Public Consultation on the Review of Number Portability in Singapore

Submission by Accenture Pte. Ltd.

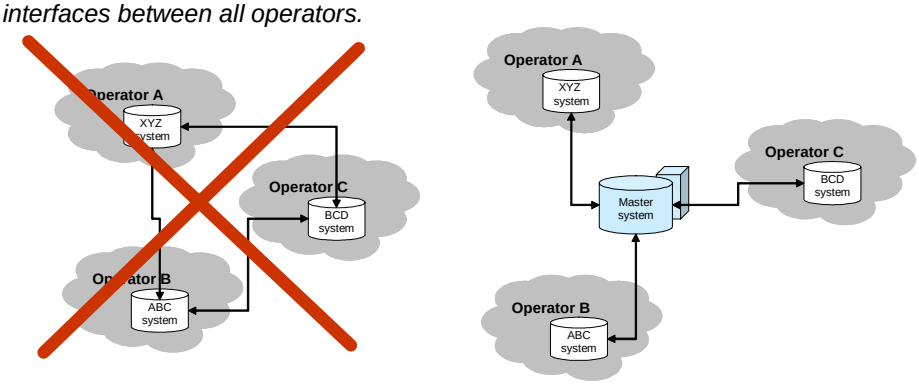
Response to Question (4):

(i) The centralized solution is viewed generally as the only viable long-term solution primarily due to its lower cost of operation.

With a non-centralized approach, operators need to establish individual interfaces between each other. When a new operator joins the system, new interfaces are needed to be built and tested with every single existing operator. This results in a considerable amount of effort and cost to individual operators.

In additional, maintaining a master porting database in one place is difficult with the non-centralized approach. This in turn complicates implementation of direct routing.

The idea of a centralized database (Master system) is to provide a common broker application and interface for all operators participating in the porting process. This is significantly more cost-efficient solution than building separate interfaces between all operators.



(ii) In order to get operator buy-in and ownership, IDA may want to consider implementing a model where an external party partly owned by the operators offer the number portability services (as with the Finnish model). This model enables the operators to jointly agree on the scope of services to be offered, expected service level agreements etc that they would need. This also ensures that the number portability service provider focuses on serving the operators by offering the needed services at cost-effective prices and high quality of service to benefit both operators and consumers.

On the contrary, a pure commercial organization running the number portability service, as observed in some cases, may emphasize on commercial gains more than quality of the services. This increases the risk of confidence loss by consumers and the industry in general which may have a long-term downstream effect on similar regulatory initiatives.

Finally, having a consortium of operators can also effectively facilitate dispute and issue management between operators with a balanced representation. This serves as a strong governance proxy between operators and the regulator without unnecessary commercial motivations.

(iii) The pricing model should reflect the true cost of acquiring and operating the number port infrastructure. This consists of the following elements:

- One-time implementation fee
- Subscription (Example: monthly or yearly) fee for operating the system. It is worth noting that the cost of operating a fully automated system may not be directly dependent on the porting volume. In fact, cost-effectiveness increases with porting volume.

As for cost sharing, a fair model would be for all operators to share the one-time implementation fee equally while the fixed monthly fee be split on the basis of system usage (ie. operators with the highest porting volumes per month pay the highest monthly fee)

(iv) If porting volumes are high, direct routing is always cheaper to implement in the long run. In the short term, indirect routing can be cheaper because of the lower hardware investment (IN solutions etc). It is worth noting that several European countries previously started out with indirect routing are now switching to direct routing because of high operating costs (UK for example).

(v) Many parties like mobile content providers will be affected. Typically mobile content providers use number prefixes to route various messages to correct gateways (SMS / MMS etc). When mobile number port is introduced, they need to have some kind of interface to the routing information master database. For this kind of services, having a centralized database is essential.

In addition, there are organizations like the police that may be interested in routing information for the purpose of monitoring phone calls.

Response to Question (5):

We understand that there are very few countries with operational inter-modal number portability systems. The main issue remains at the network-level which is technically challenging and requires investment justifications.

Nonetheless, from the centralized database's perspective, there is no issue supporting inter-modal requirements - it is simply a part of the business rules in the porting processes.

Response to Question (6):

It is worthwhile to consider extending the number portability solution as a platform for various services that can be used by all operators. There are more processes, beyond number portability, that require exchange of the information between operators (Example: contracts related to international calls, broadband connection portability etc). Similarly, operators can benefit from an independent party for governance and dispute management. In Finland's case, there are discussions around using the same solution and interfaces for such purposes.

However, there are several factors that will affect adoption of a centralized platform. Examples include the following:

a) Rapid emerging standards – For example, IMS introduces stronger standardisation of various functions closer to the network level. Depending on how network vendors define products to encompass implementation of these functions, the value of a centralized shared platform may be reduced.

b) Market positioning of Operators – In markets where operators adopt a "wall-garden" approach for service offering, as opposed to an open approach, the need for inter-operability may be less. This affects the need for standardization (Example Parlay) and the desired of a shared platform. Operators may view services as product differentiation hence the need for confidentiality and exclusivity. As such, a niche must be found in a market of such nature for the centralized platform to be successful.

c) Quality of Service (QoS) – Maintaining and controlling QoS has traditionally been the responsibility of individual operators. Operating a centralised platform requires a well established framework to manage QoS related issues especially for cross-operator transactions.

d) Cost of Technology – Finally, the cost and availability of technology will determine the value of the centralised platform. As such, staying relevant will be crucial for success when operating such a platform.

Response to Question (7):

(i) In line with the factors discussed in question 4, it is recommended that Singapore considers implementing a centralized database for number portability that is capable of supporting fixed, mobile and with provisions for emerging IP-based services.

(iii) The schedule of 9 months sounds feasible. The more challenging aspect remains at the network-level which will likely determine the overall required timeframe.