

## **Telecommunications Numbering Advisory Committee**

### **The Use of Carrier Selection Code in Service Across Networks (II)**

#### **Introduction**

At the 24th Telecommunications Numbering Advisory Committee (NAC) meeting on 6 November 1997, P Plus Communications Limited (P Plus) introduced NAC Paper No. 23/1997 which gave some initial thoughts on the use of carrier selection code for services across networks. The purpose of this paper is to explore further the applications of carrier selection code and discuss whether there would be a genuine need to assign carrier selection codes to network operators in Hong Kong.

#### **Need of Using Carrier Selection Codes**

2. To foster competition in the telecommunications market, the European Commission has mandated that Member States should introduce carrier selection, starting in 1998, to enable customers in Europe to choose different carriers to carry long distance calls. In Hong Kong, the "00X" codes have been used as a kind of carrier selection codes such that a customer can use the "00X" code to make IDD calls via a particular network of his/her own choice even though he/she may originate a call from another network.

3. Since some of the existing PABX and keyline systems are incapable of sending Calling Line Identifications (CLI) signals to fixed or mobile networks, fixed or mobile operators will not be able to provide some special services to end users behind these analogue systems. In NAC Paper No. 23/1997, P Plus has given an example showing how carrier selection codes can be deployed in local public telecommunications networks to overcome the problem. For discussion purpose, this example is further elaborated on and examined below.

#### **Applications of Carrier Section Codes**

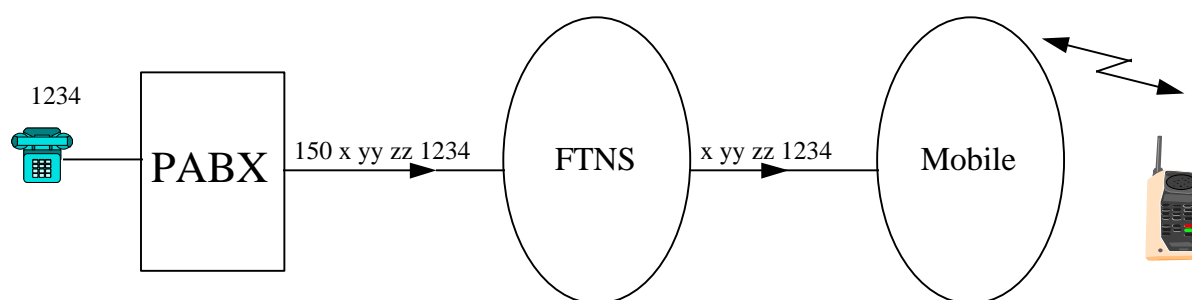
4. A terminating network operator which has a carrier selection code of say "150" is providing a special service to a PABX group of customers. Suppose that this terminating network is a mobile network, it is then possible for a PABX customer to dial, under a coordinated dialing plan, a short 4-digit number and can reach a particular mobile unit. The PABX has to analyze the dialed digits "1234" and then insert other relevant digits representing the carrier selection and other service profile of the calls such as charging index and user identification etc. The suggested number format is:

150 x yy zz 1234

where

- 150 - carrier selection of the mobile network
- x - overdecimal digit
- yy - service codes or charging index
- zz - user identity (if CLI is not available in the CPE interface) or routing index
- 1234 - the number dialed by the customers.

The figure below illustrates how the call is routed and connected from a PABX extension to a mobile unit.



5. Having detected the “150” carrier selection code, the fixed network directly connected to the PABX will route and send the call to the terminating mobile network with the rest of the digits, ““x yy zz 1234”. The terminating mobile network, upon receiving “x yy zz” digits, recognizes that the call needs special treatment and decode the digits “yy zz” into various meanings such as billing, call record and other service provisioning etc. Finally, the terminating mobile network will further analyze the digit “1234” and route the call to the required mobile unit.

### **Format of Carrier Selection Codes**

6. In the Hong Kong Numbering Plan, the “15x” and “16x” codes are now vacant and reserved as carrier selection codes. In view of operators’ need to use carrier selection codes, the TA considers that it is possible to open these two number levels now for carrier selection purposes such that each fixed or mobile operator can be assigned one of the carrier selection codes. However, the code may be either in 3- or 4-digit length. 3-digit code will give a capacity of 20 networks while 4-digit code will give a capacity of 200 networks. In view of future growth and development, the TA considers that it may be necessary to adopt 4-digit format carrier selection codes.

7. If the above proposal is acceptable, OFTA will request the Telecommunications Standards Advisory Committee to consider the need of standardizing the format and maximum length of the digits after the carrier selection code.

### **Advice Sought**

8. Members are invited to comment on the need of assigning carrier selection codes to operators for services across networks and what number format should be adopted for these codes.

Office of the Telecommunications Authority  
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