

The 1998 Review of Fixed Telecommunications

A Considered View

Information Technology and Broadcasting Bureau

The Government of the Hong Kong Special Administrative Region

3 September 1998

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I. Prologue

1.1 The paper 'The 1998 Review of Fixed Telecommunications - A Consultation Paper'¹ issued by the Information Technology and Broadcasting Bureau on 30 April 1998 had as its purpose to consider :

- 1) the current state of development of Hong Kong's local fixed telecommunications industry now that we are approaching the completion of the 3 year headstart granted to the local FTNS operators;
- 2) the opportunities that exist for ensuring effective competition in both the local and external sectors of the fixed telecommunications industry;
- 3) the appropriate industry structure which should be encouraged in Hong Kong, with particular emphasis on issues of licensing, network development and economic efficiency; and
- 4) any necessary fine tuning of the policy and regulatory environment especially in regard to the regime of competitive safeguards employed in Hong Kong.

B 1.2 In response to the consultation paper, 30 submissions were received. A summary of these submissions is at Annex B. The Government has considered these submissions and in this second consultation paper puts forward policy proposals to the industry for further comment. Our intention is that policy decisions will be finalised before the external telecommunications services market is liberalised on 1 January 1999. The principal policy proposals in this paper relate to :

- i) the moratorium on the issue of further FTNS licences;
- ii) the licensing of external telecommunications services

A ¹ Copies of the consultation paper can be downloaded from the homepage of Information Technology and Broadcasting Bureau at <http://www.info.gov.hk/itbb>. The principal issues are set out in the extract at Annex A.

operators from 1 January 1999; and

- iii) the licensing of external telecommunications facilities-based operators from 1 January 2000.

The issue of convergence of broadcasting and telecommunications is considered in the parallel 1998 Review of Television Policy.

1.3 After reviewing the submissions from a number of respondents, the Government considers that it would be appropriate to circulate to a wider audience its proposals to amend the Telecommunication Ordinance. Earlier versions of these proposals had been circulated on 12 August 1996 and, following revisions, a further consultation paper was issued on 23 December 1996. The proposals have again been revised to take account of comments received and latest developments in the telecommunications industry. The Government considers that the issue of access by telecommunications and broadcasting facilities-based operators to buildings and other spaces deserves wider comments. In addition, for a number of respondents to the 30 April 1998 consultation paper, the issues of interconnection arrangements, which are dealt with in the proposed amendments, were considered critical to a considered view of the review of fixed telecommunications. For this reason a chapter has been included specifically in this consultation document on the proposed amendments to the Telecommunication Ordinance.

1.4 The Government would welcome comments on the proposals in this Consultation Paper. Comments should be sent on or before Saturday, 3 October 1998 to :

Information Technology and Broadcasting Bureau
2/F, Murray Building
Garden Road
Hong Kong

Fax comments can be sent to : 2511 1458 (open)
2827 0119 (confidential).

E-mail comments can be sent to itbbenq@itbb.gcn.gov.hk.

1.5 Please note that the Government reserves the right to make

public all, or parts, of any submissions made to this Review. Any material claimed to be commercially confidential would need to be clearly marked: the Government would take such marking into account in making its decision whether to release the material or not.

1.6 A glossary of technical terms used in this Consultation Paper is at Annex C for reference.

C

II. Moratorium on the issue of further local Fixed Telecommunications Network Service licences

2.1 The local fixed telecommunications services market has been competitive since 1 July 1995 when, after an open selection exercise, three new entrants were licensed as Fixed Telecommunication Network Services (FTNS) operators in competition with the former monopoly operator, Hong Kong Telephone Company (HKTC). An FTNS licence allows licensees to construct a fixed telecommunications network and operate telecommunications services over that network. The FTNS licences were originally granted only for the provision of local services and facilities. One important function of the current exercise is to review the moratorium on the issue of further local FTNS licences. This moratorium expired on 30 June 1998 and our commitment to review it is reflected in Hong Kong, China's obligations under the World Trade Organisation Agreement on Basic Telecommunications.

2.2 In the consultation document issued on 30 April 1998, the Government invited comments on its assessment of the progress in the development of the local FTNS market and whether applications for more FTNS licences should be invited.

2.3 Apart from some of the existing facilities operators, the majority of the submissions tended to support the further opening of the FTNS market. The policy rationale for opening up the local market is to provide better and more efficient telecommunications for users - business and domestic - and to encourage innovation. The Consumer Council was concerned that some three years after the start of competition, HKTC still had 98.5% of the exchange lines in Hong Kong. So in its view the local telecommunications market was not significantly more competitive. The Hong Kong Telecommunications Users Group saw no strong argument for an extension of the FTNS moratorium as existing licensees had enjoyed a substantial period of protection. The Group considered choice for users could be increased by inviting further applications for FTNS licences. The view of a number of telecommunications companies providing services over the lines of the FTNS licensees also favoured the ending of the moratorium.

2.4 There was a unanimity of views among significant overseas telecommunications operators that the moratorium had served its purpose in allowing the new FTNS licensees to become established in the market. The time for restrictions had passed and in their view market forces should determine the number of participants. A competitive market, without the possibility of the formation of cartels, could best provide full benefits to the consumer in terms of price, service quality and innovation. One submission indicated that, in New York City, consumers and businesses could choose from 14 facilities-based carriers providing local service.

2.5 One mobile telecommunications operator, SmarTone, considered that, rather than additional FTNS licences, priority should be given to the removal of impediments (unspecified) to optimal competition between existing participants. Control should be exercised in issuing any new licences - whether for services or facilities, local or external, lest such awards would be to the detriment of existing committed participants. Sun Hung Kai Properties, a major shareholder in SmarTone, considered that as part of the narrowing of the regulatory distinction between fixed and mobile operators, the mobile operators should be allowed to lay backbone links - for which such operators would need an FTNS licence. On the contrary, Hutchison Telecommunications (Hong Kong) Limited (Hutchison) which is both an FTNS and mobile operator, considered that mobile operators should not be given such rights, which should be reserved to existing FTNS licensees. Furthermore, Hutchison suggested that the mobile operators' existing rights to link directly with the external gateway should be terminated and the traffic taken over the FTNS networks to the external gateway.

2.6 Hong Kong Telecom (HKT) supported the ending of the moratorium, after an adjustment to the regulatory environment to permit HKT greater ability to respond to competition and with new operators expected to have a greater reliance on own-build facilities to reach customers.

2.7 The new FTNS licensees (New World Telephone (NWT), Hutchison and New T & T) put forward in separate submissions that the moratorium be extended to 2001 or 2002 (NWT). They cited their difficulties in rolling out their networks, either through interconnection with

HKT, or by building their own networks (because of difficulties in access to buildings and the MTR tunnels necessary to construct their backbone networks). They do not consider the 3-year moratorium to be sufficient for the roll-out of a network of a wide enough coverage for effective competition with the dominant FTNS operator. Nor do they consider the 3-year moratorium adequate to establish a market presence under a flat-rate local tariff regime which would not be fully re-balanced until 2001. They consider the introduction of further licensees in the FTNS market at this stage would only further dilute competition and discourage further investment from the existing FTNS licensees.

2.8 The Government considers that there is a strong case for more effective and greater competition in the FTNS market. It notes the difficulties experienced by the three new FTNS operators in achieving greater market penetration than the 2% that they have reached in their first three years of operation. The Government accepts that there is a need to enhance the competition safeguards in its regulatory regime in order to provide more effective competition in the market. To this end, we have made proposals in paragraphs 6.18 to 6.20.

2.9 The Government is aware that long term commitments to substantial and continued investments are required to establish a local FTNS network of a wide enough coverage to provide adequate competition with the dominant FTNS operator. Also such investments would create more jobs which are particularly helpful in the current economic situation. At the same time, the Government recognises that local telephone tariffs have stayed below cost and will continue to be so until rebalancing is fully achieved in 2001, and this would affect investment decisions. In order to encourage further investments in this FTNS market, so as to provide greater competition, we could consider granting further FTNS licences or encouraging the three new FTNS operators to step up their investments and efforts in their networks by extending the moratorium for a limited period of time. If further FTNS licences are issued, the licensees should be required to enter into commitments to provide networks which are comparable to the best of the three new FTNS licensees. If the moratorium is to be extended, the three new FTNS licensees should be required to enter into commitments to further roll-out their networks to an extent considered acceptable by the Government for the purpose of

providing effective competition with the dominant FTNS operator.

2.10 *Before a decision is made on whether to grant further FTNS licences or to extend the moratorium, the Government would like to receive further submissions from the industry regarding their readiness to invest substantially in the local FTNS markets and the kind of commitments they are prepared to make.*

III. Liberalisation of the external telecommunications market

a) Licensing of external services operators

3.1 The Government has progressively liberalised the external telecommunications market within the confines of the exclusivities granted in the HKTI licence. To date, licences for such non-exclusive services and circuits have always been issued on an unlimited basis. These licences are -

- International Value Added Network Services (IVANS) including voice value-added service
- Managed Data Network Services
- Call-back Services
- Self-Provided External Telecommunication Systems (SPETS)
- Virtual Private Network (VPN) Services
- International Simple Resale (ISR) for facsimile and data services

3.2 Following the Agreement with Hong Kong Telecom on the surrender of the HKTI licence which occurred on 31 March 1998, external services competition will be allowed from 1 January 1999 and external facilities-based competition from 1 January 2000. In external services competition, operators can run competitive telecommunications services over the facilities (cables, satellite links, etc.) of a licensee permitted to own and operate such facilities. In external facilities based competition, licensed operators can provide external facilities, or external public services over their own facilities. The Government has already announced through the Policy Statement issued on 20 January 1998 that the existing FTNS operators will be automatically licensed for both external services and facilities-based services from these respective dates.

3.3 The April 1998 Consultation Paper sought views on whether further such external services licences should be issued. It sought

comments on the Government's initial position that, on the assumption that an appropriate set of interconnection arrangements can be struck for non-exclusive external services providers, the Government would propose not limiting the number of external services licences (including external voice ISR licences). Such interconnection arrangements are necessary so that services can be delivered to all customers in Hong Kong. For many service providers, in order to do this, it will be necessary for them to use the facilities of an FTNS operator who will require payment for the services on a cost-based basis - the interconnection arrangements.

3.4 We intend that the interconnection arrangements will be such as to provide FTNS operators with sufficient revenue to cover all relevant costs of carriage of external telecommunications services on the local networks, including the appropriate cost of capital reflecting the risk involved in investing in the local infrastructure, such costs to be assessed on a forward-looking basis. This will help us ensure that there is commercial incentive for continued investment in the local infrastructure and that external services providers will fairly compensate the local network operators for the use they make of that infrastructure. The TA will determine fair charges for interconnection between the external service providers and the local networks to ensure that the FTNS operation are adequately compensated and that external services providers (or their customers) will not be overcharged.

3.5 The majority of respondents favoured the opening up of the external services market to an unlimited number of operators from 1 January 1999. This would provide large benefits to consumers in terms of the variety of services and lower prices, in line with the policy objectives behind the Agreement for the early surrender of the HKTI licence. The Provisional Legislative Council members, in approving the relevant parts of that Agreement, said that they wished to see maximum competition to avoid the formation of a cartel comprising the existing FTNS operators. In their view, it was important that the competition provided by the call-back operators continued - and this would be very difficult to achieve in the new environment without an ability for them to use voice ISR. This was a point made forcefully by the call-back operators. If the operators currently using call-back are to be able to continue to mount effective competition, it will be necessary for them to have external services licences

effective from 1 January 1999. We do not wish to relax the competitive pressures on external services competition.

3.6 Of the FTNS operators, only Hong Kong Telecom welcomed the issue of an unlimited number of external services licences. New World Telephone and Hutchison opposed this (as did SmarTone, a mobile telecommunications operator). New T & T did not favour the approach, but recognised the strength of argument in favour, and argued that this course should only be adopted if the interconnection regime gave the FTNS operators appropriate recompense for the investments they were making in the local infrastructure. The Government believes this will be the case, given the arrangement put forth in paragraph 3.4 above.

3.7 The Government proposes to issue external services licences on demand under a Public Non-Exclusive Telecommunications Services (PNETS) form of licence to operate services from 1 January 1999 (Annex D). In the licence will be incorporated competitive safeguards, *inter-alia*, to ensure that affiliates of large carriers do not receive advantages from these carriers which are unavailable to other operators in Hong Kong. The issue of an unlimited number of external services licences would discourage the existing malpractices in the market of services operated without proper authorisation and relieve the TA of the regulatory burden of having to determine which services are within the scope of external services which certain classes of licensees are permitted to operate.

3.8 *The Government would welcome views on its proposal of not setting a limit on the number of external services licences effective from 1 January 1999 and on whether fair competition safeguards incorporated in the PNETS licences provide adequate control.*

b) Licensing of external facilities-based operators

3.9 External facilities for telecommunications comprise shares in submarine cables and satellite capacity, together with a network of relationships with other carriers overseas. External facilities services require a heavy investment in terms of money and human resources. There was concern among a number of respondents that only well-resourced large carriers could afford the necessary investment. While this investment would help achieve one of our telecommunications objectives of preserving Hong Kong as the pre-eminent telecommunications hub for the region, there was concern that such investors may have little interest in improving Hong Kong's telecommunications infrastructure. Against that the potential new entrants argued that their investment in external facilities should be welcomed as it would contribute to increasing Hong Kong's efficiency, especially important at a time of economic downturn. In particular, external facilities competition, in the view of potential entrants to the external services market, would reduce the possibility of the formation of a cartel and thus result in reduced prices which will be passed on to consumers, both residential and business. Another group of operators which come out strongly in favour of facilities competition in this exercise and the parallel consultation on the television environment were satellite broadcasters. With the ending of HKTI exclusivities in external facilities from 1 January 2000, they expressed a desire to be able to carry third parties' broadcasts and telecommunications services, thereby contributing to our dual policy objectives of making Hong Kong a telecommunications and broadcasting hub.

3.10 The Government considers, on balance, that we should welcome further competition in the external facilities-based services market from 1 January 2000, as a means to spur innovation, stimulate investment in our telecommunications infrastructure, improve service quality and reduce prices. The approach would accord with our free market philosophy and give encouragement to new local and overseas investors. Existing investors would continue to be encouraged to invest in the development of their own services, through providing carriage for others' services at appropriate interconnection rates as described in paragraph 3.4. There could also be opportunities for new external facilities services providers e.g. satellite uplink and downlink facilities operators, which would provide

added value to our telecommunications and broadcasting services. At the same time, such a liberalised home environment will assist our telecommunications operators in expanding their businesses overseas.

3.11 As a means to promote facilities-based competition, the Government is co-ordinating development of a teleport - a facility for satellite dishes - at Chung Hom Kok on the south side of Hong Kong Island for satellite facilities.

3.12 The Government would welcome views and comments on the proposal to invite applications for external facilities-based operations from 1 January 2000 and to let the market set the number of such licences.

IV. Interconnection and access

4.1 In a liberalised telecommunications environment, there are two issues of particular concern : interconnection arrangements and access.

Interconnection

4.2 In paragraph 3.4, we have stated our position on the interconnection arrangements for external telecommunications services, namely that these arrangements will be set to provide appropriate incentives for the roll-out of local infrastructure. We also intend, as set out in paragraphs 6.41-6.42 below, to initiate legislation to clarify the powers of the TA in respect of interconnection.

Access to buildings

4.3 The issue of access to buildings by telecommunications operators has been identified by a number of submissions to the April 1998 Consultation Paper as critical to a considered review of fixed telecommunications in Hong Kong. Without being able to ensure access to buildings by all FTNS operators, our policy of enhancing consumer choice cannot be achieved. Legislative proposals to assist in achieving such aims are put forth in paragraphs 6.22-6.30 below.

Facilities licences with limited geographic coverage

4.4 In the April 1998 Consultation Paper (paragraph 17 thereof), the Government queried whether it would be desirable to consider issuing licences with a limited geographic coverage. The majority of respondents indicated that they did not favour this as it could increase regulatory complexity (in defining the areas and determining interconnection arrangements, for instance), potentially put barriers in the way for other telecommunications operators to access these areas, thus paradoxically reducing consumer choice, assisting 'cream-skimming', and reducing incentives for the roll-out of the information infrastructure.

4.5 One submission, though, did suggest that new technologies like Digital Enhanced Cordless Telecommunications (DECT) could be used

over small areas. With dual-mode GSM/DECT handsets, full mobility would be possible. This could be considered in the context of the review of the market for cordless access services to be conducted soon.

4.6 However, in considering how to encourage the full cabling for broadband networks, the Government considers that there could be merits in encouraging the provision and operation of in-building (and in-estate) broadband networks in the so-called “intelligent buildings”. We intend to create a new form of licence for the construction of, and subsequent operation of services over, such networks. To prevent the developers from unfairly exploiting their positions in their respective buildings there have to be safeguarding conditions for the construction and operation of in-building (and in-estate) networks. The TA would ensure that there would be full interconnection at reasonable costs of such in-building networks with other networks outside the buildings and that the right of access by network operators outside the buildings for extension of their own networks to their end-users within the buildings would be strictly enforced. Occupants of such areas would continue to enjoy full choice of the provision of telecommunications networks and services. The provision of in-building broadband networks with full interconnection requirements would promote economic efficiency as it would then not be necessary to duplicate facilities within buildings.

4.7 *The Government would welcome views on its proposal to develop a licensing system for the provision of in-building (and in-estate) broadband networks and on the conditions that would be necessary to ensure full interconnection and strict enforcement of the right of access to provide genuine choice for consumers within the buildings or estates concerned.*

V. Other issues raised in the 1998 Fixed Telecommunications Review

a) Fixed-mobile convergence

5.1 There were few submissions on this topic. The majority of these submissions opted to retain the current distinction, arguing that the markets were still separate, differentiated, for example, by price, mode of pricing (time-charged and on a both-way basis) and physical requirements (spectrum and base stations versus cables). Some FTNS licensees argued that according mobile operators the same privileges as FTNS licensees when the formers' facilities investments were less could undermine the FTNS business. However mobile operators pointed out the substantial investment which they had made - \$10 billion in the past three years - and that mobile communications could play a significant role in both voice telephony and data communications in the future. The Hong Kong Internet Service Providers Association pointed out that Internet applications were now available on mobile networks.

5.2 For the time being, the Government does not propose any substantial change to the ways in which mobile and fixed telecommunications are regulated but will keep this under review in line with economic and technological changes.

5.3 However, the Government recognises that mobile communications are becoming an important tool for business and domestic use and therefore proposes to improve the ability of mobile telecommunications operators to provide ubiquitous coverage on all mobile networks throughout Hong Kong. At present, the extension of mobile network coverage to shielded areas within buildings has occasionally been hindered by discriminatory treatment accorded by developers or landlords to mobile network operators. In some cases, the cost of extending coverage into tunnels and buildings has been unduly increased because of the tunnel operators and landlords exploiting their monopoly position in charging excessive rent or access fees. Therefore we intend to include appropriate provisions in the amendment to the Telecommunication Ordinance to deal with these problems. Proposals to this effect are also contained in the legislative proposals alluded to in paragraph 4.3 above and set out in paragraphs 6.23-6.25 below.

b) The nature of regulation

5.4 Many submissions commented on the nature of regulation that would facilitate the development of the fixed telecommunication sector. Consistent with the submissions received in the 1997 Telecommunications Review, many expressed considerable dissatisfaction with the policy of “light-handedness”. For example, one FTNS licensee suggested that the light-handed policy had shielded the dominant carrier which, in its view, had imposed all kinds of administrative barriers to access to essential facilities and retarded the roll-out plans of the new FTNS licensees. Overseas carriers also urged the Government to maintain an active role in monitoring and enforcing the competitive safeguards to ensure that competition would not be stifled by the dominant carrier.

5.5 HKT argued, however, that the regulatory environment in Hong Kong was interventionist, tilting towards the interests of new entrants. They cited the low interconnection charges, the advanced level of local loop unbundling, the implementation of local number portability, an extensive set of telecommunications industry competition laws and some of the most restrictive tariffing procedures for incumbent carriers. HKT suggested : “that liberalisation ... should be accompanied by a lower level of intervention in the marketplace rather than a higher level of intervention.” Other commentators have suggested that nascent competition needed to be nurtured if it were not to be stifled by the accumulation of advantages of the previous monopoly operator.

5.6 As stated in the April 1998 consultation paper, the Telecommunication Ordinance bestows on the TA a wide range of powers and a broad set of discretions through which the TA can act in a number of formal and informal ways, and the label of 'light-handedness' may be misleading and ought to be discarded. The regulation must be applied fairly but flexibly, adjusting to the evolving circumstances of the market. The TA should be able to exercise his powers based on the Telecommunication Ordinance, the Government's policy objectives and the demands of the market. In exercising his powers, the TA will be subject to the disciplines imposed by natural justice, public accountability and judicial review. As the level of competition increases, the need for regulatory intervention will decline - but that is not the position yet.

Nevertheless, the TA will keep this under review. The TA has conducted a public consultation on streamlining of tariff approvals for the dominant operator and is considering the submissions.

c) Competitive safeguards

5.7 Most of the comments received considered the competitive safeguards currently adopted in Hong Kong to be adequate. However, some expressed concerns about the lack of deterrent effect on the incumbent operator, primarily because of the low level of fines when compared with the commercial gains, the perceived lateness of action by the TA and the lack of enforcement against the violator to compensate for the "damage" done to its competitors, and called for increased enforcement.

5.8 The Government is working towards amending the Telecommunication Ordinance to consolidate the provisions in the FTNS licences for the promotion of fair competition in the market for public telecommunications services. The statutory power on the competitive safeguards will thereby be improved and the enforcement strengthened. The issue is also referred to in paragraphs 6.14-6.20 below.

5.9 There were a few submissions commenting on the close relationship between Hong Kong Telecom IMS and the incumbent carrier, and calls for divestiture to be re-examined. It should be reiterated that the Government is satisfied with the efficacy of the financial monitoring and separation regime and the IMS special licence conditions which apply to the HKTC/IMS relationship. The TA will continue to ensure that the relationship is kept under review.

d) Local tariffing issues

5.10 Very few comments were made on local tariffing issues. With Hong Kong Telecom allowed to rebalance local tariffs progressively over the next three years, thereby removing a very significant market distortion, this is not surprising. Those that did so were supportive of the removal of cross subsidisation. Global One considered that the rebalancing of local tariff would help promote investment in the local infrastructure by giving

correct price signals to the market.

VI. Regulatory Issues requiring amendments to the Telecommunication Ordinance (Cap. 106)

Introduction

6.1 The last major amendment to the Telecommunication Ordinance (Chapter 106) was made in 1993 in preparation for the introduction of competition in local fixed telecommunication network services. In order to bring the Telecommunication Ordinance up to date and make it more suitable to cope with anticipated developments in the telecommunications sector, the Government has formulated proposals for further amendments to the Telecommunication Ordinance. The proposals aim mainly to -

- (a) consolidate the provisions for the promotion of fair competition in the market for public telecommunications services, particularly to incorporate into the Telecommunication Ordinance such conditions already written in the FTNS licence;
- (b) update, consolidate and clarify certain provisions concerning access to land and interconnection which are already in existence in the Telecommunication Ordinance; in particular there is a proposal to extend to mobile telecommunications operators rights of access to land on a cost plus basis;
- (c) streamline licensing procedures to cope with the rapid developments in the telecommunications industry; and
- (d) provide the TA as the statutory regulator with explicit legal powers in areas like radio spectrum management and technical standards.

6.2 The first draft of the Telecommunication (Amendment) Bill (the Bill) was completed in August 1996. On 12 August 1996, the TA issued a consultation paper inviting comments from the telecommunications industry and interested parties on a draft of the Bill.

6.3 After considering the comments received in response to this

consultation, a revised draft (dated 23 December 1996) of the Bill was prepared and further views on the revised draft were sought from the telecommunications industry and interested parties on 23 December 1996. In response to the invitation of comments on the draft of 23 December 1996, 12 submissions were received. In March 1997, three additional submissions from seven operators of public mobile services were received specifically on the statutory right of access to land of mobile operators for coverage extension. A summary of the major comments and the Administration's responses can be found on the OFTA home page <http://www.ofta.gov.hk> and the ITBB home page <http://www.info.gov.hk/itbb>.

6.4 This chapter summarises the proposals and results of the previous two consultations and seeks further views on the amendments proposed since 23 December 1996 from the telecommunications industry and interested parties before finalising the Bill for introduction into the Legislative Council. A copy of the current draft of the Bill can be found on the OFTA and ITBB home pages, the addresses of which are at paragraph 6.3 above.

The Main Proposals

Functions and Powers of the TA

6.5 The Telecommunication Ordinance does not stipulate the parameters within which the TA should regulate the industry. This causes problems to the TA in discharging his responsibilities and to the industry which may consider the parameters of his powers not sufficiently transparent. As a result, the Government proposed in August 1996 to introduce new provisions to set out explicitly the general functions of the TA.

Exercise of TA's Powers

6.6 After considering the comments received from the consultation in August 1996, the Government added in December 1996 new provisions to require the TA to state reasons on the exercise of his powers. The submissions in December 1996 also suggested that TA's decision should be subject to a general obligation of consultation. The Government considers that a general obligation of consultation is not practical as there are many decisions which have to be taken by the TA on a routine basis. But it is already the practice of the TA to consult relevant parties prior to making significant decisions and we intend in the Bill to include provisions to formalise the consultation mechanisms. A consultation requirement and the requirement to issue and follow guidelines for the exercise of powers had been added to a number of provisions, including those relating to the creation of class licences, determination of dominance, spectrum planning and designation of frequency bands for spectrum utilisation fees.

TA's Power on International Accounting Arrangements

6.7 The August 1996 Bill proposed to expand the TA's power in the areas of international accounting rates. Concerns were expressed on whether this would empower the TA to interfere with the negotiation of commercial agreements between carriers on accounting rates. After consideration of the comments generated in August 1996, the Government, in December 1996, revised the provision to confine the disallowal power of the TA to stopping "anti-competitive practices" or ensuring compliance

with international obligations. Based on further discussions with the industry after the consultation in December 1996, we now intend to confine the TA's power in this regard to that of issuing directions in relation to the "distortion of competition" only. The issue of directions in other circumstances related to this provision will be covered in other provisions of the Bill (e.g. stopping practices preventing or substantially restricting competition in international telecommunications is covered in provisions addressing anti-competitive practices) or licence conditions (e.g. compliance with any obligations of Hong Kong under international treaty, convention or agreement).

6.8 One respondent to the consultation in December 1996 suggested that the TA should be empowered to issue guidelines only, instead of issuing direction on accounting rates. However, the Government considers issuing directions a more effective administrative tool because non-compliance with directions can be dealt with by fines followed by revocation or suspension of licences.

Licensing

6.9 Under the present licensing framework in the Telecommunication Ordinance, the Chief Executive-in-Council has a general licensing power and a power to grant exemption from licensing. At the same time, the TA may grant licences in a form specified in the Telecommunication Regulations. This licensing framework has been found to be inflexible and inefficient to cope with rapid developments in the telecommunications industry. For example, when the need to issue licences for a new type of service arises, the Telecommunication Regulations must be amended by the Chief Executive-in-Council to provide for a new form of licences before the TA may issue such licences.

6.10 In order for the TA to act quickly and responsively to new technology and service offerings, we propose the following licensing framework -

- (a) Chief Executive-in-Council to continue to prescribe the conditions in, and issue, exclusive licences;

- (b) SITB to prescribe, after industry consultation and through Regulation, the general conditions of carrier licences which the TA may issue;
- (c) TA to issue the carrier licences prescribed by SITB, and to prescribe the conditions in, and issue, all other licences under the Telecommunication Ordinance; and
- (d) a new system of class licences for the supply of certain telecommunications services and to operate certain networks.

6.11 Pending a review of the licensing regime in the Broadcasting Bill in the context of the 1998 Review of the Television Policy, the powers for the issue of sound broadcasting licences under Part IIIA of the existing Telecommunication Ordinance will not be affected.

Class Licence

6.12 We propose that for the supply of certain telecommunications services and to operate certain networks there should be a new system of class licences. The scope of individual class licences and their terms and conditions will be determined by the TA after industry consultation. Under a class licence, there would be no need for a person intending to supply the specific services or operate the specific networks to apply for an individual licence provided that he complies with the conditions specified in the class licence. The class licence system will also replace the system of Exemption Orders, for example for cordless telephone equipment, thus placing the operation of such equipment firmly within the Ordinance framework rather than outside it.

Requirement to Obtain a Licence

6.13 Section 8 of the Telecommunication Ordinance imposes a licensing requirement on any person establishing or maintaining any means of telecommunications for the purpose of providing public telecommunications services. It does not however cover, beyond doubt, those who provide services using facilities established or maintained overseas and those who provide non-facility-based services. We propose

an amendment to section 8 to clarify the matter by subjecting the act of providing all public telecommunications services in Hong Kong to the licensing requirement. Section 8 also requires a person who operates or maintains a means of radiocommunications to obtain the appropriate licences. The licences usually last for a year and hence the concerned parties have to pay the annual licence fees. In order to improve the efficiency of the licensing regime, the Government proposed in August 1996 to empower the TA to issue a permit for carrying out an activity restricted under section 8 for a period up to six months for the purposes of field tests, demonstrations at trade fairs etc.

Economic Regulation

6.14 A comprehensive set of competitive safeguards were written into the four non-exclusive FTNS licences issued on 1 July 1995. In order to put beyond doubt the TA's powers in enforcing these safeguards, we have proposed that some of these measures be incorporated into the legislation, for instance -

- (a) Requiring licensees to publish their tariffs.
- (b) Forbidding the bundling of services, i.e. combining a number of services into a single tariff without offering consumers the opportunity to select the services at individual tariffs, unless the prior approval of the TA has been given.
- (c) Requiring licensees to adopt the specified accounting practices in their reports to the TA in order that he may identify correctly the costs and revenues for different services or kinds of services.
- (d) Empowering the TA to require any persons who provide public telecommunications services to supply information relating to their business, and if necessary, to disclose such information should public interest so require.
- (e) Empowering the TA or any person he has authorised to enter the premises of any persons providing a public

telecommunications service and to inspect or test the equipment and facilities installed therein for compliance of the licence conditions.

- (f) Prohibiting licensees from engaging in anti-competitive practices (such as collusive price fixing agreements).
- (g) Prohibiting the dominant operator from abusing its market position by, for example, predatory pricing, price discrimination, imposing harsh contract terms, tying arrangements and discrimination in the supply of services to competitors.
- (h) Forbidding misleading or deceptive conduct in relation to providing or acquiring networks, systems, installations, customer equipment, services etc.
- (i) Prohibiting the dominant operator from discriminating between persons who acquire those services in the market on the charges or the conditions of supply.

Tariffs

6.15 Regarding (a) above, some respondents to the consultation in December 1996 expressed the view that the TA should approve tariffs as soon as reasonably practicable and establish procedural rules for tariffing that are conducive to competition. These concerns the TA has addressed in his policy statement issued in December 1996. Further development of the tariffing rules is now the subject of a separate consultation exercise by the TA.

Obtaining Information from Non-Licensees

6.16 Apart from (d) above, the TA may need to obtain information from persons other than the licensees in discharging his regulatory functions. We proposed in August 1996 to include a new provision in the Telecommunication Ordinance for this purpose and subject this power to a magistrate's order as a check and balance measure.

Disclosure of Information Supplied by Licensees

6.17 Regarding (d) above, after reviewing the comments on the consultative paper of August 1996, the Government included in the consultative paper of December 1996 the procedure which the TA must follow before he decides to disclose information obtained from licensees.

Competitive Safeguard Provisions

6.18 As regards (f) and (g) above, some respondents to the consultation in December 1996 suggested that specific types of potentially anti-competitive behaviour should be added to the Bill. The Government considers it more appropriate to have general provisions in the Bill rather than specifics which tend to cover only problems identified or known at the time the Bill is drafted. We are reviewing the penalties for anti-competitive conduct and *would welcome views on the current proposal of increasing the existing penalties ten times.*

Prohibition on Price Discrimination

6.19 After incorporating the comments on the consultative paper of August 1996 in relation to (i) above, the provision was further amended in December 1996 so that only price discrimination which, in the opinion of the TA, is anti-competitive will be prohibited. In the consultation in December 1996, one respondent suggested that the prohibition of discrimination should apply only to end-users of the services only. The Government considers that the prohibition should apply to discrimination between customers who are end-users and also to customers who are service providers.

6.20 Another respondent proposed that the dominant carrier should be required to provide all basic level services² to other carriers where they are utilised in the provision by the dominant carrier of its own high level services³. The Government considers that this should be dealt with by the

² "Basic level services" are basic building blocks inside the transmission and switching networks which are used to establish high level services - e.g. local loop, inter-exchange transmission facilities.

³ "High level services" are services normally offered to ordinary customers - e.g. telephone and

TA, on a case by case basis, through interconnection determination and enforcement of legislative provisions and licence conditions against anti-competitive practices and abuse of dominant position. The requirement is too sweeping to be included in the primary legislation.

Telecommunications Lines on Seabed

6.21 Part IV of the Telecommunication Ordinance contains provisions governing the use of land for telecommunications lines. The definition of “land” applicable to these provisions however does not include the seabed within the boundaries of Hong Kong on which telephone lines and cables are already laid. The Government proposed amendments to be made to the relevant provisions in August 1996.

Access to Services and In-building Wiring

6.22 In order for the benefits of competition to reach all sectors of the community, members of the public should have unimpeded access to the full range of services available in the market. The Government proposed in August 1996 that the Telecommunication Ordinance should protect the residents’ rights of access to telecommunications from being restricted or deprived by any terms in lease agreement, Deed of Mutual Covenant or other commercial contracts.

Statutory Right of Access to Land for Operators of Public Mobile Services

6.23 The existing section 14 of the Telecommunication Ordinance provides that any licensee authorised by the TA has the statutory right of access to enter any land to place and maintain “telecommunications line”. The existing definition of “telecommunications line” is such that it probably does not cover installations for radiocommunications. In response to the consultation in December 1996, mobile services operators proposed an amendment to section 14 of the Telecommunication Ordinance so that they, like the FTNS operators, could be authorised by the TA to gain access into the premises concerned for the installation of radiocommunications equipment in order to extend their network coverage.

The proposal would relieve the public mobile services operators of the problems they have encountered in gaining access to rooftops, shopping arcades and tunnels for the installation of equipment to extend their network coverage to the areas concerned or in having to pay excessive rent for such access.

6.24 After considering the issue, the Government considers that it is not justifiable to extend the statutory right of access to encompass rooftop sites because alternatives to any particular location are usually available. The Government expects mobile services operators to negotiate rental agreements on a commercial basis with the landlords of such sites. But for tunnels and other confined areas, such as indoor shopping arcades, the issue is different. There is no alternative to placing the radiocommunications equipment inside those areas if the network coverage is to be extended into those areas. Therefore the Government considers that, in those cases, there is justification for extending the right of access under section 14 to mobile services operators. This will place the operators in a fairer bargaining position in their negotiations with the landlords or tunnel operators. The mobile services operators are expected to pay reasonable rental for the use of the space taken up by the equipment installed by the operators. If no agreement can be reached, then the TA may make a determination. This contrasts with the statutory right of access for the FTNS operators and the subscription television operator, which may be exercised without paying any access charge. The strengthened section 14 accords with the views of telecommunications users as expressed by the Hong Kong Telecommunications Users Group.

6.25 The Government is aware that a number of commercial agreements concerning access to tunnels and confined areas have already been concluded. The Government does not intend that the amended section 14 should affect these existing commercial agreements because, as a general rule, it is contrary to legal policy to use legislation to upset contracts voluntarily entered into.

Compulsory Purchase of In-Building Wiring by Owner of Flats

6.26 In the consultation exercises of 1996, it was proposed that a resident owner or occupier be given the statutory right to acquire, by

purchase, from the carrier to which he is subscribing the telecommunications line beyond the network termination point of that carrier.

6.27 Commenting on the proposal in December 1996, the dominant FTNS operator argued that the provision allowing compulsory purchase would remove the incentive for FTNS operators to install in-building block-wiring for fear that the owners of the flats would exercise the right of purchase after the FTNS operator had invested in the in-building wiring. Doubt was also cast on the ability of the flat owners to maintain the block-wiring purchased.

6.28 We accept that allowing one carrier to control the wiring for the delivery of telecommunication services to individual premises of the customers is out-of-line with the multi-network environment of Hong Kong. However, after considering the concerns of the FTNS operators, we consider that alternative measures to the compulsory purchase provision proposed in 1996 may be more effective in overcoming the "bottleneck" problem of in-building wiring. They are:

- (a) A new provision to be included in the Telecommunication Ordinance declaring that any agreement or arrangement restricting the right of access of occupiers of the premises to telecommunication or broadcasting services outside the building is void (see para 6.22 above);
- (b) Clarification of the provisions in the Telecommunication Ordinance which empower the TA to determine the so-called "Type II" interconnection to the in-building wiring by telecommunication or broadcasting network operators other than the owner of the wiring (see para 6.42 below);
- (c) Licensing of developer provided and operated in-building broadband networks (see para 4.6 above);
- (d) Mandatory provision of access facilities for new buildings (see para 6.29 below).

Mandatory Provision of Access Facilities for New Buildings

6.29 The Information Infrastructure Advisory Committee, which was set up in March 1997 to advise the Director-General of Telecommunications, has advised that the lack or inadequacy of access facilities (equipment rooms, ducts, risers, conduits, etc.) for telecommunications cabling in the existing buildings of Hong Kong is a significant barrier to the extension of the telecommunications services, and the information infrastructure in future, to the end-users. At present, under the Telecommunication Ordinance, although the statutory right of access for network installation has been provided for, there is no mandatory requirement for adequate access facilities to be provided. To overcome this barrier, the legislation should be amended such that the provision of access facilities meeting prescribed standards will become a mandatory requirement.

6.30 As regards existing buildings, due to physical constraints such as space limitation, it may not be feasible to retrofit them to provide for the access facilities to the prescribed standards. For such buildings, access to the existing access facilities and in-building wiring to all network operators on a fair and non-discriminatory basis should be made mandatory. Section 14 already provides for the Telecommunications Authority to authorise licensees (telecommunications and broadcasting services) to place and maintain telecommunication lines in, over or upon any land. However, there are practical problems in implementation. Existing legislation and licence conditions will be reviewed to ensure more effective implementation.

Technical Regulation

6.31 Following deregulation of the fixed network market, the Hong Kong Telephone Company Ltd. (HKTC) no longer certifies telecommunications equipment against the applicable technical standards and specification, and such work has been taken over by the TA. However, the Telecommunication Ordinance currently does not provide the TA with explicit power to set technical standards for telecommunications equipment or to conduct type approval and certification of telecommunications equipment. We therefore proposed in

August 1996 to establish the TA as the authority for telecommunications standards in Hong Kong, under the Telecommunication Ordinance, to ensure quality, uniformity and connectivity of apparatus and hence quality service provision.

Numbering Plan

6.32 Section 4 of the Telephone Ordinance (Cap 269) provides the TA with powers to administer the telecommunications numbering plan in Hong Kong. As the FTNS licences were issued under the Telecommunication Ordinance, it is no longer necessary to regulate the activities of HKTC by a separate piece of legislation. Before repealing it, it is necessary to incorporate the provisions on numbering plan into the Telecommunication Ordinance.

Special Number Arrangement

6.33 Respondents to the consultation in December 1996 had pointed out that the allocation and sale of the right to use a number or code would in effect put a surcharge on the licensees or the public. They suggested that the proceeds should go to charity. Although the Telephone Ordinance has provided for the powers of the TA to levy a fee for the use of telecommunications numbers and codes which is not tied to the administrative costs, legal advice has indicated that the TA may not have the powers to channel the proceeds to charity. After further consultation on this proposal, the Government has now added a new provision to enable SITB to make regulations to require the proceeds from the lease or sale, less administrative or other costs, of special numbers be paid to charity, to promote education, research or development connected with telecommunications, or information technology, or into a fund established and managed by the TA for holding of such proceeds and subsequent payment for charity and other permissible purposes.

Radio Frequency Spectrum Management

6.34 Under the present Telecommunication Ordinance, the TA discharges his responsibility for managing the radio frequency spectrum of Hong Kong through licensing. He has not been given explicit legal

powers under the legislative framework to plan and manage the radio frequency spectrum and assign radio frequency channels to operators or other bodies for use. In view of the tremendous growth of the radio communications sector, the Government proposed in August 1996 that the TA's powers in these areas be spelt out explicitly. We also proposed that the TA should be made the authority to assign orbital positions of satellites and the allocation of radio frequency channels for satellite communication purposes.

6.35 Another important function of the TA in managing the radio frequency spectrum is the prevention of interference. The Government proposed in August 1996 that the TA be empowered to give directions to persons causing direct or harmful interference and to require relevant apparatus to be submitted for testing of compliance with specified limits.

6.36 Radio frequency spectrum is a limited community resource. In order to promote more efficient use of this valuable resource in Hong Kong, the Government proposed in August 1996 to levy a spectrum utilisation fee on users, particularly those who make profits out of or in the course of using the spectrum assigned to them. A fee pitched at the appropriate level may encourage the use of non-radio means of communication (e.g. cable) which could achieve a higher efficiency in the utilisation of the spectrum. It was therefore proposed to introduce new provisions for the TA to designate frequency bands on which an utilisation fee will be levied and for the Financial Secretary to determine the level of fees and the basis of fee calculation.

6.37 The proposed spectrum utilisation fees, however, should not give users any ownership or a right to exclusive occupation of the assigned frequency bands. Appropriate steps will be taken to ensure that the utilisation fee will not lead to any speculative activities for buying and selling frequency bands and to provide the TA with adequate flexibility in spectrum planning to meet community needs.

Inspection of Records, Documents and Accounts

6.38 For the purpose of enabling the TA to perform his statutory functions more effectively, he needs to be empowered to inspect and copy

records, document and accounts relating to the business of any person who provides a telecommunications service, or to authorise another person to do so. The objective is to protect consumer interests. Proposals in this respect has been made by the Government in August 1996.

Universal Service Obligation

6.39 Under the present arrangement, HKTC is subject to the universal service obligation (USO) which requires the company to ensure that a good, efficient and continuous basic service is reasonably available to all persons in Hong Kong. The Government proposed in August 1996 that new provisions in the Telecommunication Ordinance are necessary for the TA to establish a system for calculating a reasonable contribution to be made by all FTNS and mobile phone licensees to the cost of meeting this obligation.

6.40 Commenting on the consultative paper of December 1996, a respondent proposed that the fair contribution concept of USO should be included and the scope should be widened to include other licensees other than the dominant operator. The Government is of the view that the primary legislation should provide for the concepts and principles of USO. As regards the administrative details, three rounds of consultation on USO have been conducted by the TA outside this legislative amendment exercise since April 1996. The finalised administrative details have been set out by the TA in his Statement “Universal Service Arrangements : the Regulatory Framework” issued on 14 January 1998.

Interconnection

6.41 Section 36A of the Telecommunication Ordinance empowers the TA to determine the terms and conditions of interconnection agreements among operators. The purpose is to enable customers of a network or service to be able to communicate with, or gain access to, the customers or services connected to other networks or services. We consider that the interconnection agreements should govern the relationship between the operators establishing and maintaining the telecommunication systems or services in question and the owners of the systems do not come into play in the interconnection agreements.

6.42 In the light of operational experience, it has been found that the existing section 36A is not sufficiently explicit. We therefore proposed in August 1996 that section 36A be amended to better define the meaning and types of interconnection and to outline the scope of the terms and conditions of interconnection agreements on which the TA could make determination. It was generally accepted by the industry that the determination of interconnection charges by the TA should be based on costs. It was also considered necessary to include an explicit provision to empower the TA to specify the appropriate costing methods of determining the interconnection charges. Clarification of the TA's existing powers under the present legislation will be sought specifically in relation to appropriate costing method and Type II interconnection (which means interconnection with the local loops operated by an FTNS licensee). Section 36A would put it beyond argument that the TA may determine interconnection at any technically feasible point.

6.43 Based on the comments from the consultation in August 1996, the revised proposal in December 1996 specified that the TA might waive the filing requirement in relation to a particular interconnection agreement or interconnection agreements of a certain kind. Concerns were then expressed about this. We have now revisited the proposal to give the TA the discretion of waiving the filing requirements for interconnection agreements, such as interconnection agreements which are numerous in numbers and of insignificant impact on consumer interests. The consultation document has also put forth the procedure which must be followed by the TA before publishing an interconnection agreement or any

part of it.

Sharing of the Use of Facilities

6.44 Apart from sharing of networks via interconnection, sharing the use of other facilities, like duct space and conduits, is sometimes required. The purpose is to minimise environmental disruption and to avoid wasteful and uneconomic duplication of facilities. The Telecommunication Ordinance currently does not give the TA the powers to direct persons who own or control the “bottle-neck” facilities to share their use with carriers or operators. We proposed in August 1996 that new provisions for the TA to give direction in this respect be introduced.

Remedies

6.45 The Telecommunication Ordinance currently does not provide persons, who are affected by a breach of the Telecommunication Ordinance, licence conditions or other regulatory provisions, the right to seek civil remedies by way of an action for damages, an injunction or account for profits against the licensees concerned. We proposed in August 1996 that a new provision on this be added to the Telecommunication Ordinance. While some respondents were supportive of this provision as it would provide civil remedies to those suffering damages as a result of anti-competitive practices, others were concerned that this proposed provision would result in unnecessary litigations. After considering the comments, the present proposal is to limit the right to seek civil remedies only to cases where the TA has issued a direction to require a person to stop a breach and yet that person has failed to comply with the TA’s direction and a third party suffers damages as a result.

Repeal of the Telephone Ordinance (Cap 269) and Three Subsidiary Items of Legislation of the Telecommunication Ordinance

6.46 Following the issue of the FTNS licences to regulate local telephone services, the provisions under the Telephone Ordinance have been reduced to that of providing for the powers to impose price control on the Hong Kong Telephone Company Limited and the management of the numbering plan for telecommunications in Hong Kong. With the

incorporation of the provisions for the numbering plan into the Telecommunication Ordinance by virtue of the proposed amendment to the Ordinance, the Telephone Ordinance will become redundant and will be repealed.

6.47 With the surrender of the Hong Kong Telecom International Limited (HKTi) exclusive licence on 31 March 1998, the Charges for Radiotelegrams Order (Cap 106 sub. leg.) and Telecommunication (Cable and Wireless (Hong Kong) Limited) (Exemption From Licensing) Order (Cap 106 sub. leg.) are no longer applicable. In addition, the Telecommunication (Closed Circuit Television Systems) Regulations (Cap 106 sub. leg.) have not been enforced for over a decade and the provision for interference protection in these regulations will be adequately covered by the proposed amendments to the Telecommunication Ordinance. Therefore, it is intended that these three subsidiary pieces of legislation under the Telecommunication Ordinance be repealed.

6.48 *The Government would welcome views on the proposals to amend the Telecommunication Ordinance. These views will be considered before final proposals to amend the Ordinance are put to the Legislative Council.*

**The principal issues as set out in the
1998 Review of Fixed Telecommunications**

This 1998 Review of Fixed Telecommunications needs to address several key market access issues which will determine the future industry structure in telecommunications in Hong Kong. Previous paragraphs of this Consultation Paper have identified these, in particular;

- whether applications should be invited for the issue of further FTNS licences;
- whether an unlimited number of external service-based licences should be issued;
- whether external facilities-based licences should be offered beyond the existing four FTNS operators;

A common issue to these considerations relates to the number of operators that policy will allow to enter and compete in the various market sectors.

The established economic prescription in Hong Kong has been that of ‘laissez faire’, i.e. the market should establish the number of service providers in any industry with entry relatively easy and exit also unconstrained. Indeed even in the “utility” sector generally, for example, electrical power and gas supply this prescription applies. The case would, therefore, need to be made for the Government to take action to limit the number of service suppliers in the telecommunications sector; particularly if the number was to be limited to less than what the market itself would determine. In the past the only reason for limitations on the number of operators in cellular/PCS services has been the real, physical constraint of radio frequency spectrum. In licensing four FTNS operators the Government did not have a predetermined number in mind - it merely asked for applications from industry and licensed all the applications that

met the selection criteria. In this way the market set the number of four FTNS licences at that time and the Government did not ration licences.

Economic theory postulates that ideally the optimal number of operators should be set by the market. Several submissions to the 1997 Telecommunications Review made that point believing that only when prospective entrants are left free to judge for themselves whether a business is profitable and allowed to decide willingly whether to enter or not can the market be truly liberalised and provide genuine benefits to the community.

Again both economic theory and experience demonstrate that the market (as distinct from a bureaucratic decision process) is the best allocator of resources; it rewards the efficient and punishes those that are not. The market is dynamic and would allow the industry structure to evolve in accordance with technical, commercial and global developments in the telecommunications and related information sectors.

The new orthodoxy with respect to free market entry and licensing in advanced, liberalising telecommunications regimes is now evident in the WTO Basic Telecommunications Agreement. In this Agreement most of Hong Kong's major trading partners and regional competitors (for example, Australia, Canada, the European Union, Japan, Korea and the US) have committed to opening their telecommunications sectors with no numerical limit on the number of licences for local, long distance or international services whether fixed or mobile, whether on a facilities or a services basis.

In reviewing the future structure of the fixed telecommunications services market in Hong Kong the Government would appear to face three broad options:

Option 1 - extend the existing moratorium upon its expiry in mid-1998 for a further period of time. At various times the existing FTNS licensees have tended to support this option arguing, amongst other things, that an extension of the moratorium would give the Government more time to collect reliable data upon which to base a decision. Several submitters to the 1997 Telecommunications Review were strongly opposed to this option and, indeed, there were challenges to the licensing regime itself and

calls for more use of "class licences" which would not limit entry.

Option 2 - allow the grant of a limited number of new FTNS licences. No submitter to the 1997 Telecommunications Review advocated this approach. However it would be technically possible for the Government to allow new entry to some new players by calling for applications and conducting some form of 'beauty-contest' selection exercise - this is the path that Singapore has adopted. No one called for a sale or auction of new licences and the Government as a matter of policy does not intend to sell or auction licences because such entry barriers would be unwarranted, inequitable and would result in higher consumer prices.

Option 3 - allow open entry to an unlimited number of service suppliers in all market segments - this would mean issuing as many licences for local and/or external fixed telecommunications network services as the market demands. This option would move Hong Kong to parity with the WTO commitments already made by leading telecommunications markets and this option was supported in the 1997 Telecommunications Review by many submitters wishing to see Hong Kong adopt an advanced policy prescription.

While the Government does not have a decided position on this issue at this stage, it can make some preliminary observations on the above options and would welcome further comment on these matters.

A good case in support of Option 1 has not yet been made. It is not self-evident that the existing four FTNS licensees need to be shielded against new competitive entry or even the threat of new entry: while HKT still maintains a dominant position in several market sectors, the three new FTNS licensees also derive great benefit from their three years of headstart. It needs to be demonstrated what benefit might accrue to the Hong Kong community if this headstart was to be arbitrarily extended: likewise the dis-benefits of maintaining a small, managed industry structure ought to be considered in parallel. There has been some expressed dissatisfaction with the perceived lack of performance by the FTNS licensees which would not be addressed by this option. Furthermore, Hong Kong would be increasingly out of step with global developments and would come

under greater trade pressure to open up this sector. The surrender of the HKTI licence has provided the new FTNS operators with a "windfall gain" as their licences are being automatically extended from the local market to the potentially more lucrative external telecommunications market. This has been won by them at no cost in terms of licence fees, new rollout commitments or performance bonds. Indeed, they also gain by being licensed first in the external market; by accelerated access to HKTC's established local network infrastructure; and by a more cost-based local tariff structure through HKTC's ability to rebalance its local tariffs towards costs.

Option 2 appears undesirable as it would entrench arbitrary decisions on the industry, for example, how many new licences? what selection criteria to adopt? when would further additional licences be offered? etc. There would also be a strong possibility that granting licences in limited batches is actually contrary to the industry's overall interests as restricting supply may only act to bid up the perceived value of the licences and attract new entrants on the wrong (unsustainable) basis. Indeed new entrants could falsely believe that the Government may be prepared implicitly to underwrite their licences by taking action to protect them against failure in the market. Inefficient entry would not be welcome by the Government and this option seems to be at odds with the expressed preference by several submitters to the 1997 Review for the market to be allowed to operate to the maximum extent possible. Proceeding with this option would seem to give priority to more operators rather than to more effective competition.

Option 3 has merits: it would be a 'clean' option and in economic and policy terms would send the clearest signal to anyone contemplating entry that all the usual commercial risks apply. Implementing this option would also be relatively straightforward - FTNS licences could be issued subject to demand and the meeting of any necessary prudential checks to protect competition and consumer interest. There might, however, be concerns that adopting this option would be unfair if it only resulted in a few new entrants whose interests were directed solely at competing in the supply of external facilities-based services and who placed reliance on access to the local network investments of competitors on favourable interconnection terms.

As a matter of policy, the Government wishes to ensure that the liberalised environment encourages investment in information infrastructure widely throughout Hong Kong not just in external circuits. One possible approach being considered by the Government would be to require licensees investing an infrastructure to invest in both the local and the external telecommunications market. This, in fact, is a model which several WTO Members have adopted and is consistent with the principle of most-favoured-nation (mfn). The Government could establish pre-specified obligations with respect to local network infrastructure. These pre-specified obligations could be expressed as a series of milestones covering the first five years of the licence and could be aligned with the actual achieved business and residential line build-out by the first three new FTNS operators licensed in 1995. Not only would this approach allow the market to establish the number of competitors but it would also have sufficient in-built deterrents which would act to screen out trivial applications for FTNS licenses from those that were not adequately resourced, experienced or committed to the long term investments required in this industry. It would also appear to be fair in that it would apply obligations of a similar magnitude to those accepted by the existing FTNS operators.

The Government would welcome comments on these issues of future industry structure and the appropriate policy option for licensing of future operators.

OUTSTANDING MAJOR ISSUES OF POLICY AND REGULATION

There are several matters which arose during the 1997 Telecommunications Review which are still outstanding and which are to be dealt with in this Consultation Paper. In particular comments were made on:

- convergence of telecommunications, information technology and broadcasting services
- the nature of regulation
- local tariffing issues
- competitive safeguards

- fixed versus mobile services

Convergence

It is well accepted that technological development has resulted in digital technologies becoming dominant in the hitherto separate sectors of telecommunications, information technology (IT) and broadcasting. This technological convergence has unleashed a great deal of service innovation such that the boundaries among the sectors have become blurred. For example, Video-on-Demand (VOD) appears to have some attributes of broadcast television (for instance it is generally delivered to the consumer via the domestic TV set) yet it is delivered via telecommunications networks in response to specific consumer requests (i.e. similar to Internet service delivery). Another example is the narrowing in distinction between cable (or pay) TV and Near VOD, VOD and interactive multimedia services. Indeed it is the case that the Government has merged the policy responsibilities for all of these services under the new Information Technology and Broadcasting Bureau (ITBB) in recognition of these wider industry developments.

In addition to this 1998 Review of Fixed Telecommunications, the then Broadcasting, Culture and Sport Bureau (BCSB) had embarked on a Review of the Television Environment which would be conducted concurrently in 1998. It is ITBB's intention to co-ordinate these two Reviews to ensure that "convergence" issues are dealt with comprehensively. The key policy and regulatory issues arising from the convergence of broadcasting, telecommunications and computing have been included in the consultation paper issued by BCSB in February on which the industry has generously contributed their views and ideas.

Summary of Submissions

<u>Person/Organisation</u>	<u>Comment</u>
1. American Express International	<p>Endorses the comments from the Hong Kong Telecommunications Users Group.</p> <p><i>Structure of fixed telecoms</i></p> <p>The assessment and subsequent telecommunications policy must be based on achieving the objectives of:</p> <ul style="list-style-type: none"> the long term benefits to the end users meeting HK's obligations for the development of an information infrastructure <p>Advocates the Australian approach to enshrine the objective of the long term interests of end users through the consideration of the subsidiary objectives of:</p> <ul style="list-style-type: none"> promoting competition in markets for communications carriage services and services supplied by means of communications carriage services achieving any-to-any connectivity encouraging the economically efficient use of and economically efficient investment in telecommunications infrastructure. <p>This has the significant advantage of:</p> <ul style="list-style-type: none"> maintaining the focus on the ultimate objective of regulatory reform - benefits to the end-user in terms of more services, better quality and lower prices ensuring that all relevant issues - both supply side and demand side - are taken into account in assessing a policy impact. <p><i>Moratorium</i></p> <p>Whether to extend the 3-year moratorium should be considered from the perspective of which option will further the long term interests of end users of the services, not from the perspective of the licensees. Supply side commercial interests are relevant to the extent to which infrastructure investment will be impeded or advanced by adoption of the options, but are only part of the equation. The policy option for FTNS market to meet the identified policy objectives is open competition - open licensing with no barriers to entry. There is no supportable policy reason for either extending the existing moratorium or issuing a limited number of licences.</p> <p><i>External telecoms - services</i></p> <p>Supports open licensing of external voice ISR licences.</p> <p><i>External telecoms - facilities</i></p> <p>Open competition in facilities-based external services is the only policy option which meets the defined objectives. Restricting entry to the existing FTNS licensees will meet neither objective, and the intermediate objectives identified would inevitably lead to protracted issues of definition and interpretation.</p> <p><i>Regulation</i></p> <p>If there is to be optimal development of the industry, the market power of the long dominant incumbent needs to be constrained.</p>
2. Anonymous ISP	<i>Interconnection</i>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>Considered that PNETS charges were unfair, in effect financing Hong Kong Telecom IMS's operations. Considered that T1 lease charge should be reduced.</p> <p><i>External telecoms - services</i></p> <p>Granting unlimited ISR voice licence will definitely encourage competition, but the first year could be difficult because Hong Kong Telecom still holds the monopoly on all IPLCs until 2000.</p> <p><i>Convergence</i></p> <p>Convergence is fine as long as it does not create a monopolistic situation. Hong Kong Telecom's VOD service of broadband Internet utilising ADSL has created a new monopoly for high speed Internet access.</p>
3. AT&T Asia/Pacific Group	<p><i>Moratorium</i></p> <p>It is virtually impossible for a regulator to predict how a fully competitive market will organise itself. All a regulator can do is to ensure that an environment is created which allows fair competition to develop. The Government should not restrict the number of telecommunications providers that are licensed.</p> <p>Supports the end of the moratorium. Opening up the market to a greater number of competitors will help expand competition. Broad, all inclusive licensing provides incentives for new market entrants to develop their businesses as they choose, responding to the economics of alternative strategies in ways that increase the likelihood of profitable performance.</p> <p><i>External telecoms - services</i></p> <p>Supports the preference of not limiting the number of service-based licences for external services. The voice-ISR market should not be artificially constrained as a continuation of the special protections. Providers of voice ISR in 1999 are likely candidates to become facilities based providers in 2000.</p> <p><i>External telecoms - facilities</i></p> <p>There is no legitimate rationale for limiting entry into the external facilities market or adopting a managed competition approach, since the existing FTNS operators would have plenty of time to prepare themselves for the advent of full fledged competition. Option 3 sends a clear message to companies contemplating entry into the Hong Kong market that the Government has fully embraced competition and the market risk will be limited to the usual commercial uncertainties.</p>
4. Champion Technology Holdings	<p><i>Moratorium</i></p> <p>See no reason why the number of FTNS licences should be limited and why such licence should be limited to fixed wire services, given the rapid deployment of radio based services.</p> <p><i>Structure of fixed telecoms</i></p> <p>The criteria on which licences are granted should be publicly stated before the event and the whole process should made public.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>The regulatory environment does not put the ordinary consumer at the head of its priority list. FTNS licence holders should be made to cover the whole of Hong Kong with their service provision. The Authority should, as a contractual obligation, insist the coverage of Hong Kong within a given period before any extension to FTNS licences is granted.</p> <p>There should be a specific local content requirement for granting FTNS or other telecommunications licences to benefit local businesses.</p> <p><i>Fixed vs mobile</i></p> <p>Fixed and mobile services have already converged. In future, any licences for "fixed wire" services should allow direct competition from radio based services.</p>
5. China Light and Power	<p>The Government should consider the possibilities of emerging power line carrier technology in devising a suitable regulatory environment.</p>
6. City Telecom (Hong Kong)	<p><i>Moratorium</i></p> <p>The FTNS operators put more emphasis on the competition of the market share of international services rather than the introduction of new and innovative service to consumers and the development of local fixed telecommunications network facilities.</p> <p>Welcome the issue of more FTNS licences provided they meet the financial and technical specifications required and contribute to accelerate the progress of the local fixed telecommunications market.</p> <p>Agree that FTNS licences could be issued subject to demand and the meeting of necessary prudential checks to protect competition and consumer interest. The Government could establish pre-specified obligations with respect to local network infrastructure which should be aligned with the quality and variety of service the FTNS operators provide, not just simply restrict to the actual achieved business or residential lines they have built up.</p> <p><i>External telecoms - services</i></p> <p>An open external services market conducive to fair competition is the best protection of consumers' interests. A cost-based delivery charge structure is the basic criteria of setting the interconnection arrangements by Government to prevent FTNS operators hijacking other competitors through unregulated delivery charges.</p> <p><i>External telecoms - facilities</i></p> <p>Support not imposing a limit on the number of external facilities licences, so that other operators do not have to rely on the facilities controlled by a limited number of licensees to deliver their services.</p> <p>Do not support the argument that the existing 'sunk' local investments by FTNS operators would be in jeopardy. These operators have received considerable income from the delivery fees in the last few years which almost compensated for their investment made on the local network facilities.</p> <p>The Government is only required to consider whether the consumers' interests are fully protected and the value-for-money service are returned, when issuing more licences. The investment risk should be left for the consideration of the licensee</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>himself.</p> <p>Agree with Option 3 that allows open entry to an unlimited number of service suppliers in all market segments as the market demands.</p>
7. Consumer Council	<p><i>External telecoms - services</i></p> <p>Supports not to impose any limits on the number of licences for external telecoms services, since new operators can enter the external services market with little set up costs and the economies of scale are low, thereby benefiting consumers through free competition.</p> <p><i>External telecoms - facilities</i></p> <p>Of long term benefits to consumers if the market, including facilities market, could be liberalised completely. Understood the concerns of cream skimming. Consider that appropriate measures could be incorporated in licences conditions to prevent this.</p> <p>Should strive for equitable balance between encouraging innovation and controlling cream skimming. Operators should show a long-term commitment to Hong Kong in terms of technology transfer, capital investment etc.</p> <p><i>Interconnection</i></p> <p>Government should consider encouraging a common duct system to reduce the frequency of road opening and facilitate introduction of new companies and technologies.</p> <p>Telecommunication Ordinance should be amended for statutory force for common duct in building planning to allow non-exclusive access.</p> <p><i>Convergence</i></p> <p>Government should review the implications of convergence of different technologies as related to the licensing policy of fixed telecoms.</p> <p><i>Fixed vs mobile</i></p> <p>Agrees that the TA should have a consistent licensing policy between fixed and mobile telecoms but should consider the effect on the dominant position of Hong Kong Telecom.</p>
8. Global One	<p><i>Moratorium</i></p> <p>The development of local services competition should be gradual, driven by the marketplace and not be prescribed by the regulator.</p> <p>Additional entry to the FTNS market is in the public interest, providing new investments, employing new technologies, offering new services and creating additional choices for users. Having established the necessary pre-conditions for real competition, the Government should now permit the market place to determine the actual number of service providers and the scope of their service offerings. The Government should not attempt to micro-manage this market through limiting the number of licensees or the imposition of service/investment criteria.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>Licences with limited geographic coverage will be of little interest to those well established carriers which Hong Kong should be attracting.</p> <p><i>Interconnection</i></p> <p>The Government must focus on the market power of Hong Kong Telecom and ensure that there are fair, effective and cost oriented interconnection arrangements in place.</p> <p><i>External telecoms - services</i></p> <p>Concurs with the intention and the reasoning of issuing an unlimited number of ISR licences for voice communications. It is not the Government's obligation to ensure the profitability of any commercial entity. The FTNS operators are already set to benefit from the early surrender of HKTI licence.</p> <p>The Government should ensure that the new ISR operators are able to compete on a level playing field by facilitating fair and effective cost oriented interconnection arrangements. Existing tariff rates for International Private Leased Circuits are not cost-based and will inhibit competition with Hong Kong Telecom. These will not reduce until new external facilities-based operators start operating and achieve the same level of economies of scale.</p> <p>The local access charge should be cost based and non-discriminatory, i.e. the rates paid by ISR operators should be the same as those paid by FTNS operators for the same access service provided.</p> <p>Supports the proposal to liberalise all services on an ISR basis. The Government should remove the unnecessary special conditions of the existing VPN licence and ISR fax and data licence.</p> <p><i>External telecoms - facilities</i></p> <p>The Government should proceed with its planned liberalisation of facilities based competition and should neither limit the number of licensees nor restrict their service offerings. Hong Kong should attract the foreign investment of mega-carriers at this moment of economic uncertainty.</p> <p>Effective facilities competition will drive down the cost of external services. Additional and unlimited entry will directly force carriers to enhance their relationships with customers and act as a catalyst to increase investment in local services.</p> <p>With facilities competition, the cherry picking strategy of existing FTNS licensees only interested in expanding their external service access and not more fully building out local loop will not be successful in the long term without establishing direct local loop ties to these customers.</p> <p>Facilities competition will assist ISR competition by providing multiple competitive sources of international private leased circuits (IPLC).</p> <p>Urge the Government to reject any intermediate options which delay competition. The options which impose artificial restrictions on the prospective facility-based licensees by limiting the type of services they can provide would reduce the attractiveness for foreign investment. These options advantages the existing FTNS licensees at the expense of users.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>Facilities based licences should be granted no later than the end of 1998 since infrastructure investment and the development of overseas carrier relationships will require at least 15 months. Competitive safeguards should be imposed to prevent the dominant operator from abusing its position. Facilities based carriers should be able to share all the bottleneck facilities.</p> <p><i>Structure of fixed telecoms</i></p> <p>Agrees that market forces should determine the number of FTNS licences, service scope, investment levels and other market access decisions. The option to allow open entry to an unlimited number of service suppliers in all market segments is the only choice which maximise user benefits. Even then, there will not be many applicants due to the natural barriers to entry of heavy investment, establishment of a wide reach of relationship with other carriers overseas and a long term commitment.</p> <p>Does not support any effort to grant build-out obligations which is no long appropriate in an open market with unlimited number of licensees. Any build-out target is protectionist, ensures no user benefits. By attempting to dictate how should resources be allocated, the Government will be acting contrary to the objective that telecommunications services should be provided in the most economically efficient manner possible. Furthermore, cellular phone are becoming substitutes for fixed line. Hence, build-out requirements are unnecessary. The correct way to promote investment in the local infrastructure is to give correct price signal to the market via the process of rebalancing and cost-oriented interconnection (and IPLC) prices.</p>
<p>9. Hong Kong Internet Service Providers Association</p>	<p><i>Structure of fixed telecoms</i></p> <p>Agrees in principle that limited geographic coverage or other forms of limited licences be considered, with cream skimming being addressed through licence conditions.</p> <p><i>Moratorium</i></p> <p>Sees no reason for an arbitrary limit on the number of FTNS licences. Agrees with Option 3 to license as many operators for local and external fixed telecoms network services as the market demands.</p> <p><i>External telecoms - services</i></p> <p>Applauds the Government's preference not to limit external service based licences. Proposes that PNETS licences held by ISPs be expanded for the provision of Internet telephony services from 1.1.99.</p> <p>Agrees that no foreign ownership restrictions should be imposed. Government should let the market decide the best configuration of service providers in an open and globalised marketplace. Managed competition approach is dangerous as it interferes with the free and open competition of the market.</p> <p>Should re-consider the issue of class licensing for ISP and include VPN and IP telephony in the consultation for class licences.</p> <p><i>Interconnection</i></p> <p>Presence of PNETS charge for Internet access is not favourable for the development</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>of the Internet in Hong Kong. PNETS charge should be kept low in order to facilitate more underprivileged and young users to enter the Information Superhighway. Determination of a fair PNETS level should be transparent.</p> <p>Against call for ISPs to contribute to access charges and universal service funds, since they should be regarded and regulated as value-added data service providers supplying services using networks from other infrastructure service providers.</p> <p><i>Convergence</i></p> <p>The regulatory regimes for telecoms and broadcasting should be merged. An open and integrated telecoms and broadcasting regime will facilitate Hong Kong's development into a combined hub for Asia and China.</p> <p><i>Regulation</i></p> <p>While the light-handed approach market driven regulatory regime is considered appropriate, the lack of forceful enforcement against violations is regrettable.</p> <p>Calls for increased enforcement of the competitive safeguards. Regrets that decisions often come too late and without any enforcement against the violator to compensate for the damage done.</p> <p><i>Local tariffing</i></p> <p>Agrees with the principle of re-balancing local tariff, but does not support a change from the flat-rate monthly tariff considering the concentrated nature of the population and the lack of transparency on the cost structure of the local dominant FTNS.</p> <p><i>Fixed vs mobile</i></p> <p>Believes that there is no need for any arbitrary distinction in regulations for mobile versus fixed services providers for the benefit of the development of Internet applications on both service networks.</p>
10. Hong Kong Telecom	<p><i>Moratorium</i></p> <p>Believes that there should be no limit on the entry of new competitors and no extension of the special privileges of existing industry participants, in either the local or external sectors.</p> <p>The key consideration is not how many additional competitors will enter the market, but how effective competition can best be facilitated.</p> <p>Supports the introduction of new fixed line licences, but in the context of a more balanced, less restrictive regulatory environment. The new entrants should not expect to base their business on mandated access to HKTC's local loop or other regulatory entitlements.</p> <p><i>Structure of fixed telecoms</i></p> <p>Supports the opening of the telecommunications market in Hong Kong in accordance with the timetable set forth in the Framework Agreement and the principles provided in the WTO Agreement.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>Hong Kong can best flourish by assuring that its companies are faster, smarter and more creative than their competitors, not by pursuing approaches which tend to limit the value which local companies can derive from their own capabilities, investments and innovations.</p> <p>Licences of more limited geographic coverage can encourage cream-skimming and increase difficulties in obtaining access to buildings controlled by major property developers that has become FTNS licensees.</p> <p>Supports the maintenance of distinction between external services operators and external facilities operators in recognition of the fundamentally different businesses.</p> <p>If the Government wishes to retain entity separation within the industry, it should do so universally. Should regulatory separation of licenses be maintained, the entity separation should be required for the issue of any new fixed licences to mobile operators.</p> <p>Regulation</p> <p>The regulatory environment should promote conditions which encourage the mass capital investments necessary to build the enhanced infrastructure envisioned by Hong Kong's leadership.</p> <p>Believes that Hong Kong exhibits a high level of regulatory intervention, particularly in the policy making process, very favourably tilted towards the interests of new entrants, e.g.:</p> <ul style="list-style-type: none"> • interconnection charges for both carriers and resellers are perhaps the lowest in the world; • the level of local loop unbundling is more advanced; • local number portability has been implemented; • an extensive set of telecommunications industry competition laws granting very broad powers to the TA; • HKTC has been subject to some of the most restrictive tariffing procedures. <p>Other countries entering the second phase of liberalisation have consistently relied more heavily on competition to discipline the market, i.e. additional licensing should be accompanied by a lower level of intervention. There are no grounds for expanding the competitive safeguards. Their discretionary exercise should be more limited.</p> <p>The Government should not extend into the new broadband era the series of regulatory approaches - on price controls, interconnection, new entrant subsidies and service definition - more suited to the bygone era of "plain old telephone service".</p> <p>Regulation can prevent or correct serious abuses of market power without necessarily denying or delaying indefinitely significantly categories of pricing and packaging flexibility of the public interest. But regulators can also easily slide from the role of legitimate referee and defender to that of administrative bottleneck or blocker, denying consumers the very benefits they seek to obtain from their telecom supplier.</p> <p>The Government's vision must be translated into concrete policies which promote innovation and reward investment and take care not to stifle either through regulatory controls that severely limit market leaders in the name of equalising competition.</p> <p>In Hong Kong, wholesale regulation decidedly favours the second network carriers and regulatory action on their behalf has generally been swift and firm. Retail pricing</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>regulation has been consistently tight on Hong Kong Telecom, and proceedings are typically subject to significant delays.</p> <p><i>External telecoms - services</i></p> <p>Supports the issue of unlimited number of ISR licences but there is a need to ensure that it occurs in a balanced regulatory environment that envisages investment incentives.</p> <p>Hong Kong carriers should enjoy reciprocal rights in other countries. Hong Kong should not allow itself to be manipulated into a position that allows foreign carriers to simply transfer retail revenues offshore.</p> <p>Strongly advocates that the pricing of external services and facilities should be determined by the market and not by regulatory intervention, which will encourage new entry and encourage efficient investment.</p> <p>Does not agree that there is a need for the Government to regulate charges to avoid suppliers of voice ISR services exploiting transient distortions in the market. It is the regulation that creates these distortions. Government's policy should be to withdraw from regulating prices in this market as soon as possible. However, local access charges must be such that they will provide a reasonable return on investment.</p> <p><i>External telecoms - facilities</i></p> <p>Supports the introduction of additional international facilities based competitors, but does not support niche service facilities, as many of the problems associated with liberalised and non-liberalised services under the HKTI licence will recur. A single policy should be pursued for international facilities.</p> <p>Believes that there is a place for new international gateway technologies in the future of the industry and does not object to their licensing under appropriate safeguards for spectrum protection and efficiency.</p> <p><i>Convergence</i></p> <p>Is fully supportive of any regulatory initiatives that facilitate convergence. Views on convergence regulation are:</p> <ul style="list-style-type: none"> • no restrictions on the number of licences issued for any form of broadcasting other than due to spectrum constraints • symmetry in the introduction of additional licences at all levels of the market • broadband regulatory environment must provide incentives to support continued investment in broadband switched networks in Hong Kong • regulatory parity across all forms of broadband networks • in particular, Wharf Cable must not participate in the provision of telecommunications services until there has been opportunity to implement an appropriate regulatory regime <p>Objective of convergence regulation must be to allow regulatory environment to embrace new technical applications that are increasingly questioning the regulatory coverage of Telecommunication Ordinance and Television Ordinance. The challenge of testing existing PSTN regulatory paradigms is to assess whether they have relevance to new broadband markets. Requires a recognition that the Government should stand back from the market and let innovation prosper.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>A new minimalist regulatory model must be developed for convergence and the technologies which facilitate convergence, for example, broadband network. The existing FTNS regulatory framework was developed to provide a "leg up" to the new FTNS operators to rapidly access all telephone customers in Hong Kong. The purpose is to enable new entrants to compete with HKTC's existing business, not to ride on the back of HKTC's future investment in new technologies. Proposes that ITBB should formulate a single regulatory environment for communications service providers, regardless of their historical designation as either telecommunications and broadcasting service providers.</p> <p>Convergence issues yet to be subjected to any policy debate include:</p> <ul style="list-style-type: none"> • the use of free-to-air broadcasting spectrum for the delivery of non-broadcast services; • the impact of digital television technologies on the communications market and the method of regulation; • the implications of new satellite transmission technologies; • the regulation of satellite broadcasting. <p>Important to recognise that consumers are not particularly interested in the convergence of networks, only in their output. Converged networks do provide cost efficiencies and benefits and the potential for truly innovative services and pricing structures. But the true interests of consumers resides in the reality of those innovative services.</p> <p>Believes that it is not possible for the Government to support open and unfettered licensing in telecommunications while restricting broadcasting licences, although there is need for an additional limited level of content regulation for audio visual services. The more numerous the number of content suppliers, the less critical to encourage various forms of content.</p> <p>Believes that the Government should allow the Wharf Cable network to be used for telecommunications services because HK should support convergence and the efficient use of resources, but is ardently opposed to this occurring in the context of any regulatory asymmetry.</p> <p><i>Fixed vs mobile</i></p> <p>Takes the position that all participants in the industry should be able to merge their mobile and fixed line businesses to pursue the integration of all telecommunications services and achieve further efficiencies and innovation. Does not believe that cellular operators should have any special advantage in applying for FTNS licences.</p> <p>Considers that fixed-mobile integration is simply a subset of the general licensing considerations. Believes that it is far more likely that existing cellular operators would, if granted a new fixed line licence, simply use the rights under those licences to install limited backbone elements in their mobile network that would not have a significant impact on retail customer services, the introduction of new technologies, or encourage a competitive customer access network.</p> <p>Major regulatory barriers to fixed-mobile integration are considered to be:</p> <ul style="list-style-type: none"> • the use of separate corporate entities to hold fixed and mobile network assets and provide fixed and mobile services; • the requirement for fixed services to be priced according to published tariffs with no distinction between wholesale and retail service provision; • the diseconomies caused by the lack of vertical integration.

<u>Person/Organisation</u>	<u>Comment</u>
	<p>Inherent objectives of fixed-mobile integration are to achieve:</p> <ul style="list-style-type: none"> the economies of scale through the integration of fixed and mobile businesses for the delivery of an integrated solution to customers; innovation in the provision of new services through the integration of fixed and mobile services which would otherwise not be available through the provision of either service alone. <p>If the Government is inclined to issue additional fixed line licences to mobile licensees:</p> <ul style="list-style-type: none"> those licence must have the characteristics in relation to the general fixed line licensing process; the licences must be issued in accordance with the considerations of regulatory parity.
11. Hong Kong Telecommunications Users Group	<p><i>Structure of fixed telecoms</i></p> <p>Does not agree with any form of licensing that encourages a fragmentation of the information infrastructure.</p> <p>Principles for the basis of the telecommunications industry should be:</p> <ul style="list-style-type: none"> pro-consumer ensure greatest possible level of (effective) competition technology-neutral regulatory regime for two categories of services - basic infrastructure service (Type I) and services making use of basic infrastructure (Type II) same regulatory conditions for Type I services regardless of technology used total deregulation for Type II services non-discriminatory access to all Type I services by Type II service providers safeguards for keeping Type I and Type II functions distinct encouragement for all Type I services to be made available throughout Hong Kong <p>Hong Kong needs to put in place in an integrated fashion at the earliest opportunity the Hong Kong Information Infrastructure.</p> <p>Recommends that 'basic telecom service' be reviewed in the light of the requirements of HKII and the law regarding access to buildings be amended accordingly. Alternatively, cable, power and wireless infrastructure should be allowed to provide services to Type II service providers.</p> <p><i>Moratorium</i></p> <p>No strong argument for extension of FTNS moratorium as existing licensees have enjoyed substantial period of protection. On the basis that the fullest possible choice should be available to users for Type I services, the moratorium should be terminated.</p> <p><i>Interconnection</i></p> <p>Greatly concerned that certain landlords are making it difficult for the new FTNS operators to gain access to their buildings. Believes that the concept of widest possible range of services being made available to every office, as part of a comprehensive information infrastructure, can only be achieved by the law being revised to make it obligatory for landlords to allow access to all operators, wireline or wireless, on an equal basis.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p><i>External telecoms - services</i></p> <p>Voice ISR is a Type II service and should be deregulated and without fixed limit on the number of licences.</p> <p><i>External telecoms - facilities</i></p> <p>New international licensees should be obliged to contribute to the development of the domestic network in an appropriate way by providing a territory-wide Type I service using a suitable technology and contributing to universal service.</p> <p>Benefits in licensing networks on a limited geographical basis far outweigh by the disbenefits such as cream-skimming.</p> <p><i>Interconnection</i></p> <p>Greater progress towards competition in the local market would be achieved if a stronger approach by Government. Concerned about the delays in establishing interconnection fees and lack of schedule to access 100% of Hong Kong Telecom's exchange lines for interconnection. Welcomes OFTA's positive action in discouraging anti-cartel practices.</p> <p><i>Fixed vs mobile</i></p> <p>No technological nor logical reason for the continuation of distinction between either wireline and wireless on the one hand and fixed and mobile on the other. Fixed and mobile are two ways of delivering similar services and should be licensed in similar manners.</p>
12. Hutchison Telecommunications (Hong Kong)	<p><i>Moratorium</i></p> <p>Government policy should lead the way by further enhancing the environment necessary for the existing FTNS operators to fulfil their plans and commitments, and should not stifle such commitments.</p> <p>Too many licences will weaken competition with HKT. What will remain will be international carriers 'cream skimming' major corporate accounts, taking profits out of HK rather than investing them into Hong Kong's network infrastructure. The desperately needed information infrastructure superhighway will not get built this way.</p> <p>Issuance of further licences would jeopardise the existing investment strategy of operators like Hutchison and could be compelled to drastically cut back not only their future investment plans but also their existing commitments and employees.</p> <p>The Government needs to create and maintain a sustainable environment for continued investment, otherwise jobs may be at risk.</p> <p>The Government must play a leadership role by ensuring that the number of licences are supportable by the market. The consumer will ultimately bear the cost of duplicated investment and wasted resource allocation which in reality benefits only foreign equipment suppliers. A moratorium upon the issue of any further FTNS licences should remain in place until at least 2001 by which time the actual extent of tariff re-balancing can also be assessed.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p data-bbox="496 297 799 327"><i>Structure of fixed telecoms</i></p> <p data-bbox="496 360 1414 546">Should the moratorium ultimately be lifted in 2001 it will be vital to ensure that new licensees at the very least commit to match the investment made by existing new FTNS operators in HK network infrastructure. Any lesser commitment on their part would allow large international carriers to 'cherry pick' high traffic volume multinational company accounts based in the central business districts with minimal investment.</p> <p data-bbox="496 584 1414 770">The grant of limited geographic coverage FTNS licences would give landlords the opportunity to impose high access costs upon other operators wishing to provide service in their buildings. It will also facilitate cream skinning by landlords with a captive customer base of high quality corporate accounts. The fragmentation of network access will defeat the objective of building out whole and seamless network infrastructure.</p> <p data-bbox="496 808 1246 837">The Government must provide a viable environment for investors to:</p> <ul data-bbox="496 842 1018 938" style="list-style-type: none"> • build fixed network infrastructure • offer effective competition to HKT • offer consumers a greater choice of service <p data-bbox="496 969 959 999"><i>External telecoms - services and facilities</i></p> <p data-bbox="496 1032 1414 1218">Non-FTNS ISR operators with no network build out obligations will wish to serve only the most profitable multinational companies. Unfair to allow them to do so since they have invested very little in Hong Kong networks which benefited the Hong Kong people as a whole and would merely reap the benefit of investment made by FTNS operators with little or no extra investment or employment created. It will discourage investment in infrastructure.</p> <p data-bbox="496 1256 1414 1442">Hence, only FTNS operators should be awarded voice ISR and international gateway facilities (IGF) licences, subject to a review in 2001. Subsequent issue of ISR licences should be limited in number. Even if more licences are to be issued after 2001 it is important not to issue IGF licences other than to FTNS operators who have made a commitment to both network infrastructure investment in Hong Kong and a minimum level of international capacity.</p> <p data-bbox="496 1480 1414 1543">The Government must not allow operators to cream skim large profits from HK consumers with very little investment.</p> <p data-bbox="496 1581 1414 1700">The issue of any further licences whether FTNS, ISR Voice or IGF prior to at the very earliest 2001 would be to court disaster. Drastic scaling back of investment by FTNS operators will not only deprive HK of service innovation and price competition but place in peril the livelihoods of thousands of HK people.</p> <p data-bbox="496 1738 676 1767"><i>Interconnection</i></p> <p data-bbox="496 1800 1414 2018">All new FTNS operators' business were planned in reliance upon Government assurances as to the availability of delivery fees when new FTNS operators bid for and picked up their licences. TA's proposed replacement of delivery fees with a cost based local access fee in relation to competitive routes and proposed accelerated introduction of modified delivery fee as of 1.1.1999 in relation to non-competitive routes are very premature and will together substantially reduce FTNS operators' revenue streams. The new operators are in no position to absorb a drastic loss of</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>revenue at this point in time.</p> <p>TA's proposed changes should be delayed until 2001 for review along with the moratorium proposed. If delivery fees are eventually to be replaced with local access charges, such charges must be set at a level which justifies the FTNS operators' investment and fully supports the additional investment required to carry ISR operators' traffic.</p> <p><i>Fixed vs mobile</i></p> <p>Many of the FTNS licence provisions e.g. tariff control and facilities sharing are wholly inappropriate for the mobile market. The mobile operators have also invested substantially less than the FTNS operators.</p> <p>Consider that it was a policy error to allow mobile operators direct international interconnection with HKTI, thus earning delivery fees, which should be removed. To allow mobile operators to retain the unfair advantages and enjoy the privileges of an FTNS operator would serve to undermine the investment of FTNS operators by removing a significant potential market providing base station circuits to the mobile operators.</p> <p>The retention of the distinction between mobile and fixed operators would maximise the two sectors' contribution to society and avoid undermining FTNS operators' incentive to invest.</p>
13. KDD Telecomet Hong Kong	<p><i>External telecoms - services and facilities</i></p> <p>Wish to see pre-entry restrictions removed to promote fair and effective competition and to protect the best interests of the public and the telecommunications users.</p> <p>The regulator should impose no limits on the number of carriers or operators entering into the international facilities-based market, the international simple resale or other resale markets.</p> <p>Imperative to ensure the transparency of licence application procedures and to establish processing schedules. Licence fees should be limited to procedural related expenses.</p> <p>A set of interconnection rules and conditions need to be established to maintain a fair and non-discriminatory state of interconnections between international and local facilities-based carriers and between facilities-based carriers and ISR carriers.</p> <p>For the ISR market, there should be an effective regulatory framework to provide equal-footing amongst facilities-based or ISR operators.</p> <p>Requiring facilities based carriers to own both international and local facilities is a sense of excessive entry barrier and against the best interests of the public or users in the international and domestic market.</p> <p>The concern that allowing companies to obtain international facilities based licence for the sole purpose of owning IRU in submarine cables will decrease the incentives to invest in facilities in Hong Kong can be addressed by adjusting the charges to an appropriate level to reflect the costs in the local facilities based market, instead of by establishing a market entry barrier for a facility-based company.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	Safeguards should be established to prevent the operator controlling bottleneck facilities from discriminatory behaviour or abuse of market power.
14. Lam, Charles (Dr.)	<p><i>Structure of fixed telecoms</i></p> <p>Competition has been slow in the local FTNS market and the community have not been informed well on the progress. Should publish Type II interconnection statistics regularly to arouse media and community attention.</p> <p>Convergence of fixed and mobile communications services and entry by global entities may be ways to improve the situation. There should be measures to prevent cream-skimming and cartel.</p> <p>Non-sensitive accounting data should be made more transparent to concerned parties for checks and balances.</p> <p>Technology convergence should be for the benefits of end users, not for the sake of technologies or technologists.</p> <p>Planning and regulating for IT/telecom services that cross boundaries may need dedicated horizontal linking mechanisms within and outside Government, with the community informed of the implications and impacts.</p> <p>Customer charters and performance pledges should be constantly monitored.</p> <p>The Government may need to revisit the definition of universal service obligations to include non-voice and other features. The Government needs to improve on public and private payphones.</p> <p>Universal services consideration may be linked to social responsibilities of telecom- and non-telecom-oriented firms to serve the community. The concept of universal service obligations can also be linked to the design of future community information centres and involvement of new entrants to serve limited geographic coverage.</p> <p>The roles of relevant neutral organisations for serving telecom users and consumers need to be clarified and may require Government support and legal backing.</p> <p>In drafting or revising laws and regulations, we may need to change from technology-oriented mentality to user needs-oriented mentality.</p> <p>In information infrastructure planning, the focus should firstly be placed on user needs and then information flows and then network technologies, in that order.</p> <p>The consultation paper has done very little to link the FTNS structure with the concept of information infrastructure. They should be integrated as one.</p>
15. MCI Communications	<p>Maximise benefits to consumers by allowing unlimited, fair competition. The substantial resources required to build a technologically advanced and cost efficient telecommunications network are unlikely to come from a highly regulated or monopolistic market.</p> <p><i>External telecoms - services</i></p> <p>Supports the proposal for unlimited ISR licences, which will increase competition in external services quickly and dramatically, lead to lower prices for consumers, thus</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>increased traffic for more efficient user of transmission facilities.</p> <p>Existing FTNS licensees will have the ability to obtain revenue, via ISR, for services that they were heretofore not permitted to provide, and via the use of their infrastructure by other ISR providers to originate and terminate traffic in Hong Kong.</p> <p>Submits that the application process for ISR licences should be simple, should not have foreign ownership restrictions, with a low cost-based licensing fee.</p> <p><i>External telecoms - facilities</i></p> <p>Strongly urges for an unlimited number of facilities based external licensees. Full competition has led to lower prices, technological innovation and more efficient and cost-effective services. Establishing an oligopoly would merely reward the existing FTNS licensees, require the Government to make difficult and arbitrary decisions, leading to less efficient economic and investment choices by the licensees than those made in a truly open market.</p> <p><i>Structure of fixed telecoms</i></p> <p>Urges not to adopt the market distorting approach of setting minimum local infrastructure milestones for all FTNS licensees, which is little different in practical effect than limiting the number of licensees. New entrants will want flexibility to invest in infrastructure and will very likely want eventually to build local infrastructure to gain the efficiency and flexibility of owning its own access to local customers. Government should leave these decisions to the open market.</p> <p><i>Regulation</i></p> <p>Important for the Government to maintain an active role in monitoring and enforcing the safeguards to ensure competition will not be stifled by the dominant carrier. Urges for the following competitive safeguards: - cost-oriented interconnection, cost-accounting rules to prevent cross-subsidisation, disclosure of technical information for interconnection and protection of carrier and customer and proprietary information.</p> <p>A light handed regulatory approach may in fact hinder the development of competition by enabling Hong Kong Telecom to exploit its dominant position in the market. As strong regulatory approach will not stifle the market where the approach is pro-competitive.</p>
16. New T&T Hong Kong	<p><i>Moratorium</i></p> <p>Considered that the terms of reference of the Review pre-judged the issue by referring to the new FTNS operators having a substantive advantage as a result of the 3-year moratorium.</p> <p>Concerned that Hong Kong considered itself 'forced' to make changes to telecommunications policy because of extraneous pressure from organisations such as WTO.</p> <p>Does not consider the 3 year moratorium to be sufficient to roll out a network and establish a market presence with a light handed regulatory approach and a flat rate local tariff regime. Submits that there is no evidence of a solid block of customers nor preferential access to scarce resources. Indirect IDD customers are most susceptible</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>to pricing changes. Customer inertia accounts largely for the lack of inroads in the residential line market.</p> <p>The dominant carrier has imposed all kinds of administrative barriers. The terms for access to incumbent operator's network is far more onerous and restrictive than for retail and other wholesale customers. The interconnection arrangements which the new entrants are forced to accept make the advantages conferred by the initiatives of caller line identification and operator number portability illusory.</p> <p>There are difficulty accessing bottleneck facilities such as MTR tunnels. There are also other constraints in the industry with considerably longer time frame than the 3-year moratorium which had limited access to facilities.</p> <p>Substantive improvements should first be made to the current interconnection regime before the issue of any further FTNS licences is contemplated by the Government. The regulator does not appear to have been provided with clear authority and the appropriate tools to impose sanctions that would act as pecuniary disincentives for the dominant operator to engage in anti-competitive conduct.</p> <p>Incumbent built a network funded by "scheme of control" in the past and "universal service contribution" under the current arrangement, providing a guaranteed return on investment for its network and created an un-level playing field. Infrastructure built under USC funding should be shared unconditionally and no profit should be generated by the incumbent for use by other FTNS operators.</p> <p>The regulator intervenes in the market by imposing retail price control which is not particularly aimed at predatory pricing by the dominant operator, e.g. ISP access charge, that has been driven to the cost of network that the new FTNS operators cannot match because of the economies of scale.</p> <p>No further FTNS Licences should be issued until fair and equitable interconnection terms and conditions are in force.</p> <p>A moratorium of 3(+3) years in relation to FTNS licences is appropriate, as the original 3 year moratorium has proven to be insufficient time for the 3 new FTNS operators to build a substantive customer base or substantive local network.</p> <p>Policy-making should not take into account the likelihood or otherwise of foreign equity interest in local FTNS licensees. A 'managed market' approach is preferable, in the interests of the HK Information Infrastructure and the economy.</p> <p><i>External telecoms - services</i></p> <p>It is not an appropriate time for the issue of an unlimited number of services-based licences. If Government intends to do so, it must determine clearly and enforce a set of access charges payable to FTNS operators for local transmission of international traffic.</p> <p><i>External telecoms - facilities</i></p> <p>Facilities based licences, if issued, should be the subject of competitive tender with the objective of securing commitment to significant domestic network investment and the delivery of "infrastructure and investment gain" to Hong Kong.</p> <p>Recommended a 3(+3) year moratorium on the issue of services-based and</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>facilities-based licences.</p> <p>Recommended alternatively unlimited number of services-based licences with a clear and enforced set of rules and access charges for local termination / origination of external services traffic.</p> <p><i>Regulation</i></p> <p>There are no fair and equitable terms prevailing in relation to the interconnection between FTNS networks, thus having a direct impact on the level and freedom of choice of consumers in Hong Kong.</p> <p>The regulator must take a pro-active role in ensuring that fair and equitable terms of interconnection based on LRAIC are enforced in relation to the interconnection between FTNS networks before considering further liberalisation of the market.</p> <p>The TA should establish a cost based facilities access and usage focused "local access charge" as a matter of highest policy priority. The structure of the charge should reflect the cost structure of the whole PSTN and be a retail charge. Suggested details of charges have been passed to the TA in his consideration of the Review of Delivery Fees.</p> <p>Until the amendments to the Telecommunication Ordinance relating to anti-competitive conduct become law and are actually enforced by the regulator, it would be misleading to state that there are sufficient and effective safeguards in this jurisdiction which protect new entrants from the predatory tactics of the dominant operator. Amendments to the Telecommunication Ordinance relating to competition safeguards should be enacted as soon as practicable.</p> <p>The current approach in relation to the interpretation of the competitive provisions in GC15 and 16 of the FTNS licence and the powers of the TA to make directions under s.36B of the Telecommunication Ordinance is not sufficiently robust to encourage OFTA to take pre-emptive steps to stop anti-competitive conduct. This would seriously undermine the wide discretionary powers granted to the TA in GC15 and 16. 'Light handed' approach regarding the anti-competitive behaviour of the dominant operator should be reviewed, and more pre-emptive, preventive action should be taken by the regulator.</p> <p>A more robust approach to the interpretation and application of the TA's powers to give directions under S.36B of the Telecommunication Ordinance should be the guiding principle relating to the regulation of the dominance and the potential for the abuse of the dominance of the dominant operator.</p> <p><i>Structure of fixed telecoms</i></p> <p>Advocate the serious consideration of the ramifications of the issue of joint and several licences in the fixed, cellular and mobile satellite services to HKTI and HKTCAS to the ability of non-vertically-integrated telecommunications operators in the industry to compete effectively. The joint and several licences appear to enable the HKT group to conceal cross-subsidies within bundled products. A review of the joint and several licensing structure in relation to the Hong Kong Telecom group of companies is recommended.</p> <p>The cumulative effect of the joint and several licensing structure and the existence of HKTIMS within the HKT Group would mean that the barrier of entry to other</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>telecoms operators are insurmountably high. Divestiture of HKT-IMS from the HKT group of companies should be directed by Government.</p> <p><i>Convergence</i></p> <p>The Wharf Group should be allowed to make use of all its available network assets to maximise the benefits of the convergence of telephony and broadcasting technology. Consider that the HKT Group has been accorded preferential treatment, by being allowed to extend its operations to interactive broadcasting services.</p> <p><i>Fixed vs mobile</i></p> <p>There are sufficient technical differences between mobile networks and services and fixed networks and services to warrant different sets of regulatory rules. Fixed-mobile convergence will result in a lot of duplication in infrastructure on both fixed and mobile market sectors. Until there is significant breakthrough in bandwidth requirement, the community will not benefit from fixed-mobile convergence.</p>
17. New World Telephone	<p><i>Moratorium</i></p> <p>The lack of progress of new FTNS operators on roll-out is largely attributable to the incumbent controlling bottleneck facilities. Introduction of more licensees without proper action to curb the incumbent and dominant carrier's market power would only exacerbate this HKT dominance and seriously affect the viability of both existing operators and also potential new entrants.</p> <p><i>Structure of fixed telecoms</i></p> <p>Concerned that the introduction of limited geographic area FTNS licences will create cream skimming, discourage co-ordinated infrastructure investment, hinder the development of a wide array of services to the community, introduce complexity on interconnection arrangements, cast heavy administrative burden on both the regulator and other licensees interconnecting with the local operator. The three FTNS operators, unlike HKT, lack the Universal Service Contribution to shield against the deficit on serving unprofitable customers, exposing territory-wide operators to greater risks.</p> <p><i>External telecoms - services</i></p> <p>The entitlement to delivery fee represented a fundamental assumption in formulating the business plan for the new FTNS operators. The immediate introduction of open service-based competition with the present distortion in the market will damage the development of competition based on investment in infrastructure and will, in the long run, be contrary to the interests of telecommunications customers and the wider economy. Consistent with the timetable for tariff re-balancing, a moratorium for external services should be granted to the existing FTNS operators for 3 years up to 2002.</p> <p>ISR operators can gain an advantageous headstart by exploiting the still unbalanced tariff structure if the local access charge payable by ISR operators to FTNS operators are cost-based. FTNS operators should not be liable to rectify an unbalanced tariff structure purposefully set by the Government. The interconnection charge should reflect the carriers' commitment in providing interconnection service and should be determined before any additional service-based licences are awarded.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>Allowing inefficient entry by service-based operators would give no incentive for the facilities-based operators to continue with the investment or roll-out of networks or upgrades, thereby encouraging service competition at the expense of infrastructure based competition.</p> <p><i>External telecoms - facilities</i></p> <p>Since the current market is distorted, the introduction of excessive competition in external facilities competition at this stage will expose existing operators to unmanageable risk.</p> <p>Unlimited facilities licences create the problem of wasteful duplication of resources. With abundant infrastructure facilities available with the incumbent's infrastructure, a logical policy would be to encourage the utilisation of existing resources in a cost-efficient manner before considering expanding the infrastructure stock. The Government should therefore enforce sharing of facilities to allow a speedier start by the entrants.</p> <p>An unlimited number of external facilities licences may have the harmful effects of integration and the possible unemployment created through amalgamation of licences.</p> <p>The proposal on liberalisation of external facilities on a service perspective not only violates the technical neutrality approach adopted in the past, the selection of particular segments for liberalisation is arbitrary and lacks objectivity. The restriction to general competition also discourages potential investment and may stimulate illegal activities giving rise to associated problem of monitoring and control.</p> <p>Foreign investment is relatively volatile. A stable, prosperous telecommunications sector is indispensable.</p> <p>Additional licences should only be awarded for the provision of both local and external telephony. To provide a level playing field with existing operators, new licences awarded should attract similar roll-out obligations as existing FTNS licences to deter inefficient entry.</p> <p>Against setting a particular time frame for liberalisation of external facilities but instead favours a checklist approach. Until the market has fulfilled the full checklist requirements should the Government consider introducing facilities competition.</p> <p><i>Regulation</i></p> <p>The light handed regulatory approach jeopardises the business of the incumbent with little chance of achieving a mutually beneficial outcome. Urges the regulator to take a more pro-active role to intervene into inter-carrier disputes.</p> <p>It is envisaged that self-build facilities by new FTNS operators will not take place overnight. The TA should introduce proper regulatory safeguard against the incumbent such that prospective external licence would not be denied access to the necessary facilities to bridge the gap between external facilities competition date and completion of its own facilities.</p> <p><i>Convergence</i></p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>If the provision of telephony is allowed for Cable TV operator, they should be regulated by the same provision as in the FTNS licences, i.e. interconnection and sharing of facilities. Affiliate transactions between FTNS operator and its cable TV affiliate should be conducted at arm's length to ensure there is no undue preference. Should the FTNS operator and its cable TV affiliate collectively are dominant within a particular market segment, they should be subject to specific dominant restriction applicable to that sector.</p> <p><i>Fixed vs mobile</i></p> <p>There are inherent differences in terms of operation between fixed and mobile telecommunications services. Mobiles resemble more of a service re-seller by acquiring services from other fixed operators and resell it to end users. Does not see the reason to extend carrier's right to mobile operators.</p>
18. Northern Telecom (Asia)	<p><i>Structure of fixed telecoms</i></p> <p>Hong Kong cannot achieve its stated goal of being an information society if it continues to believe it has the ability to regulate with regard to anticipated technological change. Second guessing technological change will continue to frustrate and slow innovation, preventing innovators from doing what they do best - using the best available resources to carve out a market where none previously existed.</p> <p>The main obstacle in the slow progress in the local FTNS market stems from bandwidth restrictions (cost-related) on copper loop preventing higher end services from being offered. OFTA should issue a directive on the accounting system for the cost of bandwidth.</p> <p>OFTA's differentiation of fixed from other technologies appears to hinder it from thinking through the overall competition issue.</p> <p>Current regulatory thinking elsewhere is to have the market determine the number of licences. New players should be allowed to compete against existing FTNS operators under the same conditions determined by OFTA.</p> <p>Echoes the reality that jurisdictions around the world have abandoned trying to regulate differently for local, long distance, and international services.</p> <p>Strongly disagrees with the continuing need to differentiate between facilities based competition and services competition, which forces competitors to behave in a particular way, stifling innovation. In the Australian case of eliminating differentiation, the net result has been an acceleration in the rate of new technologies being deployed.</p> <p>The number of service providers for each category of services (facilities or network based) should be determined by the market, with the Government setting uniform procedures. Allowing service providers to offer bundled services in different categories may lower running costs for users and therefore in the public interest. However, cross subsidy should not be allowed.</p> <p>The Government should encourage the use of new technologies and innovation to maximise utilisation of existing facilities.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>This review gives the opportunity to anticipate some of the evolutionary developments and to seek a universal information technology and telecommunications regulatory regime that concerns itself only with fair play and competition between operators, rather than trying to define what technologies and services these operators may deploy.</p> <p>The service providers should have the right to choose their facilities while the end users also should have the right to choose the media through which they want the services to be delivered. Whether the service providers want to own facilities or lease them is strictly a business decision.</p> <p><i>External telecoms - services</i></p> <p>Agrees not limiting the number of external voice ISR licences. It is necessary for the Government to predetermine the rate of delivery fee so competition remains fair.</p> <p>The boundary between external and internal is artificial, and new technologies continue to make it even harder to define. This sort of regulation slows down the market unnecessarily and unduly burdens consumers.</p> <p><i>External telecoms - facilities</i></p> <p>Inevitably, technology, convergence and regulatory reform around the globe will eventually force Hong Kong beyond the issue of prohibiting further external facilities operators. ITBB should be at the forefront in driving for these forces to take place now.</p> <p><i>Fixed vs mobile</i></p> <p>Differentiating between mobile and fixed services is archaic and policies which do so should be avoided. Similar consideration for wireless/wireline differentiation.</p>
19. NTT (Hong Kong)	<p><i>External telecoms - services and facilities</i></p> <p>Agree with the policy to let the market decide upon the number of PNETS licensees and support the principle being extended to other services currently limited to a small and select number of licensees.</p> <p>See a distinct need for information related services (both local and international) to be liberalised. Support deregulating voice ISR and see no legitimate reason to restrict the number of external service licences.</p> <p>Expect the situation of international telecommunication network will change dramatically as technology progresses. In future, technological innovations will be the prime driver and will generate new media for the provision of international telecom services, such as -</p> <ul style="list-style-type: none"> • supply of small size end-to-end international networks using satellites by facility based operators • supply of circuits between specific cities or areas by overseas carriers • cross interconnection and convergence between public and private networks • supply of public network service by the companies having their own private facilities-based network <p>Arbitrary restrictions on the number of external facilities based operators will have adverse consequences for consumers and will impede Hong Kong in implementing</p>

<u>Person/Organisation</u>	<u>Comment</u>
	best practices and structural innovations, which will likely cause the loss of some of Hong Kong's attraction as an international telecom hub.
20. Office of the Privacy Commissioner for Personal Data	Market forces in a competitive environment will put pressure on market players to find innovative ways of gaining an edge over their competitors, including innovative uses of customer information. Consideration should be given to strengthen the confidentiality requirements in relevant licences by including express provision in the licences for the TA to be able to, in consultation with the Privacy Commissioner, determine what uses of customer information are acceptable uses for the provision of licensees' services and impose conditions on such uses.
21. SmarTone Communications	<p><i>Structure of the fixed telecoms</i></p> <p>Believes that fundamental to the current review are clear definitions for the different roles undertaken by facilities-based operators and service providers.</p> <p>Proposes the following goals which would provide significant long-term benefits:</p> <ul style="list-style-type: none"> • an information technology industry that makes progressively greater contributions to the economy as a whole but which also specifically fosters the creation of skilled jobs, enables a flow-on of new opportunities to other sectors of the economy and promotes greater awareness and confidence in the future capability of Hong Kong; • development of a dynamic information infrastructure that is able to continually enhance the competitiveness of Hong Kong in the global economy while nurturing innovation and enabling Hong Kong to further develop its information technology industries; • the ubiquity of, and unrestricted access to, a wide range of high quality and low cost telecommunications services; • fairness and equality in the treatment of industry participants to encourage a long-term focus and ensure that those with a demonstrated commitment are not unduly handicapped. <p>Believes that policy and regulatory directions resulting from this review should directly contribute to greater business confidence, higher employment levels and more local investment thereby promoting stability and reinvigorating HK's economy.</p> <p>The best way to capitalise on successes to date, realise the stated goals above and minimise uncertainty, is through an appropriate and effective industry structure that removes barriers to competition within the existing environment and selectively introduces new competition as it can be supported by the local market.</p> <p>Advocates a clear regulatory distinction between the operators of telecoms facilities and the providers of telecoms services.</p> <p>Emphasises the strategic significance of facilities-based operations over service provisions.</p> <p>Recommends caution in the issuance of new telecommunications licences.</p> <p>Believes that a simplified regulatory role can result from an industry structure that primarily differentiates on the basis of facilities based and service based operations, consistent with a market-driven light-handed regulatory approach.</p> <p>Believes that a simplified industry model will also better prepare operators and regulators for convergence.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>An advocate of beneficial competition in the telecommunications sector and is of the view that such benefits are well evidenced in the local mobile services where customers have enjoyed greater choice, more affordable service and more frequent enhancements to service than customers in many other countries.</p> <p>Notes that while the merits of competition are considerable, it is the actual number of licensed participants and the timing with which competition is introduced that are critical to developing a viable and sustainable industry. Believes that the potential costs associated with 'too many' or 'too quickly' cannot be overlooked.</p> <p>In agreement that external facilities-based competition is expected to require greater investment, establishment of a wide reach of relationships and longer-term commitments by operators than is expected for service-based operators. Of the belief that such requirements significantly increase the level of risk to facilities based participation and those risks increase with an increasing number of licensees.</p> <p>Although an advocate of market-driven light handed regulatory approach, believes that balance is required to best serve HK's interests: an expanded market will require greater regulatory presence, as new competitors would likely focus on "cream skimming" to the detriment of committed local players.</p> <p>Advocates that the best industry model for facilities based competition is one of strategic liberalisation with the ultimate longer term goal being increasingly more open competition.</p> <p>Is of the view that HK's 'laissez faire' economic model extends to the telecoms sector and that, through equity partnerships or other relationships with existing participants, foreign operators can today participate and, in doing so, demonstrate a commitment to local infrastructure development.</p> <p>Believes that the risks of significant adjustment costs resulting from an increase in the number of participants will be too high particularly during the current period of economic uncertainty and that a path of strategic liberalisation should be followed.</p> <p>Believes that sufficient licences currently exist for local facilities based competition, be they fixed or mobile, and that no additional FTNS, PMRS and PCS licences are currently required.</p> <p>Recommends that a simplified industry structure based on three vertical market classifications (content, services and facilities) across the converging industry sectors will best satisfy regulatory requirements as well as meet the needs and interests of Hong Kong.</p> <p><i>Fixed vs mobile</i></p> <p>Believes strongly that fair and equitable treatment of PMRS/PCS with FTNS licensees is an essential part of the current review of fixed telecoms.</p> <p>Emphasises that mobile communications has become a mainstream communications method in HK and that views which consider PMRS/PCS services to be ancillary to fixed line services or a premium service are obsolete and serve as an impediment to realising the mobile segment's full potential for contributing to HK's information infrastructure.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>Believes that PMRS/PCS operators are significant investors in HK's information infrastructure and that they should be considered on a relatively equal footing to FTNS operators.</p> <p>Strongly believes that developments such as the Universal Mobile Telecommunications System (UMTS) will continue to ensure that mobile and wireless communications remain very significant components of future telecommunications architectures.</p> <p>Believes that in moving towards convergence, mobile and wireless technologies are, as a minimum, of equal importance to fixed and wireline technologies.</p> <p><i>External telecoms - facilities</i></p> <p>Challenges the award of external facilities-based licences to the existing FTNS operators without consideration of other committed industry participants, in particular existing PMRS/PCS operators.</p> <p>Believes strongly that local and external facilities-based licences should not be considered independently and further suggests that the maximum number of external facilities-based licences reflect the total number of local facilities-based licences.</p> <p>Advocates that only the players with proven commitment to local infrastructure development have a claim to an external facilities based licence and urges for the development of a set of criteria for awarding licences.</p> <p>Believes strongly that any facilities-based operator who has a track record of contributing to the local industry's development should be encouraged to be a champion of the next phase of HK's information infrastructure development.</p> <p><i>Convergence</i></p> <p>Believes that the continued global competitiveness of the local economy is directly related to the speed and effectiveness with which HK embraces convergence.</p> <p>Given the complexity and importance of convergence, recommends that further studies be undertaken and industry consultation continues with an initial objective being the development of clear HK specific goals for moving to an information technology society.</p>
22. Star TV	<p><i>Structure of fixed telecoms</i></p> <p>Fundamental principles :</p> <ul style="list-style-type: none"> • a clear framework which will promote flexibility and encourage competition • restrictions on entry should be reduced to the minimum to enable effective open entry into the telecommunications market • regulatory environment should be sufficiently flexible to keep pace with the technology and market developments • arbitrary specificity of licensing conditions should be avoided. The number of licences and the range of services should be left to market forces • a free competitive market structure should be sustained and no player enjoys a dominant position <p>Recommends:</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p><i>Moratorium</i></p> <ul style="list-style-type: none"> lifting moratorium for FTNS licences and issue them in accordance with market demands and without limit or universal coverage requirement <p><i>External telecoms - services and facilities</i></p> <ul style="list-style-type: none"> unlimited number of non-exclusive licences for external services and facilities speeding up the pace of liberalisation in order to keep up with the rapid development of technology allowing industry players to apply all forms of new technologies to service the external facilities market, without requirement for replicating conventional types of gateway services permitting new facilities based licensees to have the option of providing either external facilities based services or internal services only no attempt to set arbitrary categories or limits on the services provided by telecommunications and broadcasting industries encouraging the entry of global giants to invest into the local market for benefits including access for foreign capital, expertise and possibly greater savings to users due to the huge capacity of world wide network
23. Sun Hung Kai Properties	<p><i>External telecoms - facilities</i></p> <p>Restricting external facilities based licences to FTNS operators only has a high change of repeating the undesirable scenario in the local fixed line market and hinder the development of competition in external market.</p> <p>An abrupt change in regulatory environment could bring in harmful effects to both consumers and the economy over the medium term. The pace at which the market structure moves towards full liberalisation should be piloted in such a way to ensure that the uncertainty would be minimised.</p> <p>Loose control in issuing external facilities based licences under full liberalisation would encourage "cream-skimming" by new entrants. Committed local operators would be penalised by the substantial increase in investment risk. Both local and foreign companies' appetite for investing in local telecommunications infrastructure would be affected significantly. Hence, it is justified to require external facilities based licensees to invest also in local infrastructure.</p> <p>Liberalisation should be implemented on a step-by-step approach through which competition in the external market is strategically introduced over time to minimise the negative impact to the economy in the medium term and to allow for the potential benefit derived from full competition over the long term. To start with, external services and facilities based licences could be granted to local operators with proven contributions to the development of local infrastructure.</p> <p>Since the regulatory distinction between mobile and fixed services should be removed, the demarcation between FTNS and PMRS/PCS operators in the licensing of external licences is not justified. The comparable capital investment committed by the PMRS/PCS operators. Those PMRS/PCS operators that could meet a set of criteria on the development of the local infrastructure, such as level of investment, fulfilment of performance milestones and service quality, should receive external licences similar to FTNS licensees.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p><i>Fixed vs mobile</i></p> <p>Mobile services emerge as substitutes of traditional fixed line services. The development of technology such as mobile data transmission and fixed-cellular services would continue to broaden the type of services rendered by mobile communication. Rapid technology advancement would blur the difference between mobile and fixed services.</p> <p>In view of the significant role of mobile services and the convergence between mobile and fixed technology, it is imperative to expedite the removal of the existing demarcation between the two and grant full carrier status to mobile operators in aspects such as interconnection charge, self-provisioning of transition backbone and access to buildings, and to treat mobile and fixed operators equally in all future regulatory changes.</p>
24. Teledesic LLC	<p><i>External telecoms - facilities</i></p> <p>Non-geostationary orbit (NGSO) Fixed Satellite Service (FSS) can be used to augment the services of existing communications service providers and to create an instant infrastructure where the economics, terrain or other factors make the alternatives impractical.</p> <p>Facilitating the entry of NGSO FSS providers will help HK maintain its pre-eminence as a communications hub because it will increase broadband capacity and ensure that end-users have access to broadband services in virtually every location in Hong Kong.</p> <p>Facilitating the potential for widespread deployment of NGSO FSS earth stations will enable international interests wishing to locate a facility in Hong Kong to access the same broadband services anywhere in Hong Kong that will be available to them in the rest of the world.</p>
25. Telstra Corporation	<p><i>Moratorium</i></p> <p>The early surrender of the HKTI licence is clearly a windfall for the FTNS licensees.</p> <p>The moratorium has served its purpose in allowing the FTNS licensees to establish in the market. There should be no restrictions on future FTNS licensees and that market forces should dictate the number of participants.</p> <p><i>Structure of fixed telecoms</i></p> <p>For a truly competitive market, there should be no barriers to entry in terms of roll-out obligations, technology requirements, investment levels or ownership restrictions. Artificial limitations may retard the achievement of the wider policy goal of developing the technology infrastructure and information economy of Hong Kong.</p> <p>A limitation on the number of FTNS licensees could well see the development of cartel behaviour. An open licensing policy is a clear signal to the international community that Hong Kong is committed to its liberalisation agenda and its commitments to the WTO under the GATS Agreement on Basic Telecommunications Services.</p> <p><i>External telecoms - services</i></p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>Limiting the number of ISR licensees would conflict with and erode the benefits of the breakthrough of the early surrender of HKTI licence.</p> <p><i>External telecoms - facilities</i></p> <p>Market forces should dictate the entry into the external facilities based sector. The FTNS operators have developed relationships with foreign carriers during their start-up phase. There is nothing to stop those relationships continuing or flourishing in the new environment. Participation by so-called mega-carriers is possible at multiple levels and could well assist the current licensees.</p> <p>In general agreement that new international facilities operators should be expected to provide their own international facilities, but believe that there may be particular circumstances where satisfaction of the three main policy goals of the Government may require regulated access to existing facilities, such as major satellite earth station facilities.</p> <p>Does not dispute that new market participants will need to have a level of investment, but question whether the duplication of infrastructure is warranted which would not facilitate market efficiency.</p> <p>Believe that the intermediate policy options are artificial market determinants and is regressive.</p> <p><i>Fixed vs mobile</i></p> <p>Market segments have become contestable through alternative technologies. As Hong Kong mobile operators currently have direct interconnection with HKTI for external services, there is little justification in restricting those operators from leveraging their radio based infrastructure and customer bases into international services and apply for ISR or external facilities based licences. Fixed/Mobile distinction should be removed for regulatory purposes.</p>
26. The Hong Kong DECT Forum	<p><i>Fixed vs mobile</i></p> <p>Services using Digital Enhanced Cordless Telecommunications (DECT) technology are now being provided in a number of countries which are mobility extensions of the fixed networks and not the provision of mobile networks in themselves. Such services are not possible in HK at present because a system outside of private premises becomes a "public service". Licensing differentiation between fixed and mobile services should be abolished.</p> <p>The non-viability of large area coverage for Cordless Access Services (CAS) should not rule out other applications such as small area coverage such as shopping malls near to high density building, private estates or even areas as small as restaurants which might use it instead of payphones. Licences for providing public services not limited to territory coverage but for small areas could be issued.</p> <p>If changes were made to allow technologies the flexibility of application, the granting of public services licences should be obtainable by anyone and not restricted to large operators.</p> <p>DECT as a system is able to provide very efficient packet data mobility far beyond GSM allowing for ISDN and multimedia applications, allowing dual mode operation to extend the services of GSM and fixed operators. The policy of technological</p>

<u>Person/Organisation</u>	<u>Comment</u>
	neutrality should be safeguarded for the future by not defining too closely the ownership and coverage requirements of future public operators.
27. US Government	<p><i>Moratorium</i></p> <p>Supports ending the limits on the number of FTNS licences. Competition and open markets serve to lower consumer prices and encourage the development of innovative facilities and services. Maintaining restrictions on entry would fail to maximise consumer welfare and inhibit HK's access to the most competitive technologies and services.</p> <p><i>Structure of fixed telecoms</i></p> <p>Supports an approach which does not limit the flexibility of licensees to respond to market conditions and market changes. Providers and consumers benefit most when licences are awarded without limitation on the geographic coverage area. Subsidies necessary to extend service to unserved areas should be explicit and competitively neutral. It would be difficult and administratively burdensome for HK to make a reasoned determination of the extent of the geographic coverage.</p> <p><i>External telecoms - services</i></p> <p>Supports not limiting the number of external voice ISR licences. No economic rationale for any limits. A powerful tool for lowering settlement rates and consumer prices. Also creates hubbing opportunities for HK carriers. Lower prices will stimulate demand for international services, benefiting facilities based carriers as well as resellers. Resale entry creates a viable mechanism for new carriers to enter the market and establish a customer base and market presence, even if they ultimately evolve into successful facilities-based carriers.</p> <p><i>Interconnection</i></p> <p>Supports OFTA's preliminary findings in its review of delivery fee arrangements. Would not see as beneficial the development of an interconnection regime that sets higher rates to terminate international traffic than domestic traffic. Forcing ISR operators to subsidise facilities-based carriers will only inhibit the growth of competition and hamper entry by resellers.</p> <p><i>External telecoms - facilities</i></p> <p>Suggests that there should be no limitations on entry into the external facilities-based market. The intermediate options would benefit only the existing FTNS licensees, unnecessarily limit the benefits of competition, deprive access to critical telecom technologies, seriously undermine HK's effort to become a regional telecom hub, be viewed as contrary to the spirit of the WTO Agreement on Basic Telecommunications and may prove to be detrimental to HK-based businesses that depend on international telecommunications services.</p>
28. Wharf Cable	<p><i>Structure of fixed telecoms</i></p> <p>New T&T and Wharf Cable have established separate networks. The former is concerned with carriage while the latter with television and content provision. Separate telecommunications licences (one for Wharf Cable to provide fixed telecommunications services) would be more appropriate.</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p><i>Interconnection</i></p> <p>Concerns with interconnections problems with Hybrid Fibre Coaxial (HFC) network due to limited spectrum over the coaxial cable sections, its territory-wide broadcast nature and other technical issues relating to integrity and performance.</p> <p>For any interconnection for the provision of telecommunications services, Wharf Cable should be assigned to "facility manage" the cable network.</p>
29. WOL Communications Limited	<p><i>Structure of fixed telecoms</i></p> <p>Low cost telecommunications service is a key issue for Hong Kong to keep its leading position for financial service in this time zone, since more than 40% of the transaction cost for a financial transaction is on telecommunication charges.</p> <p>The Government should restrict the foreign ownership of FTNS and ISR licence holders to less than 50%.</p>
30. WorldCom Asia Pacific	<p><i>Moratorium</i></p> <p>The scoreboard for FTNS competition to date reads very poorly:</p> <ul style="list-style-type: none"> • there is a limited amount of operator number portability being carried out within Hong Kong; • there is an insignificant amount of alternative infrastructure developed over the last three years; • only a few customers are being served in a few buildings; • there is still a strong reliance on reselling HKT's network through either Type II interconnection or commercial deals; • there is a limited amount of innovation and price competition in the local market; and • a limited introduction of new and innovative services on the part of the FTNS operators. <p>Unrestricted domestic infrastructure licensing will ensure that Hong Kong keeps pace with other developed Asia-Pacific economies in order to compete in the global economy. Continuing to insulate the existing FTNS operators, who have made minimal progress in implementing new infrastructure as originally contemplated by the Government, will only harm consumers and the overall economy with no tangible benefits.</p> <p><i>External telecoms - services</i></p> <p>Would like the Government to fully liberalise all domestic and external services and facilities expeditiously in order to ensure that consumers reap the benefits of high quality, low priced, and innovative telecommunications services.</p> <p>Applauds the Government's proposal to permit unrestricted ISR licensing, but cautions that the benefits of such liberalisation will be severely undercut if delivery fees or other unnecessary and unjustifiable subsidies between new entrants and the FTNS operators are imposed on new licensees.</p> <p><i>External telecoms - facilities</i></p> <p>Strongly urges the Government to fully liberalise the provision of international infrastructure. Piecemeal liberalisation will create unnecessary regulatory problems</p>

<u>Person/Organisation</u>	<u>Comment</u>
	<p>and would represent a missed opportunity for consumers with little or no public benefits. The result would be that rather than leading the way in the global economy, Hong Kong would be reduced to the role of follower behind other forward-looking Asian economies that are rejecting protectionism to realise the benefits of full competition.</p> <p><i>Structure of fixed telecoms</i></p> <p>Recommends the adoption of an open licensing process in relation to FTNS competition for the following reasons:</p> <ul style="list-style-type: none"> • competition produces greater consumer benefits and has both tangible and intangible benefits for the community; • telecommunications liberalisation underpins the economy and is important for the continued success of Hong Kong as a service centre; • the increase in demand for international and domestic infrastructure requires risk diversification to ensure that the community's bandwidth requirements are catered for in a timely fashion; • the FTNS operators have had substantial "first mover" benefits and do not need further regulatory protection; • adopting protective measures will isolate Hong Kong in its attempt to maintain its position as a regional hub; while proactive measures to increase competition will make it more attractive business and financial centre; • Hong Kong carriers are afforded access in overseas markets, and Hong Kong must act fairly and reciprocate access to its trading partners; • although callback competition has been prolific, FTNS competition has lagged significantly behind; and • international and regional competition are occurring at an increasing rate and Hong Kong must liberalise further to remain ahead of the competition. <p>Recommends the following structure in relation to FTNS licensing in Hong Kong:</p> <ul style="list-style-type: none"> • it should be easy to apply for an FTNS license, and can be based on the current FTNS licence; • the licence should be a combined services and infrastructure licence for both international and domestic facilities and services; • the licence should be flexible and expandable licence to encourage operators to invest in new technologies and applications to cater for changes in technology; and • the approval process should be straight forward and not subject to approval/consultation by existing operators. <p>This relatively easy and straight forward process of licensing has the following benefits:</p> <ul style="list-style-type: none"> • it creates a minimum of time to complete, and hence new entrants can come to market efficiently; • it is based on the established licensing process that is well understood by the Government; • it allows carriers to make investment decisions that they feel are rational for the market situation; and • it encourages entry to the market.

GLOSSARY

00X Codes

00X codes are access codes for IDD on a call-by-call basis via individual fixed telecommunication networks.

Backbone Link

A backbone link is a high speed line or major connections that form a major pathway within a network.

Base Station

A base station is a fixed radio station for transmitting to and receiving signals from other fixed or mobile radio stations.

Broadband Network

A broadband network is a telecommunications network that allows wide bandwidth telecommunications signals (high speed data or video signals) to be transmitted over the network.

Call-back Operators

Call-back operators are the service providers of call-back services.

Call-back Service

A call-back service is a public telecommunications service which connects its customers to a licensed external public telecommunications service in Hong Kong for the purpose of transmitting and receiving telephone and non-telephonic messages to and from places outside Hong Kong. The service may include an ancillary service for the validation of personal identification numbers (PIN) of customers.

The service employs a "callback" arrangement that a call originating from Hong Kong is converted into a call initiated in the reverse direction from a switch in the destination territory or country where the call rate is lower.

Telecommunications Numbering Plan

A telecommunications numbering plan is a plan which governs and controls the

use of codes and numbers for various telecommunications services in a country. For example in Hong Kong, 00X codes are assigned for international telephone calls while all local telephone numbers have the prefix of '2'.

Data Communications

Data communications refer to the transmission, reception, transfer or validation of data between two or more points.

Exchange Site Space for Co-location

Exchange site space for co-location refers to the space in the telephone exchange of one telecommunication network service operator which will be used by other telecommunication network service operators to place their equipment and cabling facilities.

External Facilities

External facilities are the telecommunications equipment, installation, buildings, services etc. that are established for the purpose of providing an external telecommunications service to the public. Examples are submarine cables and satellite dishes.

External Gateway

An external gateway is a switching terminal that controls the transmission of telecommunications traffic between the local telecommunications networks and external telecommunications networks.

External Public Services

External public services are telecommunications services that are provided to the public by telecommunication means to and from places outside of Hong Kong. In the context of the Framework Agreement for the early surrender of HKTI's exclusive licence, external public services are more particularly referred to

- (a) a public external telephone service;
- (b) a telecommunications service routed in transit via Hong Kong; and
- (c) a public telegram or telex service.

External Voice ISR Licences

These are telecommunications licences for licensing the provision of an external telephonic telecommunications service operated over international private leased circuits (IPLCs) or other external switched telecommunication

services lawfully operated in Hong Kong.

Facilities Based Services

Facilities based services are telecommunications services that require substantial investment in installation, building and equipment etc. for the purpose of providing telecommunications services to the public

Fixed Telecommunications Network Services

Fixed telecommunications network services are the telecommunication services provided between fixed points. An example is the traditional residential telephone service.

Interconnection Arrangement

An interconnection arrangement is a commercial arrangement settled between two operators for interconnection of their services and networks together. It includes the following aspects -

- ¡P carriage services of codes, messages or signals across and between the interconnected networks;
- ¡P provision of physical transmission facilities to connect between networks;
- ¡P billing information reasonably required to enable the other entities to bill their customers etc.

International Simple Resale (ISR) for Facsimile and Data Services

This is an external non-telephonic public telecommunications service operated over international private leased circuits (IPLCs) or other external switched non-telephonic telecommunication services lawfully operated in Hong Kong. Unlike the IVANS service, the ISR service is not required to provide any “added value” to customers.

International Value Added Network Services (IVANS) including Voice Value-added Service

IVANS is an external public telecommunication service which provides customers with enhanced services such as electronic mailbox messaging, data interchange or database access and retrieval etc. These enhanced services are regarded as “added value” to the basic telecommunication services.

Local Loop

Local loop is the fixed telecommunication circuit connecting customer premise equipment to the nearest telephone exchange of the fixed telecommunication

network services (FTNS) operator. The local loop can be either copper wire, optical fibre, or even wireless in the case of using wireless local loop technology in future by FTNS operators.

Local Loop Unbundling

Local loop unbundling is an arrangement between two fixed telecommunication network services operators such that the local loop is leased as an independent item from the switching service.

Managed Data Network Service

A Managed Data Network Service is a telecommunication service operated by a service provider who establishes and manages, on behalf of the customers to the service, circuits and networks for the conveyance of non-voice message for intra-corporate and intra-organisation communications of the customers.

Number Portability

Number portability is the ability for a customer to retain his/her assigned telephone number(s) when changing the subscription from one network operator to another operator.

Radio Spectrum Management

The management of radio spectrum with a view to ensure that the radio spectrum, as a public resource, is available to meet the community's needs and that the various radiocommunication services (including mobile radio services, public mobile radiotelephone, paging and trunked radio services etc.) can be operated without unacceptable level of mutual interference.

Roll-out Commitments

Roll-out commitments are the commitments proposed by network operators which govern the pace of their network implementation.

Self-Provided External Telecommunication Systems (SPETS)

SPETS is an external telecommunication system established and maintained by the licensee for the transmission or reception of the licensee's messages to/from the overseas correspondents. The system is restricted for the licensee's own use and is not permitted to be used for the conveyance of third party's traffic.

Spectrum

Spectrum is a group of radio frequencies.

"Type II" Interconnection

Based on customer's request for switching subscription of services from FTNS operator A to FTNS operator B, FTNS operator B can request FTNS operator A to make "Type II" interconnection arrangement such that the local loop at customer end provided by FTNS operator A can be used to connect with telecommunication facilities of FTNS operator B.

Virtual Private Network (VPN) Services

VPN is an external public telecommunications service which enables a customer to establish a private network over the service for the purpose of carrying out telephonic or non-telephonic communications between members of the corporate group or organisation of the customer.

Way Leaves

Wayleave is the right or permission to be obtained from the relevant authorities for "utility companies" like telephone companies and power companies to put their facilities such as cables on or below government land.

TELECOMMUNICATION ORDINANCE
(Chapter 106)

PUBLIC NON-EXCLUSIVE TELECOMMUNICATIONS
SERVICE LICENCE

EXTERNAL TELECOMMUNICATIONS SERVICES

DATE OF ISSUE :

RENEWABLE :

FEE ON ISSUE : \$750.00

FEE ON RENEWAL : \$750.00 (or such other fee as may be prescribed)

..... of
.....

(hereinafter called "the licensee") is hereby licensed, subject to the conditions hereinafter contained--

- (a) to provide a public service (hereinafter called "the service") more particularly described in the First Schedule hereto; and
 - (b) to possess, establish, use and maintain such radiocommunication apparatus as described in the Second Schedule hereto as may be necessary to provide for service; and
 - (c) to deal in and demonstrate with a view to sale in the course of trade or business, such apparatus or material for radiocommunication as may be necessary to supply customers of the service.
2. This licence shall not be construed as granting any exclusive rights to the licensee in the operation of the service.
 3. This licence replaces any licence, however described, which the Telecommunications Authority may have granted to the licensee in respect of the service.

NOTES

1. It is an offence for the licensee or his customers to operate licensed apparatus in such a manner as to cause direct or indirect interference with any other telecommunication service lawfully carried on, or other apparatus for telecommunication lawfully operated in or outside Hong Kong.
2. Under section 34(4) of the Telecommunication Ordinance (Chapter 106) any licence may at any time be cancelled or withdrawn by the Telecommunications Authority or suspended for such period, not exceeding 12 months as the Authority specifies in the event of any contravention by the licensee of the Ordinance (which includes the regulations thereunder) or of any condition to which the licence is subject.
3. It is an offence upon the expiry or cancellation of this licence not to surrender it to the Telecommunications Authority within 4 weeks of such expiry or cancellation.

GENERAL CONDITIONS

This licence is issued subject to the following conditions -

1. The licensee shall at all times and from time to time during the continuation of this licence operate, maintain and provide the service in a manner satisfactory to the Telecommunications Authority.
2. The licensee shall at all times perform and observe the requirements and except insofar as the Telecommunications Authority may in writing expressly absolve the licensee from such compliance all provisions of the International Telecommunications Convention and all regulations and recommendations annexed thereto or made thereunder as are applicable in Hong Kong.
3. (1) Notwithstanding regulation 8(1) of the Telecommunication Regulations (Cap. 106 sub. leg.) the licensee may with the prior consent in writing of the Telecommunications Authority transfer this licence and any permission or any right or benefit arising therefrom.

- (2) Any such consent shall be subject to such conditions as the Telecommunications Authority may impose.
 - (3) Should any such transfer be made with such consent as aforesaid the licensee shall cause a true copy of the instrument effecting the same to be transmitted to the Telecommunications Authority within 2 months of the date thereof.
4. If the licensee possesses, uses, establishes or maintains apparatus for radiocommunications the following additional conditions shall apply--
- (a) each fixed or base station shall be used only at the address and with emissions at the frequencies and of the classes and characteristics specified in the Second Schedule hereto, and with such power and aerial characteristics as are specified in the Second Schedule in relation to the class and characteristics of the emission in use;
 - (b) the apparatus comprised in each fixed or base station shall at all times comply with the technical and performance standards as may be prescribed by the Telecommunications Authority and specified in the Second Schedule;
 - (c) the apparatus comprised in each fixed, base or mobile station (being a mobile station used by the customer of the licensee) shall be of a type approved by the Telecommunications Authority and shall be so designed, constructed, maintained and operated that its use does not cause any avoidable interference with any radiocommunications;
 - (d) each fixed or base station shall be operated only by the licensee or a person authorized by the licensee in that behalf. The licensee shall not permit or suffer any person not so authorized to have access to the apparatus comprised in each fixed or base station. The licensee shall ensure that persons operating each fixed or base station observe the conditions of the licence at all times;
 - (e) the licensee -
 - (i) shall not make any change -
 - (A) in any fixed or base station; or
 - (B) in the address at which each fixed or base station is installed, without the prior approval in writing of the Telecommunications Authority;
 - (ii) shall return this licence to the Telecommunications Authority for amendment when a change referred to in sub-subparagraph (i) has been effected;

- (f) if power for the working of any fixed or base station is taken from a public electricity supply, no direct connection shall be made between the supply mains and the aerial;
 - (g) if any fixed or base station aerial crosses above or may fall or be blown onto any overhead power wire (including electric lighting and tramway wires) or power apparatus it shall be guarded to the reasonable satisfaction of the owner of the power wire or power apparatus concerned;
 - (h) the licensee shall take all reasonable measures to ensure that customers of the service do not cause interference to other users of radiocommunications and shall take all the necessary measures to stop such interference as may occur;
 - (i) the licensee shall cease to offer service to a customer thereof if instructed to do so by the Telecommunications Authority;
 - (j) the licensee shall, if so required, provide the Telecommunications Authority with a list of the names, addresses and other details requested by the Telecommunications Authority of the customers of the service annually on a date specified by the Telecommunications Authority by notice to the licensee;
 - (k) when any person ceases to be a customer of the licensee the licensee shall notify him, in such manner as the Telecommunications Authority may require, that he is no longer exempt from the licensing requirements of the Ordinance in relation to the apparatus used by him as a customer.
5. The apparatus operated by the licensee shall be operated only on such radio frequencies as the Telecommunications Authority may assign to the licensee and the Telecommunications Authority may refuse to assign further frequencies or require the licensee, by notice to him, to cease to operate the apparatus on any frequency previously assigned to him if in the opinion of the Telecommunications Authority the licensee is not making efficient use of that frequency.
6. The Telecommunications Authority may, by giving not less than 12 months' notice in writing to the licensee, require him upon such date as may be specified in the notice to cease using any frequency previously assigned to him by the Telecommunications Authority and to use such new frequency as the Telecommunications Authority may designate.
7. The licensee shall not enter into any agreement or arrangement whether legally enforceable or not which shall in any way prevent or restrict competition in relation to the operation of the service or any other telecommunication service licensed by the Telecommunications Authority.

SPECIAL CONDITIONS

1. The licensee shall comply with the Telecommunication Ordinance (Cap. 106) ("the Ordinance"), Regulations made under the Ordinance, conditions and special conditions of this licence, or any other instruments which may be issued by the Telecommunications Authority under the Ordinance.
2. The grant of this licence does not authorize the licensee to do anything which infringes any exclusive right to provide telecommunication circuits or services granted under the Ordinance or any other ordinance.
3. In connecting the service to a public telecommunication network operated under a licence granted under the Ordinance, the licensee shall comply with any technical specification prescribed by the Telecommunications Authority for the purposes of ensuring technical compatibility, avoiding technical harm to network or preventing safety hazards to personnel in the connection of telecommunication apparatus to that network.
4.
 - (1) On receiving reasonable prior written notice from the Telecommunications Authority, the licensee shall allow the Telecommunications Authority and any person authorized in writing by him for the Telecommunications Authority's own purposes to enter and inspect the offices, places and premises in Hong Kong where the licensee has installed telecommunication equipment, or used for the provision of the service, to verify that the licensee is in compliance with the conditions and special conditions of this licence and the Ordinance.
 - (2) The licensee shall provide and maintain, at no less than the reasonable technical standards set by the Telecommunications Authority, facilities to enable the Telecommunications Authority to inspect, test, read or measure, as the case may be, any telecommunication installations, equipment (including, but not limited to testing instruments) or premises used or to be used for the provision of the service, and may at its option, and shall on the written request of the Telecommunications Authority, and subject to the provision by the Telecommunications Authority of reasonable prior written notice, provide a representative to be present at any such inspection, testing, reading or measurement.

- (3) On giving reasonable prior written notice, the Telecommunications Authority may direct the licensee to demonstrate that the service complies with the technical requirements imposed by the Ordinance and Regulations or any other instruments which may be issued by the Telecommunications Authority under the Ordinance and the licensee shall comply with such directions.
 - (4) For the purpose of paragraphs (2) and (3), the licensee shall provide adequate testing instruments and operating staff.
5.
 - (1) The licensee shall furnish to the Telecommunications Authority, in such manner and at such times as the Telecommunications Authority may request in writing, such information related to the business, including financial information, accounts, traffic information, technical configuration, circuit routing and other records or information as the Telecommunications Authority may reasonably require in order to perform his functions under the Ordinance and this licence and to ensure the licensee's compliance with the conditions and special conditions of this licence and the Ordinance.
 - (2) Where the Telecommunications Authority proposes to disclose information obtained and the Telecommunications Authority considers that the disclosure would result in the release of information concerning the business or commercial or financial affairs of the licensee which disclosure would or could reasonably be expected to adversely affect the licensee's lawful business or commercial or financial affairs, the Telecommunications Authority will give the licensee a reasonable opportunity to make representations on the proposed disclosure before the Telecommunications Authority makes a final decision whether to disclose the information.
6. The licensee shall permit the Telecommunications Authority or any person authorized by him in writing for the Telecommunications Authority's own purpose to inspect and if required to make copies of records, documents and accounts relating to the licensee's business for the purpose of enabling the Telecommunications Authority to perform his functions under the Ordinance and this licence and to ensure the licensee's compliance with the conditions and special conditions of this licence and the Ordinance.
7. Except with the consent in writing of the Telecommunications Authority, the licensee shall adopt non-proprietary technical standards or standards prescribed by the Telecommunications Authority for all telecommunication functions for:
 - (a) customer access to the service: and

- (b) interconnection between the service and other telecommunication networks and services.

In this connection, a “non-proprietary technical standard” means:

- (a) the standard is fully published;
 - (b) equipment meeting the standard is available from alternative suppliers on a competitive basis; and
 - (c) permission to use any intellectual property rights associated with the standard may be readily obtained at a reasonable cost.
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- 8.
 - (1) The licensee shall not disclose information of a customer except with the consent of the customer, which form of consent shall be approved by the Telecommunications Authority, except for the prevention or detection of crime or the apprehension or prosecution of offenders or except as may be authorized by or under any law.
 - (2) The licensee shall not use information provided by its customers or obtained in the course of provision of service to its customers other than for and in relation to the provision by the licensee of the service under this licence.
 - 9.
 - (1) The licensee shall take all reasonable steps to ensure that any metering equipment used in connection with the service operated under this licence is accurate and reliable. The licensee shall, in relation to the metering system used for the provision of the service, keep such records and make them available for inspection by the Telecommunications Authority.
 - (2) Upon written request of the Telecommunications Authority, the licensee shall conduct tests on metering equipment to assess its accuracy, reliability and conformity to the technical standards, if any, specified by the Telecommunications Authority. The licensee shall submit the test result to the Telecommunications Authority within 14 days after the date of the test or such other longer period as the Telecommunications Authority may determine.
 - 10.
 - (1) For services offered generally to the public in Hong Kong, the licensee shall publish and charge no more than the tariffs for the service operated under this licence. The tariffs shall include the relevant terms and conditions for the provision of the service.

- (2) Publication shall be effected by -
 - (a) placing a copy in a publicly accessible part of the principal business place and other business premises of the licensee;
 - (b) sending a copy to the Telecommunications Authority on or before the date on which a new tariff is introduced; and
 - (c) sending a copy to any person who may request it. The licensee shall not levy a charge greater than that is necessary to cover reasonable cost involved.
 - (3) Where the licensee provides customer equipment integral to the provision of the service to its customers, the tariffs shall clearly state the price of the customer equipment separately from the charges for the service.
11. The licensee shall not use the service, and shall endeavour to prevent the service from being used by any user, for the transmission of unsolicited advertising information or unsolicited promotional information.
12. (1) (a) A licensee shall not engage in any conduct which, in the opinion of the Telecommunications Authority, has the purpose or effect of preventing or substantially restricting competition in the operation of the service or in any market for the provision or acquisition of telecommunication installation, service or apparatus.
- (b) Conduct which the Telecommunications Authority may consider has the relevant purpose or effect referred to in sub-paragraph (a) includes, but is not limited to -
- (i) collusive agreement to fix the price for any apparatus or service;
 - (ii) boycotting the supply of goods or services to competitors;
 - (iii) entering into exclusive arrangements which prevent competitors from having access to supplies or outlets;
 - (iv) agreements between licensees to share the available market between them along agreed geographic or customer lines;
 - (v) predatory pricing.
- (2) In particular, but without limiting the generality of the conduct referred to in paragraph (1), a licensee shall not -

- (a) enter into any agreement, arrangement or understanding, whether legally enforceable or not, which has or is likely to have the purpose or effect of preventing or substantially restricting competition in any market for the provision or acquisition of any telecommunication installations, services or apparatus;
 - (b) without the authorization of the Telecommunications Authority, make it a condition of the provision or connection of telecommunication installations, services or apparatus that the person acquiring such telecommunication installations, services or apparatus also acquire or not acquire any other service or apparatus either from itself or of any kind from another person; or
 - (c) give an undue preference to, or receive an unfair advantage from, a business carried on by it or an associated or affiliated company, service or person if, in the opinion of the Telecommunications Authority, competitors could be placed at a significant competitive disadvantage or competition would be prevented or substantially restricted within the meaning of paragraph (1).
- 13. The licensee shall conform to any numbering plan made or approved by the Telecommunications Authority and any directions given by the Telecommunications Authority in respect of the numbering plan.
- 14.
 - (1) The licensee shall comply with any directions given in writing by the Telecommunications Authority in relation to the use of a telecommunications number translation device for access to the service.
 - (2) The licensee shall bear all the costs and financial losses incurred due to full compliance with the directions mentioned in paragraph (1).
 - (3) In this condition, “telecommunications number translation device” shall mean a device which translates a number input via the normal dialing pad into another number for access to specified destinations or services, but does not include a device which generates such a number upon input through a special function key or a combination of special function keys and the normal dialing pad. The “normal dialing pad” means the dialing pad comprising the buttons for digits 0 to 9, and for “*” and “#”.

15. (1) The service must be operated over external leased circuits supplied by an Fixed Telecommunication Network Services (FTNS) Licensee at the Hong Kong end or over other external switched telecommunication services lawfully operated in Hong Kong at the Hong Kong end.
- (2) Connections between the facilities of the licensee in Hong Kong for the service and the users in Hong Kong shall be made through dedicated circuits or switched circuits provided by an FTNS Licensee or Public Radiocommunication Service (PRS) Licensee.
16. (1) The licensee shall maintain an up-to-date record of the configuration of the system used for the provision of telecommunication services. This record shall include the following details and shall be supplemented by schematic diagrams where the Telecommunications Authority considers appropriate:
 - (a) the description, nature, specification and configuration of building blocks, including embedded software and information programmed into the switch or remote computer equipment and switches in or connected with the system, the interconnection between the building blocks and all incoming and outgoing telecommunication circuits connected to the system.
 - (b) For switched circuits mentioned in paragraph (a) above, information identifying the circuits such as telephone number and circuit identification number of the provider of the circuit and the licensee and the type, quantity and the special features and functions available on or in connection with these circuits, for example call forwarding.
 - (c) For non-switched circuits or dedicated circuits mentioned in paragraph (a) above, circuit identification information, type, quantity and terminating locations.
 - (d) Information on the routing of messages between the system and an external gateway means of telecommunication (including, without limitation, an external gateway switching facility) duly licensed under the Ordinance. The information shall include details on any intermediate nodes, switches or service providers involved in the routing of calls and routing information programmed into the switch or any remote computer equipment.
- (2) A copy of the record certified to be correct and up to date at the time of submission by a director of the licensee shall be submitted to the Telecommunications Authority at such intervals as may be specified by the Telecommunications Authority and the licensee shall not permit any deviation of its system from the record which has been submitted to the Telecommunications Authority and for which an acknowledgment of receipt has been issued by the Telecommunications Authority.

- (3) If the Telecommunications Authority notifies the licensee that the record submitted is not satisfactory to him and specifies the nature of amendments to be made, the licensee shall make such amendments according to the schedule as specified by the Telecommunications Authority and submit an amended record to the Telecommunications Authority within 30 days of the date of such notice.
- 17. The licensee shall not operate the service between Hong Kong and any place unless the law and policies at that place permits or does not prohibit the operation of such service.
- 18.
 - (1) The licensee shall not enter into any agreement or arrangement with a service supplier of international public switched services in a place outside Hong Kong the effect of which is to effectively and substantially distort competition in the supply of external services between that place, or another place, and Hong Kong.
 - (2) For the avoidance of doubt, “agreement or arrangement” in paragraph (1) above includes an agreement, arrangement, understanding or the like in relation to payments between service suppliers whether by way of the international accounting methods or accounting rates, revenue divisions or terminating charges, or any other like charges.
 - (c) Where, following consultation with the licensee, the Telecommunications Authority reasonably concludes that an agreement or arrangement substantially distorts competition in contravention of paragraph (1), the Telecommunications Authority may give directions to the licensee for the purpose of ensuring compliance with paragraph (1) and the licensee shall comply with such directions given.
- 19. The licensee shall not carry out any refiling of traffic in Hong Kong unless the prior approval of the Telecommunications Authority in writing is obtained. For this purpose “refiling” means the re-routing as outgoing traffic of any incoming traffic not destined for Hong Kong.
- 20. The licensee shall at all times comply with the requirements of -
 - (a) the International Telecommunication Convention and the regulations and recommendations annexed to it;
 - (b) the provisions of the ITU-R and ITU-T Recommendations made by the International Telecommunication Union that are applicable to Hong Kong; and
 - (c) any other international convention, agreement, protocol, understanding or similar document of which the Telecommunications Authority gives notice to the licensee,

except to the extent that the Telecommunications Authority may in writing exempt the licensee from such compliance.

21. Where directed by the Telecommunications Authority in writing, the licensee shall implement such accounting practices as specified by the Telecommunications Authority. Such accounting practices are to be consistent with generally accepted accounting practices, where applicable, and may include (but are not limited to) accounting practices which allow for the identification of the costs and charges for different services or types or kinds of services offered by the licensee.
22.
 - (1) Where directed by the Telecommunications Authority, the licensee shall pay to the Hong Kong Telephone Company Limited, or other licensees, as the case may be, its relevant share of the Universal Service Contribution to assist the Hong Kong Telephone Company Limited, or those licensees, to meet their Universal Service Obligations, if any.
 - (2) Any Universal Service Contribution shall be subject to annual review by the Telecommunications Authority as to description and quantum and the licensee shall pay its relevant share of such Universal Service Contribution as the Telecommunications Authority may direct following a review. On the completion of an annual review, the Telecommunications Authority will supply the licensee such information as the Telecommunications Authority is reasonably able to supply, subject to any duty of confidence, as to the basis on which the Universal Service Contribution is calculated.
 - (3) For the purpose of this special condition, the following definitions shall apply -
 - (a) Basic Service means, subject to the Ordinance, the provision of
 - (i) a public switched telephone service including the service connection, continued provision of connectivity, provision of a dedicated telephone number, an appropriate directory listing (except where the customer otherwise directs), a standard telephone handset without switching capacity (except where the customer elects to provide the handset), standard billing and collection services and relevant ancillary services and facilities necessarily utilized by the licensee; and
 - (ii) a reasonable number of public payphones including payphones located within publicly or privately owned facilities to which the public have access, whether on a 24 hours basis or restricted to certain hours or days of the week; and
 - (iii) a reasonable number of public payphones, designed for ease of effective use by the hearing impaired; and

- (iv) a reasonable number of public payphones, designed for access by the physically disabled, including but not limited to those persons using wheelchairs; and
 - (v) operator provided directory enquiries, fault reporting, service difficulty and connection services; and
 - (vi) a tropical cyclone warning service; and
 - (vii) a thunderstorm and heavy rain warning service; and
 - (viii) a flood warning service; and
 - (ix) access to a number or numbers for emergency services; and
 - (x) such other services, subject to the Ordinance, as the Telecommunications Authority may include.
- (b) Universal Service Contribution is that sum calculated in accordance with a formula adopted annually by the Telecommunications Authority, to ensure that the Hong Kong Telephone Company Limited, where it has a Universal Service Contribution, and any other licensee with such an obligation, as the case may be, receives a fair contribution from other fixed telecommunication network services licensees towards the costs, net of attributable revenue, of serving customers with Basic Service whom would otherwise not be served because it is not economically viable to do so but who are required to be served under the Universal Service Contribution.
- (c) Universal Service Contribution is the obligation to provide, maintain and operate the relevant network in such manner as to ensure that a good, efficient and continuous Basic Service is reasonably available, subject to the Ordinance, to all persons in Hong Kong and to provide that Basic Service in that manner.
23. The licensee, or the Telecommunications Authority, may at their discretion make the terms and conditions of this licence, including any special conditions, publicly available in any manner they think fit.

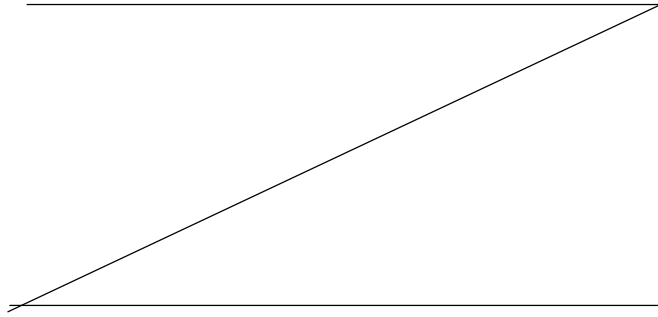
FIRST SCHEDULE

Description of Service

1. The service is an external public telecommunications service operated over external leased circuits supplied by an FTNS Licensee at the Hong Kong end or over other external switched telecommunication services lawfully operated in Hong Kong at the Hong Kong end.
2. In the above description of service, "external" means communications with places outside Hong Kong.
3. For the avoidance of doubt, the service shall not include any of the following:
 - (a) except with the prior approval of the Telecommunications Authority in writing given under Special Condition 19, a telecommunications service routed in transit via Hong Kong;
 - (b) the provision to customers a telecommunication circuit between any termination point in Hong Kong (including, without limitation, a radiocommunication facility or cable termination facility) and one or more points outside Hong Kong, and any means of telecommunication capable of facilitating such a circuit.
4. Customers at the Hong Kong end and/or at the distant end may be connected to the service through any public switched telecommunication network or dedicated circuits.

*** End of the First Schedule ***

SECOND SCHEDULE



*** End of the Second Schedule ***

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For and on behalf of the
Telecommunications Authority