

# **M1'S RESPONSE TO IDA'S PUBLIC CONSULTATION PAPER ON THE PROPOSED FRAMEWORK FOR THE REALLOCATION OF SPECTRUM IN THE 900MHz AND 1800MHz FREQUENCY BANDS**

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# **M1'S RESPONSE TO IDA'S PUBLIC CONSULTATION PAPER ON THE PROPOSED FRAMEWORK FOR THE REALLOCATION OF SPECTRUM IN THE 900MHz AND 1800MHz FREQUENCY BANDS (“FRAMEWORK”)**

## **Background**

1. M1 has been providing cellular mobile services to the Singapore market since 1 April 1997 and in 2000, we launched our international telephone services. In February 2005, M1 took the lead in introducing 3G technology and launching our 3G services. We launched the M1 Broadband service in December 2006, reaffirming M1’s commitment to offer customers high quality services that complements mobility with high speed and wide area coverage for data intensive applications in the home, office and mobile broadband market.
2. Today, the Singapore mobile market is already highly competitive and saturated, exceeding 111% penetration. A significant majority of the mobile subscribers in Singapore (more than 3.7 million or 75%<sup>1</sup>) are still 2G customers. As such, in making any regulatory decision that may impact the stable and continuous provision of such services, customer interest in terms of minimising any disruption of services and inconvenience is of paramount importance.
3. In the mobile industry, long term planning is critical as significant capital investments are required. A clear and transparent spectrum policy framework is essential not only towards creating an attractive investment climate, but also in allowing mobile operators to develop and innovate in a defined and stable environment, having certainty in their spectrum allocations.
4. M1’s view is that the issue of renewal/reallocation of existing spectrum in the 900MHz and 1800MHz frequency bands (“2G spectrum”) cannot be looked at in isolation and requires careful and balanced assessment of the implications of the various spectrum-related decisions. These decisions will have a direct impact and ramifications on the rate of investment, innovation and growth of the mobile industry. We believe that the framework for reallocation of spectrum should have the following policy objectives:
  - Ensure continuity of services for customers, minimising any unnecessary service disruption or inconveniences;
  - Provide a stable investment environment; and
  - Ensure the efficient use of Singapore’s scarce spectrum resources.
5. While IDA seeks to preserve flexibility of the regulatory process to accommodate changing market and technological conditions and ensure optimal exploitation of spectrum resources, it is also critical to strike the right balance between promoting consumer interests and ensuring certainty for market players, so as to achieve the best outcome for all stakeholders.

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<sup>1</sup> IDA, *Statistics on Telecom Services*, URL:<http://www.ida.gov.sg/Publications/20070209134246.aspx>, June 2007

## Key Concerns

6. M1 welcomes the opportunity to respond to the issues raised in the consultation paper. We would like to highlight a number of our concerns for IDA's consideration and would be obliged to further engage with IDA on the matter. In summary, M1 submits that<sup>2</sup>: -
- a. Spectrum in the 900MHz and 1800MHz frequency bands should be preserved for the primary purpose of providing Public Cellular Mobile Telecommunication Services ("PCMTS") and there is clear need of the current spectrum for the continued provision of services to existing 2G customers;
  - b. In a well functioning market, a 'greenfield' allocation opens up the market to significant risks that are not necessary to achieve market efficiency nor in the best interests of the public, operators or investor community: -
    - Risks of service disruption to existing mobile users (domestic and inbound roamers) are particularly significant without any attendant clear long term benefits for the consumer from a re-assignment of spectrum as existing operators are already providing comprehensive network coverage and innovative services fully utilising the current spectrum;
    - Reduction in business certainty and erosion of investor confidence which may distort economically efficient investment decisions; and
    - Significant costs to existing operators in having to re-plan their networks should they lose some spectrum or have to relocate to a different band. Such efforts will take time and require substantial infrastructure re-investment.
  - c. So far, no regulator has implemented a 'greenfield' allocation on the expiry of existing GSM licences, as they have not seen the need to do that from the perspective of competition and consumer interests. M1 is similarly convinced that there is no compelling reason to adopt such an approach in the Singapore market, unless it can be shown that there are clear benefits that far outweigh the ensuing costs;
  - d. Conversely, IDA's specific concerns on ensuring efficient spectrum allocation and usage can be adequately addressed without a 'greenfield' allocation:
    - **Opportunity for interested buyers to procure a scarce resource** - There is sufficient spectrum currently available in the 1800MHz, 2100MHz and E-GSM bands whether for 2G or 3G services should there be interest from existing operators or new entrants without disrupting the current allocation of spectrum.
    - **Avoid perpetuating legacy imbalances** - All operators were aware of existing spectrum allocations upon entering the market, and have thus designed networks accordingly. Attempting to address legacy imbalances will be disruptive to operations without incremental value or efficiency to the industry. For example, in a recent allocation exercise of GSM spectrum in Hong Kong, operators which would be considered as disadvantaged due to their existing spectrum allocation have, in fact, advocated that the

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<sup>2</sup> More details are available in the main sections

prevailing allocation under their existing spectrum rights remain intact as there is the recognition that the potential cost savings would be overwhelmed by the network disruption from a reassignment of spectrum.

- ***Ensure most efficient use of spectrum*** - In a competitive market, operators will already have the incentive to ensure efficient usage of spectrum to reap the benefits of their investments. With mandatory service obligations, regulators are also empowered to seek the return of any unused spectrum or spectrum that is not efficiently utilised. The existing arrangement achieves the most efficient use of spectrum in terms of spectrum planning, management, coordination with international partners and minimising the need for guard bands through contiguous blocks of spectrum.
7. IDA's past policy and conduct in relation to spectrum management has been consistent with a policy of licence renewal or extension on reasonable terms so as to enable the operators to perform their licensed services. IDA's consultation paper of 28th June 2007 states the requirement for operators to ensure that they would be able to provide service continuity to existing customers. This is reflective of IDA's concerns on potential disruption to existing end user services in a greenfield allocation. In exercising its discretion, we would thus urge IDA to take into account all relevant applicable circumstances including the intents of the licences, the legitimate expectations of operators and best international practice.
  8. We respectfully submit that owing to documentary intents, coupled with a legitimate expectation of residual rights for renewal or extension of the spectrum rights; a right of first refusal has been, or ought to be, granted in connection with the existing spectrum rights. As the Spectrum Rights explain, the spectrum was allocated to us to enable us to operate systems to provide 2G services under the 2G FBO Licence. Under condition 15.1 of the 2G FBO Licence, it is further provided that we shall be provided with the necessary frequencies to enable the effective and efficient operation of the systems and the provision of the services. Accordingly, the loss of the spectrum rights or a significant portion of it, may effectively erode, and possibly frustrate, an important substratum of the 2G FBO Licence.
  9. It should be additionally noted that we have invested hundreds of millions to provide 2G services under the spectrum, it being the expectation that we would enjoy a renewal or extension of the Spectrum Rights upon their expiry upon reasonable terms, and at the least not be required to undertake costly network adjustments to migrate to alternative spectrum. We respectfully submit that a conferment of residual rights by way of a preference (at least until the expiry of the 2G FBO Licence in 2017) is not only consistent with international best practice, but also mirrors the approach taken by IDA with respect to the 3G spectrum right and licence, both of which will concurrently expire in 2021.
  10. Bearing in mind that to date, M1 has invested significantly in our network infrastructure, M1 would urge IDA to award existing operators 'first right of refusal' based on the policy objectives of the reallocation framework, i.e.
    - service continuity and maintained quality for existing consumers;
    - efficient use of spectrum; and
    - improved investment climate and business certainty.

11. We also put forth to IDA that the duration of the spectrum rights should be renewed for 15 years or more, in line with international practice, to provide a reasonable period for operators to recover their network investments. At a minimum, it should be harmonised with the duration of our existing 2G FBO licence, to enable us to fulfil our service obligations under the licence.
12. The rest of our response is structured in five sections to address IDA's policy questions: - allowable uses for the spectrum in the 900MHz and 1800MHz frequency bands, available spectrum, the proposed allocation framework, proposed pricing and the consultation on the 800MHz band.

## I. ALLOWABLE USE FOR THE SPECTRUM

*The allowable uses for the spectrum in the 900MHz and 1800MHz should be the provision of PCMTS using 2G or 3G technologies*

13. M1 strongly supports the proposal to allow the 900MHz and 1800MHz frequency bands to be used for the provision of PCMTS using 2G or 3G technologies, or GSM family of technologies that share a similar platform. We believe all services and technologies deployed in these frequency bands should be for the primary provision of PCMTS, in order to make most efficient use of the scarce national resource.
14. The availability of spectrum on the 900MHz and 1800MHz bands for GSM will allow the continuation of 2G services for over 3.7 million users as of June 2007<sup>3</sup>. Currently these bands are used exclusively by the three local operators for the provision of nationwide PCMTS based on GSM technologies.
15. We welcome the flexibility to operate higher speed data services on these frequency bands and would emphasize that the harmonisation of such technologies on specific frequency bands is essential to accommodate both inbound and outbound roamers. We suggest that a technology neutral policy be adopted for the reallocation of the frequency bands. This will allow the industry to evolve in line with the demands of such higher speed data services and other technologies. Any technology to be considered for deployment in these bands must be aligned with international standards.
16. Concerning future uses of spectrum, we note that both the 900MHz and 1800MHz frequency bands are primarily used for the provision of 2G services. We believe this will be the case for a number of years in the near term as the transition from 2G to 3G is gradual. M1 is, therefore, most keen to ensure that it can continue to deliver high quality 2G services to its consumers.
17. With regards to requirements for additional spectrum, with new technologies such as LTE, more bandwidth may be required than that currently assigned to M1. According to equipment vendors, LTE (an evolution from the current 3G standard) will be available in 2009/2010. LTE is able to make use of a wider channel bandwidth of up to a 20MHz to provide a peak downlink throughput of 100Mb per second. It is capable of higher spectral efficiency than current 3G technology. We envisage this to result in a possible need for additional spectrum in the future.

*M1 does not see the need for reserving additional spectrum for new specific technologies beyond what is currently available*

18. M1 is in agreement with the WiMAX forum that there is no real consideration of deployment of wireless broadband in either the 900MHz or 1800MHz bands in the foreseeable future.
19. We also view that there is no foreseeable demand for low power GSM in Singapore particularly since in-building coverage is already quite good in Singapore. This is in consideration that there has been no significant international demand to date, with only the U.K. regulator, the Office of Communications (“OFCOM”) acknowledging low power GSM spectrum licences in the 1800MHz band. So far, only one licence holder has launched a commercial service<sup>4</sup>.

<sup>3</sup> IDA, *Statistics on Telecom Services*, URL:<http://www.ida.gov.sg/Publications/20070209134246.aspx>, June 2007

<sup>4</sup> Telecom Markets, *Low Power GSM*, 27 February 2007

20. Hence, our view is that there is no need at this point to reserve additional spectrum for the deployment of new specified services within the 900MHz and 1800MHz frequency bands. This would be inefficient use of a scarce resource that could otherwise be employed for the provision of PCMTS.

## II. AVAILABLE SPECTRUM

***There is sufficient available spectrum whether for 2G or 3G services for new entrants or existing operators in the 1800MHz, 2100MHz and E-GSM bands***

21. We note that there is currently unallocated spectrum, namely 20MHz on the 1800MHz band, 15MHz on the 2100MHz and part of the 10MHz on the extended GSM band. All of these bands have sufficient unallocated spectrum should a new player express interest in entering the market or an existing 2G operator require more spectrum for expansion.

***It is reasonable to allocate unused spectrum in lots of paired 5MHz per lot***

22. Going forward in the allocation of unused spectrum, it is reasonable that the allocation be done in lots of paired 5MHz spectrum per lot. This is a common practice internationally, one of the reasons being that allocating lots of paired 5MHz per lot allows for UMTS (WCDMA) 3G technology to be placed on the 900MHz and 1800MHz frequency bands in the future. Used spectrum should, however, continue to be allocated as per the current allocation.

***The number of guard bands necessary in the 900MHz and 1800MHz frequency bands can be minimised by allocating contiguous blocks of spectrum***

23. We understand that for optimum use of the spectrum, the size of guard bands should be minimised and that a fair assignment of the responsibility for the provision of guard bands should be established.
24. The fundamental issue is that the number and width of guard bands necessary can be minimised by the allocation of contiguous blocks of spectrum. Operators with contiguous blocks of spectrum will be able to co-ordinate their own frequencies of both 2G and 3G services thereby minimising their size while preventing interference. Ensuring the minimum number of guard bands necessary will maximise spectrum available for the provision of PCMTS and other services.
25. In the case when there is a need to co-ordinate guard bands, M1 agrees that the second option that IDA has proposed, whereby operators would be required to provide guard bands according to a certain principle, is the fairest arrangement for the provision of guard bands between spectrum lots of different operators.

### III. PROPOSED ALLOCATION FRAMEWORK

***M1 is of the strong belief that a ‘greenfield’ methodology is an inappropriate method of allocation as stated in the proposed allocation framework***

26. There has been no major international precedent in which a jurisdiction has implemented a ‘greenfield’ allocation upon expiry of existing spectrum rights as regulators take cognisance of the substantial risks involved. Instead, key developed markets that are predominantly GSM-based have awarded first right of refusal to existing 2G operators, thus avoiding the potential costs and disruption associated with a ‘greenfield’ allocation.

***There will be a long lead time to complete necessary network redeployment and migration***

27. The estimated time required for completion of network redeployment and migration is difficult to determine given the many components required for the exercise. However it is clear that it would be a lengthy and complicated process, particularly relating to the common telecommunications infrastructure in the Mass Rapid Transit (MRT) and various road tunnels as well as in-building sites. Based on the tunnel projects currently in progress or being undertaken, it would take at least 18 to 24 months to install new telecommunication infrastructure in the tunnels. Similarly, for in-building coverage, the time taken to replace or retrofit the systems will be long drawn, depending on the building owners’ approval process.

***There may be significant disruption during the transition period***

28. In the event where major frequency re-tuning is required, temporary frequencies will be required to minimise the disruptions to consumer services. The requirements on the amount and duration of the temporary spectrum depend largely on the extent of the differences between the current and the newly allocated spectrum. However even if there are temporary frequencies available, this does not mean that there will not be adverse impact on user experience.
29. Any disruption to service would also affect in-bound roamers in Singapore. GSM in-bound roamers utilising the mobile networks will encounter any disruptions to services experienced by domestic GSM subscribers whilst the network redeployment exercise is underway. There were 4.9 million visitors to Singapore between January and June 2007. Any service disruption will not reflect well on Singapore’s image as an efficient and well-managed country.
30. Spectrum migration will also have material adverse impact on corporations and major government agencies that have invested in customised terminal equipment designed to operate on specific frequencies of their network operators.

***There are heavy costs that could result from ‘greenfield’ allocation that may trickle down to the consumer***

31. Should existing operators be reallocated spectrum that is not held under their existing rights, significant costs will have to be incurred for the extensive frequency migration and network adjustments. The costs will include capital expenditure for the replacement of networks and equipment to align with new frequency bands, operating expenditure related to additional base stations. These costs are unnecessary, particularly if the market is already operating efficiently. The industry would suffer from additional costs that could then trickle down to the end users.



***We suggest an alternative allocation framework that grants first right of refusal to existing operators in line with international best practice***

32. These unnecessary costs and disruptions can be avoided by awarding first rights of refusal to existing operators and M1 is of the view that this will result in optimal allocation of spectrum for the industry going forward.
33. IDA should consider international best practices adopted by other regulators in terms of appropriate allocation frameworks that award first rights of refusal to existing 2G operators and provide certainty for industry players. The reallocation frameworks of regulators from key developed markets which are predominantly GSM-based are shown in the exhibit below. Their methodologies take into account user interests as well as the provision of a stable investment climate. The views of a sample of respondents to public consultations held by the regulator are also noted where appropriate.

**Exhibit 1: Recent reallocation frameworks adopted by regulators and respondent comments in key GSM developed markets**

	Regulator	Respondents
<p><b>Hong Kong</b></p> <p>(Office of the Telecommunications Authority, “OFTA”)</p>	<ul style="list-style-type: none"> <li>• OFTA awarded ‘right of first refusal’ to nine incumbent GSM and PCS mobile operators, granted on the expiry of each operators respective licences<sup>5</sup></li> <li>• This decision was made as the great majority of respondents to OFTA’s consultations supported the proposal</li> <li>• The right of first refusal was also granted on the basis that the operators had been utilising their existing spectrum rights efficiently</li> <li>• OFTA noted the importance of “providing a stable investment environment and ensuring continuity of consumer services” in reaching its decision</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SmarTone</b>, one of the largest mobile operators in HK, stated that “an efficient operator utilising spectrum efficiently should be granted first right of refusal upon licence renewal”<sup>6</sup> with the view that efficient use of spectrum should be the primary factor in deciding if an operator be granted this right</li> <li>• <b>The Consumer Council</b> supported the ‘right of first refusal’ be awarded to existing GSM licensees as this “would ensure an environment for the stable and continuous provision of existing services and for minimal disturbance to mobile users”<sup>7</sup></li> <li>• <b>Kowloon Canton Railway, KCRC</b>, Hong Kong’s leading railway system provider, also strongly agreed that ‘right of first refusal’ be awarded to existing GSM operators that would provide “good support</li> </ul>

<sup>5</sup> OFTA, *Further Consultation on Licensing of Mobile Services on Expiry of Existing Licences for Second Generation Mobile Services*, 19 March 2004

<sup>6</sup> SmarTone-Vodafone, *Submission to Consultation Paper on Proposed Spectrum Policy Framework*, January 2007

<sup>7</sup> Consumer Council, *Submission to Consultation Paper on Proposed Spectrum Policy Framework*, January 2007

		to [Hong Kong's] economic development and social well-being". In addition, it would prevent "severe service disruption causing confusion and inconvenience to the public" <sup>8</sup>
<p><b>New Zealand</b></p> <p>(Commerce Commission of New Zealand, "CCNZ")</p>	<ul style="list-style-type: none"> <li>• CCNZ is offering to renew spectrum management rights of incumbent operators for spectrum in current utilisation and/or deemed to have incurred significant investment<sup>9</sup>. Only remaining, vacant spectrum is to be auctioned</li> <li>• Therefore 'first right of refusal' is granted to incumbents for any spectrum in efficient use</li> <li>• CCNZ recommended this methodology to avoid incumbents "unreasonably stranding their existing investment" which would result in loss for the industry</li> <li>• CCNZ also highlighted that offering incumbents sufficient spectrum for existing services, "avoids undue disruption to services...and maximises the opportunity for investment in the spectrum"<sup>10</sup></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Telecom NZ</b>, an incumbent mobile operator, indicated significant impacts to consumers should the incumbents lose management rights. Telecom highlighted that "<i>consumers are likely to incur costs when switching...to an existing provider operating on different frequency bands</i>". Telecom also indicated that incumbents may have to "write-off of sunk assets, whereas a new entrant does not", and thus the regulator should consider this in its reallocation framework</li> <li>• <b>Vodafone NZ</b>, the second incumbent, indicated that its extensive investment, approximately 2 billion NZ\$ at time of consultation, should not be compromised in the interests of the industry. Vodafone also notes an auction process "<i>does not achieve one of the key objectives of the renewal process that is to provide certainty to existing rights holders</i>"<sup>11</sup></li> </ul>
<p><b>France</b></p> <p>(Autorité de Régulation des Télécommunications, "ART", now "ARCEP")</p>	<ul style="list-style-type: none"> <li>• ART renewed spectrum rights of identical allocation of spectrum held under existing rights</li> <li>• This effectively awarded first right of refusal to GSM operators</li> <li>• Neither new entrants nor existing operators expressed interest in a</li> </ul>	

<sup>8</sup> MTR, *Submission to Consultation Paper on Proposed Spectrum Policy Framework*, January 2007

<sup>9</sup> Office of the Minister of Communications, *Arrangements for the Renewal of Radio Spectrum Management Rights Used for Cellular Services*, 4 April 2007

<sup>10</sup> CCNZ, *Arrangements for the Renewal of Radio Spectrum Management Rights Used for Cellular Services*, 4 April 2007

<sup>11</sup> Vodafone NZ Ltd., *Submission to the Ministry of Economic Development*, 25 August 2006

<sup>12</sup> ART, *Consultation publique sur le renouvellement des autorisations GSM*, January 2004

	<ul style="list-style-type: none"> <li>• ‘greenfield’ allocation</li> <li>• The allocation was finalised after the regulator deemed there was insufficient demand of spectrum from new entrants</li> <li>• One of ART’s key policy objectives was that the renewal of GSM licences “ <i>will make it possible to prolong the success of the second generation of mobile telephony in France to consumers’ benefit</i>”<sup>12</sup></li> </ul>	
<b>Germany</b> (Bundesnetzagentur)	<ul style="list-style-type: none"> <li>• Bundesnetzagentur simply plans to renew all existing GSM licences on request, of identical allocation of spectrum as held under existing rights</li> <li>• The regulator will harmonise the expiry dates of all GSM licences</li> <li>• The regulator decided not to provide any opportunity for new bidders</li> <li>• Neither new entrants nor existing operators expressed interest in a ‘greenfield’ allocation on expiry of existing licences</li> </ul>	
<b>Norway</b> (Norwegian Post and Telecom Authority, “NTP”)	<ul style="list-style-type: none"> <li>• Similar to the French regulator, NTP launched a public consultation on the renewal of GSM 900 spectrum licences to determine the level of interest in the licences</li> <li>• Neither new entrants nor existing operators expressed interest in a ‘greenfield’ allocation</li> <li>• The result was that incumbents were granted spectrum rights of identical allocation of spectrum held under existing rights</li> <li>• No redistribution of spectrum occurred</li> </ul>	
<b>Portugal</b> (Autoridade Nacional de Comunicações, “ANACOM”)	<ul style="list-style-type: none"> <li>• ANACOM renewed the incumbents spectrum rights of identical allocation of spectrum held under existing rights</li> <li>• The regulator’s key objectives for the renewal framework included “<i>to better safeguard consumers’ interests</i>”<sup>13</sup> and to improve network quality</li> </ul>	

<sup>13</sup> Analysys, *A Study of the Considerations and Circumstances of GSM licence renewals in EU Countries*, 2 September 2005

	<ul style="list-style-type: none"> <li>ANACOM decided that no redistribution of spectrum amongst existing operators would occur, in line with the policy objective of increasing network quality</li> </ul>	
<b>United Kingdom</b>  (Office of Communications, "OFCOM")	<ul style="list-style-type: none"> <li>OFCOM has awarded licences for an indefinite period with no expiry date</li> <li>GSM licences are renewed on an ongoing annual basis, where operators have presumed right of renewal, thus the process has been a formality to date</li> </ul>	

*IDA's concerns can be adequately addressed without pursuing a 'greenfield' allocation approach*

34. With regards to specific concerns of IDA should a 'greenfield' allocation not be pursued, M1 believes these concerns are better addressed without the use of 'greenfield' allocation. We understand there are three main concerns to be addressed:

- ensuring there is spectrum availability for interested buyers, especially potential new players
- preventing the continuation of legacy imbalances resulting from previous spectrum allocation
- maximising efficient use of spectrum

35. M1 notes that there is already sufficient spectrum available outside of the rights of existing operators for interested buyers. There is sufficient unallocated spectrum currently available in the 1800MHz, 2100MHz and E-GSM bands whether for 2G or 3G services should there be interest from existing operators or new entrants without disrupting the current allocation of spectrum.

36. While we understand the objective to avoid the perpetuation of legacy imbalances, we note that no operator has been negatively compromised by current spectrum allocation. Operators reviewing the business case for entering the market at the time of licence bidding were aware of the spectrum available and have thus designed their networks efficiently based on the specific lots acquired. A 'greenfield' allocation that attempts to address imbalances may therefore not result in the desired outcome. The costs to existing operators and potential disruption to consumer services are too heavy to justify such methodology that would not result in additional value or efficiency to the industry overall. It is noted that in the recent renewal of 2G licences in Hong Kong, even operators who could be conceived to be disadvantaged by legacy imbalances of spectrum allocation advocate that existing rights remain intact and first right of refusal be granted to all existing operators after having taken into consideration the significant network disruption that this could cause.

37. In a competitive market, operators will already have the incentive to ensure efficient usage of spectrum to reap the benefits of their investments. With mandatory service obligations,

regulators are also empowered to seek the return of any unused spectrum or spectrum that is not efficiently utilised. The existing arrangement achieves the most efficient use of spectrum in terms of spectrum planning, management, coordination with international partners and minimising the need for guard bands through contiguous blocks of spectrum. In particular, should non-contiguous spectrum lots be obtained by operators, as facilitated by a ‘greenfield’ allocation, guard bands will not be minimised.

***The duration of licence rights should be between 15 to 20 years in line with other international regulators to ensure business certainty and investor confidence***

38. M1 believes the new spectrum rights should be granted for duration of 15-20 years. This yields improved business planning and greater investor confidence that would be positive for the development of the industry. In addition, it would also prevent the tendency for reduced spending and investment in networks towards the end of a relatively short licence period. Operators may be deterred from investing whilst there is uncertainty over retaining network alterations in the near term due to potential spectrum reallocation.
39. A longer licence duration is also in line with international best practice as seen on the exhibit (Exhibit 2) below. Despite being in an era where technological developments are gathering pace, recent regulatory decisions have granted spectrum rights for a long duration with the view that this will improve the investment climate and promote industry development.

**Exhibit 2: Length of licence awarded and rationale of regulator**

	Year of regulator decision	Length of licence awarded	Regulator rationale
<b>Hong Kong</b>	2005	<ul style="list-style-type: none"> <li>Awarded incumbents spectrum rights for the 900MHz and 1800 MHz bands respectively, for a duration of <b>15 years</b><sup>14</sup></li> </ul>	<ul style="list-style-type: none"> <li>Default licence duration</li> </ul>
<b>New Zealand</b>	2007	<ul style="list-style-type: none"> <li>Awarded spectrum management rights for a maximum period of <b>20 years</b> on a case-by-case basis beginning 2011 (when existing rights begin to expire) for the 800MHz and 900MHz frequency bands<sup>15</sup></li> </ul>	<ul style="list-style-type: none"> <li>20 years considered “<i>a reasonable timeframe considering the investments made by current rights holders</i>”</li> <li>Will also “<i>allow for common expiry date</i>” of all existing spectrum rights holders<sup>16</sup></li> </ul>
<b>France</b>	2004	<ul style="list-style-type: none"> <li>Awarded renewal of all existing GSM licences for a duration of <b>15 years</b><sup>17</sup></li> </ul>	<ul style="list-style-type: none"> <li>Will harmonise 2G and 3G licence expiry dates</li> <li>However, primary rationale to</li> </ul>

<sup>14</sup> OFTA, *Further Consultation on Licensing of Mobile Services on Expiry of Existing Licences for Second Generation Mobile Services*, 19 March 2004

<sup>15</sup> Office of the Minister of Communications, *Arrangements for the Renewal of Radio Spectrum Management Rights Used for Cellular Services*, 4 April 2007

<sup>16</sup> Office of the Minister of Communications, *Arrangements for the Renewal of Radio Spectrum Management Rights Used for Cellular Services*, 4 April 2007

			harmonise dates related to GSM spectrum allocation across Europe <sup>18</sup>
<b>Norway</b>	2005	<ul style="list-style-type: none"> <li>Awarded renewal of all existing GSM licences for a duration of <b>12 years</b></li> </ul>	<ul style="list-style-type: none"> <li>12 years considered “sufficient length of time to enable operators to make a return on their investment”<sup>19</sup></li> </ul>
<b>Portugal</b>	2005	<ul style="list-style-type: none"> <li>Awarded renewal of all existing GSM licences for a duration of <b>15 years</b></li> </ul>	<ul style="list-style-type: none"> <li>Minimum renewal duration permitted legislatively</li> <li>Considered harmonisation of all GSM licences<sup>20</sup></li> </ul>

40. In addition given the necessity of frequencies in enabling the effective and efficient operation of systems and provision of services under the 2G FBO licence, we believe that the spectrum rights should be harmonised with our existing 2G FBO licence that lasts until 2017.

#### IV. PROPOSED PRICING

##### *M1 agrees that IDA’s proposed spectrum pricing structure is reasonable*

41. In our assessment, IDA’s proposed fee structure comprising S\$140,000 per annum per lot in spectrum management fees is reasonable.

##### *In the event of auctions for any unused spectrum, operators should be allowed to express interest in specific spectrum lots and strict pre-qualification criteria for all bidders should apply*

42. M1 supports the allocation of spectrum rights by administrative allocation. However, should IDA decides to proceed with any spectrum auction for any unused spectrum, we are of the view that operators should be allowed to indicate interest in specific spectrum lots rather than anonymous spectrum lots, to take into account existing network configuration and allow for most efficient use of the spectrum.
43. In the event of auctions, we would also like to highlight that strict pre-qualification criteria should be employed to avoid uncommitted and disruptive bidders. This would result in price manipulations that could be of substantial loss to the industry.
44. M1 agrees with IDA that in the event there are multiple bidders for a spectrum lot, all the spectrum lots should be subject to auction. This ensures that existing operators do not

<sup>17</sup> ART, *Annual Report 2003-2004*, June 2004

<sup>18</sup> Analysys, *A Study of the Considerations and Circumstances of GSM licence renewals in EU Countries*, 2 September 2005

<sup>19</sup> Analysys, *A Study of the Considerations and Circumstances of GSM licence renewals in EU Countries*, 2 September 2005

<sup>20</sup> Analysys, *A Study of the Considerations and Circumstances of GSM licence renewals in EU Countries*, 2 September 2005

speculatively bid for other spectrum lots that do not provide economic benefits for themselves but will escalate the costs of spectrum for all concerned.

45. All potential bidders for a given spectrum lot must have obtained an FBO licence prior to bidding for spectrum rights not after the bidding for spectrum rights. This ensures there will be no bidders who acquire spectrum with preconceived intent to resell without employing it for the provision of PCMTS.
46. All potential bidders must be required to use acquired spectrum for PCMTS within a given timeframe. Assurance must be given prior to the auction that the bidder has sufficient financial and technical capability to roll out and operate a mobile service network.
47. M1 notes, however, that auctions could potentially escalate spectrum prices for all operators. This would not be healthy for the development of the industry as these costs could be passed on to the consumers in terms of higher costs for services provided.

## **V. CONSULTATION ON 800MHz BAND**

*M1 supports IDA's consultation on the 800MHz Band but sees no noteworthy applications at this time*

48. M1 supports IDA's efforts to explore the potential uses of the 800MHz band.
49. Currently, we see no noteworthy or interesting applications to be deployed in the 800MHz band. However, we suggest that IDA continue to monitor the emergence of new technologies in this band.
50. We emphasise the need for any new technologies introduced in Singapore to be technically harmonised with other key markets on specific frequency bands enabling the creation of economies of scale for network and customer premise equipment and thus creating a more viable business case.