

# Hong Kong 3G Auction



27th July, 2001

# Overview of Presentation

- Introduction
- Indicative Timetable
- Reserve Prices and Bidding Schedule
- Regulatory Framework and Licences
- Auction Mechanics

# Introduction

## Key elements of licensing framework

- Hybrid selection method
- Bidding for royalties with underlying minimum annual payments
- Reserve price of 5% royalty on Network Revenues
- Licensees must open 30% of their network capacity to non-affiliated service providers
- Open and transparent auction process whilst preserving integrity and fairness of the exercise



**An innovative approach for Hong Kong which is beneficial for consumers, taxpayers, existing operators, new entrants and other participants in the mobile industry**

# Introduction

## Progress to date

- Announcement in February 2001: The Government will issue four 3G licences through a spectrum auction, following a pre-qualification exercise
- Outcome of thorough consultation on the licensing and regulatory framework
- Legislative backing:
  - Telecommunications (Amendment) Ordinance 2001
  - Telecommunications (Method for Determining Spectrum Utilization Fees) (Third Generation Mobile Services) Regulation
  - Telecommunications (Designation of Frequency Bands Subject to Payment of Spectrum Utilization Fee) Order
- Information memorandum (IM) released on 18th July 2001 which contains full details of the regulatory framework, bidding schedule, reserve prices and auction rules

## Industry Concerns Addressed

- Open Network Access Requirement
  - implementation (e.g. measurement methodology)
- Confidentiality Feature of Auction
  - open, transparent and fair auction
  - maximise transparency of the auction whilst preserving its integrity : full release of information as soon as possible

# Introduction

## Indicative Timetable

Issue of IM

**18th July**

Applications

**17th and 18th September**

Pre-qualification

**Expected to be in same week  
as Applications**

Main Phase Auction

Second and Third Phases

Selection of Licences

**September / October**

Grant of Licences

**Before end 2001**

# Reserve Prices and Bidding Schedule

## Reserve Prices for the Auction

- Reserve price for the Main Auction is set at a Royalty Percentage of **5%** (based on Network Turnover of the Licensee)
- At the Reserve Price the minimum annual payment is **HK\$50 million** per annum for the first five years, rising thereafter
- No royalty is payable in the first five years, only the minimum annual payment
- Reserve prices for sealed bids in Phase 2 (Connected Bidders) and Phase 3 (Selection of Licences) are both **HK\$0**. Any such bids are payable in cash on grant of licences

# Reserve Prices and Bidding Schedule

## Bidding Schedule

- The following is an extract of the Bidding Schedule which is attached to the Notice and the IM

Licence Year Royalty Percentage	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
	Relevant Minimum Fee mentioned in Section 4(b)(i)					Relevant Minimum Fee mer				
	(HK\$'000)	(HK\$'000)	(HK\$'000)	(HK\$'000)	(HK\$'000)	(HK\$'000)	(HK\$'000)	(HK\$'000)	(HK\$'000)	(HK\$'000)
5.00%	50,000	50,000	50,000	50,000	50,000	60,124	70,249	80,373	90,497	100,622
5.01%	50,217	50,217	50,217	50,217	50,217	60,385	70,553	80,722	90,890	101,058
5.02%	50,434	50,434	50,434	50,434	50,434	60,646	70,858	81,070	91,283	101,495
5.03%	50,651	50,651	50,651	50,651	50,651	60,907	71,163	81,420	91,676	101,932
5.04%	50,869	50,869	50,869	50,869	50,869	61,169	71,469	81,769	92,069	102,370
5.05%	51,086	51,086	51,086	51,086	51,086	61,430	71,775	82,119	92,463	102,808
5.06%	51,304	51,304	51,304	51,304	51,304	61,692	72,081	82,469	92,858	103,246
5.07%	51,522	51,522	51,522	51,522	51,522	61,955	72,387	82,820	93,252	103,685
5.08%	51,740	51,740	51,740	51,740	51,740	62,217	72,694	83,171	93,647	104,124
5.09%	51,959	51,959	51,959	51,959	51,959	62,480	73,001	83,522	94,043	104,564
5.10%	52,177	52,177	52,177	52,177	52,177	62,743	73,308	83,873	94,438	105,004

**Reserve Price** → (points to the 5.00% row)

**Bidding Increments of 0.01%** → (points to the 0.01% increments between rows)

- Bidding schedule covers the full 15 year term of the licence and all percentages (to 2 decimal places) from 5% to 26%
- For each royalty percentage there is a flat minimum payment for the first five years



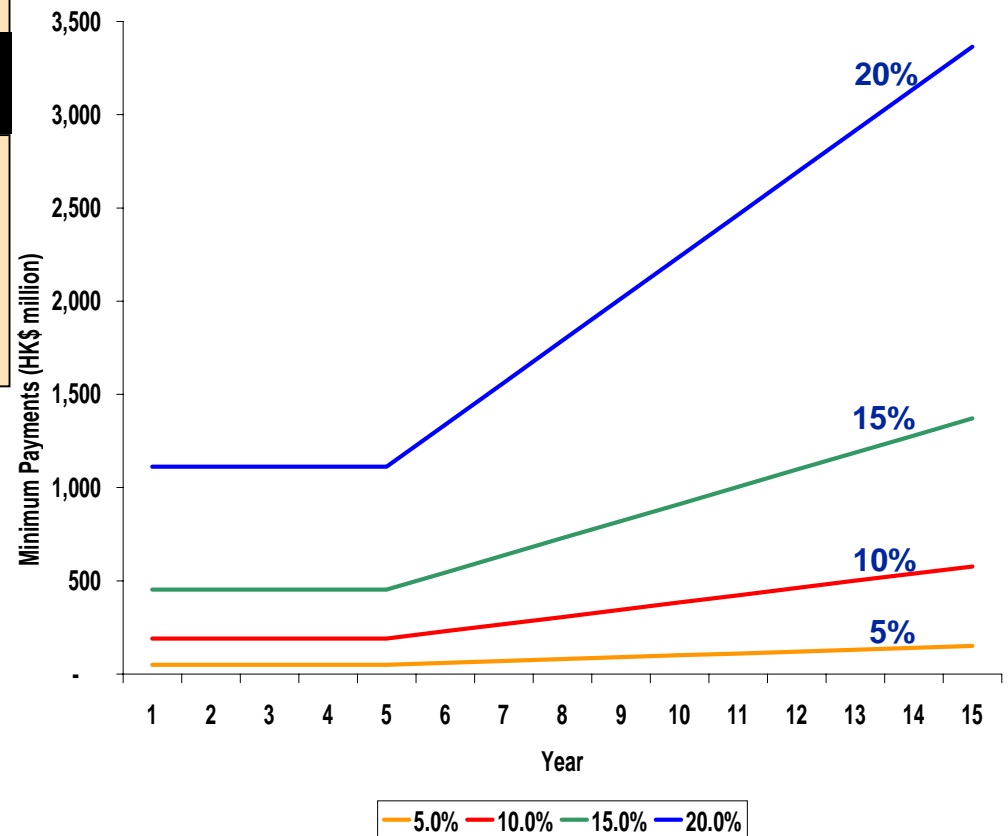
# Reserve Prices and Bidding Schedule

## Minimum Payment

### Extract from Bidding Schedule

	Annual Minimum Payments			
	Yr 1-5 (HK\$ m)	Yr 8 (HK\$ m)	Yr 12 (HK\$ m)	Yr 15 (HK\$ m)
<b>5.0%</b>	50	80	121	151
<b>10.0%</b>	191	307	462	578
<b>15.0%</b>	453	729	1,096	1,371
<b>20.0%</b>	1,112	1,788	2,688	3,364
<b>25.0%</b>	5,846	9,397	14,132	17,683

### Minimum Payments over time

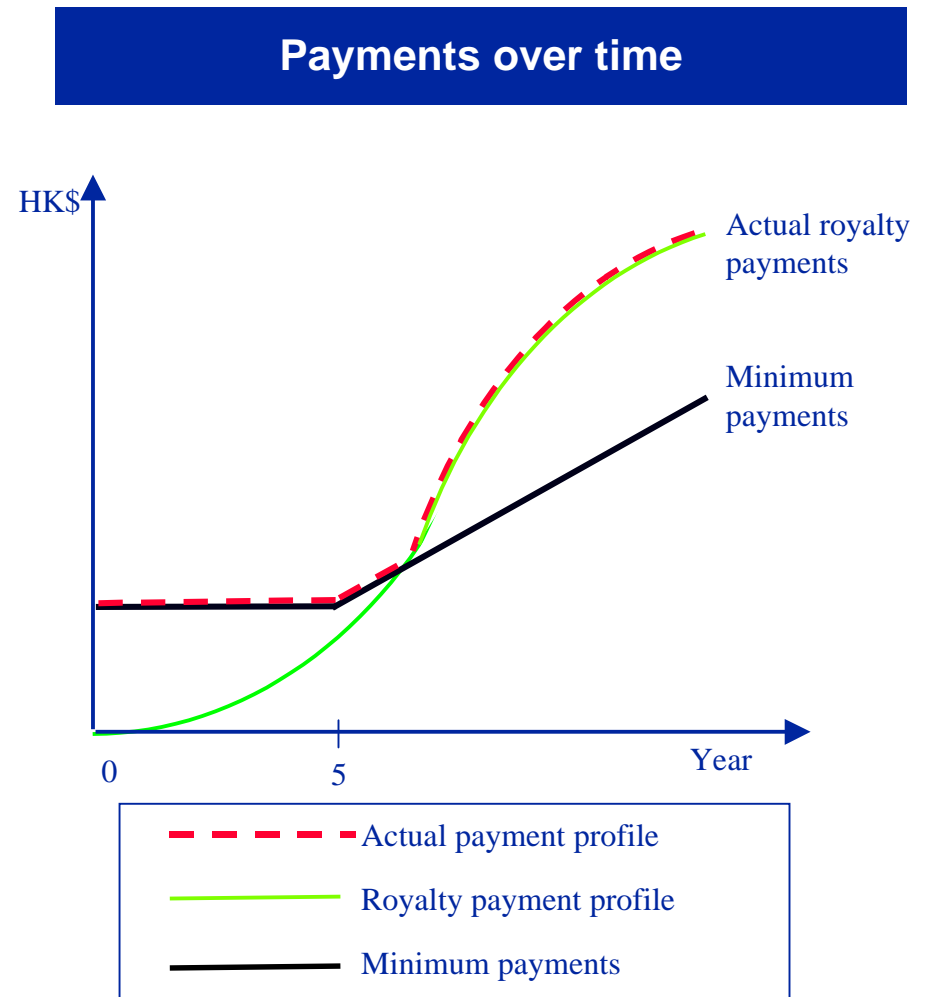


➤ Bidding schedule designed to deter irrational bidding

# Reserve Prices and Bidding Schedule

## Spectrum Utilization Fee

- Payable annually in arrears
- For the first five years, Licensees pay only the Annual Minimum Fee applicable to the Royalty Percentage determined in the Main Auction
- For years 6 to 15, Licensees will pay the higher of:
  - the Annual Minimum Fee for each year; and
  - the Network Turnover of the Licensee multiplied by the applicable Royalty Percentage



# Reserve Prices and Bidding Schedule

## Performance Bond

- Each Licensee will provide a 5-year rolling Performance Bond, for an amount equal to five years' guaranteed minimum payments
- Performance Bond aims:
  - to mitigate Government's credit risk
  - not to impose too great a burden on licensees : more suitable than upfront cash payment or a guarantee of all minimum payments

# Regulatory Framework and Licences

## Overview of framework (1)

### Spectrum

- Technology neutral approach
- 4 Licences – each of 2 x 14.8 MHz (paired) plus 1 x 5MHz (unpaired)
- No further cellular licences before 2005
- Existing 2G licences expiring in 2002/2003 to be extended for 3 years

### Open Network Access

- Licensees must offer 30% of their network capacity to NSPs
- A light regulatory approach adopted:
  - ensure competition at the content, application and service level
  - preserve sufficient 3G investment incentives
- Cost-plus pricing with reasonable return to Licensees (cost of capital - 20% for the initial 3 years)
- Licensee to develop own measurement methodology

# Regulatory Framework and Licences

## Overview of framework (2)

### Network Sharing

- ONA arrangements promote network sharing between MNOs and MVNOs
- Arrangements similar to sharing by current 2G operators (tunnels, indoor complexes, etc) will be permitted
- All other arrangements require TA's consent

### Domestic Roaming

- For New Entrants onto existing 2G networks of 2G Operators (including their group or consortium companies) which become 3G Licensees
- Sunset date 5 years from licensing
- Retail-minus pricing

# Regulatory Framework and Licences

## Other licence conditions

### Licence Period

- Licences will last 15 years from date of issue

### Mobile Number Portability

- Must be available at launch of 3G services
- Portable between 2G and 3G as well as within 3G

### Roll-out Conditions

- 50% population coverage by 31 December 2006
- Target coverage to be achieved for data rates of at least 144 kbps

### M&A Controls

- Ownership structure as presented in Application not to change materially without TA's prior consent
- Interim measure before introduction of long-term ownership regulation

# Auction Mechanics

## Overview

- Applications and pre-qualification
  - Only qualified bidders participate in the Auction
- 3 Phases to the Auction
  - First Phase – to decide on the Royalty Percentage (set by the highest loser)
  - Second Phase – disconnection undertaking or sealed cash bid to resolve connections (if any)
  - Third Phase – sealed cash bid to determine order of selecting licences
- Collusion and manipulation of Auction forbidden – and design minimises possibility
- Provisions to ensure bidding information is kept confidential

# Auction Mechanics

## Applications and Pre-qualification

- A valid application will consist of:
  - A completed application form (with corporate information as required) and supporting documents and certifications
  - Deposit of **HK\$250 million** (cash or letter of credit); cash deposit is interest bearing
- Pre-qualification process is expected to be rapid and involves checking:
  - deposits (cash or letter of credit) and all other requested information and documents have been received
  - that there are no joint bids from 2G operators (without TA's consent) or common control of Bidders
- The Auctioneer may request further information or clarification

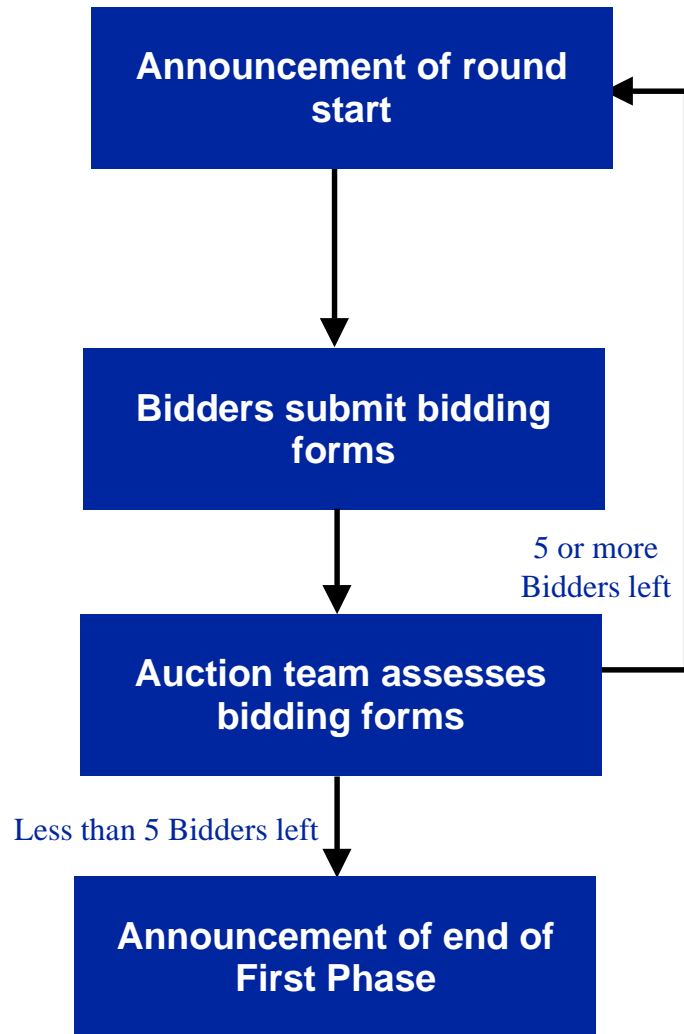


Pre-qualified Bidders and disqualified applicants will be notified shortly after review of applications.  
Pre-qualified Bidders may be requested to attend auction location at short notice



# Auction Mechanics

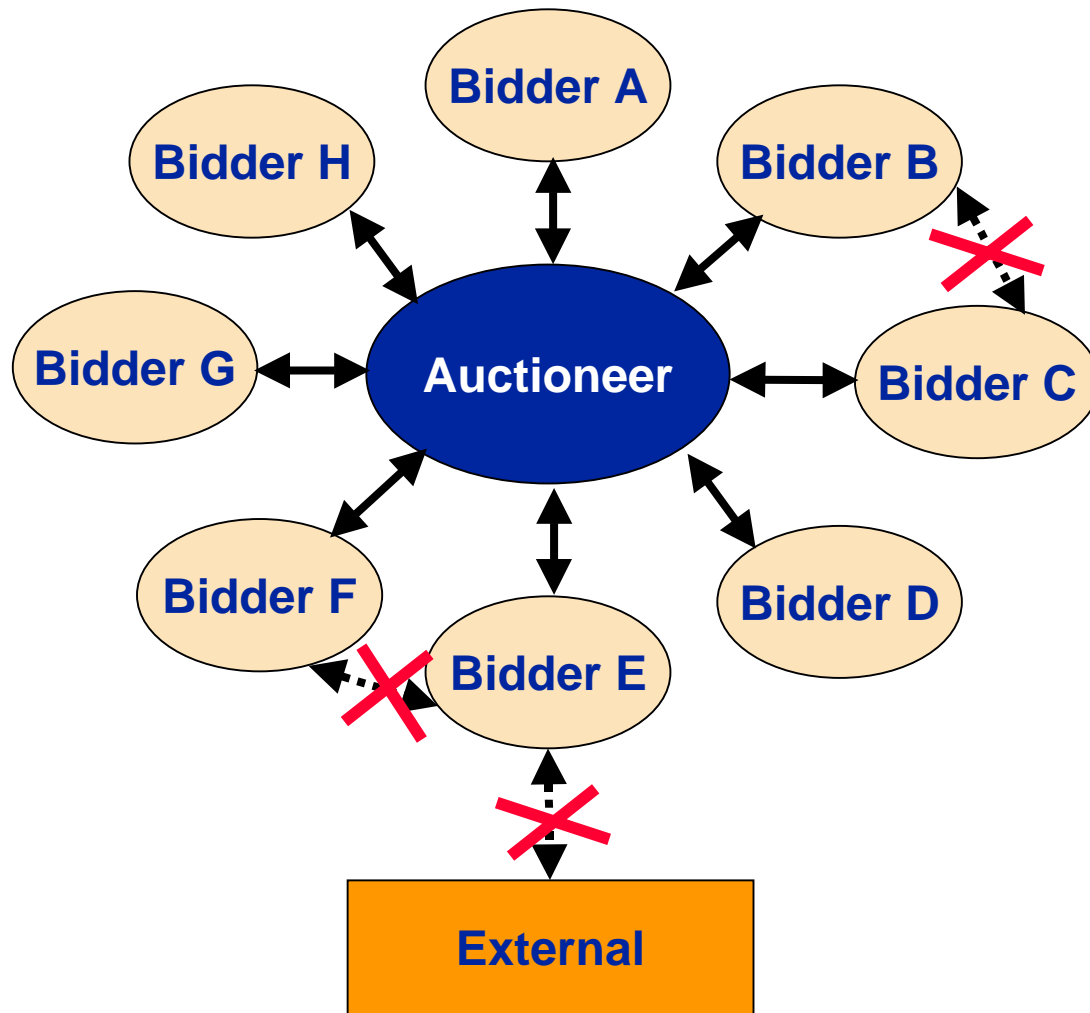
## First Phase



- Auctioneer announces duration of each round (to allow Bidders to prepare and submit their bids for each round)
- Each round related to an incremental percentage range – e.g. 5.00% to 5.99%, 6.00% to 6.99%, etc.
- Each Bidder faxes a bidding form to the Auctioneer either confirming that they will remain in this round or to withdraw at a certain royalty percentage (to two decimal places)
- Bidding forms received and checked
- Auctioneer announces end of First Phase
- Common royalty = 0.01% above last withdrawal

# Auction Mechanics

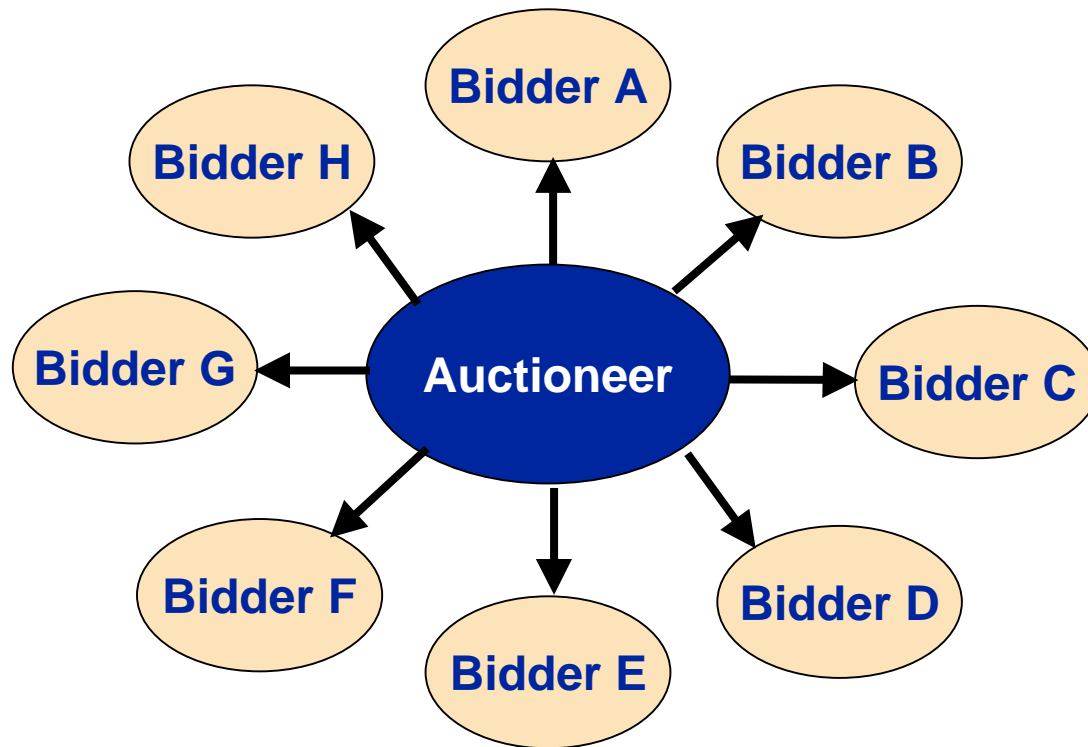
## Auction System – First Phase - Design



- Bidding from different selected locations
- Communications between Bidders **not** permitted
- External communications **not** permitted
- ICAC Observers

# Auction Mechanics

## Auction worked example



### First Phase Round 1

- Eight pre-qualified Bidders
- Auctioneer calls increment of 5.00% to 5.99% and about ten minutes for round
- Bidders must now either confirm they remain in the round or withdraw at a certain level

## Sample Confirmation

### Bidding Form for Bidding Rounds of the First Phase (please complete in block letters)

Bidding Round:  Bidding increment:

Bidder: BIDDER A (the "Bidder")

**Either:**

We confirm that the Bidder will remain in the First Phase in this Bidding Round. We therefore confirm that the Bidder's minimum Final Offer which we may now make is 6.00%.

Password: MCT6T2DI

Signed:    
 Representative 1 Representative 2

**Or:**

We confirm that the Bidder withdraws from the First Phase in this Bidding Round.

We confirm that the Bidder's Final Offer is:

10s	Units	1st decimal	2nd decimal	
<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text"/>	%

In words: \_\_\_\_\_ Per cent. (see note 1)

We confirm the Bidder is not willing to bid at or above (see note 2):

10s	Units	1st decimal	2nd decimal	
<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text"/>	% (see note 2)

In words: \_\_\_\_\_ Per cent. (see note 1)

Password: \_\_\_\_\_

Signed: \_\_\_\_\_  
 Representative 1 Representative 2

## Sample Withdrawal

### Bidding Form for Bidding Rounds of the First Phase (please complete in block letters)

Bidding Round:  Bidding increment:

Bidder: BIDDER H (the "Bidder")

**Either:**

We confirm that the Bidder will remain in the First Phase in this Bidding Round. We therefore confirm that the Bidder's minimum Final Offer which we may now make is 6.00%.

Password: \_\_\_\_\_

Signed: \_\_\_\_\_  
 Representative 1 Representative 2

**Or:**

We confirm that the Bidder withdraws from the First Phase in this Bidding Round.

We confirm that the Bidder's Final Offer is:

10s	Units	1st decimal	2nd decimal	
<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text" value="\$"/>	<input style="width: 30px; height: 20px;" type="text" value="\$"/>	<input style="width: 30px; height: 20px;" type="text" value="0"/>	%

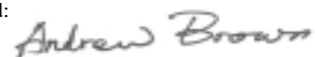

In words: FIVE POINT FIVE ZERO Per cent. (see note 1)

We confirm the Bidder is not willing to bid at or above (see note 2):

10s	Units	1st decimal	2nd decimal	
<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text" value="\$"/>	<input style="width: 30px; height: 20px;" type="text" value="\$"/>	<input style="width: 30px; height: 20px;" type="text" value="1"/>	% (see note 2)

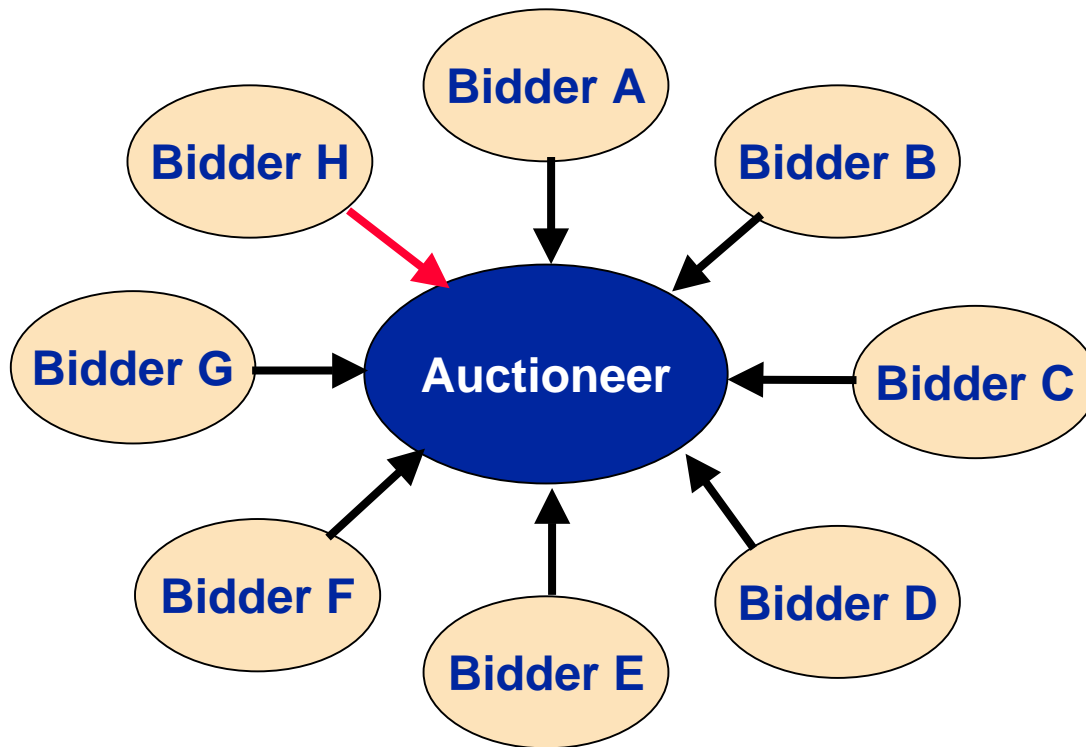
In words: FIVE POINT FIVE ONE Per cent. (see note 1)

Password: MCT6T2DI

Signed:    
 Representative 1 Representative 2

# Auction Mechanics

## Auction worked example



### First Phase Round 1

- Bidders return Bidding Forms to Auctioneer by fax
- Bidders A to G confirm
- Bidder H withdraws at 5.50%

**Bidding Form for Bidding Rounds of the First Phase**  
(please complete in black ink)

Bidding Round:  Bidding increment:

Bidder:  (the "Bidder")

Either:

We confirm that the Bidder will remain in the First Phase in this Bidding Round. We therefore confirm that the Bidder's minimum Final Offer which we may now make is **6.00%**.

Password: \_\_\_\_\_  
Signed: \_\_\_\_\_  
Representative 1 \_\_\_\_\_ Representative 2 \_\_\_\_\_

Or:

We confirm that the Bidder withdraws from the First Phase in this Bidding Round.

We confirm that the Bidder's Final Offer is:

0th Units 1st decimal 2nd decimal  
    %

In words: \_\_\_\_\_ Per cent. (see note 1)

We confirm the Bidder is not willing to bid at or above (see note 2):

0th Units 1st decimal 2nd decimal  
    % (see note 2)

In words: \_\_\_\_\_ Per cent. (see note 2)

Password: \_\_\_\_\_  
Signed: \_\_\_\_\_  
Representative 1 \_\_\_\_\_ Representative 2 \_\_\_\_\_

**Bidding Form for Bidding Rounds of the First Phase**  
(please complete in black ink)

Bidding Round:  Bidding increment:

Bidder:  (the "Bidder")

Either:

We confirm that the Bidder will remain in the First Phase in this Bidding Round. We therefore confirm that the Bidder's minimum Final Offer which we may now make is **6.00%**.

Password: \_\_\_\_\_  
Signed: \_\_\_\_\_  
Representative 1 \_\_\_\_\_ Representative 2 \_\_\_\_\_

Or:

We confirm that the Bidder withdraws from the First Phase in this Bidding Round.

We confirm that the Bidder's Final Offer is:

0th Units 1st decimal 2nd decimal  
    %

In words: \_\_\_\_\_ Per cent. (see note 1)

We confirm the Bidder is not willing to bid at or above (see note 2):

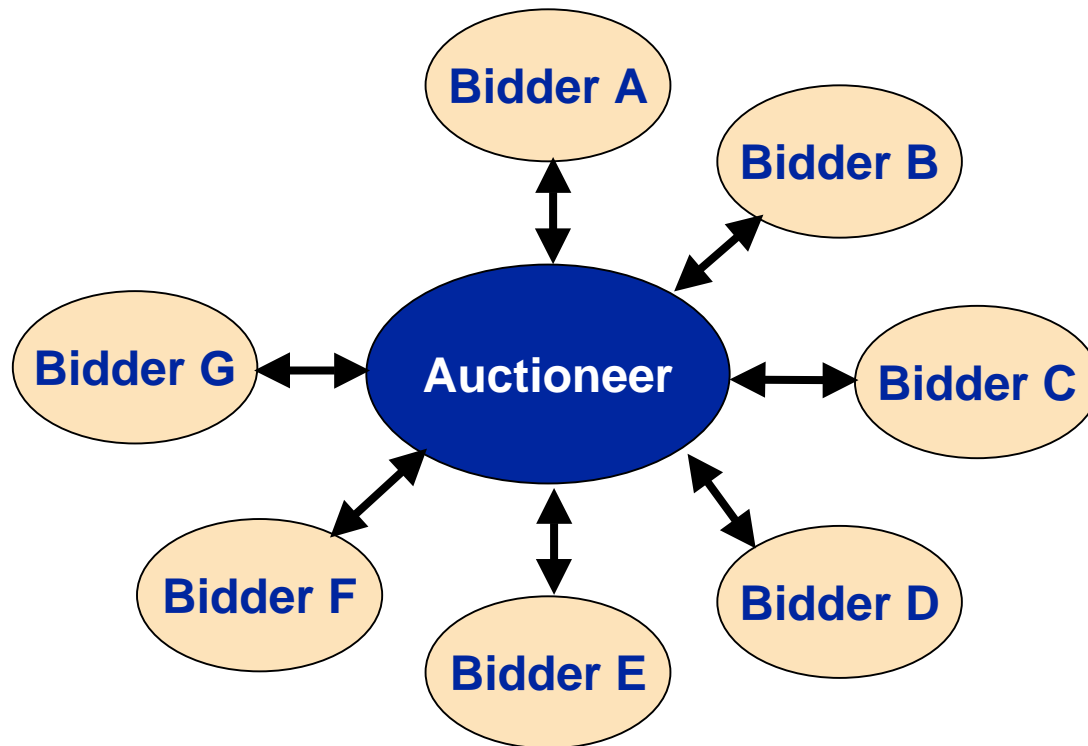
0th Units 1st decimal 2nd decimal  
    % (see note 2)

In words: \_\_\_\_\_ Per cent. (see note 2)

Password: \_\_\_\_\_  
Signed: \_\_\_\_\_  
Representative 1 \_\_\_\_\_ Representative 2 \_\_\_\_\_

# Auction Mechanics

## Auction worked example

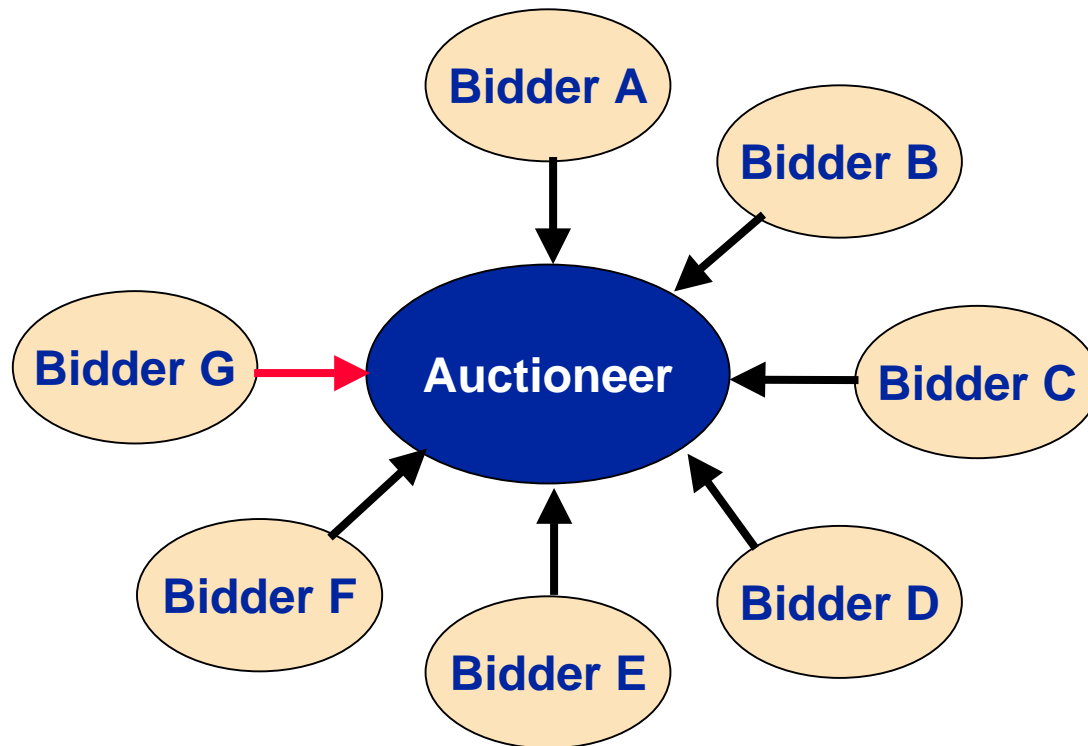


### First Phase Round 2

- Seven Bidders left
- Increment 6.00% to 6.99%
- All seven Bidders confirm

# Auction Mechanics

## Auction worked example

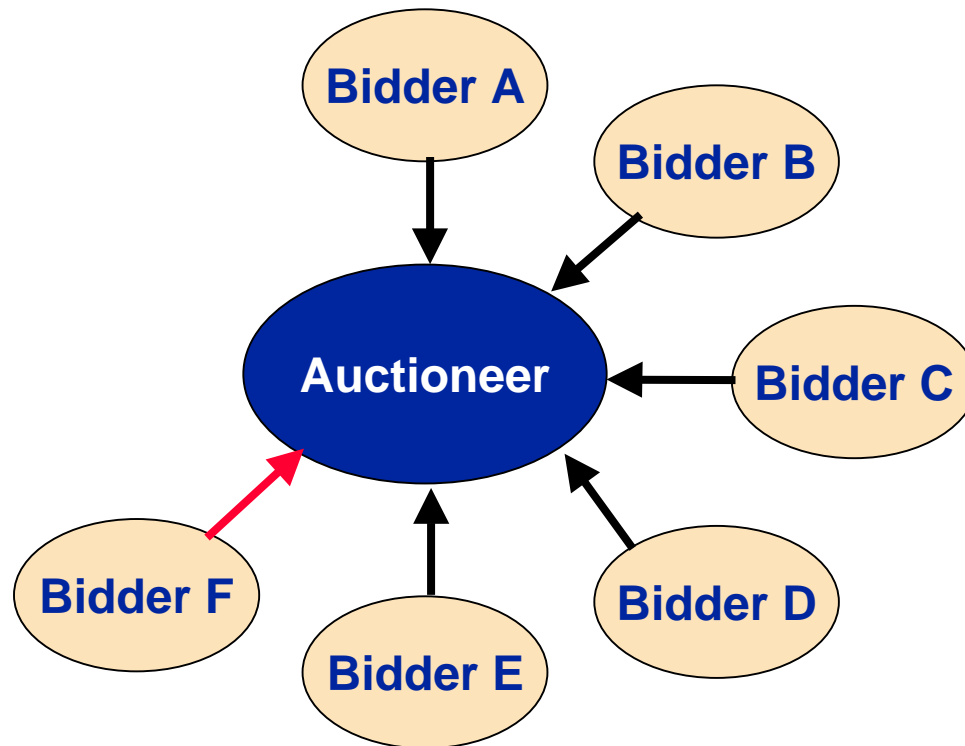


### First Phase Round 3

- Seven bidders left
- Increment 7.00% to 7.99%
- Bidder G withdraws at 7.97 %
- Bidders A to F confirm

# Auction Mechanics

## Auction worked example



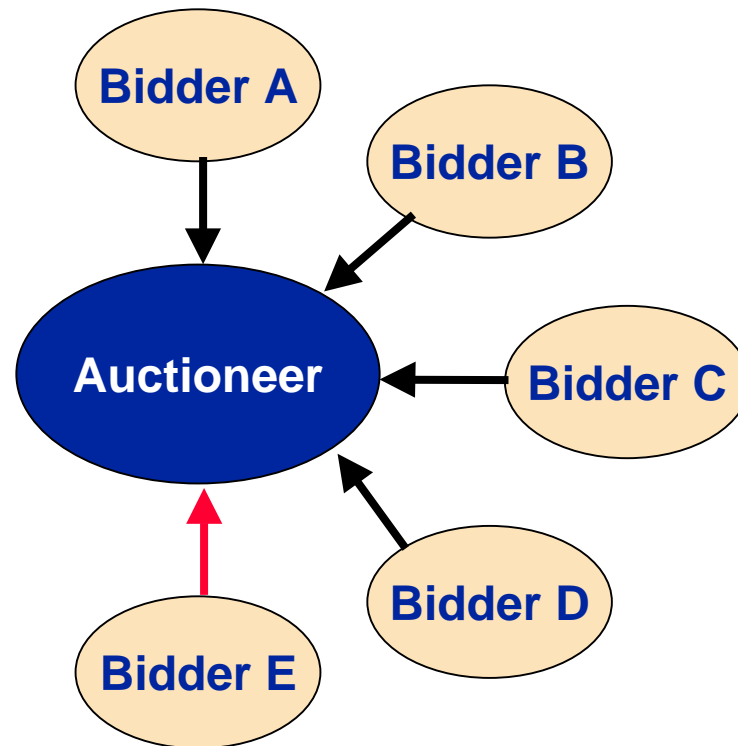
### First Phase Round 4

- Six bidders left
- Increment 8.00% to 8.99%
- Bidder F withdraws at 8.89 %
- Bidders A to E confirm



# Auction Mechanics

## Auction worked example



### First Phase Round 5

- Five bidders left
- Increment 9.00% to 9.99%
- Bidder E withdraws at 9.26 %
- Bidders A to D confirm
- Bidders A to D are Provisional Successful Bidders

**Provisional Applicable Royalty Percentage is  $9.26\% + 0.01\% = 9.27\%$**

# Auction Mechanics

## Second and Third Phase and Grant of Licences

### Second Phase

- In unlikely event that provisional winners connected then move to Second Phase
- Connected bidders to provide irrevocable undertaking to disconnect
- If not then single cash sealed bid
- Winners from First and Second Phases announced

### Third Phase

- As soon as practicable after end of Second Phase
- Bidders to submit a single sealed cash bid
- Bid determines order in which Bidders may choose licences

### Grant of Licences

- Timing of awarding license at TA's discretion
- Intend to award licences 10 business days after Third Phase (extendable at TA's discretion)

# Auction Mechanics

## Release of Information

**During First Phase**

- Bidding increment (with minimal delay) will be continually posted on OFTA's website ([www.ofta.gov.hk](http://www.ofta.gov.hk)) at the end of each round

**After completion of First Phase**

- TA to announce names of all provisional winners and provisional applicable Royalty Percentage

**Immediately after completion of Second Phase**

- TA to account fully for the First Phase and results of Second Phase

**Immediately after completion of Third Phase**

- TA to announce results of Third Phase

# Hong Kong 3G Auction



27th July, 2001