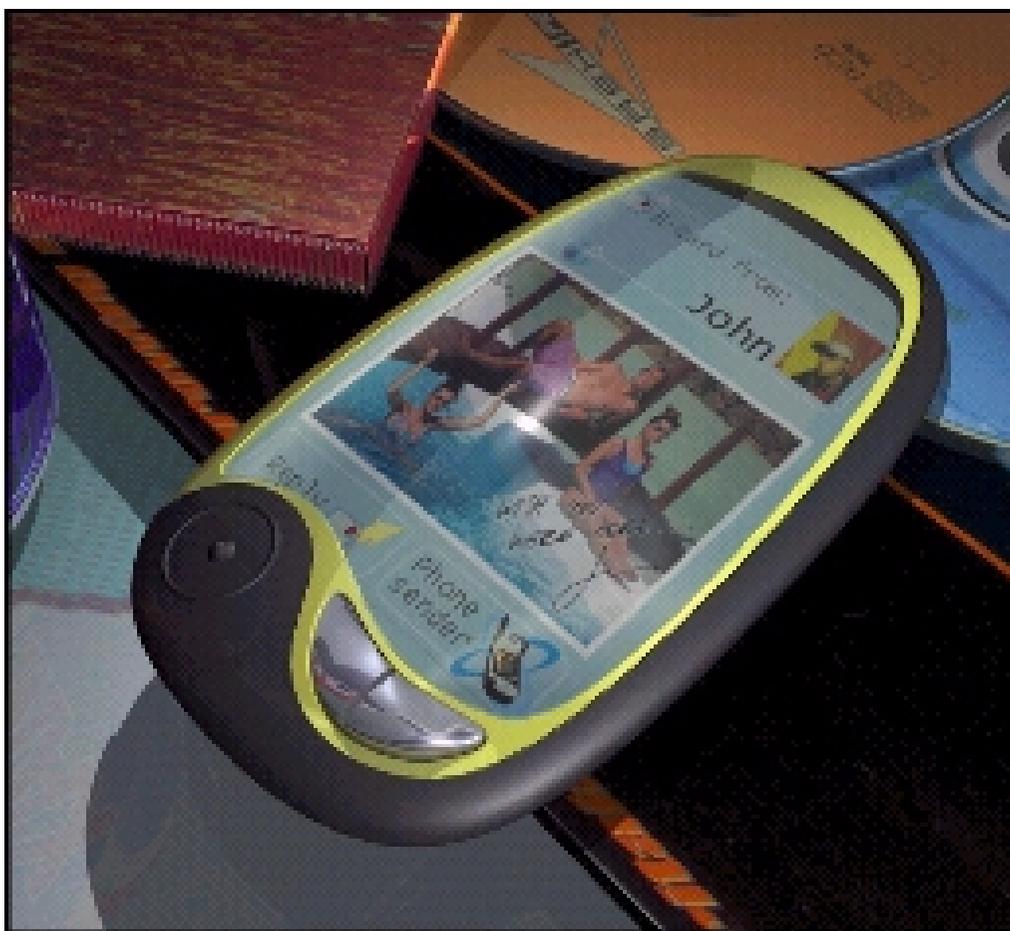


**Second Consultation Paper**  
**on**  
**Licensing Framework for**  
**Third Generation Mobile Services**  
**(3G)**



# What is 3G?

- mobile access to personalised multi-media services - anywhere, anytime
- Consumers will enjoy mobile-internet and mobile-commerce services e.g. e-shopping, video services

# Where Hong Kong is in mobile services

- **Leader** in mobile technology applications and services
  - > early introduction of WAP and 2.5G service
- Penetration rate of **71%**, highest in Asia and second only to Scandinavia
- A competitive 2G market with **six** operators

# Hong Kong stands to benefit from 3G

- Tremendous opportunities not only in network operation but also in content creation and service application
- Benefits to the business sector, especially our small and innovative businesses

# Overseas Examples

## Countries which have awarded 3G licences

	Allocation Method	No of Licences issued
UK	Auction	5
The Netherlands	Auction	5
Germany	Auction, and whether there will be 4 to 6 licences is subject to bidding	6
Spain	Selection by merits	4
Finland	Selection by merits	4
Japan	Selection by merits	3
Italy	Auction with pre-qualifications	5

# Overseas Examples

## Countries which have decided on the allocation method but have not awarded 3G licences

	Allocation Method	No of Licences to be issued
Singapore	Auction	4
New Zealand	Auction	4
Switzerland	Auction with pre-qualifications	4
France	Selection by merits with a fixed fee	4
South Korea	Selection by merits with a fixed fee	3
Norway	Selection by merits with a fixed fee	4
Sweden	Selection by merits (Now considering to include an auction element)	4
Ireland	Selection by merits	4

# Policy Considerations

- To promote the development of the telecoms industry
- To protect consumers' interests
- To maximize benefits to the economy as a whole

# Key Issues

- To establish a licensing and regulatory regime to achieve our policy considerations :
  - > a fair and transparent allocation method that results in efficient allocation of the limited spectrum
  - > to decide on the number of licences to be issued within the limited spectrum available, taking into account technical requirements

## Key Issues (cont'd)

- > A level-playing field, pro-competition and pro-consumer regulatory environment conducive to the development of our telecommunications industry

# Issues for Consultation

- Licence allocation method
- Open network requirement
- Number of licences to be issued
- Other regulatory issues

# **Licence Allocation Method**

# Option 1: Selection by Merits

- Well-established method in HK to evaluate based on merits of application

## PROS

- > proven to be successful
- > commitments by applicants on coverage roll out and investment
- > does not incur high entry costs

## CONS

- > arguably less transparent and more subjective
- > public and possibly LegCo criticism
- > problems if windfall profits to licensees

## Option 2 : Cash Auction

- Price level is successfully raised *UNTIL*  
no. of bidders = no. of licences issued

### PROS

- > transparent and easy to administer

### CONS

- > lead to higher 3G platform price
- > not conducive to e-commerce
- > economists differ on whether spectrum cost is sunk cost, but banks may stay away from inflated 3G investments

# Option 3 - Reverse Auction

- Bidders do not bid for cash payment to Government
- Instead, they compete on their proposed wholesale price for network capacity - the *LOWEST PRICE* commitments win

## PROS :

- > highest economic & consumer benefits

## CONS:

- > 3G services not clearly defined
- > difficult to design bidding process
- > difficult to bid for the right bid price

**“Purist” Options 1 to 3 unable  
to meet policy objectives in  
dealing with 3G**

# **Proposed Option 4 : Pre-qualification + Cash Auction + Open Network**

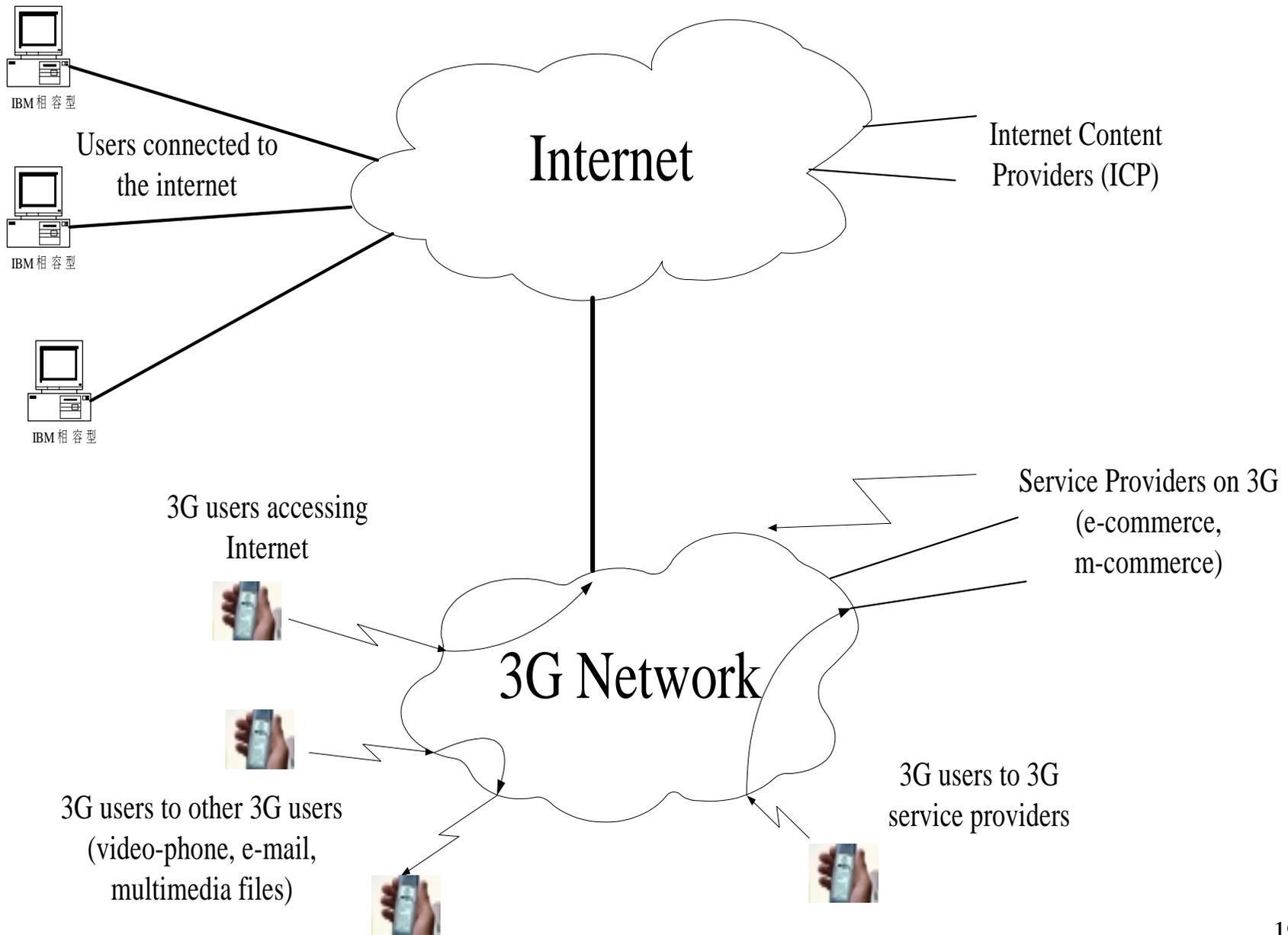
A hybrid option

Step 1 : Pre-qualification with minimum requirements  
on coverage, rollout and investments

- > Weed out unqualified bidders who are unable to deliver the pledged services
- > Assured quality of services for consumers
- > Open Network requirement beneficial to consumers and SME's

**Proposed Option 4:  
Pre-qualification + Cash Auction  
+ Open Network**

Step 2 : Pre-qualified applicants make cash bids to compete for licences



# Proposed Option 4: Open Network Requirements

- Network operators are required to open network to 3G MVNO's (*Mobile Virtual Network Operators*) and other service providers
- Despite limited spectrum, ensure room for operation of small, innovative companies
- Separation of **network** & **service** meet policy objective of more competition in content and service applications

# Proposed Option 4: Open Network Requirements

- 3G licensees be required to open a proportion of their network capacity to non-affiliated companies, say, 30-50% (% for consultation)
- Wholesale price to MVNOs to be negotiated commercially with 3G licensees
  - > If commercial negotiations fail, TA to determine the ceiling of wholesale price based on fair interconnection principles

# Proposed Option 4 : Pre-qualification + Cash Auction + Open Network

## - PROS

- > allows all 6 existing 2G operators to take part in 3G business even if they lose out in 3G bidding
- > high transparency
- > revenue for Government, yet consumers protected
- > promotes competition in content and service applications

## - CONS

- > still introduces a relatively high entry cost
- > open network requirement may make 3G licence less attractive

## **A Variant to Option 4 : Pre-qualification + “Royalty” Auction + Open Network**

- Same as Option 4 but replace cash auction by auction on royalty on turnover
  - > pre-qualified applicants bid on a percentage of their annual turnover to be paid as royalty
  - > to avoid default, a minimum lump sum royalty is payable annually
  - > a 5 year rolling guarantee on the minimum payment is required

## Option 4 with “Royalty” Auction

### PROS

- reduces upfront cost for licensees, enables smaller operators to bid
- may attract more bidders, more successful auction
- licensees pay more if 3G business is more successful
- constant revenue stream for Government

### CONS

- more complicated procedures, higher enforcement costs
- Government takes some risks

**Proposed Option 4 :**  
**Pre-qualification + Auction (cash or**  
**royalty) + Open Network**

- Industry feedback invited on cash or royalty preference

# Number of Licences

- Four licences to be issued
  - Undesirable to introduce capacity constraints
  - “Open network” requires more spectrum
  - Each operator to be assigned 15 MHz x 2 paired spectrum and 5 MHz unpaired spectrum
  - Incumbent operators and new entrants will be given equal opportunity to bid for all four licences

# Domestic Roaming from 3G to 2G Networks

- 2G network operators successful in obtaining 3G licences will be obliged to allow customers of 3G new entrants to roam into their 2G networks
- Aimed to enable effective competition between existing operators and new entrants in 3G services
- Available for 5 years from 3G service launch

# Time Table

- Consultation lasts for 6 weeks
- Final decision made in around end 2000/early 2001 before inviting licence applications

# Time Table (Con't)

- To tie in with the licensing exercise by TA, we will introduce the following legislation as soon as possible : -
  - (1) regulations for implementation of the carrier licence regime; (under section 7(2) of the amended Telecommunications Ordinances)
  - (2) regulations and order in relation to spectrum utilization fee. (under section 32I of the amended Telecommunications Ordinances)
- To seek funding from the Finance Committee to engage an adviser to assist in the detailed design and implementation of the licence allocation process.