

Paper on
Licensing Framework for
Unified Carrier License Consultation

Submitted by
Electronics Division
Information Division
Hong Kong Institution of Engineers

Licensing Framework for Unified Carrier License Consultation

In response to the Consultation Paper by the Telecommunications Authority on 21 December 2007, the Electronics and IT Divisions of the Hong Kong Institution of Engineers would like to jointly submit our independent opinions and concerns as follows.

1. The Licensing Framework

We consider that service quality, network integrity & security and protection of consumer interests are, inter alia, three most important aspects of the proposed licensing framework. It is suggested that these aspects be carefully addressed in the proposed licensing framework.

2. Basis on Deferring the Introduction of 9, 10-digit Numbering

In the light of the rapid growth of telecommunications services, it is predicted that the 8-digit number may be exhausted by 2015. To extend the life of the 8-digit numbers, apart from raising the threshold utilization rate to 60% for fixed network as well, an annual fee of HK\$3 for each subscriber number allocated to the Unified Carrier Licence (UCL) is proposed, regardless of whether the number has been assigned to end customers or not on the top of the customer connection fee of HK\$8 (In the UCL restructured scheme, while the licence fee of mobile phone is reduced from HK\$18 to HK\$8 and that of the fixed line is increased from HK\$7 to HK\$8, HK\$3 of connection fee will be added to each subscriber number). It is expected that mobile phone operators may wish to return as many unused numbers to OFTA as possible after the new number fee is introduced. With the above measures, it is estimated that the period of number saturation will be prolonged to 2020 before the 9 or 10-digit number is introduced.

We understand that increasing the telephone number levels implies a huge amount of societal cost. However, we believe the increase of number level to 9- or 10- digit is unavoidable in support of the future development of telecommunications services. The crux of the matter is about when to implement the number levels change. The introduction of the numbering charge and other proposals appear, to an extent, to hold

back the number level increasing plan. It is necessary to examine in more detail on how the proposals can be carried out and to consider the wider and longer term implications of these actions before a decision is to make.

In fact, we consider that the number level increasing plan should be devised in a holistic manner and be communicated to the public in a responsible moment. The overall societal cost involved can be minimized. In addition, it is expected that there will be lots of new telecommunications services coming up in recent years. Many of them will need new numbers. Delaying the plan will jeopardize this development.

Therefore, no matter whether this (numbering charge) proposal will be implemented, the plan on increasing number level should be well-thought-out as soon as possible.

3. Introduction of new number fee

We consider that an efficient use of the numbering system should always be promoted. With regard to the introduction of the number fee, our concerns are elaborated below.

Concerns

3.1 Effectiveness of the introduction of new number fee

Though the number fee is not new in many other countries, its effectiveness in increasing the utilization rate of telephone numbers in countries like Canada, United States of America, Australia, Germany and Spain remains inconclusive. Further research with local data are suggested to be explored.

More fundamentally, operators will be charged on the basis of their allocated numbers regardless of whether these numbers are being used or unused. Given the prime purpose of the numbering charge is to encourage using numbers more efficiently, should the unused numbers be charged only?

3.2 What if HK\$3 cannot achieve the expected results?

In addition to the above point, it is not clear if the basis on the imposition of the number fee would suggest any further increase in the fee should HK\$3 per number be proved insufficient to achieve more efficient use of telecommunications numbers?

3.3 Use of the returned numbers

If the introduction of number fee can encourage fixed or mobile operators to return numbers to OFTA, do we have an established means to handle the returned numbers effectively in order to ensure our numbering resources are better utilized?

3.4 Use of the additional income

It is estimated that approximately HK\$99M¹ extra income will be generated every year with the number fee. Use of the additional income should be clarified. Otherwise, there will be unnecessary speculations on whether proposal is a twisted way to increase government income?

It is doubtful if collecting the number charge alone may resolve the issue of number exhaustion. It certainly imposes administrative overheads, in particular when frequent number porting is taking place under a highly competitive environment. We are also concerned that numbers returned to OFTA may not be easily re-used if they are scattered around the numbering blocks. Other management measures may be considered in parallel to encourage efficient use of numbers.

4. Proposed Measures on Efficient Use of Numbers

Likewise, we want to put forward some measures on the efficient use of the telephone numbers both as a backup on the exhaustion of the 8-digit number prior to the 9,10-digit numbers are introduced and for the future 9,10-digit numbering systems as are listed below for your consideration.

4.1 Long-term Measures

4.1.1 Decrease the Size of Number Blocks

According to the study by OFTA, Singapore allocates numbers to mobile phone operators in blocks of 10,000. In Hong Kong, the current practice is to allocate numbers in a block of 50,000 and 100,000 for fixed and mobile service operators respectively.

We recommend the TA to consider decreasing the size of each number block in orderly manner to promote efficient use of numbers. We are of the view that the allocation of numbers in smaller blocks can be supported by current technologies.

¹ At present, there are 33M 8-digit numbers being used, \$3 each a year means \$99M a year on a whole.

4..1.2 Increase the threshold utilization rate from 60% to 65% or even higher

Based on the new Code of Practice to the Use of Numbers and Codes in the Hong Kong Numbering Plan (Cap. 106) published by the TA in Dec 2007, a fixed or mobile operator/licensee may apply to the TA for a new fixed or mobile number block when it has achieved a threshold number utilization rate of 60%. According to OFTA's record, around 40% of the subscriber numbers currently allocated have not been assigned for use by end customers. The unassigned numbers are being left idle.

We recommend the TA to consider increasing the threshold number utilization rate to 65% or even 70% gradually to encourage the operators to have better planning and use of telephone numbers.

With this measure, operators will be encouraged to recycle previously used numbers more efficiently. In addition, we may, for example, encourage mobile operators to use relatively "unlucky" numbers in prepaid cards as the numbers may not be very important to those accidental or adhoc users.

4..1.3 Measures to recycle the unused numbers

Effective measures to recycle the numbers must be considered. Currently, there is no mechanism for operators to return unused "piecemeal" numbers such as "unlucky numbers" to OFTA. One possibility is to allocate these numbers to operators who have prepaid card services.

Telephone numbers may also be assigned to prepaid card users upon purchase. This can decrease the potential wastage of telephone numbers.

4..1.4 Auction of "lucky" number prefixes

Currently, the lucky number prefixes are put up for auction among the operators. In order to avoid the operators stock up these good numbers, it is suggested to pick out the "lucky" numbers for open public auction. We consider that this will be more acceptable than the proposal as it will be on voluntary rather than on compulsory basis.

4.2 Temporary Back-up Measures

In the meantime, the following back-up measures are proposed, should numbers be exhausted before 2015 and the transfer to the 9,10-digit plan has not been

implemented:

4..2.1 Reuse the 7-number and 5-number blocks

Since the paging subscribers are now below 140,000 and the utilization rate of “7X” numbers is less than 1.6%, we recommend the migration of the scattered number to one or two sub-number blocks instead of occupying the whole of “7X” number blocks. The remaining blocks may then be spared for other purposes or future services when necessary. This will prolong the use of 8-digit numbers.

4..2.2 Start fixed-mobile number portability

Currently, there is only number portability among fixed or among mobile operators but not fixed-mobile. Sharing the usage between mobile and fixed can help to use these numbers more efficiently. However, this should be the last resort as it will lead to giving up the advantage of using number level to segregate different services.

5. Conclusions

The current 8-digit number will not exhaust in the near future but by 2015. There is still some time to plan ahead. The government should speed up the plan of increasing 8 digits to 9 or 10 digits in a holistic way. By better alignment with the operators, transition plans can be implemented earlier. If this can be implemented before 2015, the issue of shortage of numbers can be resolved. In addition, the 8-digit number system will not act as a constraint to the advancement of the local telecommunications industry.

Nevertheless, better telephone number utilization shall always be encouraged. It should be a multi-pronged approach through economic, social, technological and administrative means. Introduction of number fee is certainly one of the alternatives to handle the telephone numbering problems from an economic perspective. Other measures to encourage fixed and mobile operators to better utilize the public resources of telephone numbers in an effective way shall also be considered.