

Telecommunications Numbering Advisory Committee

The Use of Paging Numbers by Mobile Operators in Secretarial or Short Messages Services

Purpose

This paper seeks members' views and advice on the use of paging numbers by mobile operators in their Secretarial or Short Messages Services (thereafter simply called SMS).

Background

2. One of the assignment principles given in paragraph 9(a) of the "Code of Practice Relating to the Use of Numbers and Codes in the Hong Kong Numbering Plan (Cap. 269)" dated 11 October 1997 states that "the assignment of numbers and codes by operators to end customers and their service offerings must comply with this Code of Practice and the statements issued by the TA related to the numbering issues." Therefore, paging operators would only assign paging numbers with the leading digits "701-799" to customers who have subscribed to the paging services (i.e. either normal operator-assisted, automatic or secretarial paging services or the related voice mail services) whereas mobile operators would only assign mobile numbers with the leading digits "901-989" to customers who have subscribed to the mobile services (i.e. basic mobile telephony services and the related value-added services such as voice mail, fax mail, SMS etc.).

Introduction

3. Modern digital mobile phones are now capable of displaying messages in English or Chinese characters. As a result, most of the mobile operators nowadays can provide SMS to customers for receiving messages through their mobile phones.

4. Recently, it is found that some operators, who simultaneously own and operate a mobile network and a paging network, have assigned paging numbers not only to their paging customers but also to their mobile customers in the following manner -

- Some customers are used to carry a mobile phone and a pager. Usually, the pager is used for receiving paging messages while the mobile phone is used for making outgoing calls. After the introduction of the SMS by mobile operators, some customers may find it more cost-effective and efficient to use just the mobile network's SMS

and have decided not to subscribe to the paging services any more. As a result, these customers are allowed to keep and make use of their existing paging number for receiving messages through their mobile phones.

- New mobile customers joining to the SMS will also be assigned with new paging numbers. However, they may have to pay an additional premium charge for using the assigned paging numbers on top of the SMS charge. Otherwise, the paging numbers will not be made known to them for use and will simply be used by these operators for routing purpose.
- The above arrangements have assisted these operators to migrate or capture their existing paging customers to their mobile networks and at the same time attract new mobile customers to join their SMS. The merit of allowing customers to maintain their paging numbers is that customers will not be required to advise all their friends, relatives or business partners about the change of number or the discontinued use of their paging numbers.

Operation of SMS

5. The operation of SMS is explained as follows. A customer who does not want to receive any mobile phone calls directly can forward them to its assigned paging number. The calls will then be routed via the Public Switched Telephone Network (PSTN) to the paging operation centre where they will be processed and handled like normal paging calls. Having received the messages from the callers, the paging operation centre will then send the messages to the SMS system of the mobile network. The mobile customer concerned will be alerted by the SMS system that someone has deposited some messages to it. It can then retrieve the full messages by reading the message box of its own mobile phone. The same operation takes place even if the caller has dialled the paging number instead of the mobile phone number. Figure 1 depicts the above SMS operation in detail.

TA's Initial Views

6. Having studied the above case, the Telecommunications Authority (TA) has the following initial views -

- The paging call centre is simply doing a call management function on behalf of the mobile network. In actual fact, there are no radio frequency signals being transmitted from the paging transmission network to any customer's pager. Since no pagers and paging transmission network are involved in the process, such operation is considered as mobile network's operation rather than paging network's operation. In order to be in line with the Code of Practice as mentioned in para. 2 above, the TA considers that for *new* mobile customers joining to SMS, they should not be assigned paging numbers. However, for the sake of minimising customer inconvenience,

existing customers who have already been assigned paging numbers may be tolerated to use the paging numbers for SMS even if they have discontinued the subscription to the paging services.

- If every mobile customer is to be assigned with a paging number, the TA is concerned that the capacity of paging numbers in the Hong Kong Numbering Plan will be easily exhausted.

7. In fact, the TA finds that in the operation of SMS, some mobile operators who are not operating any paging networks at all have made use of customers' assigned mobile numbers for routing instead of paging numbers. For any calls dialled to a mobile number, the calls will be either picked up by the mobile customer concerned or routed to the secretarial services for assistance. For the latter case, the dialled mobile number will first be translated into the corresponding internal number and then forwarded to the secretarial operator pool over a leased line or internal circuit. Figure 2 gives the SMS operation of this mobile operator. The TA considers that the use of internal numbers by this mobile operator is more efficient and appropriate than those employing paging numbers.

Advice Sought

8. Members are invited to give their views and advice on whether the use of paging numbers by mobile operators in the SMS, and the TA's initial views on such use for *existing and new* customers, are acceptable and in line with the assignment principles of the Code of Practice as mentioned in para. 2 above.

Office of the Telecommunications Authority
28 October 1997

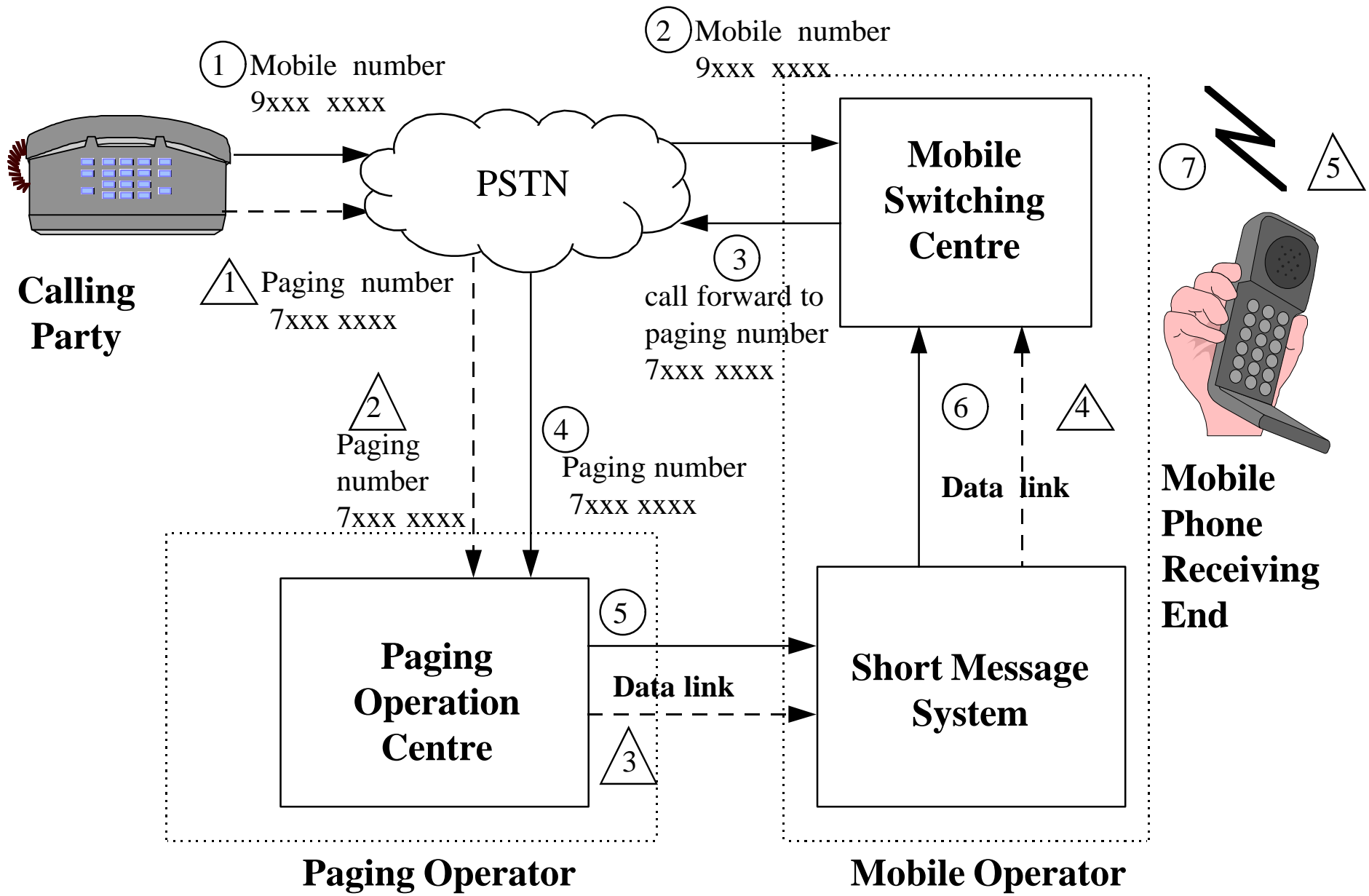


Figure 1

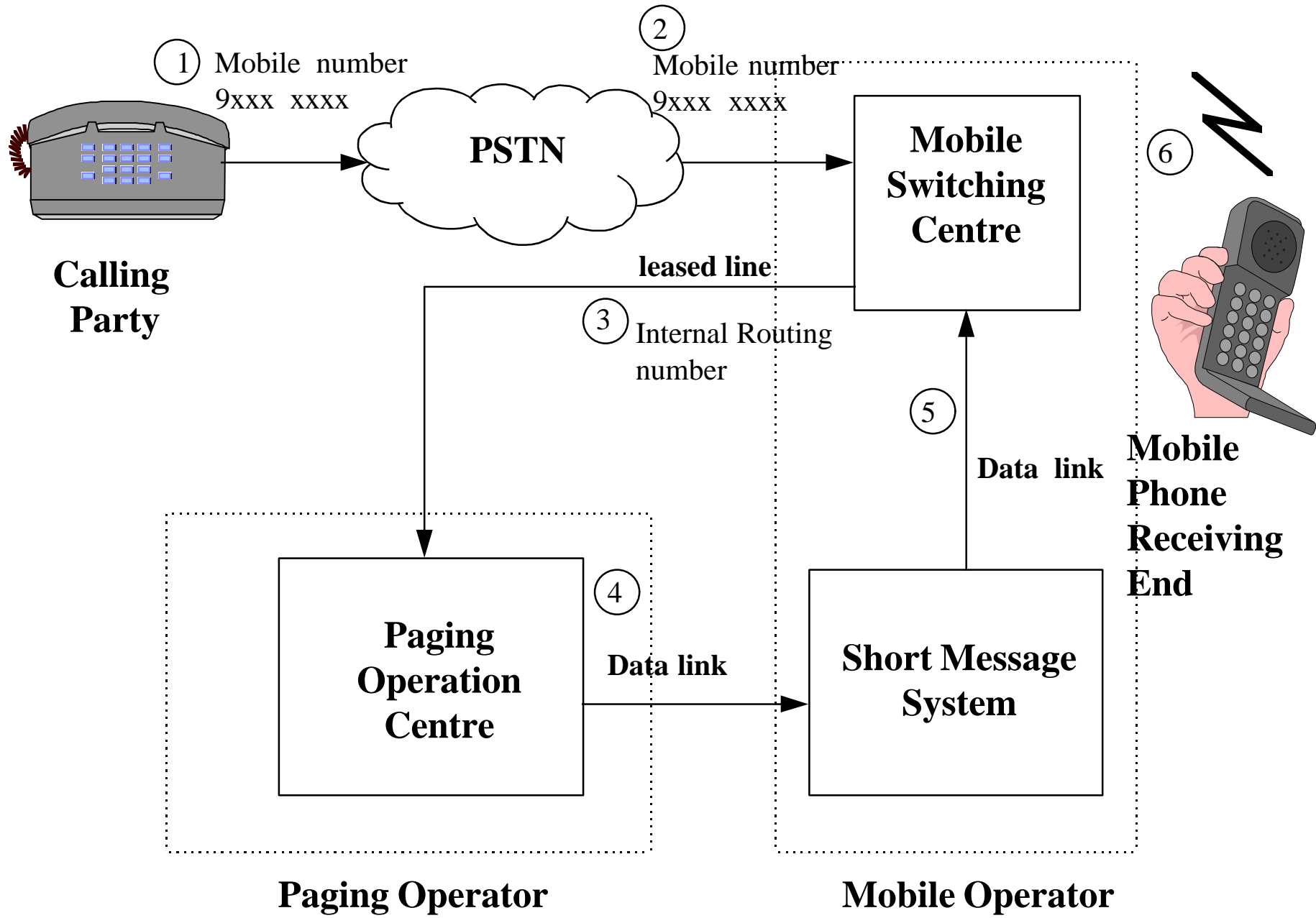


Figure 2