

**AUCTION OF
PUBLIC CELLULAR MOBILE
TELECOMMUNICATION SERVICES
SPECTRUM RIGHTS**

INFORMATION MEMORANDUM

18 January 2008
(Updated on 6 February 2008)

INFO-COMMUNICATIONS DEVELOPMENT AUTHORITY
REPUBLIC OF SINGAPORE

Important Notice

Terms and expressions used in this Important Notice are as defined in this Information Memorandum.

This Information Memorandum has been prepared in connection with the proposed grant of Public Cellular Mobile Telecommunication Services ("PCMTS") Spectrum Rights pursuant to the Telecommunications (Radio-communication) Regulations. This Information Memorandum is for informational purposes only. It is made available on the express understanding that it will be used for the sole purpose of assisting an interested person in deciding whether it wishes to proceed with a further investigation of possible participation in the Auction.

This Information Memorandum is not intended to form any part of the basis of any investment decision or other evaluation of any decision to participate in the Auction and should not be considered as a recommendation by IDA or IDA's advisers to participate in the Auction. Each interested person must make its own independent assessment of the potential value of a PCMTS Spectrum Right after making such investigation as it may deem necessary. All information contained in this Information Memorandum may be updated or amended at any time.

While the information contained in this Information Memorandum is believed to be accurate as at the time of posting on IDA's website, it has not been independently verified by IDA or its advisers. Neither IDA nor any of IDA's advisers nor any of their respective directors, partners, officers or employees make any representation or warranty (express or implied) nor has nor will have any responsibility or liability in relation to the accuracy or completeness of the information contained in this Information Memorandum or any other written or oral information made available to any interested person or its advisers. Any responsibility or liability in respect of any such information or any inaccuracy in this Information Memorandum or omission from this Information Memorandum is expressly disclaimed.

This Information Memorandum does not constitute an offer or invitation to participate in the Auction.

Each recipient of this Information Memorandum should consult its own professional advisers as to financial, legal, tax and other matters concerning any potential participation in the Auction or any grant of a PCMTS Spectrum Right.

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(A) GENERAL INFORMATION

1. Introduction

1.1 The Info-communications Development Authority of Singapore (“IDA”) is the authority in charge of regulating and promoting the information and communication technology industry in Singapore. Pursuant to the Telecommunications (Radio-communication) Regulations, IDA will offer for allocation Public Cellular Mobile Telecommunication Services (“PCMTS”) radio-frequency spectrum lots (together “PCMTS Spectrum Lots” and each a “PCMTS Spectrum Lot”) in the 900 MHz and 1800 MHz bands by way of the process described in this Information Memorandum (“Auction”). Each Bidder which is allocated one or more PCMTS Spectrum Lots in the Auction will be granted one PCMTS Spectrum Right in respect of such PCMTS Spectrum Lot(s). A PCMTS Spectrum Right will permit the Bidder granted such PCMTS Spectrum Right to use the PCMTS Spectrum Lot(s) it is allocated in the Auction to operate a telecommunication system for the purposes of providing PCMTS in relation to that PCMTS Spectrum Right, provided that the successful Bidder has or obtains the necessary Facilities-Based Operator Licence (“FBO Licence”) for such operations. This Information Memorandum contains important information that interested persons should read and understand for the purpose of the Auction.

1.2 This Information Memorandum contains:

- an overview of the PCMTS Spectrum Lots offered for allocation in the Auction and the PCMTS Spectrum Rights that will be granted in respect thereof;
- a review of associated policy issues;
- an indicative timetable; and
- a description of the application process.

Unless expressly specified otherwise, terms and expressions used in this Information Memorandum are defined in the Auction Rules (please see “Auction of PCMTS Spectrum Rights – Auction Rules” released by IDA on 18 January 2008).

2. Spectrum to be Allocated

- 2.1 A total of eighteen paired 5 MHz PCMTS Spectrum Lots, comprising:
- a) one PCMTS Spectrum Lot in the Extended GSM band (“EGSM Lot”),
 - b) five PCMTS Spectrum Lots located in the 900 MHz spectrum frequency band (“900 MHz Lots”); and
 - c) twelve PCMTS Spectrum Lots located in the 1800 MHz spectrum frequency band (“1800 MHz Lots”),

will be made available for allocation.

- 2.2 Please refer to Schedule 1 to this Information Memorandum for details of the PCMTS Spectrum Lots available for allocation.

3. Existing use of the Spectrum

3.1 Spectrum in the 900 MHz and 1800 MHz frequency bands has been allocated for PCMTS in Singapore. The 900 MHz band has been fully assigned to SingTel Mobile Pte Ltd (“STM”) and MobileOne Ltd (“M1”) and the 1800 MHz band has been partially assigned to STM, M1 and StarHub Mobile Pte Ltd (“SHM”) (collectively, “the 2G operators”) in their respective 2G Spectrum Rights. The 2G Spectrum Rights were granted on 1 October 2001 and 1 October 2002 for 7 and 6 year periods respectively, and are due to expire on 30 September 2008. However, IDA will offer current 2G operators an extension of their respective 2G Spectrum Rights for a duration of 3 months from 1 October 2008 to 31 December 2008, with the applicable pro-rated spectrum management fee for those 3 months to be S\$35,287.67, exclusive of the applicable GST, for each 2 x 5 MHz 2G Spectrum Lot.

3.2 The expiry of the 2G Spectrum Rights on 30 September 2008 (or if extended by IDA, then on 31 December 2008) will free up valuable spectrum in the 900 MHz and 1800 MHz frequency bands for reallocation. Existing 2G operators will have no residual rights to use the spectrum allocated to them upon the expiry of their Spectrum Rights.

4. Use of the PCMTS Spectrum Lots

4.1 Given the importance of ensuring the continued provision of nationwide mobile telephone services to both businesses and consumers, including inbound roamers, operators using the PCMTS spectrum lots will be required to provide PCMTS to the public.

4.2 IDA will not restrict the technology used to only existing 2G technologies. Bearing in mind the potential deployment of other technologies capable of providing

PCMTS, IDA will allow 2G or 3G technologies and other technologies which share a similar platform and allow higher speed data services, such as GPRS, EDGE or HSDPA/HSUPA/HSPA, to be deployed in the PCMTS Spectrum Lots, as long as the spectrum is used for the provision of PCMTS. IDA notes that separate 3G Spectrum Rights and licences have been issued in 2001 for the provision of 3G services. Nonetheless, bearing in mind technology trends and international developments, IDA considers that allowing 3G in the PCMTS spectrum lots will further enable Singapore to unleash the possibilities of higher speed data services and more innovative mobile applications. In addition, if more mobile subscribers move to 3G and 3G traffic becomes more data-centric, there may be a need for more spectrum for 3G services in future.

4.3 Further, IDA is aware that there may be other technologies, existing or future, that may not be classified as 2G or 3G technologies or their evolved versions, but yet are capable of providing PCMTS. Should operators wish to deploy these technologies in the PCMTS Spectrum Lots, IDA will assess such requests on a case-by-case basis, taking into account issues such as the technical interference between these technologies, technologies deployed in the neighbouring frequency bands and other relevant considerations.

4.4 IDA will also allow operators to use the spectrum to provide other data services, including wireless broadband access, as long as they have met the requirement to provide PCMTS.

5. Rationale for Auction Approach

5.1 The auction methodology has been chosen to be the mechanism to allocate PCMTS spectrum. This takes into account that spectrum is a scarce and finite resource and that a market-based allocation approach, such as an auction, is more effective in ensuring spectrum optimisation by operators. An auction will be a more efficient, objective and transparent approach for allocating scarce resources because it relies on market forces to allocate scarce resources to those who value them most. However, to minimise unnecessary spectrum churning which may lead to service disruption, incumbent operators will be accorded first rights of refusal to retain the spectrum lots in their existing 2G spectrum rights, as long as they pay the market price for the spectrum lots, as determined by the auction. See Section B for overview of the Auction mechanism.

5.2 For avoidance of doubt, IDA is not bound in any way to grant "first rights of refusal" in future reallocation exercise over these spectrum lots. Similarly, IDA is not bound in any way to accord similar preferences to the incumbent operators in other spectrum reallocation exercises. Going forward, decisions on reallocation frameworks will be determined solely by IDA based on its policy objectives and on the facts at that point in time.

6. Applications and First Initial Offers

6.1 In order to participate in the Auction, a person must submit an Application Form (accompanied by the documents specified in the Application Form), a First

Initial Offer Document and a Bank Guarantee (copies of which are respectively set out in Appendices 1, 2 and 3 to the Auction Rules).

6.2 IDA will determine: (a) whether the Application Form (accompanied by the documents specified in the Application Form), First Initial Offer Document and Bank Guarantee are in compliance with the Auction Rules; and (b) whether a person submitting such documents is eligible and should be registered as a Bidder entitled to participate in the Auction.

6.3 IDA, when deciding whether such person should be registered as a Bidder in the Auction, may take into account, amongst other things:

- (a) whether, in the opinion of IDA, such person has demonstrated that it has the financial and technical capability to acquire a PCMTS Spectrum Right and operate a telecommunication system for the purposes of providing PCMTS in relation to that PCMTS Spectrum Right;
- (b) whether, in the opinion of IDA, such person is an Associated Bidder in relation to any other person(s) which submitted an Application Form;
- (c) whether it would be in the public interest for such person to be granted a PCMTS Spectrum Right; and
- (d) all or any facts, circumstances or matters which IDA considers to be relevant including the financial or personal probity and standing of such person, or any company in the same corporate group as such person, or any director or shareholder of such company.

6.4 A PCMTS Spectrum Right will only be granted to a company incorporated in Singapore under the Companies Act (Cap. 50), or such other person IDA considers fit and appropriate.

7. Associated Bidder Groups

7.1 IDA is concerned to ensure that Bidders participating in the Auction are independent entities whose policy and operational decision-making processes are not influenced by any common shareholders or other connections.

7.2 IDA has the discretion to determine whether two or more persons which submit Application Forms are Associated Bidders in relation to each other. No more than one member of an Associated Bidder Group may participate in the Auction unless all members of that Associated Bidder Group have undertaken to IDA to reorganise themselves so as to cease to be Associated Bidders by such date as is specified by IDA. The Auction Rules contain guidelines as to the level of cross-shareholdings and other connections between such persons which will not, alone, result in such persons being determined to be Associated Bidders in relation to each other. Persons submitting Application Forms must provide supporting documentation to establish their independence.

7.3 If after a PCMTS Spectrum Right has been provisionally awarded or granted, IDA determines that the holder of that PCMTS Spectrum Right was an Associated Bidder during the Auction, IDA reserves its right to take such actions as IDA considers appropriate, including revoking the provisional award or refusing the grant of that PCMTS Spectrum Right in accordance with the Auction Rules and pursuant to IDA's powers under the Telecommunications (Radio-communication) Regulations.

8. Establishing a New Entity/Consortia

8.1 IDA appreciates that a person or a consortium may wish to participate in the Auction but may not have established an entity which complies with the applicable requirements (see Section 1.4 of the Auction Rules) at the time the Application Form and First Initial Offer Document must be submitted. It is not necessary for such an entity to have been established in order for a Bidder to participate in the Auction.

8.2 In the case of a consortium, one member of the consortium will represent the consortium in the Auction and participate in the Auction as a Bidder. IDA will treat such a representative as though it were participating in the Auction on the Bidder's behalf and IDA shall not have any dealings with, or responsibility to, any other member of the consortium.

8.3 It is the responsibility of the Bidder, if successful in the Auction, to ensure that an appropriate entity owned and controlled by the Bidder, or by the consortium, in accordance with the information provided to IDA and complying with the applicable requirements (see Section A.6 of the Information Memorandum) is established before the deadline for the grant of the relevant PCMTS Spectrum Right set out in the Auction Rules.

8.4 The Application Form submitted in respect of any consortium must provide details of all members of the consortium, including details of their ownership and control structure. These details will be considered by IDA in determining whether the person which submits the relevant Application Form (as representative of the relevant consortium) is an Associated Bidder for the purposes of the Auction. All members of such a consortium must sign the schedule to the Application Form and must agree to comply with the Auction Rules, in particular the prohibitions on disclosure of information and collusion.

9. Determination as to whether the Auction will Proceed

9.1 IDA retains the discretion whether to proceed with the Auction in all situations. For example, if there is only up to one First Initial Offer received for each of the eighteen PCMTS Spectrum Lots, IDA will not proceed with the Auction and instead grant PCMTS Spectrum Rights in respect of the relevant PCMTS Spectrum Lots at the Reserve Price. Annual Charges and Application and Processing Fees will also apply.

10. Reserve Price

10.1 The Reserve Price for each PCMTS Spectrum Lot is S\$300,000.00, exclusive of the applicable GST.

11. Fees and Charges Payable for PCMTS Spectrum Lot(s) for the Duration of the PCMTS Spectrum Rights

11.1 In the first year of the duration of a PCMTS Spectrum Right, in respect of each PCMTS Spectrum Lot, the successful Bidder shall pay the Base Year Charge as determined by the Auction, or equal to the Reserve Price if the Auction does not proceed.

11.2 In addition, an Application and Processing Fee of S\$22,500.00, exclusive of the applicable GST, will be payable by the successful Bidders to IDA in respect of each PCMTS Spectrum Lot included in a PCMTS Spectrum Right awarded to them under the Auction or otherwise allocated to them by IDA if the Auction does not proceed.

11.3 In addition, Annual Charge(s) shall be payable by each successful Bidder to IDA in respect of each PCMTS Spectrum Lot allocated to it under the Auction. Such Annual Charge(s) shall be payable from the first year for the duration of a PCMTS Spectrum Right in accordance with the terms and conditions of the PCMTS Spectrum Right. The Annual Charge for a PCMTS Spectrum Lot is S\$140,000.00 for each PCMTS Spectrum Lot respectively, excluding the applicable GST. The Annual Charge will be pro-rated accordingly for the final three months of the PCMTS Spectrum Right duration.

12. Outcome of the Auction

12.1 In the case where the Auction proceeds, the outcome of the Auction will determine:

- (a) the allocation of the PCMTS Spectrum Lot(s) to the successful Bidders; and
- (b) the Base Year Charge for each PCMTS Spectrum Lot allocated under that Auction.

12.2 Please refer to Section B for details on how the PCMTS Spectrum Lots will be allocated if the Auction proceeds.

13. PCMTS Spectrum Rights, FBO Licences and Station/Network Licences, and Roll-out Requirements

13.1 A PCMTS Spectrum Right will constitute the grant of a right to use specific allocated parts of radio frequency spectrum to operate a telecommunication system for the purposes of providing PCMTS in relation to that PCMTS Spectrum Right.

13.2 Bidders which are granted a PCMTS Spectrum Right in this Auction will not be issued a new FBO Licence pursuant to the grant of the PCMTS Spectrum Right if they are already holders of an existing FBO Licence. In the event that such successful Bidders' existing FBO Licence does not allow the provision of PCMTS, then they must request IDA to modify the scope of their systems and services under their FBO Licences. Successful Bidders which are existing holders of 3G FBO Licences will need to apply for IDA's approval to amend their existing 3G FBO Licences and Radio-Communications Network Licences in order to provide 3G services using the PCMTS Spectrum Right. In this regard, the existing 3G Licensees will have to pay a FBO licence fee set at 1% of the Annual Gross Turnover ("AGTO"), for the provision of 3G services under its 3G FBO Licence using the PCMTS Spectrum Rights.

13.3 If successful Bidders do not hold a FBO Licence at the time they are provisionally awarded a PCMTS Spectrum Right, such successful Bidders must apply for a FBO Licence within thirty Business Days of the provisional award of a PCMTS Spectrum Right. Details on the FBO Licensing Framework and Guidelines can be found on IDA's website at www.ida.gov.sg. Such FBO Licences must be obtained before services are provided using the PCMTS Spectrum Lots specified in a PCMTS Spectrum Right granted to such Bidder.

13.4 All holders of FBO Licences will be required to pay the annual FBO Licence fees, currently set at 1% AGTO based on the provision of services specified in the FBO Licence Schedules, subject to a minimum of S\$100,000. Please refer to IDA's website, under the section on "Policy & Regulation, Licensing", for a template of an FBO Licence.

13.5 In addition, successful Bidders which are granted a PCMTS Spectrum Right in the Auction will be required to apply for, and obtain, the relevant Station/Network (Spectrum) Licence(s) before operating the radio-communication systems to provide PCMTS using the PCMTS Spectrum Lots specified in the PCMTS Spectrum Rights granted to such Bidders. The fees payable on such Station/Network (Spectrum) Licences are prescribed in Part I of the First Schedule of the Telecommunications (Radio-communication) Regulations.

13.6 The PCMTS Spectrum Rights are granted by IDA pursuant to the powers granted to IDA under the Info-communications Development Authority of Singapore Act (Cap. 137A) ("IDA Act"), the Telecommunications Act (Cap. 323)

("Telecommunications Act") and the Telecommunications (Radio-communication) Regulations. A template of the PCMTS Spectrum Right is attached as Appendix 4 to the Auction Rules.

13.7 Bidders granted a PCMTS Spectrum Right but which do not already have a nationwide network are required to roll-out a nationwide PCMTS network by 31 December 2010.

14. Duration of PCMTS Spectrum Rights

14.1 The PCMTS Spectrum Rights granted in the Auction will be valid for a period of eight years and three months. There is no commitment by IDA that the PCMTS Spectrum Rights in respect of the PCMTS Spectrum Lots allocated under the Auction will be extended for any period, if at all.

14.2 If, at IDA's discretion, there is any grant of an extension of the PCMTS Spectrum Rights, or if there is any new allocation exercise for PCMTS Spectrum Lots, there is no commitment by IDA that the same number of PCMTS Spectrum Lots will be reallocated in that subsequent extension or allocation exercise to the successful Bidders in the Auction, or that the same applicable fees and charges will apply in respect of such PCMTS Spectrum Lots.

14.3 It is expected that PCMTS Spectrum Rights awarded under the Auction or otherwise allocated by IDA if the Auction does not proceed, will be effective as of 1 January 2009.

15. Spectrum Trading

15.1 IDA will permit the trading of any or all spectrum rights allocated pursuant to the grant of a PCMTS Spectrum Right. Spectrum trading will be subject to:

- (a) approval from IDA;
- (b) any restriction and condition or other requirements imposed or specified by IDA; and
- (c) the relevant provisions of the Telecommunications (Radio-communication) Regulations and Code of Practice for Competition in the Provision of Telecommunication Services ("Telecom Competition Code").

16. No Moratorium

16.1 IDA may allocate further PCMTS Spectrum Lots for the provision of PCMTS or any other telecommunication services at any time, and does not commit to any moratorium period during which no such allocation will take place. IDA may also

allocate PCMTS Spectrum Lots which remain unallocated at the end of this Auction for the provision of PCMTS or any other telecommunication services at any time after the Auction. However, IDA will give at least three months' notice prior to the commencement of any further allocation exercise.

17. Radio Frequency Interference

17.1 Successful Bidders using PCMTS spectrum will be required to co-ordinate among themselves and with neighbouring countries' network operators to avoid frequency interference problems. IDA will only intervene in cases where operators are unable to resolve these problems themselves.

18. Health and Safety Issues

18.1 The health hazards from exposure to electromagnetic fields are still largely unknown. This Information Memorandum does not express any view or opinion on such matters. Successful Bidders are expected to be apprised of and comply with any guidelines, recommendations or other standards that may be issued by the relevant ministries or statutory boards and/or internationally recognised expert bodies in this field.

(B) INTRODUCTION TO THE AUCTION FRAMEWORK AND THE BIDDING PROCEDURE

This introduction is intended only to provide an overview of some of the main features of the Auction. Any person interested in participating in the Auction should familiarise itself with the Auction Rules and should seek appropriate independent legal and other advice in respect of the Auction Rules.

1. Overview of the Auction

1.1 A Pre-Auction phase, including an Application and First Initial Offer process, will precede the Auction.

1.2 The Auction process for the PCMTS Spectrum Lots will be a combinatorial clock auction, comprising:

a) A Clock Auction, to determine the number of PCMTS Spectrum Lots each Bidder is granted.

b) The Assignment Stage, to determine the specific PCMTS Spectrum Lots that each Bidder is granted, and the Base Year Charge for each PCMTS Spectrum Lot. This Stage consists of:

i) The exercise of First Rights of Refusal (“FROR”)

ii) The Second Initial Offer

iii) The Sealed-Bid Combinatorial Auction

1.3 The Pre-Auction and Auction will be conducted in accordance with the Auction Rules.

1.4 No Bidder may be granted a PCMTS Spectrum Right in respect of more than six PCMTS Spectrum Lots. In addition, the total number of EGSM and 900 MHz Lots that a Bidder may be granted a PCMTS Spectrum Right in respect of cannot exceed three.

2. Pre-Auction

2.1 To be registered as a Bidder entitled to participate in the Auction, an interested person must, by 5.00 pm on the Application Date in accordance with the Auction Rules:

(a) submit to IDA its Application Form and its First Initial Offer Document; and

- (b) deposit a Bank Guarantee with the IDA to cover the Initial Guaranteed Amount of S\$3,000,000.00.

2.2 An interested person must specify in its First Initial Offer Document the PCMTS Spectrum Lots for which it submits First Initial Offers at the Reserve Price. An interested person cannot specify First Initial Offers in respect of more than six PCMTS Spectrum Lots in total. In addition, an interested person cannot specify First Initial Offers in respect of more than three 900 MHz lots and EGSM Lots, i.e., the total combination of the number of 900 MHz and EGSM Lots must be three or less.

2.3 If there is only up to one First Initial Offer received for each of the eighteen PCMTS Spectrum Lots, IDA will not proceed with the Auction and instead grant PCMTS Spectrum Rights in respect of the relevant PCMTS Spectrum Lots at the Reserve Price to Bidders. Annual Charges and Application and Processing Fees will also apply.

2.4 If more than one First Initial Offer is received for any of the eighteen PCMTS Spectrum Lots but there is no excess demand in any category of PCMTS Spectrum Lots (ie. the total number of EGSM Lots specified by all Bidders does not exceed one, the total number of 900MHz Lots specified by all Bidders does not exceed five, and the total number of 1800MHz Lots specified by all Bidders does not exceed twelve), each Bidder will be granted Eligibility Points with respect to each of the three categories of PCMTS Spectrum Lots. The number of Eligibility Points will be equal to the number of PCMTS Spectrum Lots specified in each category in the First Initial Offer Document. The Auction would proceed with the Assignment Stage without conducting the Clock Auction.

2.6 If there is excess demand in any category of PCMTS Spectrum Lots, the Clock Auction will proceed for all three categories of PCMTS Spectrum Lots simultaneously.

2.7 If IDA determines that the Auction will proceed, details of the Auction timetable and the number of Bidders participating will be notified to Bidders. An Information Session and a Trial Auction will then be held to allow Bidders to familiarise themselves with the procedures for the Auction. At the Trial Auction the Authorised Representatives will be taken through the Bidding Procedure.

2.8 Only Authorised Representatives will be permitted to attend the Trial Auction and the second part of the Information Session on behalf of the Bidder they represent. Additional representatives of the Bidders will also be permitted to attend the first part of the Information Session, provided that no more than twelve persons, inclusive of the Authorised Representatives, attend on behalf of any particular Bidder.

2.9 A timetable showing the expected timing of the Auction and related matters is set out in Section C of this Information Memorandum. Details of the timing and location of the Trial Auction and the Information Session will be provided to Bidders at least five Business Days in advance.

3 Clock Auction

3.1 The Clock Auction will be conducted using online auction software. Bidders log onto the software using ordinary personal computers with no special software required. The bidding instructions relating to the software platform will be given to all Bidders no later than at the Information Session.

3.2 In the Clock Auction, there will be one EGSM Lot, five generic 900 MHz Lots, and twelve generic 1800 MHz Lots available. There are three separate price clocks, one for each category of lots.

3.3 The Clock Auction will consist of a series of Rounds. In each Round, there will be a Start-of-Round Price and an End-of-Round Price for each category of lots. In the first Round, the Start-of-Round Price will be equal to the Reserve Price of S\$300,000.00 for each PCMTS Spectrum Lot. In the following rounds the Start-of-Round Price will be equal to the End-of-Round Price of the previous Round. The End-of-Round Price in each Round will be equal to the Start-of-Round Price plus an increment, which will be determined at the IDA's sole discretion. The Start-of-Round Price and the End-of-Round Price in each category for a given Round will be notified to Bidders before the start of the Round.

3.4 In each Round, a Bidder must specify one or more Bids, each Bid comprising a Price Point expressed as a percentage between 0.01% and 100% and a quantity for each of the three categories of PCMTS Spectrum Lots. The Price Point represents the percentage of the distance from the Start-of-Round to the End-of-Round Prices; 0% corresponding to the Start-of-Round Price and 100% corresponding to the End-of-Round Price. Up until that specified percentage, the quantity of lots for the Bidder carries forward from the previous Round (or from the First Initial Offer for the first Round). The Bidder also submits a new quantity of lots in each category that will take effect at the specified percentage. The Bidder can increase the number of lots in any category, subject to the constraints that: the total number of lots specified cannot exceed the total number of lots specified by the Bidder in the previous Bid and cannot exceed six; and the total number of lots in the first two categories (the EGSM and 900 MHz) cannot exceed three.

3.5 In each Round, a Bidder's Entire Bid can comprise up to five Bids, i.e. five different percentages and the corresponding number of lots in each of the three categories.

3.6 A Valid Entire Bid shall be legally binding upon the Bidder.

3.7 After each Round, Bidders will be notified of the aggregate demand for each category of PCMTS Spectrum Lots at the End-of-Round Prices in the immediately preceding Round.

3.8 The length of each Round and the break between Rounds will be determined by IDA. IDA expects that each Round will be no less than ten minutes and the break between the end of a Round and the start of the next round will be no less than fifteen minutes.

3.9 The Clock Auction will be closed simultaneously in relation to all PCMTS Spectrum Lots the first time a Round ends during which there is no excess demand in all three PCMTS Spectrum Lot categories, i.e. an aggregate demand of no greater than one lot for the EGSM category, an aggregate demand of no greater than five lots for the 900 MHz category, and an aggregate demand of no greater than twelve lots for the 1800 MHz category.

3.10 At the end of the Clock Auction, each Bidder will be granted Eligibility Points in each of the three categories of PCMTS Spectrum Lots. The number of Eligibility Points that each Bidder is awarded in each category of PCMTS Spectrum Lots will be equal to the quantity demanded of each category by that Bidder at the Closing Clock Price. Thereafter, the Assignment Stage will proceed.

3.11 Please refer to Appendix 6 of the Auction Rules for an illustration of the Clock Auction process.

4 Assignment Stage

4.1 The Assignment Stage consists of three Phases. In the first Phase, each Bidder which has existing 2G Spectrum Rights will be granted FROR for each PCMTS Spectrum Lot where the Bidder holds more than 80% of the frequency of the PCMTS Spectrum Lot under its existing 2G Spectrum Right. The Bidders would specify the specific PCMTS Spectrum Lots that they wish to be granted in the FROR Exercise Document. The Bidders may only specify PCMTS Spectrum Lots for which they have been granted FROR. The number of PCMTS Spectrum Lots that Bidders may specify in each category of PCMTS Spectrum Lots in the FROR Exercise Document cannot exceed the number of Eligibility Points that they were granted in the category. The Bidders would be granted those specified lots at the Closing Clock Prices, or at the Reserve Price if the Clock Auction did not proceed.

4.2 In the second Phase of the Assignment Stage, Bidders will be informed of the specific PCMTS Lots which were not specified in the first Phase of the Assignment Stage. Each Bidder must specify in its Second Initial Offer Document the specific PCMTS Spectrum Lots, for which it submits a Second Initial Offer, based on the Closing Clock Prices, or at the Reserve Price if the Clock Auction did not proceed. The number of PCMTS Spectrum Lots that Bidders may specify in each category of

PCMTS Spectrum Lots must equal the number of Eligibility Points they were granted in each category in the Principal Stage, less any number of lots in that category that they have specified in the first Phase of the Assignment Stage. If there is more than one Second Initial Offer for any PCMTS Spectrum Lot, the third Phase will proceed. If not, the Auction closes and the Bidders would be granted the specified lots at the Closing Clock Prices, or at the Reserve Price if the Clock Auction did not proceed.

4.3 The third Phase of the Assignment Stage is a one-time, sealed-bid Combinatorial Auction. Bidders would specify the additional amounts, over and above the amount implied by the Closing Clock Prices, that they are willing to pay for each particular combination of PCMTS Spectrum Lots that they are eligible to bid for. IDA would then determine the allocation in the manner which maximises auction revenue. Bidders must submit their Combinatorial Bids to IDA during the period on the Combinatorial Auction Day specified by IDA. The Auction concludes at the specified Auction Closure time and the final allocation of lots will then be computed.

5 Results of the Auction

5.1 IDA will announce the results of the Auction within two Business Days (or such longer time as IDA deems appropriate which will be no more than seven Business Days) of the announcement of the close of the Auction.

5.2 PCMTS Spectrum Rights will be granted following payment by a Bidder in full of the relevant Base Year Charge, the Annual Fee for the first year and Application and Processing Fee, plus any Forfeitures imposed on the Bidder. If a Bidder fails to pay such amount within the specified period, that Bidder will not be granted a PCMTS Spectrum Right.

6 Forfeiture and Exclusion

6.1 IDA may determine that a Bidder will forfeit amounts up to the amount of its Bank Guarantee (including any Additional Bank Guarantee) for breaches of the Auction Rules and other conduct prejudicial to the Auction.

6.2 In addition, Bidders can be excluded from the Auction by notice from IDA in certain circumstances, including collusion between Bidders and conduct prejudicial to the Auction.

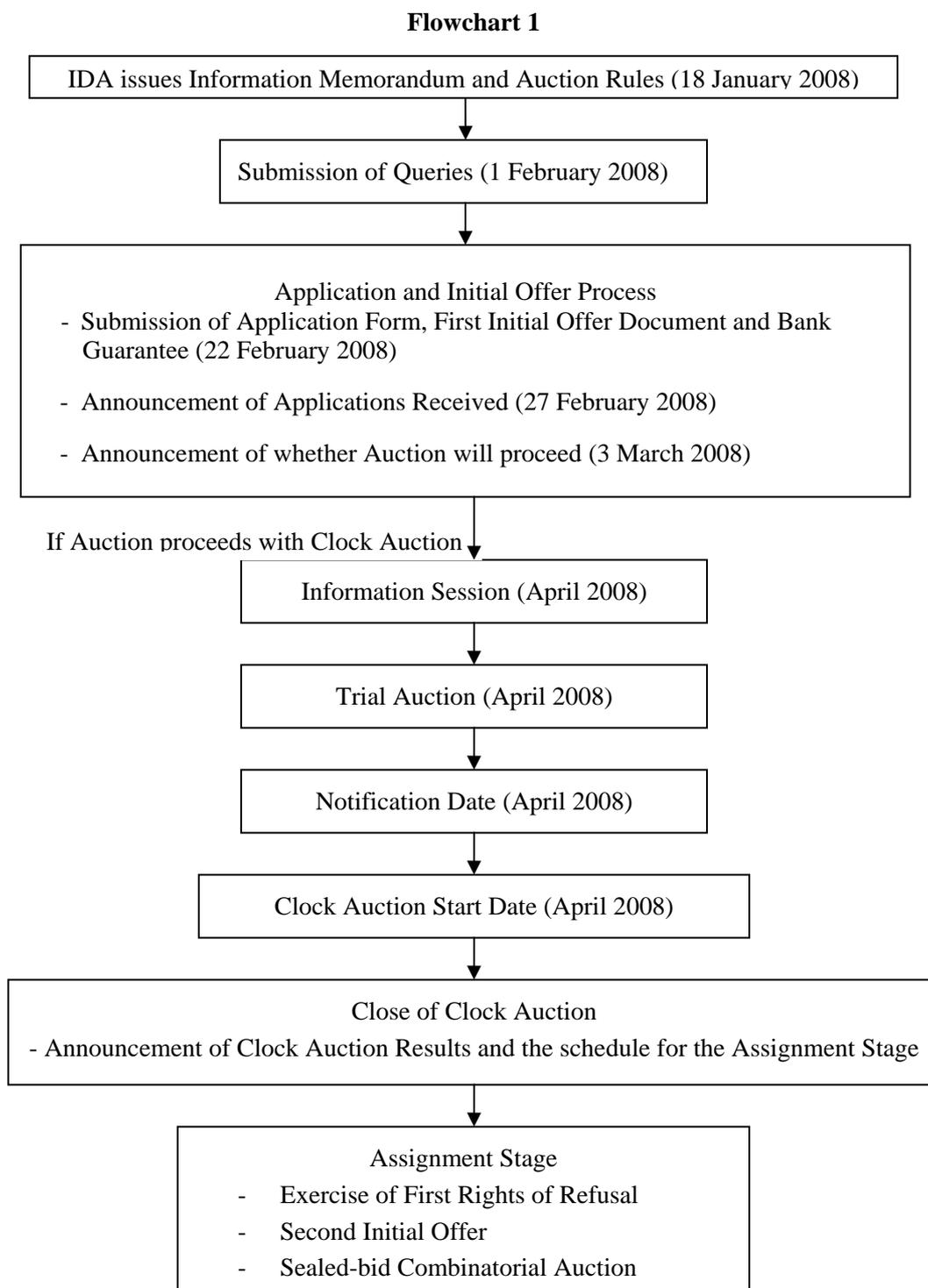
(DISCLAIMER: Neither IDA nor any of its officers or employees or its advisers makes any representation nor warranty (express or implied) nor accepts nor will accept any responsibility or liability whatsoever as to, or in relation to, any errors resulting from or relating to the Auction. In no event shall IDA or any of its officers or employees or its advisers be liable for any damages whatsoever resulting from or relating to the Auction. No obligation or liability whatsoever

on the part of IDA or its officers or employees or its advisers will arise from the advice or service provided in connection with the Auction.

Bidders are solely responsible for ensuring the security of their bids and that only their Authorised Representatives submit bids on their behalf. Neither IDA nor any of its officers or employees or its advisers will accept any responsibility or liability whatsoever for any of these matters.)

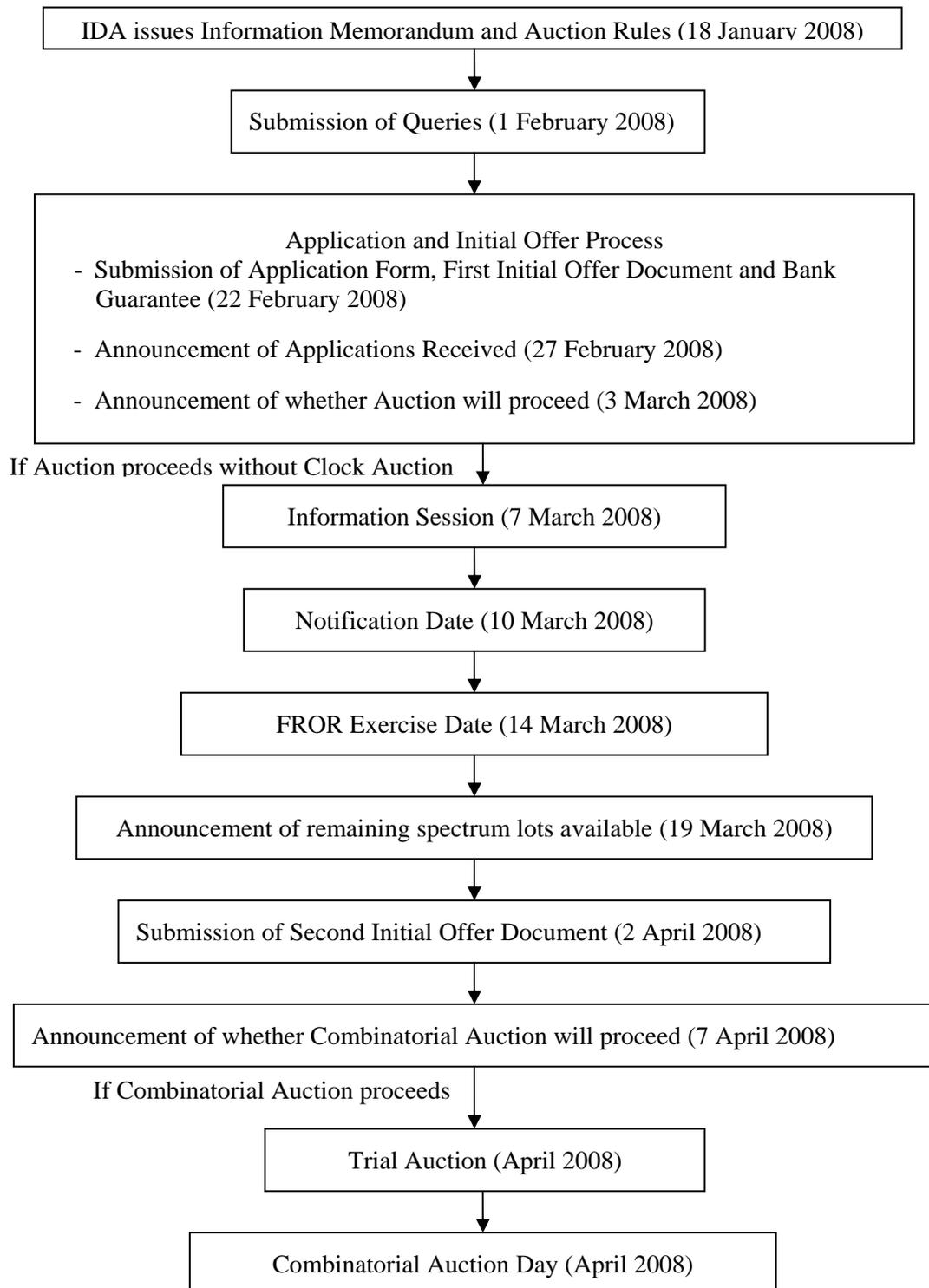
(C) TIMETABLE

1. Flowchart 1 below illustrates the Auction process and provides an indicative timeline of certain key events prior to the start of the Clock Auction, in the event that the Clock Auction proceeds. The Auction Rules contain provisions relating to the notice which will be given of certain dates and events in relation to the Auction.



2. Flowchart 2 below illustrates the Auction process and provides an indicative timeline of certain key events prior to the start of the Sealed-Bid Combinatorial Auction, in the event the Clock Auction does not proceed.

Flowchart 2



3. Please note that IDA may at any time change any of the times or dates and/or shorten or extend the time periods set out in the Auction Rules

upon giving at least twenty-four hours' notice, save in emergency situations where such changes may be made without notice.

(D) THE REGULATORY REGIME IN SINGAPORE

1. The Regulatory Authority

1.1 IDA is the authority in charge of regulating the information and communication technology industry in Singapore. IDA is a statutory board under the purview of the Ministry of Information, Communications and the Arts.

2. Relevant Legislation

2.1 There are various legislation and subsidiary legislation that is relevant to PCMTS Spectrum Rights. Persons interested in being granted a PCMTS Spectrum Right should ensure that they familiarise themselves with such legislation and seek independent legal and other appropriate advice in respect of such legislation.

2.2 The relevant legislation includes (but is not limited to):

- (a) the IDA Act;
- (b) the Telecommunications Act; and
- (c) the Telecommunications (Radio-communication) Regulations.

2.3 There are also various codes of practice governing the field of telecommunications, which include (but are not limited to):

- (a) the Telecom Competition Code 2005; and
- (b) the Code of Practice for Info-Communications Facilities in Buildings (“COPIF”).

3. The IDA Act

3.1 The IDA Act sets out the functions and powers of IDA with regard to the licensing and regulation of telecommunication systems and services in Singapore.

4. The Telecommunications Act

4.1 The Telecommunications Act is the primary legislation relating to telecommunications. The Telecommunications Act empowers IDA to grant licences for the provision of telecommunication services and to regulate the telecommunication industry in Singapore. It also authorises IDA to make regulations governing the classes of licences to be granted by IDA and the conditions for their grant, as well as the control and regulation of interference by radiowaves, electrical and other telecommunication means in Singapore. Offences and penalties relating

to the unlawful operation of telecommunication systems or services are also stipulated in the Telecommunications Act.

5. The Telecommunications (Radio-communication) Regulations

5.1 The Telecommunications (Radio-communication) Regulations was gazetted on 2 March 2001 and came into force on that date in place of the repealed Radio-Communication Regulations (which was gazetted in August 1994).

5.2 The Telecommunications (Radio-communication) Regulations set out the regulatory framework by which IDA exercises licensing and regulatory functions in respect of the allocation, management and use of radio frequency spectrum in Singapore.

5.3 All Bidders participating in the Auction should familiarise themselves with the Telecommunications (Radio-communication) Regulations.

6. The Telecom Competition Code 2005

6.1 The Telecom Competition Code first came into force on 29 September 2000. On 18 February 2005, IDA issued a revised Telecom Competition Code 2005, which will come into effect on 4 March 2005. The Telecom Competition Code 2005 sets out a comprehensive regulatory framework for the development of fair and effective competition in the telecommunication industry in Singapore.

6.2 The licensing framework adopted by IDA under the Telecommunications Act, for providing telecommunication services, is divided into the following categories of licensees:

- (a) Facilities-based licensees;
- (b) Services-based licensees;
- (c) Telecommunication equipment dealer licensees; and
- (d) Self-provisioning licensees.

6.3 The Telecom Competition Code applies to the categories of licensees listed in (a), (b), and (c) above, albeit to varying degrees in recognition that certain licensees should be obliged to comply with more stringent obligations by virtue of the extent of their control over the market.

7. COPIF

7.1 The COPIF came into effect on 15 September 2000 and sets out detailed specifications and guidelines for telecommunication facilities in buildings to ensure

that architects and construction professionals include in new and re-furnished buildings adequate in-building cabling facilities and space required for the operation of installations and plants used by the public telecommunication licensees and telecommunication system licensees in providing info-communication services to building occupants.

7.2 The Telecom Competition Code and COPIF are available on the IDA website.

(E) QUERIES

1. All queries relating to this Information Memorandum and/or the Auction should be made in writing and sent by post or fax directly to IDA to be received by IDA no later than 5.00pm on 1 February 2008. All queries should be addressed to the following person and sent to the following address:

Info-communications Development Authority of Singapore
8 Temasek Boulevard #14-00
Suntec Tower 3
Singapore 038988
Fax No: (65) 211 2116

For the attention of: Mr Andrew J. Haire

All queries should be marked: PCMTS Spectrum Auction Queries

2. Please note that all queries must be made in writing. No responses will be given to verbal queries. An electronic version must also be sent by e-mail to gregory_chia@ida.gov.sg. IDA is under no obligation to respond to any queries made. IDA may publish any queries and the answers provided on its website at <http://www.ida.gov.sg>. The identity of the person raising the query will not be published.

3. Any person considering participating in the Auction should not assume that their application to participate in, their participation in, or the results of, the Auction will be kept confidential. Queries raised by any person must be made in accordance with this Information Memorandum and the Auction Rules. IDA may also publicly announce information relating to the Auction and/or the award of PCMTS Spectrum Rights either during or following the close of the Auction or the relevant procedure, without consulting any interested persons.

SCHEDULE 1

PCMTS Spectrum Lots

PCMTS Spectrum Lot Number	Paired		FROR
	Lower band (MHz)	Upper Band (MHz)	
EGSM Lot			
1	885 – 890	930 – 935	
900 MHz Lots			
2	890 – 895	935 – 940	M1
3	895 – 900	940 – 945	M1
4	900 – 905	945 – 950	
5	905 – 910	950 – 955	STM
6	910 – 915	955 - 960	STM
1800 MHz Lots			
7	1710 – 1715	1805 - 1810	STM
8	1715 – 1720	1810 – 1815	
9	1720 – 1725	1815 – 1820	STM
10	1725 – 1730	1820 – 1825	STM
11	1740 – 1745	1835 – 1840	SHM
12	1745 – 1750	1840 – 1845	SHM
13	1750 – 1755	1845 – 1850	SHM
14	1755 – 1760	1850 – 1855	SHM
15	1760 – 1765	1855 – 1860	M1
16	1765 – 1770	1860 – 1865	M1
17	1770 – 1775	1865 – 1870	M1
18	1775 – 1780	1870 – 1875	M1