would be suffering negative margins, as much as the ETS operators, in the business for the operation of the external services under such discounts described in paragraph 25.

28. Some members of the industry do not view the LAC as cost-based. ETS operators submit that the existing level of LAC is well above cost. PCCW-HKT submits that LAC was never intended to be a cost-based regime. In its view, LAC provides a 'above-cost based compensation' to network operators in order to provide investment incentives. Reach submits that if the LAC is meant to provide a reward or incentive for local infrastructure deployment, then the TA seems to be contemplating an incentive determined on a different basis.

29. In the 1998 LAC Statement, a cost-based methodology different from that for other interconnection charges (i.e. PNETS charge and fixed/mobile interconnection charge) was adopted for the calculation of LAC and this resulted in an LAC level higher than that for PNETS charge or fixed/mobile interconnection charge. The difference in methodology was mainly in the inclusion of different cost components (particularly the local loop cost which is included in LAC but excluded in PNETS charge and fixed/mobile interconnection charge), the adoption of different costing standards (forward-looking cost for LAC versus historical cost for PNETS and fixed/mobile

¹⁷ Submissions from Joint ETS and One Tel

interconnection charges) and the adoption of different cost of capital (industry average level for LAC versus incumbent level for PNETS and fixed/mobile interconnection charges). The choice of different cost-based methodologies was to satisfy different policy objectives. One should not consider *per se* that LAC is above cost or PNETS is below cost.

The local loop costs

30. Local loop cost is the most controversial topic among the industry submissions. The TA is aware that his decision on local loop costs will be a swing factor for determining the level of LAC. Most submissions from the FTNS operators also consider local loop costs to be the key item for providing investment incentives.

31. ETS operators submit that local loop costs should have already been recovered through the fixed monthly rental paid by local fixed-line telephone users. They consider LAC to be over-compensatory when local loop costs are included again. On the other hand, the FTNS operators submit that the TA should not allow the ETS operators to ‘free ride’ on their networks, including the local loop. In the TA’s view, whether local loop costs should be borne by local fixed-line users or LAC is a matter of ‘externality’¹⁸ and definition of ‘property rights’¹⁹, i.e., whether the basic local fixed-line subscription include the ‘right of access’ to ETS.

32. In economics theory, there is no right or wrong definition of property rights. Instead, it suggests that as long as the property right is well defined (no matter how it is distributed among different parties concerned), market forces will work towards a corresponding equilibrium allocation of resources that is efficient²⁰. Applying theory to practice, once the TA determines whether or not the ‘right of access to ETS’ constitutes part of local fixed-line subscription, the local loop costs would then become a genuine cost item for the corresponding market, and the retail prices in all markets concerned will be adjusted accordingly:

¹⁸ A ‘production externality’ arises when the production possibilities of one firm are influenced by the choice of another firm.

¹⁹ ‘Property rights’ refers to the right to use or to authorize use, the right to derive income from its use and the right to exchange ownership.

²⁰ “*The Problem of Social Costs*” (October 1960), Ronald Coase. Also known as the Coase Theorem.

- Assume LAC continues to include local loop costs, the cost base of ETS services will remain relatively high. Since local loop costs have been partially recovered via LAC, competition in the local FTNS market will drive down the fixed-line rental accordingly, to such a level that FTNS operators would not be able to make supernormal profits from LAC. This view is supported by the new entrant FTNS operators who submit that competition in the local FTNS market is intense and fixed-line rentals remain at low levels, leaving no room for cross-market subsidy.
- Assume local loop costs are to be fully recovered through fixed-line rentals, the cost of local fixed-line services will become relatively higher. Meanwhile, as LAC no longer bears the burden of local loop costs, competition in the ETS market will drive down the retail prices accordingly. This view is supported by Bandwidth Asia, an ETS operator, who submits that any reduction in LAC will not benefit the industry because it will only trigger another round of cut-throat price war.

33. One should note that although the local loop costs are attributed differently in the two scenarios above, competition in both the local FTNS and the ETS markets ensure that the retail prices in the respective markets are driven towards cost. In this context, both scenarios are economically efficient²¹. Neither scenario incurs deadweight loss²² to the economy as a whole. The main difference between the two scenarios is the relative price levels between local and external telecommunications services, i.e. the distribution of private interests between different groups of producers and consumers (e.g. FTNS and ETS operators, local fixed-line subscribers and IDD users). As such, the TA is faced with a policy decision to distribute such private interests, rather than an economic decision that affects the aggregate welfare of the society.

34. To form such a policy decision whether to maintain the present apportionment of local loop cost, it is necessary for the TA to revisit the rationale behind his decision in 1999 and contrast it against the contemporary market situation. In paragraph 16, the TA has already explained that local loop cost was apportioned to LAC in 1999 because ETS was considered to be an important source of revenues to fund the rollout of customer access networks. He then

²¹ Resource allocation is Pareto efficient when there is no alternative allocation that can make somebody better off without making somebody else worse off.

²² Deadweight loss is the forgone interest by somebody that is not captured by anybody else.

concluded in paragraph 22 that LAC is no longer a significant factor for the investment decisions made by local fixed network operators. As such, the amount of incentives provided under LAC must be weighted against the implications on the level playing field in the market.

35. In the TA's view, the local conveyance service to be paid for by LAC should bear its reasonable relevant cost. To establish what is reasonable relevant cost, the question of 'causality' should be considered. A fixed line user needs to have a connection (via the customer access network) to the fixed network before he can use the various services available through the switching and transmission over the network, e.g. making and receiving calls to and from other users of the networks, using ETS, etc. While traffic of the ETS would increase the costs of the switching and transmission in the long run, it would not affect the cost of providing the connection for access. From this angle, it is more reasonable for the cost of the access to be apportioned to the fixed line service.

36. Some FTNS submissions consider the TA's recent determination on the interconnection charges for international call forwarding services (ICFS)²³ to be analogous to LAC, in the sense that fixed monthly rental is not supposed to recoup the investments costs for all types of traffic. The TA notes that, according to the ICFS determination, traffic-sensitive costs are recovered from the interconnection charge, while traffic-independent costs are recovered from mobile users. Applying this principle, the TA considers that local loop is a traffic-independent cost and therefore should be excluded from LAC. Other cost items such as switching and transmission, number portability, etc. are traffic-sensitive costs and therefore should continue to be included.

37. What has happened in the market (especially the pricing behaviour described in paragraph 25) also shows that the local fixed carriers are indeed cross-subsidizing external services from other business segments of the carriers. It appears that revenue potential from other business segments is sufficient to recover the cost of the local loops, such that it is not necessary to charge the local loop costs to the external services. The ETS providers not affiliated with a network operator do not have this flexibility. Therefore, including local loop cost in LAC does not result in a level playing field between the network operators and the service providers in the ETS market.

²³ *Telecommunications Ordinance (Cap 106) - Determination under Section 36A of the Telecommunications Ordinance of the Terms and Conditions of Interconnection for International Call Forwarding Services*, 3 November 2003.

38. The TA considers that in the current environment, the adverse impact on the level playing field has outweighed the need for the inclusion of local loop costs as an incentive to promote rollout of the customer access network. In order to meet the policy objectives stated in paragraph 10, the TA is satisfied that local loop costs should be excluded from the calculation of LAC. He also considers that investment incentives should be provided via the choice of charging principles, costing standards and cost of capital rather than the deliberate inclusion of a particular cost component.

Other cost components

39. Apart from the local loop cost, the other cost components of LAC are switching and transmission, number portability, administration cost and cost of capital. The submissions have not raised many issues relating to the inclusion of these components. A few specific comments by individual respondents are addressed in **Annex**. Apart from these, the existing methodology is generally agreeable to the industry. Most respondents request the TA to update the parameters used under these cost components based on the current market situation. This will be done in the upcoming TA determination on the level of LAC following the conclusion of this review.

Charging principles

40. Section 36A(3B) of the Telecommunications Ordinance provides that *“[t]he charges in a determination shall be based on the relevant reasonable costs attributable to interconnection, and in determining the level, or method of calculation, of the relevant reasonable costs attributable to interconnection, the [TA] may select from among alternative costing method what he considers to be a fair and reasonable costing method”*. The existing LAC regime is based on the ‘long-run average incremental cost’ (LRAIC) approach, although the TA has also determined some other interconnection charges based on the ‘fully distributed cost’ (FDC) approach, including the PNETS charge for VAS and fixed/mobile interconnection charge for mobile network operators.

41. Both LRAIC and FDC are cost-based charging principles, but they differ in two main aspects. First, LRAIC is based on the forward-looking cost including a cost of capital, while FDC is based on historical or accounting cost.

The second difference is the treatment on indirect fixed costs at the corporate level (or commonly known as corporate overheads).

42. FDC fully allocates the indirect fixed costs incurred at the corporate level as it is typically adopted when the interconnection service is provided to established operators, or when it constitutes a substantial proportion of the carrier's business. In contrast, LRAIC is often adopted during the infant stage of competition where the new entrants are establishing the initial critical masses in the market. Indirect fixed costs are not typically included in LRAIC because the incremental costs to the incumbent at the corporate level should be negligible given the limited scale of such interconnection services initially. Therefore, pure LRAIC enables rapid introduction of effective competition, yet may be inadequate in stimulating investment over the long run. When competition develops further in a market, a markup is often made to the LRAIC to include a proportion of company overheads incurred as the scale of interconnection service expands.

43. In the Consultation Paper, the TA asked whether the present charging principle of LAC, based on LRAIC with a percentage markup for administrative costs, remains valid and justified, or an alternative approach, such as pure LRAIC or FDC, should be adopted (Question 6). Most ETS operators support pure LRAIC, while most FTNS operators support pure FDC. The ETS society proposes 'the lesser of LRAIC and FDC'.

44. First, the TA considers the inclusion of corporate overheads to be appropriate because the ETS market is already mature. Should the ETS operators opt to 'build' rather than 'buy', they would also incur corporate overhead expenses. Failure to include such expenses would defeat the LAC policy objective of fair compensation to the local fixed networks. When corporate overheads are included, the difference between LRAIC and FDC should not be exaggerated, because both the bottom-up 'markup' approach of LRAIC and the top-down 'allocation' approach of FDC essentially reflect the same fair share the corporate overhead expenses. The remaining difference between LRAIC and FDC is the costing standard, i.e., historical vs forward-looking cost, which will be discussed in the next section.

Costing standard

45. The forward-looking cost standard has the merit of sending an accurate and contemporary ‘build or buy’ signal to the market, thus providing the very right amount of incentives for infrastructure investment to new entrants. However, when compared to the historical cost standard, forward-looking costs may not necessarily reflect the actual cost incurred by the carrier supplying the interconnection service, and tends to over-compensate the incumbent whose network investments were largely made during its monopoly era, i.e., when the market was less risky. Among the submissions, most FTNS operators support the forward-looking standard, while most ETS operators support the historical standard, citing reasons similar to the above.

46. The TA observed that the submissions on the costing standard were tainted by the desire of the respective categories of operators to have higher or lower level of LAC. While the network operators support FDC, they support forward looking cost. On the other hand, the ETS operators support LRAIC, they support historical cost.

47. Under the existing costing methodology of LAC, the forward-looking cost standard is adopted, with an indirect adjustment on the switching and transmission cost component to historical cost via the Universal Service Contribution (USC). With this indirect adjustment, the new entrant FTNS operators are compensated with forward-looking costs, while the issue of over-compensation to the incumbent is also addressed. As such, the TA is satisfied that the existing methodology captures the pros while avoiding the cons of different costing standards, and therefore should be maintained.

PNETS charge

48. ETS operators submit that, as a matter of fairness, the charging principles of LAC should be aligned with those of PNETS charge for dial-up internet traffic, which compensate for the same network resources consumed. At present, the PNETS charge is based on FDC, historical cost, a cost of capital at the incumbent’s level and without including local loop costs.

49. The TA considers that the LAC and PNETS regimes are established based on different policy objectives and considerations, and therefore he can apply different charging principles. As explained in paragraph 29, one should not consider *per se* that LAC is above cost or PNETS is below cost. The also notes

that even if LAC and the PNETS are calculated under the same methodology, the actual level of charges are still likely to be different given the dissimilar traffic patterns, especially the duration per call attempt.

50. As such, the TA is not satisfied that the principles and costing methodology of LAC and PNETS must be aligned. In particular, he is satisfied that LAC should continued to be based on forward-looking cost and industry-average cost of capital in order to preserve investment incentives in local fixed networks.

LAC in other jurisdictions

51. In the Consultation Paper, the TA presented the principles, costing methodologies and level of LAC-equivalent of some other jurisdictions including Australia, United Kingdom and United States, and asked for industry comments on his findings (Question 15). ETS Society and Global Call submit that the level of LAC in Hong Kong appears to be out of line when compared to other jurisdictions with fully liberalized markets. However, FTNS submissions point out that such comparisons are invalid for various reasons. PCCW-HKT considers that LAC was introduced in 1999 as a new category of charge separate from interconnection charge for policy reasons. NWT points out that unlike these jurisdictions, there is no local call charges under the present tariff regime in Hong Kong. HGC points out that local fixed-line and broadband services in other jurisdictions are much more expensive than in Hong Kong.

52. In response to the comments from PCCW-HKT, paragraphs 10 - 29 have addressed the policy objectives of introducing LAC and the change in market environment since 1999. NWT and HGC's submissions merely point out that in other jurisdictions, when there are other significant sources of revenue for the recovery of the costs of the local fixed networks, local access charge tends to be lower. The fact that broadband prices are relatively cheap in Hong Kong does not undermine the significance of such revenue streams, because penetration is among the highest in the world. Hong Kong is also among the few jurisdictions globally to have completed tariff rebalancing in full.

53. HGC further submits that the three jurisdictions studied by the TA presents a biased picture on the low side because the termination charges of Mainland China and Philippines have not been taken into consideration. These

two routes are particularly important because they comprise more than half of the total IDD traffic to and from Hong Kong. In response, the TA considers that the examples cited by HGC may not be regarded as fully liberalized regimes and the level of termination charges is affected by the policy and specific circumstances of the respective jurisdictions.

54. After due consideration of the submissions, the TA accepts that the level of capital and operating costs for local fixed networks in different jurisdictions may not be comparable because of differences in, for example, the population density and income levels. However, the principles that the access charge should be cost-based and exclude local loop costs²⁴ are useful references. He is satisfied that the LAC regime should primarily be based on the unique circumstances in Hong Kong, with reference to international best practices as appropriate.

Voice over Internet Protocol (VoIP)

55. In the Consultation Paper, the TA asked whether the emergence of VoIP technology would render the existing principles and costing methodology of LAC obsolete (Question 5). ETS operators generally submit that LAC should be lowered in light of the availability of VoIP as a lower-cost alternative. AT&T submits that VoIP technologies are not mature enough to be considered for the LAC regime and the US regulator has exempted enhanced and information service providers (including Internet Service Providers) from the payment of access charge. CTI considers that it is pre-mature at this stage to argue whether the introduction of VoIP would bypass the LAC regime because the majority of traffic is still routed through PCCW-HKT's circuit-switched network. Other respondents emphasized the importance of a regulatory regime to be technology neutral. The TA considers that, assume the cost base of VoIP is lower, an LAC based on circuit-switched costs would indeed signal the market to deploy VoIP networks in order to avoid high costs rather than discouraging the migration. If and when VoIP becomes more prevalent, circuit-switched networks would increasingly be bypassed, in which case the LAC regime would naturally become less relevant. Therefore, the TA would let the market decide whether LAC based on circuit-switched costs is becoming obsolete or not.

²⁴ As summarized in Appendix to the Consultation Paper, local loop costs are excluded in the Oftel and FCC calculation of access charge. In Australia, local loop cost is included when there is an access deficit.

Conclusion

56. Having considered that

- the operating environment has changed significantly since the introduction of external telecommunications services in 1999. The rationale for LAC to encourage investment in local network infrastructure must now be weighted against the implications on the level playing field of the ETS market;
- the existing LAC regime has resulted in a tilted playing field that is more prone to ‘margin squeezing’;
- investment incentives should be provided via the adoption of the forward-looking cost standard and an industry-average cost of capital rather than by the deliberate inclusion of local loop cost,

the TA concludes that the charging principles and costing methodology of LAC should remain unchanged, with the exception that local loop cost should no longer be included. The parameters for the individual cost components should be updated based on the latest market situation in the upcoming TA determination on the level of LAC following the conclusion of this review.

57. However, in order to avoid an abrupt impact on the market, the TA is satisfied that the local loop cost should be phased out in three years. The determined LAC will include two-thirds of the local loop cost for the first year, one-third for the second year and completely excluded for the third year. During the transition period for the calculation methodology, the TA may further revise the level of LAC by updating the parameters of individual cost components as and when appropriate.

Analysis on the other implications of LAC

58. The following issues are, strictly speaking, not among the relevant factors to be considered by the TA in reviewing the principles and costing methodology of LAC, but rather the consequences to the implementation of the LAC regime. In the following sections, the TA analyses the implications of his

revised charging principles of LAC on these issues.

Illegal traffic bypass

59. Illegal traffic bypass refers to the routing of external traffic through ordinary (local) telephone lines instead of interconnection lines with number blocks specifically assigned for ETS. Such illegal bypass can take place in the outgoing direction as well as the incoming directions, although bypass activities in the incoming direction are more difficult to detect.

60. Most respondents recognize the existence of illegal bypass activities. The whole industry suffers because FTNS operators lose considerable LAC revenues, while the ETS operators who 'play by the rules' are disadvantaged in competition. FTNS operators prefer the TA to tackle the problem through enforcement rather than getting around with it by manipulating the principles and costing methodology of LAC. Some respondents proposed certain measures such as a 'CEO certification programme' where the directors and officers of a company involved in illegal bypass activities should be subject to criminal liability. The TA agrees with the industry that illegal bypass activities should be tackled effectively and resources have already been deployed to tackle such activities. The 'CEO certification programme' seems to have some deterrent effect, but it begs the question of why this approach should not be extended to all activities in breach of the Ordinance and licence conditions. The existing regulatory framework consists of remedies to address breaches of the Ordinance and licence conditions and it has not been the policy to address the breach through criminal sanction.

61. ETS operators submit that the difference between the level of LAC and PNETS charge has been the main reason for the prevalence of illegal bypass activities, and that lowering the LAC would reduce such incentives. On the contrary, the FTNS operators submit that as long as some level of interconnection charges is payable, there would still be the incentive for bypass. The TA also notes that even the PNETS is avoided in many cases of such illegal bypass. As such, he agrees that bringing the LAC down to the level of PNETS charges would not have significant effect to discourage illegal bypass. Accordingly, the TA's decision stipulated in paragraph 56 has not taken illegal bypass activities into account. He agrees with the industry that the problem should be tackled directly through enforcement.

62. PCCW-HKT proposed in its submission a ‘revenue-neutral’ rate structure for LAC – lowering the incoming LAC and increase the outgoing LAC according to the in-out traffic ratio – as a ‘second best solution’ to tackle illegal bypass activities which happen mostly in the incoming direction, while maintaining LAC revenues to FTNS operators unchanged so as to preserve the investment incentives. However, the TA is bound by section 36A of the Telecommunications Ordinance to determine interconnection charges based on cost, and he could not justify PCCW-HKT’s proposal on cost grounds. Furthermore, the PCCW-HKT’s proposal of raising the level of LAC in the outgoing direction will only aggravate the existing impact of LAC on the level playing field between the service providers and the network operators. PCCW-HKT’s proposal is also contrary to the position of another operator which expressed concerns about lowering the LAC in the incoming direction in the context of international balance of payment.

International balance of payment

63. The TA is aware that there were a number of situations over the past year where the overseas administrations or carriers unilaterally raised their termination charges for international traffic to such levels that are significantly above cost. He is also aware that Hong Kong has more outgoing traffic than incoming for most of the external routes due to more competitive retail prices. The concern is that, since LAC is cost-based, the Hong Kong operators (and consumers) may end up subsidizing the overseas economies with a ‘net settlement deficit’ (outpayment).

64. According to the 1998 LAC Statement, the criteria for route categorization comprise only the existence of alternative connections and the degree of genuine price competition in Hong Kong²⁵, without regard to the status of competition in overseas markets. For example, when two external gateway operators in Hong Kong have established separate connections to the same monopoly carrier in a certain country for the delivery of traffic, this particular route would be classified as Category A as long as there is genuine competition between the two operators in Hong Kong. The termination charge at the distant end could well include a monopoly rent charged by the distant carrier. On the other hand, the incoming traffic to Hong Kong from the distant carrier would be

²⁵ Paragraph 7 of the 1998 LAC Statement

terminated at largely cost-based rates under the LAC regime. Therefore, the present LAC regime does not cater for situations where overseas administrations or carriers exercise their pricing power on termination charges and does not inherently prevent imbalance of payment.

65. As such, the TA asked in the Consultation Paper whether the offshore termination charges should be taken into account in determining the level of LAC in Hong Kong (Question 4). HGC submits that LAC in Hong Kong is amongst the lowest in the world. As a result, Hong Kong consumers are subsidizing foreign operators. Therefore, LAC should be increased to allow FTNS operators better negotiating leverage with overseas carriers. On the other hand, Reach submits that international balance of payment is more driven by in-out traffic ratio rather than termination rates. CTI also submits that the TA should take the active approach to balance the in-out traffic ratio by lowering LAC instead of the passive approach to align the LAC level with overseas. Most respondents agree that setting LAC on a route-specific basis is impracticable due to 'one-way bypass', i.e., incoming traffic to Hong Kong can be refiled by overseas carriers. ETS operators submit that the competitiveness of Hong Kong depends on its free trade environment, and therefore urge TA not to intervene by manipulating the level of LAC.

66. Although LAC is not equivalent to the termination rate for incoming external traffic to Hong Kong, LAC is a cost component for the termination service and lowering LAC may result in lower termination rates as a result of competition among operators in providing termination services. Having reviewed the submissions above, the TA does not consider the balance of payment in the operation of ETS should be viewed in isolation. ETS is just one service among many goods and services imported and exported by Hong Kong. Such external trade as well as other payments under the capital and financial account (e.g. incoming and outgoing investments) in aggregate constitute Hong Kong's overall balance of payment. Hong Kong has over the past years been making net outpayment in ETS, and that apparently has not caused particular concerns (outpayment to a foreign country is for the purchase of the terminating service supplied by the country which is not dissimilar in nature to the import of other foreign goods or services), as Hong Kong will be earning inpayments through other trades and foreign investments. To lower Hong Kong's termination rates may alter the in-out ratio of the ETS traffic as overseas callers might be encouraged to make more incoming calls to Hong Kong. Indirectly,

lower costs for traffic in and out of Hong Kong will reinforce Hong Kong's position as a telecommunications hub.

Way forward

67. On the back of the revised principles and costing methodology of LAC stipulated in paragraph 56 of this statement issued today, the TA will proceed with a determination under section 36A of the Telecommunications Ordinance on the actual levels of LAC.

68. The TA will publish a Preliminary Analysis of the level of the LAC based on the data that he has already obtained on the costs of PCCW-HKT's network and other data that he may need to obtain from PCCW-HKT for the purpose of the LAC review. Subject to any comments from the industry on the level of the LAC in the Preliminary Analysis, the TA will finalize the determination. The TA intends to complete the final determination in one month. The revised level of LAC should be effective from the date of the TA's determination.

69. At present, the LAC of PCCW-HKT is determined by the TA because it is the dominant operator in the local fixed telecommunications services market(s). PCCW-HKT has applied for a declaration of non-dominance in the retail market for the supply of business and residential direct exchange line services. The defined markets have not included the supply of local access services for ETS and interconnection for value-added and mobile services. Therefore the charges for these services will remain regulated, regardless of the outcome of the PCCW-HKT applications. However, the TA notes that in theory, the share of receipts from the provision of local access and interconnection services among the fixed network operators should be proportional to their respective market shares in business and residential telephone line services. As such, the TA does not rule out the possibility that PCCW-HKT applies for non-dominance in these interconnection markets in the future.

Office of the Telecommunications Authority

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Summary of industry submissions and the TA's responses

Industry submissions	The TA's responses
1. Local fixed network involves a long investment cycle. A stable and certain regulatory environment is crucial. It is inappropriate to review the LAC policy in less than five years. (PCCW-HKT and HGC)	At the inception of the LAC regime in 1998, the TA has alerted the industry that he may review the LAC as and when necessary under contemporary market situations. With the conclusion of this review, the ultimate policy objective of maximizing the economic welfare of Hong Kong remains unchanged, and the issue of providing investment incentives has been taken into account.
2. Investment incentive is necessary for LAC, as external operators depend on reliable and ubiquitous coverage of local fixed networks to provide international services. (Reach)	Noted. LAC will continue to provide investment incentives via adopting the forward-looking cost standard and an industry-average cost of capital.
3. ETS operators have also made investments. The TA should not only protect FTNS investments. (Joint ETS)	The TA's objective is to protect and sustain competition rather than competitors. In any case, it cannot be denied that capital investments on local FTNS networks are much more intensive than ETS facilities.
4. Instead of requiring ETS operators to subsidize fixed network rollout, the TA should encourage the FTNS operators to provide more VAS from their networks. (CTI)	Investment incentives are necessary to provide an accurate 'build or buy' signal to the market and should not be regarded as a subsidy or profit <i>per se</i> . There is no regulatory barrier for FTNS operators to provide VAS when there are commercial incentives.

<p>5. Even if LAC accurately reflects cost, there is still room for margin squeezing, as FTNS operators are not concerned with the sunk investments which is not reflected at the cash flow/EBITDA level. (ETS Society)</p>	<p>This is false when margins after depreciation is considered. It is normal business practice for FTNS operators to ride on their sunk investments to price at cash flow breakeven (negative economic return) levels temporarily to gain or protect market shares. Under such circumstances, ETS operators without sunk investments may choose whether to endure negative cash flow for a short period of time in order to compete in the market or shut down temporarily and re-enter the market as and when prices rationalize. Entry and exit for service operators are relatively flexible.</p>
<p>6. Non-vertically integrated operators will be disadvantaged if LAC is based on circuit-switched models while vertically integrated operators deploy VoIP. (Reach)</p>	<p>There is no regulatory barrier for any operator to become vertically integrated. The business model chosen by an operator is a commercial decision.</p>
<p>7. PCCW-HKT did not receive any concession on land and building in developing its exchanges. Land was purchased at contemporary market price, albeit not auctioned. The cap at historical cost is therefore inappropriate. (PCCW-HKT)</p>	<p>Whether or not PCCW-HKT obtained its land under concession or not is irrelevant. The cap at historical cost is to avoid over-compensation to the incumbent. Land and building is only one of the cost items involved.</p>
<p>8. On the issue that new entrants would require fewer exchanges to construct a new network, PCCW-HKT is prepared to work jointly with the TA and the industry to derive the forward-looking cost for land and building. (PCCW-HKT)</p>	<p>Noted. The TA will decide in the upcoming determination on LAC whether forward-looking cost of an efficient network architecture should be used for calculating land and building cost, or PCCW-HKTC's historical cost remains the best proxy.</p>

9. 'Tilted annuities' should be used for the depreciation of assets. (Reach)	Under the forward-looking cost standard, depreciation of assets is based on economic life, which has already provided for the possibility of obsolescence as new technologies emerge. 'Tilted annuities' will render compensation excessive.
10. As local fixed networks depreciate, LAC should be reduced. (Joint ETS)	Similar to above, if LAC is reduced when local fixed networks depreciate, it would fail to reflect current cost.
11. IDD traffic grew 61% over the past 5 years, but LAC has only been reduced by 20%. (Joint ETS)	When IDD traffic grows, it consumes more network resources. It is fair for ETS operators to share a larger proportion of the network costs.
12. Actual traffic should be used instead of 'efficient traffic' as the denominator for calculating switching and transmission costs. (HGC)	The use of actual traffic would reward over-capacity, i.e., inefficiency. LAC would only provide incentives for efficient investments.
13. Disagree on an addition contribution being disguised as 'administration costs' to provide investment incentives. (Reach)	Administration cost is a genuine cost item for which an FTNS operator should be compensated. Such costs will be incurred if an ETS operator choose the build a local network itself. Failure to include administration costs in LAC would discourage local fixed network investments.
14. LAC should not include mobile portability costs because ETS operators are indifferent to number portings. (Reach)	Dipping of the number portability database is necessary to complete the delivery of an incoming IDD call. The resources consumed are also traffic sensitive. Therefore, it is fair for ETS operators to compensate the local FTNS networks.
15. LAC should be calculated based on conversation minutes rather than occupancy minutes. (ETS Society)	Network resources are consumed on occupancy rather than conversation basis.

<p>16. There should not be different call types under the Type I interconnection model used to calculate switching and transmission costs for LAC. All types of calls utilize the same network. (CTI)</p>	<p>The different call types have different traffic patterns, especially the duration per call. They consume different level of network resources. Setting separate charges for different call types is a better match to the underlying cost base.</p>
<p>17. The TA should conduct a thorough review on the cost of capital for all interconnection charges. (PCCW-HKT)</p>	<p>Noted. The TA will consider such a review as and when appropriate. For this review, the use of an industry-average cost of capital seems to be agreeable to the industry.</p>
<p>18. The incremental business risk for the incumbent to provide local access should be minimal (WT&T and CTI)</p>	<p>LAC must also reflect the risk of new entrants in order to provide incentives for investment.</p>
<p>19. Cost of capital should be reduced, as interest rates have declined in a weak global economy. (Joint ETS)</p>	<p>Cost of capital depends on a number of factors other than interest rates, including equity premium, capital structure, etc. The TA will decide on the level of WACC in the upcoming determination of the level of LAC.</p>
<p>20. No other jurisdictions charge different interconnection rates for local and external calls. (Reach)</p>	<p>This statement is imprecise. Termination charges, which is further down the production chain of ETS than LAC, are regulated in some other jurisdictions. See Appendix of the Consultation Paper.</p>
<p>21. The TA should conduct a second-round consultation on a number of important yet uncertain issues. (HGC)</p>	<p>The TA is satisfied that, having duly considered all the submissions received, his decision today is for the best interest of the Hong Kong economy. There are no important outstanding issues that warrant a second consultation.</p>
<p>22. Propose a two-tier LAC system for incumbent and new entrants. (NWT)</p>	<p>The present LAC regime with an indirect adjustment via USC is already a two-tier system between incumbent and new entrants.</p>

23. LAC was determined in 1998. The ETS perspective was missing. (Joint ETS)	Noted. The TA has given due consideration to all the submissions from the ETS industry in this review.
24. Any LAC revision should be backdated to the beginning of 2003. (ETS Society and Global Call)	The upcoming TA determination on the level of LAC will be based on contemporary market information. The effective date for the revised level of LAC should be the date of the determination.
25. LAC should be reviewed semi-annually or annually given the dynamic nature of the IDD market. (Joint ETS)	On the contrary, the TA considers the intense competition in the ETS market to be an indication of maturity. He will review the LAC again in the future as and when appropriate. Semi-annual or annual review of LAC is too much for a matured market.
26. There is no competition on the provision of local access, as all the other FTNS operators charge the same LAC as the incumbent. (Joint ETS)	The TA determined the LAC of PCCW-HKTC based on cost, and that has become an industry benchmark. This situation should not be considered as a collusion. When LAC accurately reflects cost, it becomes the market equilibrium price.
27. ETS operators have limited scope in providing VAS due to lack of network control, but when they provide innovative services such as ICFS, the TA discouraged it. (Global Call)	The TA has never intended to discourage innovative services, provided that the consumption of network resources involved is fairly and adequately compensated. This is the main rationale behind the ICFS determination.
28. USC should be removed to alleviate the burden to the industry. (WT&T)	The USC regime was established with the policy objective of ubiquitous access to basic telecommunications services. It is beyond the scope of this statement to review the USC.