

# Public Consultation on More Efficient Utilisation of the 8-digit Numbering Plan

Telecommunications Users and Consumers Advisory Committee  
28 January 2016

# Purpose

- Invites public views on the :
  - five proposed measures for the more efficient utilisation of numbers in the 8-digit numbering plan to make available additional mobile numbers
  - implementation timeframe of the proposed measures

Please refer to the following for the consultation paper

[http://www.coms-auth.hk/filemanager/en/content\\_711/cp20151029\\_e.pdf](http://www.coms-auth.hk/filemanager/en/content_711/cp20151029_e.pdf)

# Background (1)

- Telecommunications numbers are finite public resources
- Current 8-digit numbering plan has been adopted since 1995
- As of Oct 2015, Hong Kong had more than 16.54 million mobile subscribers, i.e. penetration rate at 226.6%, one of the highest in the world

# Background (2)

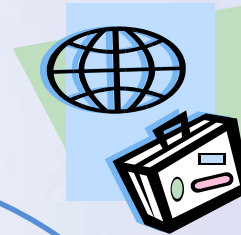
- Consumption of mobile numbers is expected to continue due to:
  - growing popularity of pre-paid mobile services
  - advent of next generation mobile services (e.g. Internet of Things, 5G mobile services)
- Shortage of number resource for mobile services expected within **3 years at the earliest**

# Allocation under the Existing 8-digit Numbering Plan

Freephone Service



Level 0



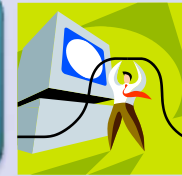
International Prefix

Personal Number Service



Level 8

Level 1



- Short codes
- Access codes
- Network test & routing codes

Mobile Services



(84X to 87X, 89X)

Level 7

Levels 2 / 3



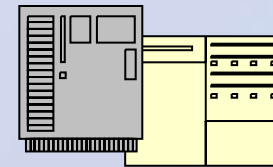
Fixed Services

Paging Services



Levels 5\* / 6 / 9

Level 4



Network Numbers

Mobile Services



\* 58X is allocated for Class 2 fixed services.

# Available Mobile Numbers

## 51X - 57X and 59X

- 0.67 million numbers available (last for 5 months)

## 6X

- Fully allocated

**Total 4.97 million numbers  
- last until Nov 2018**

## 84X - 87X and 89X

- 4.3 million numbers available (last for 32.3 months)

## 9X

- Fully allocated

# Growth of Mobile Services Subscribers



# Migration to Longer Digit Numbering Plan?

- Currently not considered unless all possible measures have been exhausted
- Huge costs to the community – estimated to be **HK\$1.1 billion**

## Individuals

- Update phonebooks

## Business & Government

- Replace stationery / promotional materials
- Update equipment

## Operators

- Upgrade networks
- Update databases



# Public Consultation on Proposed Measures for More Efficient Utilisation of the 8-digit Numbering Plan

- The CA has identified in the consultation paper five possible measures in order to make available additional number resources for mobile services
- These measures are devised with the objectives of minimising the social and economic costs on the community whilst making more effective use of the existing 8-digit numbering plan

# Measure 1

*Relocating some of the existing numbers for paging services and re-allocating some of the numbers in the “7(0-3)X” levels for mobile services*

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## Key points

- Relocate some paging numbers to number blocks with more active users in “7(1-3)X” range
- Vacate most of the number blocks in the “7(1-9)X” range for reallocation
- **3.2 million** numbers made available for mobile services (meet **24 months** demand)

## Considerations

- Utilisation of paging numbers are quite low
- Relocating paging numbers will affect some of the paging users; would implement the measure at the last stage to minimise impact

# Measure 2

*Re-allocating numbers in the “4X” level for mobile services*

## Key points

- “4X” mainly used as network numbers
- 5.6 million numbers made available for mobile services (meet 42 months demand)

## Considerations

- Operators and subscribers may not welcome the leading digit “4”
- These numbers can in fact be used for pre-paid SIM cards and data-only service plans

# Measure 3

*Re-allocating vacant numbers in the “8(1-3)X” levels for mobile services*

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## Key points

- Vacant numbers can be re-allocated for mobile services
- **0.98 million** numbers made available for mobile services (meet **7 months** demand)

## Considerations

- No more spare personal number blocks if demand revives in the future (though unlikely)

# Measure 4

*Raising the threshold of utilisation rate for allocation of additional numbers to network operators*

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## Key points

- Tighten up the threshold of utilisation rate from 70% to 80%, that means percentage of spare numbers held by licensees must drop from 30% to 20% before they can apply for new number blocks
- **2.42 million** numbers made available for mobile services (meet **18 months** demand)

## Considerations

- A smaller amount of spare numbers for operators' operation may have impact on pre-paid SIM market
- Operators can avoid pre-assigning numbers to pre-paid SIM
- Same threshold used in nearby regions

# Measure 5

*Releasing most of the Special Number Blocks for normal allocation*

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## Key points

- A list of Special Number Blocks (SNBs) reserved since 2002
- Substantially reduce the size of SNBs
- **3.52 million** numbers made available for mobile services (meet **26 months** demand)

## Considerations

- It may impose a constraint for any Special Number Arrangement to be introduced in the life span of the 8-digit numbering plan

# Mobile Numbers Made Available

	Available No. for Mobile (million)	Time Extended (month)
Measure 1	<b>3.20</b>	<b>24</b>
Measure 2	<b>5.60</b>	<b>42</b>
Measure 3	<b>0.98</b>	<b>7</b>
Measure 4	<b>2.42</b>	<b>18</b>
Measure 5		
(a) Measure 5 only	<b>2.17</b>	<b>16</b>
(b) with Measures 2 and 3	<b>3.16</b>	<b>24</b>
(c) with Measures 1, 2 and 3	<b>3.52</b>	<b>26</b>

If adopt all measures,  
total available no.:  
**15.72 million**



Time extended:  
**~10 years**  
to September 2028

# Implementation of the proposed measures

- **Measures 2, 3, 4 and 5** (except those SNBs released in “7X” level) could be implemented first as they should not require substantial changes or reconfigurations to the networks of the operators.
- **Measure 1** requires relocation of some of the paging subscriber numbers, therefore causing inconvenience to paging users and the general public. CA is of the preliminary view that Measure 1 should be implemented the last when available number resources (made available by other measures) are about to be used up, so as to minimise impact on the paging users and the general public.



# Way forward

- Consultation period already ended
  - 29 October 2015 to 29 December 2015
- A total of 20 submissions received
- The CA will carefully consider all views and comments received before making decision on the measures and implementation timeframe

# Thank you