

NEW T&T HONG KONG LIMITED

**Submission in relation to Licensing Framework for
Third Generation Mobile Services**

**An Industry Consultation Paper
21 March 2000**

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**Submission in relation to Licensing Framework for
Third Generation Mobile Services**

**An Industry Consultation Paper
21 March 2000 (the "Consultation Paper")**

1 INTRODUCTION

- 1.1 New T&T welcomes the Consultation Paper from the Telecommunications Authority (TA) in relation to licensing framework for third generation mobile services (3G).
- 1.2 We note the TA's intention to invite applications for 3G licences in the last quarter of year 2000¹. We also note the TA's intention to conduct another round of industry consultation process.
- 1.3 We recognise the need for a timely introduction of an industry-wide acceptable and effective licensing framework for 3G mobile services in Hong Kong which will be in line with global trend on 3G technological and market development. 3G is promising to take the telecommunication world by storm with its revolutionary services. It will fundamentally change people's life style and the ways businesses have traditionally been carried out, and it will provide further stimulus for further competition and economic growth in Hong Kong.
- 1.4 Whilst we agree that growth in the mobile telecommunications market may be in part attributable to the pro-competition approach adopted², we believe there is a need for closer regulatory intervention for 3G services to ensure that the consumer will benefit from advanced and innovative mobile services.
- 1.5 We also submit that the TA should be prepared to take the time needed to clearly define the Government policy objectives of 3G, and the right licensing option and regulatory framework which would be best suited for the development of 3G. This is an important policy decision for the TA to take and which requires the TA to balance many different interests. Nevertheless the TA should be encouraged to take a robust and market driven approach.
- 1.6 This submission sets out New T&T's response to the following issues raised in the Consultation Paper:
- Standard Issues (Section 2)
 - Spectrum Issues (Section 3)
 - Licensing Issues (Section 4)
 - Regulatory Issues (Section 5)

¹ Consultation Paper, paragraph 1.6

² Consultation Paper, paragraph 1.2.

2 STANDARD ISSUES

3G Standards in Hong Kong - Single or Multi-standards?

- 2.1 The TA invites view on his proposal to open to the prospective operators to use any IMT-2000 standards within their assigned 3G frequency bands for 3G mobile services, subject to the TA being satisfied that the various technical standards are compatible with each other from the users' point of view.³
- 2.2 New T&T generally supports the TA's proposal as set out in paragraph 2.9 of the Consultation Paper. We agree with the TA's main consideration to ensure that customers can easily switch from one network to another to obtain similar services and to maximise convenience in using roaming services without having to change the mobile terminals.⁴
- 2.3 We note OFTA's policy to adopt open and non-proprietary standards in telecommunications⁵. We believe a technology-neutral approach should be adopted in licensing 3G mobile services. Standards recommended by ITU should be followed as far as possible.

Technical Issues

- 2.4 However we believe the following technical issues should be considered before implementation of the TA's proposal.

Radio Technology and Mobile Terminals

- 2.5 We note that the ITU has failed to adopt one common standard for the radio interface of the 3G services⁶. We are concerned that compatibility will be an issue if 3G operators adopt different radio technologies under which "dual-mode" mobile terminals may be required for customers to switch from one network to another. The development and commercial availability of such "dual-mode" mobile terminals needs to be considered when evaluating the radio technologies.
- 2.6 There may be radio interference problem when using 3G services in some parts of the New Territories near the border with mainland China due to possibly different radio frequency systems in Hong Kong and China respectively. This needs to be addressed when conducting radio planning in Hong Kong.

³ Consultation Paper, paragraph 2.9.

⁴ Consultation Paper, paragraph 2.9.

⁵ Consultation Paper, paragraph 2.5.

⁶ Consultation Paper, paragraph 2.7.

- 2.7 Different guard band requirements may be required for different radio technologies. Thorough consultation with 3G equipment vendors is required to clarify the technical requirements.

3 SPECTRUM ISSUES

Availability of Spectrum for 3G System

- 3.1 New T&T notes the TA's plan to assign 2x60 MHz paired spectrum and some 25 MHz to 29 MHz unpaired spectrum available for terrestrial 3G mobile services in Hong Kong at this stage⁷.
- 3.2 We believe the overall spectrum reserved for 3G services should be reviewed in line with local market demand as well as global 3G technology and market developments.

Additional ITU IMT-2000⁸ Spectrum

- 3.3 We note that the TA will consult the industry again on the allocation of the IMT-2000 expansion bands for 3G services in Hong Kong when there is further development in the ITU⁹.
- 3.4 As a number of bands including some bands currently in use by the 2G systems are being considered by the World Radiocommunication Conference (WRC) for IMT-2000 expansion, the result of the WRC discussion in May 2000 may have an implication on issues such as spectrum allocation in Hong Kong, 2G/3G roaming arrangement and hence the licensing options for 3G services.
- 3.5 The TA should consider the result of the WRC forum in a timely manner before the licensing scheme for 3G services is finalised.

3G services in 2G Spectrum

- 3.6 The Consultation Paper¹⁰ states that "*[t]o allow existing 2G mobile operators to evolve their networks to 3G and to be in line with the adoption of the technology neutrality policy discussed in paragraphs 2.5-2.9. the TA intends to open to the existing 2G operators, whether they are **successful or not** [emphasis added] in obtaining 3G spectrum, to use any IMT-2000 standards within their assigned 2G frequency bands for 3G mobile services when equipment is commercially available in the market, subject to the TA being satisfied that the various technical standards are compatible with each other from the users' point of view and that the interest of existing 2G consumers is adequately safeguarded.*".

⁷ Consultation Paper, paragraph 3.4.

⁸ International Mobile Telecommunications - 2000, an international 3G standard developed by ITU

⁹ Consultation Paper, paragraph 3.5.

¹⁰ Consultation Paper, paragraph 3.8.

- 3.7 New T&T is concerned with the proposal to allow the existing 2G mobile operators to unconditionally evolve their network to offer 3G services (although these may not be full range of 3G services). We believe this is because the existing 2G operators would in effect be "guaranteed" a right to offer at least some if not all 3G or 3G-compatible services even if they fail to obtain a 3G licence or decide not to apply for a 3G licence.
- 3.8 This "guarantee" of rights would create unfairness to potential applicants for a 3G licence who would be required to commit to make substantial investment in rolling out their networks and services.
- 3.9 We expect this problem of undue advantage to the existing 2G operators who fail to secure a 3G licence to become profound especially during the initial phase of competition when the full range of 3G services are not yet available. More importantly, this would defeat the objective of competitive licensing for 3G services and devalue the new 3G licences.
- 3.10 We therefore submit that the existing 2G mobile operators should not be given any undue advantage or "guarantee" of right.

Band Plan for 3G Services

- 3.11 The TA is of the view that Hong Kong should adopt a 3G band plan that is in compliance with the ITU IMT-2000 allocation.¹¹
- 3.12 We support the TA's view on band plan for 3G services. This is based on our understanding from equipment vendors that there would likely be ITU standard compatible 3G equipment available in the market in the near future. As compatible equipment types become available, it would be technically feasible to implement international 3G roaming services.

Individual Operator's / Bandwidth Requests

- 3.13 The Consultation Paper states that "*[b]ased on the considerations in paragraphs 3.13-3.18, the TA is of the view that a new 3G operator will need 2 x 15 MHz paired spectrum in order to allow the implementation of three-layer hierarchical cell structure and the provision of full range of 3G services including the high speed multimedia services at 2 Mbps in an indoor environment. For incumbent 2G operators, the TA considers that less spectrum would be required because they can upgrade their 2G systems and use them to provide the macro layer. In this case, the minimum spectrum per existing operator is 2 x 10 MHz. If the foregoing spectrum allocation is adopted, between four to six licences can be issued for 3G services, depending on the licensing model adopted (see paragraph 4.5 below). The TA invites*

¹¹ Consultation Paper, paragraph 3.12.

comments from the industry on the proposed minimum 3G spectrum allocation to new and existing operators.”¹²

- 3.14 New T&T supports the TA's proposed minimum 3G spectrum allocation. We agree that a new 3G operator will need more spectrum than an incumbent 2G operator. We agree with the rationale put forth in paragraphs 3.13 to 3.18 of the Consultation Paper.
- 3.15 Further we are of the view that the minimum spectrum allocation as proposed by the TA is consistent with UMTS¹³ Forum's recommendation of 2x15 MHz (paired) and 5 MHz as the preferred minimum spectrum requirement per public UMTS operator in the initial phase in order to provide full range of UMTS services¹⁴.

Allocation of TDD Spectrum¹⁵

- 3.16 The Consultation Paper states that “[t]he TA therefore considers that there may be no immediate need to make a decision on the allocation of the TDD spectrum. However the TA will reserve the TDD spectrum in the 3G band for use by the licensed 3G operators and will further consult these operators when it is timely to allocate this spectrum. The TA invites views from the industry on the proposed allocation of TDD spectrum.”¹⁶
- 3.17 We believe that Internet-based services such as Internet access or video streaming would be the major 3G services initially. These services are highly asymmetric in terms of traffic pattern and bandwidth requirements. Although the standardisation of TDD for unpaired band segment is currently behind that of TDD for paired bands, we understand from industry sources that TDD compliant equipment would be available when 3G services are introduced.
- 3.18 In our view, in order to maximize the bandwidth efficiency to cater for these asymmetric services, there is a merit for the TA to consider allocating the TDD spectrum to the 3G operators during initial assignment. In any event, according to the Consultation Paper, the TDD spectrum will be reserved for 3G operators.

¹² Consultation Paper, paragraph 3.19.

¹³ Universal Mobile Telecommunications System

¹⁴ UMTS Forum, Report no. 5, Minimum Spectrum demand per public terrestrial UMTS operator in the initial phase, 8 September 1998

¹⁵ Time Division Duplex

¹⁶ Consultation Paper, paragraph 3.21.

4 LICENSING ISSUES

Need for New Entrants

- 4.1 The Consultation Paper states that “[i]n view that 3G technologies may provide the scope for innovative service developments and, as a new entrant would not be constrained by any legacy network elements, it would have more flexibility in developing its network for new service applications and providing new input to the benefit of the industry and consumers. The TA therefore considers that the introduction of new entrants to the 3G market will be beneficial to market development and to consumers.”¹⁷
- 4.2 New T&T strongly supports the TA's view that the introduction of new entrants to the 3G market will be beneficial to market development and to consumers. It is important that the right licensing and regulatory framework is put in place to ensure that the consumers will benefit from the introduction of 3G services.
- 4.3 As explained in paragraph 3.14 above, new entrants will likely construct a completely new full-layer network and offer full range of 3G services including high speed multi-media services at 2 Mbps in an indoor environment. Unlike the incumbent operators who are, to a certain extent, constrained by their legacy networks, the new entrants will be free to develop a full range of innovative 3G services which will not be constrained by any legacy network problems. This allows flexibility in developing their networks for new service applications which would bring benefits to the industry and the consumers as a whole.

Incumbent Operators

- 4.4 The Consultation Paper states that “[t]he TA is therefore of the preliminary view that there are benefits in allowing incumbent operators to bid for the 3G services, but they would not be given any priority over new entrants in the bidding process. Views and comments are sought on this issue.”¹⁸
- 4.5 New T&T strongly agrees with the TA that the incumbent operators should not be given any priority over new entrants.
- 4.6 For any competition to start and grow it is important that there is a level playing field for all players. The regulatory framework must be put in place to create a level playing field.

¹⁷ Consultation Paper, paragraph 4.3.

¹⁸ Consultation Paper, paragraph 4.4.

- 4.7 We do not preclude the possibility of economies of scale and efficient migration paths between 2G and 3G mobile networks. We are concerned that the incumbent 2G operators particularly those with substantial market power could engage in conducts which would lead to restriction of competition. Further the incumbent 2G operators would have an inherent advantages over the new entrants in many aspects including established cell sites in physically constrained space, established customers, network, operation, customer servicing and superior information. This immediately creates an unlevelled playing field for new entrants.
- 4.8 Given the inherent advantages enjoyed by the incumbent operators over the new entrants they should not be given any priority or undue preferences in the licence bidding process. In fact we believe there must be stringent conditions imposed on the incumbent operators to ensure that the new entrants will not be unduly disadvantaged including mandatory requirement to provide roaming services to new entrants; prohibition on exclusive dealing with equipment vendors.

Licensing Options

- 4.9 The TA has considered 4 licensing options (Option 1,2,3,4) in the Consultation Paper and is of the view that “[t]he TA has not yet formed a view on the preference for any one of the above licensing options and would like to seek comments from the industry prior to making a final decision.”¹⁹
- 4.10 Before attempting to arrive at a conclusion or recommendation as to which option(s) among Options 1 to 4 would appear to be the most preferred licensing option for 3G services, we recognise the need to divide the core issue in question into 2 parts for analysis as follows, i.e.
- a) *Should there be different spectrum for incumbent operators and new entrants?*
- a) *Should part of the 3G spectrum be reserved for new entrants only?*

Part a) Different spectrum for operators?

Option 1 & 3

- 4.11 Under both Options 1 and 3 all 3G licensees would be allocated with the same 2x15 MHz paired spectrum, with one 5 MHz unpaired reserved for each licensee for subsequent allocation. Therefore 4 licences can be accommodated under each of these two options.

¹⁹ Consultation Paper, paragraph 4.6.

Individual operators' spectrum requirements

- 4.12 As explained in the Consultation Paper²⁰ and analysed in paragraphs 3.13 and 3.14 above, a new 3G operator will need 2 x 15 MHz paired spectrum in order to allow the implementation of three-layer hierarchical cell structure and the provision of full range of 3G services including high speed multimedia services at 2 Mbps in an indoor environment. For incumbent 2G operators, less spectrum would be required because they can upgrade their 2G systems and use them to provide the macro layer. In this case, the minimum spectrum per existing operator is 2 x 10 MHz.

Overseas Examples

- 4.13 Overseas experience (for examples Sweden, the Netherlands²¹ and UK²²) also suggests that there should be differentiation in spectrum allocation to new 3G entrants as opposed to the incumbent 2G operators.
- 4.14 The Consultation Paper²³ also indicates that equipment manufacturers may respond to market demand by producing equipment in the existing 2G spectrum for provision of 3G services. Evolutionary upgrades from 2G to 3G standards could be achieved within the 2G spectrum.

Result of Part a)

- 4.15 To conclude, there should be different spectrum for incumbent operators and new entrants. We believe more spectrum should be allocated to new 3G operators than to the existing 2G operators based on the principle of efficient allocation of scarce spectrum resources. Therefore Options 1 and 3 are not the preferred licensing options.

*Part b) Part of spectrum reserved for new entrants only**Options 2 & 4*

- 4.16 As regards the remaining 2 options, i.e. Options 2 and 4, only Option 4 satisfy both parts a) and b) above. Option 2 satisfies part a) but fails part b).

New entrants will bring stimulation, innovation and benefits

- 4.17 As stated in paragraphs 4.1 to 4.3 above, the introduction of new entrants to the 3G market will be beneficial to market development and to consumers.

Inherent advantage to incumbent operators

²⁰ Consultation Paper, paragraph 3.18.

²¹ UMTS Forum, "IMT-2000 Licensing Conditions & Status, A selected regional overview" [Issue date 5 May 2000] states that 2x15MHz for 2 new entrants, 2x10MHz for 3 others (Sweden, The Netherlands);

²² Consultation Paper, paragraph 3.13.

²³ Consultation Paper, paragraph 3.6.

- 4.18 As discussed in paragraphs 4.5 to 4.7 above, given the inherent advantages enjoyed by the incumbent operators over the new entrants, regulatory measure should be incorporated to ensure a level playing field among all players.

Collusion among incumbent operators

- 4.19 New entrants should be allowed to enter the market so as to minimise the effect of market dominance and anti-competitive conduct by big players.

Overseas Examples

- 4.20 Countries which reserve part of the 3G spectrum only for the new entrants include Sweden²⁴, the Netherlands and UK²⁵.

Other licensing options possible?

- 4.21 Although the above analysis focuses on the 4 licensing options set out in the Consultation Paper, we do not preclude the possibility of existence of some other equally or even more preferred licensing option(s). We believe that the present consultation on licensing framework for 3G services should not limit itself to discussion of the 4 options set out in the Consultation Paper. Rather, the TA should also explore some other alternative licensing options, if any. For example, some new options in line with ITU's latest development in spectrum allocation.

Summary

- 4.22 We encourage the TA to adopt Option 4 as the preferred licensing option for 3G mobile services based on the principles of equity, efficient allocation of spectrum resources and further competition as a result of further new entrants.
- 4.23 We submit that in order to satisfy the above principles to their fullest extent, the TA should allocate as a minimum equal split of available 3G spectrum to both the new entrants and incumbent operators for licensing purpose.

²⁴ UMTS Forum, "IMT-2000 Licensing Conditions & Status, A selected regional overview" [Issue date 5 May 2000] states that 2x15MHz for 2 new entrants, 2x10MHz for 3 others (Sweden, The Netherlands);

²⁵ Consultation Paper, paragraph 3.13.

Operator Selection Arrangement

- 4.24 The Consultation Paper states that “..... the TA considers that spectrum auctioning *should not be applied to 3G licensing* (emphasis added). *Instead the TA intends to continue with the well-established approach to select 3G operators by evaluation based on merit.*”²⁶ and that “*The TA invites comments from industry on his intention to select 3G licensees by evaluation based on merit.*”²⁷
- 4.25 The TA appears to have dismissed the spectrum auctioning approach and intends to stick with his established approach which is evaluation based on merit (or "beauty contest"). New T&T believes the TA should not preclude the market-based approach of licensing by spectrum auctioning. Other regulatory bodies have gone through similar decision making process as the TA is now going through. Some have opted for evaluation based on merit, some have opted the auctioning approach and some are undecided at this stage. (see Table 1 below). Clearly there are advantages and disadvantages with either approaches. (see Table 2 below).
- 4.26 We understand this is one of the most important decisions which the TA has to take which requires different interests to be balanced. This is by no means an easy task. Clearly there are two very acutely opposing views and the public is very much divided. We believe it is important that the TA takes the time necessary to consider each of the approaches very carefully. We suggest that the TA initiates further and fuller industry consultation on this issue when the other less controversial issues is resolved. Whichever approach the TA ultimately decides he must be clear as to the Government policy objectives in relation to 3G and he must ensure that the right regulatory framework will be put in place to meet these objectives.

Overseas experience

- 4.27 The Consultation Paper²⁸ has named 2 countries, Finland and Sweden which have adopted or supported this approach of so-called “beauty contest”. A table of comparison showing the list of countries which have adopted or supported either the approach of beauty contest or spectrum auctioning is given below:

²⁶ Consultation Paper, paragraph 4.13.

²⁷ Consultation Paper, paragraph 4.14.

²⁸ Consultation Paper, paragraph 4.9.

Table 1

Selection Mechanism ²⁹	
<u>Beauty Contest</u>	<u>Auction</u>
Denmark	Australia
Finland	Austria
France	Belgium ³⁰
Ireland (Hybrid)	Germany
Japan	Ireland (Hybrid)
Portugal	Italy
Spain	Netherlands
Sweden	New Zealand
	Switzerland
	UK
	USA

4.28 It is interesting to note that selection based on merit approach has been increasingly replaced by spectrum auctioning in many other parts of the world.

²⁹ UMTS Forum, IMT-2000 Licensing Conditions and Status, A selected regional overview, Issue date: May 22, 2000.

³⁰ Auction likely.

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4.29 We have attempted to put together a matrix showing the comparison of "Beauty Contest" and spectrum auction as follows:

Table 2

<u>"Beauty Contest"</u>	<u>Spectrum Auction</u>
<p>Advantages</p> <ul style="list-style-type: none"> • The TA decides based on his criteria, greater say in the technology to be deployed, network and service rollout • more scope to implement policy objectives directly* • more extensive criteria to assess the proposal from different perspectives[#] • more indepth understanding of proposer's business plans • encourages innovative and advanced services 	<p>Advantages</p> <ul style="list-style-type: none"> • the process is transparent • the process is based on objectivity • the process is simple and efficient • inherent incentive for operators to rollout network and services • the speed of competition to market will benefit consumers • encourages innovative and advanced services • incentivise cost efficient use of spectrum • licences to entities placing highest value on spectrum* • higher proceeds as government revenue for public interest
<p>Disadvantages</p> <ul style="list-style-type: none"> • less transparent • licences may place lower value on spectrum* • favours incumbents, so reduces interest internationally* • less incentive for efficient use of spectrum[#] • licensees may "trade" licences through corporate restructuring[#] • premium for licences eventually reflected in bid price for entity with spectrum right[#] • lengthy and cumbersome administrative process • uncertain outcome due to some degree of subjective judgement on merits by the TA • the TA may not be the best judge of the proposal • free give away scarce spectrum resources, may devalue licences • absence of substantial revenue to government • uncertainty of benefits to consumers 	<p>Disadvantages</p> <ul style="list-style-type: none"> • harder to "shape" the market - if that is the goal* • possible criticism in the market that costs may be passed onto consumers - but this is unlikely in a competitive market as the proceeds are a sunk cost in economic terms* • big players out-bid small operators and become dominant[#] • speculators may push spectrum price to a high level and may turn radio spectrum into a tradable commodity, delay service rollout[#]

[#]: The TA's views expressed in the Consultation Paper

*: NM ROTHSCHILD & SONS, Third Generation Mobile Spectrum Auction, The UK Experience: "A Whole New Ball Park" May, 2000

- 4.30 It should be noted that there are possible solutions to some of the demerits of each approach. Indeed some of the disadvantages may or may not be substantiated. It is also possible that a mini "beauty contest" precedes that of spectrum auction so as to take advantage of the 2 approaches.

5 REGULATORY ISSUES

Similar Regulatory Framework for Mobile Telephone Services Applies to 3G?

- 5.1 The Consultation Paper states that “[t]he 3G mobile systems have the capability of providing broadband multimedia services. It is expected that the scope of services that will be provided by 3G platforms will be substantially more extensive than that of the 2G platform. As the operation and the scope of the 3G services are significantly different, the TA would like to seek the views of the industry on whether the 3G services should be regulated under a similar regulatory framework as that for the mobile telephone services at present. In particular, the TA invites views on whether any safeguarding measures should be introduced or strengthened to preserve effective competition in the 3G market.”³¹
- 5.2 We are unable at this time to give any solid view on whether the 3G services should be regulated under a similar regulatory framework as that for the 2G mobile services at present until there is further information on the operation and scope of the 3G licence. Although at this stage we have not seen any compelling reason for the difference.
- 5.3 We believe that safeguarding measures should be introduced or strengthened to preserve effective competition in the 3G market particularly where there are very strong incumbent operators. We believe the amendments as proposed in the Telecommunication (Amendment) Bill 1999, when enacted will resolve some of our concerns. However the problem we foresee would be in terms of policing and enforcement by the TA which we have experienced. Unless and until the TA takes a proactive approach in regulating market conduct, anti-competitive conduct and abuse of dominance as we have seen in the wireline FTNS market will continue to prevail in the 3G market.
- 5.4 As a minimum we believe the following safeguards should be incorporated by the TA:
- mandatory requirement for incumbent operators to provide roaming service and other facilities (such as access to cell sites) to new entrants, the price and terms and conditions should be open and transparent and non-discriminatory;

³¹ Consultation Paper, paragraph 5.7.

- prohibition of 3G licensees from entering into exclusive dealing with equipment vendors as this would restrict the source of supply to other licensees;
- non-discriminatory access to network operators by service providers. The process and terms and conditions should be open and transparent; and
- price control on incumbent operators with 3G licence at least initially.

Timing to review the current framework in view of fixed-mobile convergence?

- 5.5 The Consultation Paper states that “[t]he TA would like to seek views and comments from the industry on the necessity to maintain a regulatory distinction between the fixed services and the mobile services and whether there is a need to maintain separate forms of licences for the FTNS and mobile telephone services.”³²
- 5.6 New T&T believes it would be premature to have fundamental changes to the status of regulatory and licensing regimes for fixed and mobile services respectively. We have not seen any compelling reason to do so. Further we are concerned that with the proposed unified regulatory framework this would give the wrong message that the Government is intending to cut short the moratorium on granting of further wireline-based FTNS licences.

Domestic roaming between 2G and 3G networks

- 5.7 “The TA invites views from the industry before deciding on whether such an obligation should be imposed on the 2G network operators if they are successful in obtaining 3G licences, and if so, whether such an obligation should be a short-term one and the applicable charging principles.”³³
- 5.8 We strongly support the TA to impose an obligation on the 2G network operators who have successfully obtained 3G licences, to offer roaming services to other new 3G operators for a period until the new entrants have rolled out their networks to a defined extent. To ensure that competition will not be stifled the TA should lead the industry to develop a set of acceptable charging principles on cost-based applicable to the roaming services offered and set a dead line for commencement of such services regardless of whether the relevant commercial agreement is in place between the parties. We believe the charges, relevant terms and conditions should be non-discriminatory, open and transparent.
- 5.9 We consider that the TA’s assistance is required to help new 3G operators to get access to potential base station buildings in order to shorten the implementation lead time and accelerate network coverage.

³² Consultation Paper, paragraph 5.12.

³³ Consultation Paper, paragraph 5.13.

- 5.10 *“The TA invites views from the industry on whether such a roaming arrangement from 2G networks to 3G networks should be implemented. The TA would also like to seek views on the technical and commercial implications of such a roaming arrangement and whether there are technical and operational difficulties in roaming from 2G to 3G networks.”*³⁴
- 5.11 We consider that the issue of roaming from 2G to 3G network is in effect very similar to the concept of separation of service provision from network operation which will be discussed in the next section. The 2G operators would become service providers providing services over the 3G network infrastructure operated by the licensed 3G network operator. Due to premature and ongoing development of dual-band (2G/3G) handsets as well as the radio interface standards, we are not able to give any solid views on the technical and commercial implications of such roaming arrangement. In any event, we anticipate that the TA’s assistance may be required in facilitating the commercial negotiation between the 2G and 3G operators for the roaming/ resale arrangements in question.

Separation of service provision from network operation

- 5.12 *“The TA invites views and comments from the industry on the concept of separating service provision from network operation and whether it should be implemented in the 3G mobile services.”*³⁵
- 5.13 We consider that there is a market justification for separating service provision from network operation and it should be implemented in the 3G mobile services.
- 5.14 We agree with the TA’s view set out in the Consultation Paper that separating service provision from network operation in the 3G mobile services would enhance competition in the services market and provide customer with more choice and variety of service and price packages. Service provider would develop a wider range of value-added and multimedia services such as mobile access to the internet, innovative data applications over mobile networks etc. to customers and customers would be able to enjoy wider geographical coverage if service providers team up with more than one mobile network operators.³⁶
- 5.15 There are enormous market opportunities and benefits of choices and variety of services to the public with separation of service provision and network operation. We consider it necessary for the TA to exercise regulatory control to guide the proper development of such potential service market for those companies who elect to enter the 3G service provision business only through channels such as resale of 3G operators’ services or value-added service/content provision. Regulatory control in this area is also required to minimise anti-competitive acts or collusion among big players who play dual roles of both network operator as well as service provider.

³⁴ Consultation Paper, paragraph 5.14.

³⁵ Consultation Paper, paragraph 5.18.

³⁶ Consultation Paper, paragraph 5.16.

- 5.16 The development in the Internet Service Providers is an excellent show case for the success of separating service providers and network operation. We encourage the TA to take similar approach to that in the Internet market.

Mobile Number Portability

- 5.17 *“The TA intends to set out MNP as a mandatory requirement in the licensing conditions of the forthcoming 3G licences.”*³⁷
- 5.18 We believe the MNP requirement to be imposed on the 3G licensees is in line with the existing practice adopted for the 2G mobile services.

Numbering Requirement

- 5.19 *“The TA intends to allocate the leading digit “6” primarily for 3G services.”*³⁸
- 5.20 Noted.

6 CONCLUSION

- 6.1 New T&T supports the TA's proposed minimum 3G spectrum allocation. We agree that a new 3G operator will need more spectrum than an incumbent 2G operator.
- 6.2 New T&T strongly agrees with the TA that the incumbent operators should not be given any priority over new entrants. For any competition to start and grow it is important that there is a level-playing field for all players. The regulatory framework must be put in place to create a level playing field.
- 6.3 Given the inherent advantages enjoyed by the incumbent operators over the new entrants they should not be given any priority or undue preferences in the licence bidding process. In fact we believe there must be stringent conditions imposed on the incumbent operators to ensure that the new entrants will not be unduly disadvantaged including mandatory requirement to provide roaming services to new entrants; prohibition on exclusive dealing with equipment vendors.
- 6.4 We encourage the TA to adopt Option 4 as the preferred licensing option for 3G mobile services based on the principles of equity, efficient allocation of spectrum resources and further competition as a result of further new entrants.

³⁷ Consultation Paper, paragraph 5.19.

³⁸ Consultation Paper, paragraph 5.20.

- 6.5 We believe the TA should not preclude the market-based approach of licensing by spectrum auctioning. We believe it is important that the TA takes the time necessary to consider each of the approaches very carefully. Clearly there are two acutely opposing views and the public is very much divided. We suggest that the TA initiates further and fuller industry consultation on the issue of operator selection when the other less controversial issues is resolved. Whichever approach the TA ultimately decides he must be clear as to the Government policy objectives in relation to 3G and he must ensure that the right regulatory framework will be put in place to meet these objectives.
- 6.6 We strongly support the TA to impose an obligation on the 2G network operators who have successfully obtained 3G licences, to offer roaming services to other new 3G operators for a period until the new entrants have rolled out their networks to a defined extent. To ensure that competition will not be stifled the TA should lead the industry to develop a set of acceptable charging principles on cost-based applicable to the roaming services offered and set a dead line for commencement of such services regardless of whether the relevant commercial agreement is in place between the parties. We believe the charges, relevant terms and conditions should be non-discriminatory, open and transparent.
- 6.7 We consider that there is a market justification for separating service provision from network operation and it should be implemented in the 3G mobile services.
- 6.8 We agree with the TA's view set out in the Consultation Paper that separating service provision from network operation in the 3G mobile services would enhance competition in the services market and provide customer with more choice and variety of service and price packages. We consider it necessary for the TA to exercise regulatory control to guide the proper development of such potential service market. Regulatory control in this area is also required to minimise anti-competitive acts or collusion among big players who play dual roles of both network operator as well as service provider.

Submitted by
New T&T Hong Kong Limited

Date: 22 May 2000