LC Paper No. CB(1)1829/07-08(01)

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The Number Fee and Effective Use of Numbers

June 2008

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Number is a scarce resource

- "Subscriber numbers" under the current 8-digit Numbering Plan
  - Numbers available for allocation to operators: 54.0M
  - Numbers already allocated to operators: 36.8M
  - Numbers not yet allocated to mobile operators: 7.0M
  - Numbers not yet allocated to fixed operators: 3.3M
  - Numbers not yet allocated to other operators: 6.9M
  - Numbers assigned to end users: 20.3M
  - Idle numbers: 16.5M
- Based on the current yearly demand of 1.2M for mobile and 0.4M numbers for fixed services respectively, the current Numbering Plan may only last up to Year 2015 (when all numbers designated for mobile services are exhausted), after which migration to a longer-digit Numbering Plan is required to cope with new demand. This is a costly exercise, both for operators and the general public.

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Number is a scarce resource (2)

- To minimise the social costs, the Office of the Telecommunications Authority (OFTA) should extend the life span of the current Numbering Plan as long as practically feasible.

- Accordingly, OFTA has to formulate measures to ensure that operators utilise numbers already allocated to them effectively so that they only retain numbers that they really need, and that new allocation to them would likewise be on a more stringent basis. OFTA will also open up new number range for allocation to services with higher demand of numbers in a more flexible manner.

Allocation and use of numbers by different types of services (4/2008)

Service type	Total capacity available (A) & % total capacity (=(A/E)*100%)		Capacity allocated to operators (B)	Spare capacity (=(A-B)= D) & % total available capacity (=(D/A)*100%)		Capacity assigned to end users (C) & utlisation % (=(C/B)*100%)		Idle numbers (＝(B-C)= F) & idle ％ (=(F/B)*100%）	
Mobile (including MVNOs) (Prefixes 5/6/9)	24.7M	45.7%	17.7M	7M	28.3%	10.8M	61.0%	6.9M	39.0%
Fixed (Prefixes 2/3/8)	18.3M	33.9%	15M	3.3M	18.0%	9.3M	62.0%	5.7M	38.0%
Paging (Prefix 7)	9M	16.7%	4M	5M	55.6%	0.1M	3.5%	3.9M	96.5%
Service Based Operators (Prefixes 57/58)	2M	3.7%	0.06M	1.94M	97.0%	0.01M	16.7%	0.05M	83.3%
Total (E)	54M		36.8M	17.2M		20.3M		16.5M	

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Improving number utilisation efficiency so as to extend the life span of the current Numbering Plan

- **Currently, the total number of idle numbers amounts to 16.5M. This shows that many of the allocated numbers are not effectively used (with unassigned numbers kept by operators ranging from around 38% to 96% for different types of services). If these idle numbers can be assigned to end users, the life span of the current Numbering Plan can be extended.**

- **However, as OFTA does not charge any additional fee for allocating numbers, operators may not have the initiative to return the idle numbers to OFTA. They may also assign numbers to end customers in a less than disciplined manner. For example, for commercial customers using private automatic branch exchanges (PABXs), fixed network operators may assign extension numbers generously.**

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Measures to reduce idle numbers (1)

To provide financial incentive to encourage service providers to return idle numbers to OFTA as soon as possible by introducing a number fee of $3 per number per annum:

- **Under the proposed Unified Carrier Licence (UCL), the licensee will have to pay a number fee of $3 per number per annum, excluding idle numbers returned to OFTA. The target date of implementation is August 2008. Existing fixed network operators will not be affected if they choose not to switch over to UCL until the expiry of their licences (Year 2010 by the earliest).**

- **Number Fee proposed to be levied per subscriber number, whether the number has been assigned to end users or not. As compared with the arrangement to impose a "penalty" fee for idle numbers only, this proposal is easier to implement and capable of avoiding evasion by operators.**

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Measures to reduce idle numbers (2)

- OFTA will propose the same arrangement for paging services operators and Mobile Virtual Network Operators (MVNOs). The latest date for implementation is July 2010. For service-based operators (SBOs), a number fee of $7 per number per annum has already been included as a licence fee component since the SBO licence was introduced in 2006.

- Prefix "5" numbers have been released for mobile services. After they are exhausted, consideration will be given to release prefix "7" numbers for the same purpose.

- OFTA has set up a Working Group to look into other means to improve number utilisation efficiency. These measures include (i) allocation of smaller number block; (ii) setting a higher threshold or utilisation efficiency level for allocation of additional numbers; and (iii) allowing return of non-contiguous idle numbers, etc.

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The number fee is fair to different types of operators

– Both fixed and mobile service operators are treated equally under the UCL with the same number fee of $3 per number per annum.

– The number utilisation efficiency of both fixed and mobile service operators is around 60% and so it is fair to apply the same number fee to them.

– It is planned to apply the same number fee to paging service operators and MVNOs after industry consultation.

– Amount of number consumed by operators is not a relevant consideration in the imposition of the number fee. The main point is that it encourages operators to use allocated numbers effectively.

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Financial implications (1)

- Number fee provides financial incentive to licensees for using numbers more effectively. It should not bring additional revenue to OFTA, i.e. it is “revenue neutral”. It is not a licence fee increase but a licence fee re-structuring proposal – to introduce $3 number fee but reduce other relevant licence fees at the same time.

- To mobile operators, paging services operators and MVNOs, the introduction of number fee means reduction of expenditure on licence fee (the per station licence fee will be reduced from $18 per annum to $8 with an additional $3 number fee).

Financial implications (2)

- To fixed operators, the proposal of having the same charge as mobile services means a licence fee increase: from $7 per customer connection fee to $8 plus $3 number fee. However, if fixed operators can use numbers effectively, the licence fee increase will be smaller.

- Since the concerned operators will have to pay number fee only when they switch to the new UCL voluntarily or when their existing licences expire (Year 2010 by the earliest), there will be no immediate financial impact on fixed carriers. Fixed carriers will also have sufficient time to adjust their business plan and return numbers to minimise the financial impact of number fee.

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Financial implications (3)

- The number fee of $3 per number per annum is a relatively small portion of the total revenue of fixed telephone services (even if the estimate is based on the lowest service fee charged by fixed network operators, the number fee is less than 0.5% of the service fee). It should not adversely affect the business of telecommunications service operators.

Expected result

Assuming the demand for numbers remains at the current level of 1.6 million numbers per annum, after the introduction of financial and other measures to increase number resources and utilisation efficiency:

- **the life span of the current Numbering Plan can be extended to Year 2019 if say, 50% of idle numbers of mobile/fixed services (about 6.3 million) could be recovered**
- **the life span of the current Numbering Plan can be extended beyond Year 2026 if paging numbers could be recovered and re-allocated to mobile/fixed services (about 9 million) together with other measures introduced.**

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Thank you!