

## **TELECOMMUNICATIONS NUMBERING ADVISORY COMMITTEE**

### **Review of “300” Numbers for International Value-Added Network Services (IVANS) (II)**

#### **Purpose**

The purpose of this paper is to solicit further views and comments from Members and IVANS operators on the proposed assignment principles of “30” numbers to IVANS.

#### **Introduction**

2. At the 25th Telecommunications Numbering Advisory Committee (TNAC) meeting on 22 January 1998, Members had discussed the NAC Paper No.4/1998 and generally agreed to open additional number levels “30(1-9)” in the Hong Kong Numbering Plan to cater for the increasing demand of the IVANS. As regards the proposed assignment principle of “30” numbers, A Member considered that the proposed Direct Dialling In (DDI) circuit-to-number ratio of 1:12.5 for the IVANS was too high. He was concerned that IVANS operators would apply for the maximum number of IVANS numbers regardless of whether it had the operational need or not. Another Member considered that the proposed ratio was simple and acceptable and believed that IVANS operators would provide reasonable justifications when they applied for the IVANS numbers. As regards how the maximum ratio should be established, Members felt that it should be set according to the nature of the service rather than the traffic of the service.

3. In response to the NAC Paper No. 4/1998, the Office of the Telecommunications Authority (OFTA) received two submissions, one from an IVANS operator, Dynacom Communications Ltd. (Dynacom) and the other from a Fixed Telecommunication Network Services (FTNS) operator, New T&T Hong Kong Ltd. (New T&T). Dynacom proposed that OFTA should adopt a DDI circuit-to-number ratio of at least up to 1:18 in order to suit its operational need. New T&T requested the Telecommunications Authority (TA) to define the number assignment guidelines for “30” numbers for different types of IVANS. Their original submissions are attached in the Annex of this paper for Members’ information.

## **Operations of IVANS**

4. From the numbering usage and operation points of view, IVANS could be classified into two main groups, Group 1 and Group 2. The operations of these two groups are described below.

### **Group 1 (All Non-Public Messaging Services)**

- Most of the existing IVANS such as Internet services, facsimile/data store and retrieve/forward services, electronic data interchange services and calling card services etc. are classified as Group 1. These IVANS usually make use of Direct Exchange Lines (DEL) or DDI types of lines (or T1 lines) for connection to the public fixed networks. Customers subscribing to these Group 1 IVANS will not be assigned any personal “30” numbers.
- Customers can originate their calls by dialling to the operators’ prime or main numbers so that they will reach the service platforms of the IVANS operators. Customers are then required to key in their account numbers and personal identity numbers (PIN) by themselves or with the help of the number translation devices. Guidance may be given to customers through the operators’ Interactive Voice Response Systems (IVRS). The information will then be checked by operators’ validation systems. After verification of the identity of the customer, the IVANS operators will then handle the call of the customer.
- Since the DEL or DDI numbers are assigned to the services rather than to customers, the demand from IVANS operators for using DEL or DDI numbers is very low and independent of the traffic volumes of lines. The number of DEL or DDI lines required by IVANS will depend on individual operator’s operational need but basically it will be calculated or projected based on the traffic volumes of the existing installed DEL or DDI lines. Currently, the Hong Kong Telephone Co. Ltd. (HKTC) assigns “30” numbers to IVANS operators according to the circuit-to-number ratios of 1:1 for DEL service and not more than 1:1.5 for DDI service.

### **Group 2 (All Public Messaging Services)**

- There is a trend for some IVANS operators (like Dynacom) to operate the public messaging services. The operation is that each customer will be assigned a unique DDI number by the IVANS operator such that its business partners, friends or relatives can dial this number and then leave some fax, voice or data messages in its personal mail box directly. The IVANS operator will then treat or route the deposited messages according to the instructions of the customers. The operation of these public messaging services will be similar to the existing paging operators’

secretarial/automatic paging services or mobile operators' Short Messaging Services. Each customer will also be assigned a unique number for its personal use. Customers of these public messaging services are in fact the message/call recipients rather than message/call senders or originators.

- In order to cater for the customer growth of these public messaging services, IVANS operators need to obtain sufficient DDI numbers from the FTNS operators and then sub-assign the numbers to customers. The amount of "30" numbers required by these IVANS operators can be determined by means of the traffic volumes of the installed lines or the estimated customer growths. However, in order to make assignment process more simple and transparent, it is considered that some circuit-to-number ratios should be established for the assignment of "30" numbers to IVANS operators for these public messaging services.

### **Proposed Assignment Principles of "30" Numbers**

5. As there are two different groups of IVANS with different operational requirements and demands for "30" numbers, it is appropriate to devise two different principles for assigning "30" numbers.

6. Usually, IVANS operators belonging to Group 1 will use one or at most a few "30" numbers for each service offering. The demand of "30" numbers from these Group 1 operators is therefore very low and does not depend on the traffic volumes of lines. **For Group 1, the TA proposes to adopt HKTC's existing practice that the maximum circuit-to-number ratio for DEL and DDI service will be 1:1 and 1:1.5 respectively.**

7. Since "30" numbers are essential for the business growth of the public messaging services, the TA considers that it is reasonable to allow these operators to use more "30" numbers. However, to ensure that the numbers are used in an efficient manner, the TA needs to devise some reasonable and acceptable circuit-to-number ratios for these services. In NAC Paper No. 4/1998, the TA proposed that the IVANS operators operating the public messaging services could request for the assignment of up to a maximum of 300 numbers from FTNS operators for every installed or additional T1 circuit or 24 DDI circuits. The maximum ratio of circuit-to-number for DDI service is **1:12.5**. For DEL service, the ratio will remain **1:1**. The calculation of the ratio for DDI service is based on the assumption that the busy hour traffic of a customer is 0.051 Erlang at the Grade of Service of 1%. The traffic of 0.051 Erlang per customer is selected because it is the nominal traffic value of customers of different types of services (voice, data and fax). **The TA considers that the ratio of 1:12.5 for DDI service in general should be able to suit most of the IVANS operators' operational needs at present and therefore maintains his original view.**

8. For normal applications, the FTNS operators will follow the above two assignment principles to assign “30” numbers to IVANS operators. However, under special circumstances, if IVANS operators wish to use more “30” numbers than the above ratios (such as the request from Dynacom for using a higher ratio of 1:18), they may submit an application together with their justifications and reasons to the TA for consideration. Subject to the TA’s approval, the FTNS operators will then assign the requested amount of “30” numbers to the IVANS operators.

**Advice Sought**

9. Members of TNAC and IVANS operators are invited to give further views and comments on the TA's proposed assignment principles of “30” numbers given in paras. 5-8 above.

Office of the Telecommunications Authority  
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