

TELECOMMUNICATIONS NUMBERING ADVISORY COMMITTEE

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

Introduction

In NAC Paper No. 2/1998, the Telecommunications Authority (TA) sought further views and comments from Members and mobile operators on the use of paging numbers by mobile operators in their Secretarial or Short Messages Services (hereafter simply called SMS). At the last Telecommunications Numbering Advisory Committee (TNAC) meeting held on 22 January 1998, Members had concerns and views over the use of paging numbers in SMS. The purposes of this paper are to clarify and address Members' concerns and give further considerations on the issue.

Summary of Comments and Views

2. As a result of the consultation in NAC Paper No. 2/1998, the Office of the Telecommunications Authority (OFTA) received 3 submissions from Members and mobile operators. A summary of these submissions is given in the Annex.

3. The specific views and concerns expressed by Members and mobile operators, together with the TA's considered views and clarifications, are discussed in the following bullet points -

- There is a need to define the meaning of new and existing customers as given in NAC Paper No. 2/1998.

TA's views -

In the last NAC paper, the definition of "new" and "existing" customers are explained as follows -

"New" customer is the one who wishes to subscribe to the SMS of a mobile operator but has not subscribed to any paging services at present. This means that the customer should not have any assigned paging number for use at present.

“Existing” customer is the one who wishes to subscribe to the mobile operator’s SMS and use his existing assigned paging number as the calling number for the SMS and then stop using the paging service.

- As the nature of SMS is similar to the paging service, SMS should be classified as a kind of paging network's operation.

TA's Views -

Although the nature of SMS and paging service are very similar, SMS is still considered as part of a mobile phone network’s operation rather than paging network’s operation because SMS is run by mobile phone operators and there are no pagers and paging transmission network involved in the SMS operation.

- Both existing and new customers should be allowed to use paging numbers.

TA's Views -

Please refer to the discussions in para. 7 below.

- Due to the use of paging numbers for SMS operation, it may happen that the Fixed Telecommunication Network Services (FTNS) operators will not be able to identify and meter the SMS calls for interconnection payment. Therefore, a distinguishable and separate number ranges for SMS in paging or mobile services are required for number administration and interconnect call accounting purposes.

TA's Views -

Although some of the paging numbers have been used in the SMS operation, the calls in fact remain operator-assisted paging calls which require to be terminated onto the paging operators’ systems and call centres for handling first. For operator-assisted paging calls, under the current regulation, there should be no interconnection payment by paging operators to fixed network operators.

The number ranges for paging and mobile services will remain separated and they will not be merged unless there is a strong

requirement from the industry for doing so or when there is a convergence of the technologies of the two services.

- Whether there will be any impact on the implementation of mobile number portability if paging numbers are used in the SMS operation.

TA's Views -

Currently, OFTA is studying whether number portability should be introduced to the mobile services in Hong Kong. However, paging services are not included in the study. Therefore, in the near to medium future, number portability will not be implemented in the paging services. This means that customers cannot bring along their assigned paging numbers (including those used in the SMS) with them when changing from one paging operator to the other. It should not have any impact on the implementation of mobile number portability in future.

- Customers would be confused if one customer is allowed to keep the paging number when he migrates from the paging service from company A to the mobile SMS of company A while the other customer, who migrates from the paging service of company A to the mobile SMS of company B, is not allowed to keep the paging number.

TA's views -

As discussed in the above bullet point, number portability will not be implemented in paging services in near future. Therefore, paging customers cannot carry their paging numbers freely from one operator to the other. However, some customers may be able to retain and use their existing assigned paging numbers for SMS provided that their subscribed paging operators have teamed up with the mobile operators for the required SMS operation. Since only customers of these paging/mobile operators would be informed of this feature, there should be no confusion to the customers of the other operators.

Operation of the SMS Involving Paging Numbers

4. Customers who carry a mobile phone and a pager may find it cheaper and more convenient to use SMS offered by mobile operators. By subscribing to SMS, customers could still retain their paging numbers for receiving messages through their mobile phones even though they have terminated the paging services. The

merit of allowing customers to retain their paging numbers is that they will not be required to inform their friends, relatives or business partners about the change of number or the discontinued use of their paging numbers. New mobile customers joining to the SMS may also be assigned with new paging numbers.

5. The operation of SMS is illustrated in Figure 1. A customer can forward the mobile phone calls originated from its mobile number 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 operator-assisted paging calls. The paging operation centre will then send the received messages to the SMS system of the mobile network. The mobile customer concerned will be alerted by the SMS system and it can then retrieve the full messages by reading the message box of its own mobile phone. On the other hand, the same operation takes place if the caller has dialled the assigned paging number directly to the paging operation centre to deposit the messages.

6. SMS is usually operated by mobile operators, who simultaneously own and operate a mobile network and a paging network. However, this situation has changed recently in the market. There are now mobile operators which operate only the mobile services teamed up with other paging operators to operate the SMS. This may become a new trend for co-operation amongst mobile and paging operators in the industry.

Proposed Options of Using Paging Numbers in SMS

7. Taking into consideration the views of Members and mobile operators, the TA has the following views on 3 possible options -

- **Option 1** - Both “new” and “existing” customers who wish to subscribe to the SMS should not be assigned any paging numbers for the SMS operation. Mobile operator can assign each customer an additional mobile number in accessing to the SMS if necessary.

TA's views -

The disadvantage of Option 1 is that “existing” customers will not be able to use their assigned paging numbers for the SMS and they have to use new mobile numbers instead. This means that they are required to inform all their friends, relatives or business partners about the change of their numbers. The TA does not prefer this option because it will cause inconveniences to these customers.

- **Option 2** - There are views that both “new” and “existing” customers should be allowed to use the paging numbers for SMS i.e. the “existing” customers will be allowed to use their already assigned paging numbers while “new” customers joining the SMS will be assigned either new paging or mobile numbers.

TA's views -

The TA does not see any benefit that the “new” customers may obtain through this arrangement. For a “new” customer who subscribes to SMS, it would make no difference to him if he is assigned a SMS number starting with “7” or “9” leading digit.

Since the SMS is still considered as part of the mobile operations at present, it may not be appropriate to assign to every mobile customer a paging number when joining the SMS.

- **Option 3** - “New” customers should not be assigned any paging numbers for the SMS operation. However, if necessary, they can be assigned mobile numbers by mobile operators instead in accessing the SMS. However, for the sake of minimising customer inconvenience, “existing” customers will be allowed to use their existing assigned paging numbers as the calling numbers of the SMS.

TA's views -

The advantage of Option 3 is that the “existing” customers joining the SMS will benefit from the merit of maintaining their paging numbers and they will not be required to inform their friends, relatives or business partners about the change of numbers or the discontinued use of their paging numbers.

The disadvantage is that both mobile and paging operators have to spend effort to administer and assign numbers from their own number blocks to “new” and “existing” customers respectively.

8. Having studied the pros and cons of the above proposed options, the TA considers that Option 3 will be the best option because it would bring benefits to the customers. To allow OFTA to keep track of the quantity of paging numbers which have been used for the SMS, mobile and paging operators involved in the SMS

operation are required to keep a record of it and provide the information to OFTA if requested by the TA.

Advice Sought

9. Members and mobile operators are invited to give their comments and views on the above three options proposed in para. 7 and TA's consideration in para. 8.

Office of the Telecommunications Authority
25 March 1998

Summary of Comments and Views to NAC Paper No. 2/1998

**P Plus
Communications
Limited (P Plus)**

- P Plus supports the TA's proposal in principle as a partial solution. However, they think that the existing practice should be continued and both old customers and new customers should be allowed to use paging numbers together with mobile numbers. This is the best solution from customer point of view.
- If the definition of old and new customer is going to be complicated, this will cause confusion among customers.
- Managing the administrative work in different customer cases is quite substantial. Administrative work includes keeping the record and controlling the subscriber number assignment.

**New T&T Hong
Kong Limited**

- A distinguishable and separate number ranges for SMS and paging services are required for number administration and interconnect call accounting.
- For the sake of minimising customer inconvenience, existing customers who have already been assigned paging number for SMS may be tolerated until they cease SMS. However, existing paging customers should not be tolerated to use their paging number for SMS later.

**Mandarin
Communications
Limited**

- The nature of SMS or secretarial service is similar to the paging service.
- A separate number starting with "7" is used and this practice should be continued.
- Old and new SMS or secretarial service users should have the same numbering blocks to avoid confusion.
- Call routing using paging number is simple, efficient and easy to administer because the existing paging and mobile systems can already support this set up.

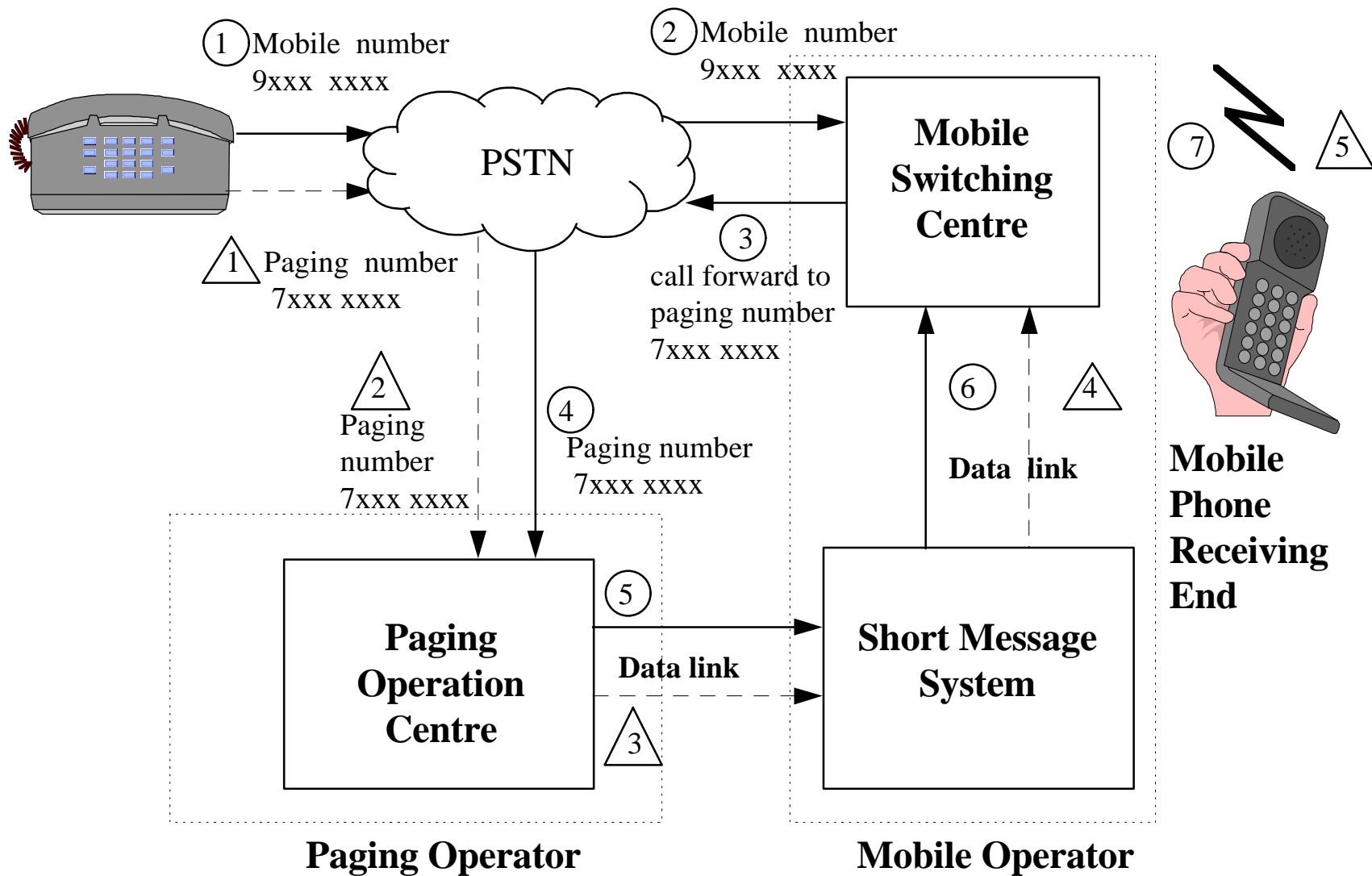


Figure 1