

# CONSULTATION DOCUMENT

## Recommendation of the Eastern Caribbean Telecommunications Authority ("ECTEL") To the National Telecommunications Regulatory Commission to consult on

### Consultation on Policy Recommendations for the Adoption of Number Portability in ECTEL States

#### Consultation Document /NO.

**June 22<sup>nd</sup>, 2011**

1. The National Telecommunications Regulatory Commission is in receipt of a submission from ECTEL containing ECTEL's recommendation for a Policy on Number Portability for its Member States.
2. A copy of the draft Policy document on Number Portability is attached to this Consultative Document.
3. The initial comments period will run from **Wednesday 22<sup>nd</sup> June – Wednesday 3<sup>rd</sup> August 2011.**
4. The Comment on Comments period will run from **Monday 8<sup>th</sup> August – Friday 2<sup>nd</sup> September 2011.**
5. Following the Reply Comments period, ECTEL's Directorate will revise and submit the draft Policy document to the ECTEL Council of Ministers for its recommendation for adoption in the ECTEL Member States.
6. All responses to this Consultative Document should be written and sent by post, fax or e-mail to: -  
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## **Disclaimer**

***This consultative document does not constitute legal, commercial or technical advice. The consultation is without prejudice to the legal position of ECTEL's duties to provide advice and recommendations to the Ministers with responsibility for telecommunications and the National Telecommunications Regulatory Commissions.***

## **SUGGESTED GUIDELINES FOR RESPONSES TO CONSULTATION**

In order to reduce administrative lags in ECTEL's public consultation processes and to enable a reasonable degree of transparency by sharing of views submitted, ECTEL hereby recommends that parties desirous of making contributions to the attached consultation follow the procedures outlined below.

- 1) Responses to consultations should be clearly labeled as a response to the particular ECTEL consultation and correctly referenced by title.
- 2) Documents should contain; the Name of Party/Licensee/NTRC commenting, address and telephone, fax number and email contacts of commentary author or corporate officer(s) responsible for the document. This information will enable ECTEL to clarify any comments where necessary, or to facilitate follow-up dialog by ECTEL where required.
- 3) Where specific recommendations require it, commenting parties should indicate clearly via a "Yes" or "No" response, whether they concur or disagree with the recommendation and provide explanations/reasons for each response.
- 4) Where parties have no view or interest in expressing a view on a specific recommendation, parties should indicate "no comment" and number appropriately.
- 5) Responses/comments to specific recommendations should be double spaced and numbered in sequence with the recommendation. Where comments are extensive, paragraphs should be numbered. Pages should be numbered.
- 6) Commenting parties should avoid making comments in the form of tracked changes to consultation documents.
- 7) Where possible, comment documents should be submitted in PDF format.
- 8) Where possible, parties should make explicit reference to academic articles, legislative provisions in other jurisdictions, or other sources relied on, and should provide copies of these together with comments. Accurate citations of resources relied on will suffice if copies cannot be provided.

- 9) If relevant, parties commenting on specific provisions of legal language should propose alternative language where possible. Such language should be appropriately highlighted and double spaced. Parties should avoid proposing alternative language in tracked changes to the consultation document.
- 10) Comments may be submitted via letter, e-mail or fax, but should be submitted via one method only. Only comments submitted via e-mail may be acknowledged.
- 11) Commenting parties should expressly indicate or highlight which parts of comment documents contain commercially sensitive or confidential information that should not be published.

ECTEL reserves the right to publish all the responses received to the consultation and provides no undertakings to refuse to publish such comments where requested, on its website or otherwise.

ECTEL is grateful to those parties adopting the recommended guidelines for submitting comments to this consultation.

**EASTERN CARIBBEAN TELECOMMUNICATIONS  
AUTHORITY (ECTEL)**

**CONSULTATION ON  
POLICY RECOMMENDATIONS FOR THE  
IMPLEMENTATION OF  
NUMBER PORTABILITY (NP)  
IN ECTEL STATES**

**June 2011**

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## **INTRODUCTION**

The purpose of this consultation is to set out the broad parameters that will guide the implementation of Number Portability (NP) in ECTEL Contracting States. In the course of the document, ECTEL will outline its responses and seek views on the following questions from interested parties:

- (i) What type of NP should be implemented?
- (ii) For which services should NP be required?
- (iii) What type of technical arrangements for NP should be adopted?
- (iv) How long should it take to port a number?
- (v) Who should bear the cost of facilitating NP?
- (vi) What conditions should be attached to portability?
- (vii) When should NP become mandatory for providers in ECTEL states?

In addition to these matters, ECTEL will also seek views on some related issues.

This consultation represents the first phase of ECTEL's recommendations to move toward the introduction of NP. Upon completion of the policy framework at the conclusion of the current consultation, further consultation may be necessary to finalize the precise technical arrangements to be adopted by providers. A final determination will be made by ECTEL as to whether this is necessary based on the outcome of the responses received to this consultative document.

ECTEL hereby invites views and comments on the issues raised in this document to be submitted by 4:30 p.m. on the 3<sup>rd</sup> day of August, 2011 to the following address:

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## **NUMBER PORTABILITY – AN OVERVIEW**

It is a well-established fact that the inability to keep one's number when moving to a new telecommunications provider is a major disincentive to switch providers.

In newly liberalized markets, this lack of capacity to retain a telephone number can be an especially difficult hurdle for customers to overcome, particularly in the context of fixed line services. In cases where telecoms monopolies have existed for several years, it is common for customers to regard themselves as having become very closely associated with a particular telephone number, resulting in general reluctance to be associated with a new number when switching providers.

This tendency is especially acute in cases of business customers, for whom the practical implications of abandoning long established numbers are significant. Specifically, changing numbers can often mean high transaction costs, as businesses must replace existing stationery, signs and invest resources in marketing and advertising to advise both existing and potential customers of the change. These are additional costs over and above those purely related to actually switching providers.

The capacity for customers of telecommunications providers to retain their telephone numbers when changing providers, services or location, is referred to as NP. In circumstances where customers lack the option of provider portability, actual competition may be hampered, or prevented from developing altogether, even though other providers have formally entered the market. In some cases the lack of the feature in a market can serve as a barrier to entry for new entrants, who must carefully weigh the level of investment required against the potential subscriber inertia caused by the inability to keep their numbers when they move.

At a competitive level, NP helps promote customer choice and prompts providers to compete on quality of service as opposed to merely price. No longer restricted to one provider, customers are able to move freely, based on their assessment of a range of factors, including but not limited, to prices and quality of service. A fixed-line customer unhappy with his or her provider's terms and conditions of service can change to another provider offering better terms. A mobile customer unable to get adequate coverage near his or her home or simply dissatisfied with the level of dropped calls by one provider, can move to another offering better call quality, or perhaps even new and different mobile services. In both cases, each customer can keep his or her number,

reducing the potential inconvenience and disruption to their personal lives previously caused by having to inform others of his or her new contact details, every time they switch providers.

For the provider, the empowerment of customer choice through NP provides an important competitive incentive. Faced with the potential threat of a loss in market share to competitors offering new or better services, better customer service or more impressive or up-to-date technologies, providers will simply respond by making necessary adjustments to improve customer experience or face the prospect of going out of business.

As a result, NP can potentially encourage the development of more efficient networks; investment in infrastructure, the introduction of advanced telecommunications technologies and services, improved standards of quality, reduced barriers to entry and increased customer choice.

Simply put therefore, NP is an important catalyst of true competition in telecommunications markets. Indeed the European Union has noted that “number portability is a key facilitator of consumer choice and effective competition in a competitive telecommunications market.”<sup>1</sup> Globally, the number of countries which have imposed or adopted NP is growing exponentially, and includes: the USA, Canada, most of the EU, (including the UK, Portugal, Spain and France) and several countries in Asia, including India, Malaysia and Singapore. Of increasingly special note is the imposition by regulatory authorities of NP in small jurisdictions like Luxembourg, Jersey and Malta, which represents the strongest possible rebuttal to potential arguments that NP is impractical in small markets.

In the Caribbean, the Dominican Republic adopted NP in 2009 but Caribbean Commonwealth jurisdictions have yet to do so. However, recent consultations on NP have been undertaken or considered in some English speaking jurisdictions, including the Bahamas, the British Virgin Islands (BVI) and Jamaica.

### **ECTEL’s Basic Policy on Numbers**

ECTEL regards telephone numbers as a national public resource, notwithstanding their assignment to providers for commercial use. Ultimately therefore, ECTEL regards numbers as being allocated to subscribers for their benefit and use.

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<sup>1</sup> See the Universal Service Directive.

## **Competition in ECTEL Markets**

In the ECTEL Contracting States, the option to retain one's fixed line or mobile telephone number upon switching providers has thus far not been available to subscribers. This is despite the emergence of formal competition in both mobile and fixed-line services in nearly all ECTEL states, over the last several years.

Although ECTEL markets were formally liberalized in 2000, it was not until the introduction of new mobile providers in St. Lucia followed closely by St. Vincent and the Grenadines in 2003 that actual competition began. In the period between 2003-2011, the markets of all ECTEL states evidence more than one provider for most basic telecommunications services, including fixed and mobile services.

In the case of fixed service provision, some competition is evident in all member states except St. Kitts and Nevis. In the case of mobile services, two providers operate in all member states and a third provider is or has operated at one point or another in Dominica, St. Kitts and Nevis, St. Lucia and St. Vincent and the Grenadines since 2003. In a reversal of technological developments, actual competition for fixed-line services lagged considerably behind the mobile sector, with new entrants providing alternative services to the incumbent fixed-line provider only recently in some cases.

Despite the introduction of formal competition however, a reasonable assessment of either market would not compel a conclusion that such competition has been or is dynamic.

Since the promotion of dynamic competition in telecommunications represents one of the core aims of the regulatory system, ECTEL regards NP as an important regulatory tool that could be utilized to help promote that objective. The decision to recommend NP is therefore in keeping with ECTEL's standing policy of making appropriate recommendations for broadening and deepening competition in the telecommunications markets of Contracting States based on continuous assessments of existing market conditions.

In keeping with its mandate to promote competition in telecommunications markets of Contracting States, facilitate the introduction of advanced technologies and an increased range of services therefore, ECTEL hereby publishes its recommendations for the implementation of NP in ECTEL states.

## **WHAT TYPE OF NP SHOULD BE IMPLEMENTED?**

For reasons already discussed in the preceding section, this consultative document is focused on provider portability, in which subscribers of one provider are able to retain their number when switching to a different provider. An important basis of this decision is contained in the legislative rules contained in the existing Interconnection Regulations.

Specifically, section [6] of the 2008 Telecommunications (Interconnection) Regulations states:

“Public network operators shall configure their networks to facilitate number portability between similar networks as and when directed by the Commission, acting on the recommendation of ECTEL.”

The term “number portability” is defined in the Regulations as “the ability of a customer to retain the same telephone number on changing telecommunications providers.” Effectively therefore, the Regulations specifically contemplate and address the potential imposition of provider portability.

However, in keeping with ECTEL’s standing policy to recommend the adoption of regulatory measures based on continuous re-assessment of the state of the markets in Contracting States, other types of NP may be considered at a future date, where circumstances make this desirable.

In the case of service portability, in which subscribers of a particular service are able to retain their number when they change from one service to another, e.g. from mobile to fixed services, further study and analysis may be required, prior to the development of a clear policy framework for the regulation of the same. However, this would be contingent on a clear policy need to develop such a framework and there does not appear to be an urgent or overwhelming case for the introduction of service portability at this time.

Geographic portability, in which a subscriber is able to retain his or her number when moving from one location to another, either within a city or to another, is already largely available for fixed-line services from the incumbent fixed-line provider and emerging competitors, on a generally voluntary basis. ECTEL is not currently aware of any problems associated with geographic portability in Contracting States that merit regulatory intervention.

More generally, developments in technology, such as the spread of high speed broadband and next generation networks and Electronic Number Mapping (E-

Num), are also giving rise to emerging issues which may have implications for NP in ECTEL states. While it is still too early to understand the impact of these issues on ECTEL's still developing markets for the moment, there will be a clear need for examining the implications of NP in relation to these issues in the future.

By contrast, the potential competitive benefits of introducing provider portability to the recently competitive markets of ECTEL states are reasonably clear and well understood, although some level of flexibility in the technical arrangements adopted would be desirable given the other issues noted above.

### **Recommendation**

ECTEL proposes to focus on adopting a framework for regulating provider portability in ECTEL states and to address other types of NP as and when the need arises.

#### **1) ECTEL INVITES COMMENTS ON ITS RECOMMENDATION TO ADOPT A FRAMEWORK FOCUSED ON PROVIDER PORTABILITY IN THE SHORT TERM.**

#### **FOR WHICH SERVICES SHOULD NP BE REQUIRED?**

For the purposes of this consultation, ECTEL proposes to introduce NP for only fixed-to-fixed and post-paid mobile-to-mobile calls for the moment. In ECTEL's view, these services represent the most logical candidates for the initial introduction of NP. The adoption of a NP requirement for other segments of the market will be approached in phases.

#### **The Fixed Market**

The emergence of new entrants in the area of fixed line services has given rise to repeated calls by policy makers to facilitate NP<sup>2</sup> in order to ensure that actual competition for quality of service can take place and to reduce the potential for new entrants to be foreclosed from growth in the market. New fixed line providers have also raised concerns regarding the lack of portability,

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<sup>2</sup> "It is... unacceptable that ten years into liberalization, we are yet to have Number Portability. Consumers should be able to change provider and retain their telephone numbers, which they may have had for decades. Liberalization will not be complete without this capability. I challenge ECTEL to work with the providers to have this in place with urgency." The Hon. Tilman Thomas, Prime Minister of Grenada, on the occasion of ECTEL's 10<sup>th</sup> Anniversary, May 2010.

noting the challenges associated with competing in circumstances where customers are unable to keep their numbers when moving providers. The relatively low market shares commanded by new entrants, despite the availability of an alternative fixed provider in Dominica, Grenada, St. Lucia and St. Vincent and the Grenadines over several years,<sup>3</sup> suggests that further regulatory steps are required to reduce barriers to competition, beyond the mere formal liberalization of the fixed sector.

More importantly, subscribers in ECTEL states are increasingly demanding NP for fixed services. In a survey conducted by ECTEL in 2008, 87% of small businesses polled, indicated that it would be important to keep their fixed line number if they switched providers. In Saint Lucia, the largest single ECTEL market, the figure was 92%. In fact, the “lowest” figure registered was in Grenada, where 78% of small business respondents stressed the importance of keeping their number.<sup>4</sup> From a statistical standpoint however, even the Grenada figure is significant, if the “lowest” number of respondents suggest that nearly 4 in every 5 business customers for fixed lines in that country, place a high premium on retaining their number.

Given this relatively high level of importance placed on NP by fixed-line business subscribers, ECTEL regards fixed-to-fixed portability as a natural starting point for the introduction of NP.

### **The Mobile Market**

In the same survey of small and medium enterprises (SMEs), roughly half of all respondents appeared to attach considerable importance to retaining their mobile telephone number, although the level of importance varied depending on the type of economic activity involved. In the case of the transportation sector for example, 71% of respondents indicated that number retention was crucial to business.

A more significant indicator however, may be that 88% of respondents indicated that they had not changed mobile providers in two years. This latest figure represents perhaps the strongest indication that the lack of number portability is a deterrent to changing providers and is likely to have a “chilling effect” on competition in the mobile market. As subscribers become increasingly associated with particular numbers to conduct an increasing

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<sup>3</sup> See Appendix A to this consultation.

<sup>4</sup> See “Report on the Use of Information and Communication Technology by Small and Medium Enterprises in the ECTEL Member States,” ECTEL, (2009,) available at [www.ectel.int](http://www.ectel.int).

range of business transactions, the possibility of losing those numbers assumes a level of risk these subscribers want to avoid.

This fact is underscored by the increasing economic importance of mobile phone service to SMEs in ECTEL states. Approximately 73% of businesses now report reliance on a mobile phone to conduct their affairs. Interestingly, a majority of respondents (61%) had only one mobile service provider. At the time of the survey, one provider had 70% of business subscribers.

Accordingly, it is clear that mobile phone service has become essential to the operations of SMEs. In light of the importance of the service to SMEs in ECTEL states and the critical role such businesses play in promoting growth and economic development, the option to retain numbers when switching providers could contribute significantly to overall competitiveness, reduced costs and an improved range of services.

Similarly, the importance of mobile services to corporate and other subscribers should not be overlooked. Traditionally, such clients have tended to be counted among the most profitable for providers, yielding relatively higher revenues per user than the average individual customer. In addition, even individual customers stand to benefit considerably from the improved choice and mobility facilitated through NP.

Clearly therefore, the introduction of some level of NP for the mobile market could yield significant dividends for many subscribers and small businesses in particular, who are increasingly dependent on the service. ECTEL therefore recommends that NP should be introduced in some areas of the mobile market.

However, in the initial phase, ECTEL recommends that NP should be limited to certain types of mobile services. In the case of post-paid services, the ability to switch providers while retaining a number that has become associated with a particular user or set of users would be obvious. Post-paid subscribers enter into annual contracts with providers, have established relationships that suggest a level of permanence, and tend to be more closely associated with particular numbers than the average pre-paid subscriber. The majority of corporate clients for example, rely on post-paid service. As a general rule, post-paid mobile customers tend to rely more heavily on one or a known series of numbers for all their mobile service needs. Providers are also more likely to risk extra commercial costs for post-paid customers, such as slightly discounted handsets, either as a reward for subscribing to post-paid service or as an inducement to subscribe to such services.

By contrast, the desirability or necessity of retaining numbers for subscribers of mobile pre-paid services is unclear. Such customers tend to be more casual users, do not enter into long term agreements with providers and tend to be more volatile. Pre-paid customers also tend to own multiple sim-cards for strategic use. For these customers, retention of a specific number is generally not a priority, and maintaining a relationship with any particular provider is simply not required.

Imposing a requirement of NP for pre-paid customers therefore, without clearly establishing the parameters for porting, could potentially give rise to significant costs for providers. In such circumstances, providers would need to facilitate portability for customers who could potentially make frequent and unnecessary requests for porting. This could be a significant burden and have a destabilizing effect on the mobile market in light of the fact that the majority of mobile subscribers are pre-paid.

ECTEL is sensitive to these potential costs and therefore believes that NP should be restricted in the initial stages to the post-paid mobile market, where demand by subscribers is better understood. Portability for the pre-paid mobile market may be considered at a later date as and when circumstances require it or in the event of clear subscriber demand. Restricting implementation of NP to post-paid mobile-to-mobile services for the moment also provides ECTEL and the NTRCs, an opportunity to examine pre-paid portability in greater detail. For instance, it would provide an opportunity to observe whether some level of migration takes place from pre-paid to post-paid services due to the availability of NP, or to consider in greater detail, the conditions for facilitating pre-paid portability, among other things.

The alternative to the approach proposed would be to introduce NP for all mobile services simultaneously. Notwithstanding the potential destabilization of the mobile market where proper conditions were not specified, one possible advantage to this approach would be that the higher porting volumes associated with the availability of pre-paid porting, could reduce overall porting costs.

For reasons outlined above however, ECTEL does not regard it as desirable to impose this requirement at this time.

### **Recommendation**

ECTEL proposes to recommend implementation of NP for fixed-to-fixed and post-paid mobile-to-mobile services.



- 2) ECTEL invites comments on its recommendation to implement NP for fixed-to-fixed and post-paid mobile-to-mobile services.**
- 3) ECTEL invites comments on its recommendation to defer the implementation of pre-paid NP pending further investigation and study.**

## **WHAT TYPE OF TECHNICAL ARRANGEMENTS SHOULD BE ADOPTED?**

There are a number of potential technical solutions for facilitating NP in ECTEL states. These options can be complex and vary depending on whether portability is to be implemented for either mobile or fixed networks and whether the arrangements involve a peer-to-peer solution or reliance on a centralized database (“CDB”) or intelligent network (“IN”) solution. Briefly, some of these options include:

### Onward Routing

A call to a ported number is routed to the original network where the call is then sent to the new destination network either by means of call forwarding or a database query. Call forwarding is suitable for voice calls only.

### Query On Release

If a number is ported, the destination network sends a release message to the originating network which then makes a database enquiry and finally routes the call to the new destination. This method requires use of a CDB/IN.

### Call Drop Back

The donor network receiving the call makes the database enquiry and passes on the information to the originating network, which then uses the information to complete the call. This method requires use of a CDB/IN.

### All Call Query

The originating network always makes a database enquiry for outgoing calls, and then routes the call to the correct destination from the outset. This method requires use of a CDB/IN. It is suitable for both fixed and mobile network portability.

## Routing of Non-Call Related Information

For non-call related signaling, the Signaling Relay Function (SRF) has been developed. This function is usually implemented as part of a CDB/IN solution and can be used to facilitate the routing of SMS messages and other non-call related information. The SRF is also used for mobile portability and has been utilized by many mobile operators in the United Kingdom. In this system, calls are directed to the donor network which passes the call onward to the receiving network.

## Back Office Processes

In addition to the routing arrangements for NP, a successful regime requires clear and well established administrative processes to ensure that numbers can be successfully ported so that ported numbers may be called seamlessly. These processes generally include the methods by which the database is updated and or that information is shared with and between providers. Generally, these procedures may be specified by regulators or agreed between providers.

## **Centralized Database Solutions**

Globally, the most popular solution for achieving number portability is the CDB or IN solution. In this type of system, a reference database or number clearing house owned or operated by an independent third party or sometimes maintained by a consortium of providers is established for the purposes of facilitating NP. With these systems, the All Call Query method is utilized to determine whether a call is to a ported number and to ensure that the call is then directed to the destination network. In Europe, the CDB solution has been adopted by a majority of countries. Most interestingly, several small jurisdictions have adopted this option in recent times, including Malta and Jersey, with population sizes comparable to ECTEL states.

These CDBs provide several obvious advantages which make them attractive solutions for regulators. First, it is possible that the databases can be operated by third parties with specialized infrastructure for providing such services that is already established. This means that costs can usually be shared by providers both within and in some cases, depending on the route pursued, outside of ECTEL jurisdictions. If this option is pursued, the initial start-up costs are reduced significantly, making it incredibly attractive. Alternatively providers may jointly choose to establish such a centralized reference database.

The second important advantage is that the CDB solution is easily adaptable to different types of services, so that both fixed and mobile, or even other types of portability may be facilitated.

### **Peer-to-Peer Solutions**

However, an alternative to CDB solutions is Peer-to-Peer arrangements. Bilateral peer-to-peer solutions allow operators to enter into individual arrangements for porting. These arrangements may be standardized across the industry or may be unique to each agreement. Although internationally, such peer-to-peer arrangements are fewer given the availability and convenience of centralized solutions, it is nonetheless arguable that the arrangement may be suitable for jurisdictions with small port volumes and a limited number of operators.

By comparison, the centralized option involves the establishment of a single reference database containing all the numbers. This database is usually copied to operational databases in each participating network operator on a frequent basis. As noted above, a consortium of operators usually manages the centralized database, though its actual operation and maintenance may be outsourced. As such, although the setting up of a central database is the common solution for number portability globally, a potential advantage of peer-to-peer arrangements is that initial establishment costs can be lower. This tends to be an important consideration in small jurisdictions where porting volumes are relatively low.

On the other hand, even peer-to-peer arrangements have implications for providers who may be required to upgrade their networks or switches to accommodate NP. Moreover, many peer arrangements prove more costly to maintain in the long term, whereas centralized solutions tend to result in lower overall long term maintenance costs.

### **Number Portability and Small Jurisdictions**

The notion that CDBs/IN solutions are too expensive and therefore inappropriate for small jurisdictions is also not supported by international evidence. A number of small jurisdictions with population sizes and profiles comparable to ECTEL states, either individually or in total, have adopted the CDB/IN solution to facilitate NP. As noted previously, these jurisdictions include Iceland, (approximately 320,000 inhabitants), Luxembourg (approximately 490,000 inhabitants), Jersey (approximately 87,000

inhabitants) and Malta (approximately 420,000 inhabitants.) Accordingly, CDB solutions are a proven option for small jurisdictions.

A further potentially significant consideration is that the NP solution adopted for ECTEL states may be available to other Caribbean jurisdictions, further reducing overall costs of establishment and maintenance. Alternatively, providers based in ECTEL may choose to participate in NP solutions established for other Caribbean jurisdictions, based on the fact that several Caribbean jurisdictions, including the Bahamas and Jamaica, are contemplating the introduction of NP in their telecommunications markets. Both these options suggest the possibility that the costs of facilitating NP may be less significant than initially thought, upon closer analysis.

Fundamentally therefore, the questions providers must resolve are whether they bear the costs alone or seek to share them and whether they avoid higher costs in the short term only to deal with higher costs in the future.

### **Technical Requirements**

In terms of pure technical feasibility, most modern switches come pre-configured by switch vendors to accommodate NP. In such cases, software licences may be required to unlock existing capability or enable upgrades. However, older networks or technology may not have that capacity and may require some upgrading.

ECTEL takes the view that providers would be best positioned to address their network needs to facilitate NP and their related costs.

### **Basic Policy Considerations**

ECTEL's view is that providers should be invited to recommend the appropriate technical solutions for implementing NP in member states, bearing in mind the broad policy objectives and parameters outlined in this consultation. Accordingly, any final decision on routing and administrative arrangements for NP should be made in consultation with all interested parties and subject to the eventual approval of the National Telecommunications Regulatory Commission (NTRC). The Commission in consultation with ECTEL, reserves the right to refuse to grant permission for the implementation of any solution which is unable to meet the broad policy objectives it has outlined, once the options proposed in this consultation have been adopted.

Irrespective of whatever type of technical solution is preferred by providers to facilitate NP in member states, the solution should meet some basic expectations. In particular, a solution for NP should:

- (a) Be flexible enough to accommodate the different types of networks that currently exist as well as foreseeable upgrades of existing networks and technology;
- (b) Take account of emerging issues likely to impact on NP in the future;
- (c) Facilitate true portability, including voice and non-call related information; and
- (d) Be cost effective, efficient and provide maximum value to subscribers, bearing in mind the broad policy objectives outlined in this consultation.

If necessary, a further consultation on NP may be undertaken, dedicated exclusively to determining the preferred technical solution proposed by providers currently operating in ECTEL states.

### **Recommendation**

ECTEL does not propose to recommend a technical solution for implementing NP in member states and will instead permit providers to make submissions on the most appropriate technical solution, bearing in mind the broad policy objectives outlined in this consultation.

- 4) ECTEL invites comments on centralized databases versus peer-to-peer options for NP.**
- 5) ECTEL invites comments on the most appropriate technical solution and related costs for implementing NP in ECTEL states.**
- 6) ECTEL invites comments on participating in regional NP solutions for providers in ECTEL states.**
- 7) ECTEL invites comments on the issue of technology neutral options for implementing NP in ECTEL states;**

- 8) ECTEL invites comments on the need to provide NP solutions capable of facilitating the transmission of SMS and other non-call related signaling.**
- 9) ECTEL invites comments on the proposal to undertake a further consultation focused solely on the technical solutions proposed by providers responding to the current consultation.**

### **HOW LONG SHOULD IT TAKE TO PORT A NUMBER?**

A critical determinant of whether a porting process is successful and provides value to subscribers is the time period within which a number can be ported. Where the process is measured in days or weeks, it is likely to serve as a significant disincentive to change numbers and undermine the efficacy of a NP arrangement. Periods that are too short however may, depending on the technical solutions adopted, lead to subscriber frustration, delay and increased costs. Depending on the administrative processes involved and the procedures required by donor networks for example, an unduly short period of time might result in higher incidences of fraud and or mistake. Either case of delay or undue haste is also likely to have cost implications. The longer the period adopted, the higher potential costs of porting for users, while shorter periods are also likely to increase costs for both providers and users due to mistakes, fraud and the associated requirement for facilitating portability on a consistent basis.

Globally, porting periods vary substantially, but it is consistently the case that NP regimes with shorter porting periods are notably more successful than regimes in which they are not.

Having noted this, ECTEL's view is that the issue of time for porting should be guided to the extent possible, by international best practice in this area. In Ireland for example, the time for porting is limited to 2 hours. In the US, the Federal Communications Commission requires mobile porting to be facilitated in 2.5 hours.

However, while ECTEL believes such time periods are the ideal and that any NP option adopted should attempt eventually to facilitate that level of efficiency, it proposes for now only to recommend an outward limit of 24 hours to facilitate a port. Any substantially longer period would likely defeat the purpose of portability and serve as a disincentive to subscribers.

## **Recommendation**

ECTEL proposes to recommend that the technical option for NP eventually adopted in member states should be capable of facilitating a port within a period of 24 hours.

### **10) ECTEL invites comments on the time period proposed to implement a request to port a number.**

#### **WHO SHOULD BEAR THE COST OF FACILITATING NP?**

The costs of enabling number portability can be roughly divided into three categories.

- (i) System set up and maintenance costs are incurred in establishing and maintaining the capability to supply number portability. These costs include the conditioning of exchanges and or establishing and maintaining databases. (Implementation or set-up costs.)
- (ii) Call conveyance costs are costs associated with delivering calls to ported numbers. These costs include any additional switching and transmission required for calls to ported numbers, as well as the costs of expanding the capacity of the network to cater for calls to ported numbers. In part these costs depend on the number of customers who have ported their number. (Recurring or ongoing costs.)
- (iii) The customer transfer costs are one off costs to the donor operator each time a customer ports their number to another provider. (Commercial costs.)

It is important to recognize that the cost of implementing NP is directly dependent on the technical solution eventually adopted and the back-office processes required to support it. In whatever case, most arrangements for establishing NP will generally involve the costs of software upgrades, network alterations and or establishing databases and query points, to some degree or other.

For ECTEL, the most important questions to resolve are: (i) whether the costs for NP should be borne by users or providers, and (ii) if the latter, how the costs should therefore be apportioned. In arriving at its determination, various factors have been taken into consideration including the fact that NP is in the public interest. In ECTEL's view, the obligation to facilitate NP is a basic requirement for telecommunications providers, similar in many ways to the

need to supply subscribers with a bill or tariff information. Put another way, ECTEL regards the facilitation of NP as a basic cost of doing business in a liberalized, competitive telecommunications environment.<sup>5</sup>

Further considerations are the need to minimize costs while distributing benefits fairly and promoting reciprocity. The most important consideration is that the system adopted should not discourage porting.

Accordingly, ECTEL's view is that, irrespective of the solution proposed, implementation costs of NP are best and most appropriately borne by providers. Whether such costs are borne by providers individually or shared between them will depend on the technical solutions eventually adopted. Costs of implementing NP should not be imposed on users under any conditions and as such, subscribers should not be required to contribute a fee to the establishment or maintenance of the NP infrastructure.

### **Recommendation**

ECTEL proposes to recommend that the costs of implementing NP should be borne by providers. ECTEL proposes to permit providers to indicate, based on the preferred technical solution to be adopted, whether costs should be shared among providers or whether all providers should be required to bear their own costs.

- 11) ECTEL invites comments on whether the implementation costs of NP should be placed on providers.**
- 12) ECTEL invites comments on whether providers should be required to contribute to the establishment and maintenance costs of a NP system or whether all providers should be required to bear their own costs.**
- 13) ECTEL invites comments on how costs should be distributed between donor and recipient networks.**
- 14) ECTEL invites comments on whether providers should be permitted to charge subscribers any kind of fee for porting their number.**

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<sup>5</sup> This is expressly recognized by the Interconnection Regulations. See Chapter 1, page, 11, above.



## **WHAT CONDITIONS SHOULD BE ATTACHED TO NUMBER PORTABILITY?**

In addition to the many complex technical considerations that may impact NP, there are a number of important issues to resolve with respect to the actual porting process if it is to be successful. To ensure success, providers should be required to comply with a number of basic rules:

- (1) Porting should be facilitated by the recipient network;
- (2) Providers should be required to notify consumers of their right to port their number and should clearly specify the conditions for porting in their terms and conditions of service;
- (3) Subscribers should be entitled to port their number to any operator including to a previous operator;
- (4) Subscribers should be permitted a minimum period within which to withdraw a request to port or to change their minds after initiating a service with a new provider;
- (5) Donor networks should not do anything to impede a request to port once a subscriber has fulfilled all the obligations contained in the provider's terms and conditions of service;
- (6) Providers should only be entitled to refuse a request to port a number where –
  - (a) The request refers to a non-existent number;
  - (b) The request is by an unauthorized person;
  - (c) The requested number is already in the process of being ported;
  - (d) The number for which a port is requested is temporarily or permanently disconnected from the donor operator's network;
  - (e) There are unfulfilled contractual obligations of the subscriber toward the provider at the moment of the request.
- (7) Providers must provide non-discriminatory conditions for subscribers with ported and non-ported numbers.

To enable ECTEL and the NTRC to monitor the implementation of NP, additional obligations may be imposed on providers required to facilitate portability. Some of these additional obligations include:

- (a) Providers should provide portability without changing the nature of the service;

- (b) Donor providers should be required to maintain and provide a list of ported numbers of their subscribers to the NTRC at its request;
- (c) Recipient providers should maintain records in respect of requests for porting which have been rejected for a period of at least twelve months and should disclose the same to the NTRC at regular, pre-determined intervals; and
- (d) Providers should be prohibited from engaging in “win-back” tactics once a request for a port has been made.

### **Recommendation**

ECTEL proposes to recommend that the basic conditions for porting and the process for porting should be clearly specified and understood by providers.

### **15) ECTEL invites comments on the process proposed for implementing NP and the associated conditions on providers.**

### **WHEN SHOULD NUMBER PORTABILITY BECOME MANDATORY FOR PROVIDERS IN ECTEL STATES?**

Taking all matters into consideration, ECTEL proposes to recommend that NP should be implemented in ECTEL states from 1<sup>st</sup> September 2012, which represents one year from the close of the current consultation.

### **16) ECTEL invites comments on the proposed deadline for implementing NP in ECTEL states.**

### **OTHER CONSIDERATIONS**

#### **Validation of Requests**

In order to facilitate a convenient and efficient process, providers will need to agree on the basic requirements for validation of a port request. At a minimum, some method should be utilized to authenticate the identity of the subscriber making the request. Such a requirement for validation would be important to reduce instances of fraud and potential hardship to subscribers. It would also avoid exposing providers to nuisance requests and or potential liability from

genuine subscribers where numbers have been ported pursuant to a false request.

However, any authentication or validation procedures adopted should be no more burdensome and or different than providers already require for new subscribers.

### **Recommendation**

Providers should be required to indicate what type of validation/authentication procedures should be adopted to facilitate a port request.

### **17) ECTEL invites comments on the process of validation or authentication to be utilized to facilitate a port request by a recipient network.**

### **Tariff Issues**

One of the potential complications of NP is that it becomes more difficult for subscribers to predict the costs of certain calls, due to the fact that they may be unaware that a number is now associated with a different network. In ECTEL states, where charges for calls between networks remain artificially high, the change from one network to another by a particular subscriber could potentially cause problems for callers expecting to make an on-network call. Whereas previously, subscribers could associate a particular number or number series with a particular network and thereby make strategic decisions with respect to calling, NP will make that level of tariff predictability difficult.

In effect therefore, NP may in the short term, reduce the level of tariff predictability which subscribers in ECTEL states currently take for granted.

However, ECTEL does not regard this as an insurmountable or major problem for three reasons. First, in the long term, NP is likely to put downward pressure on prices, particularly in the mobile market.

Second, the problem is transient in nature at best. As customers become increasingly aware of the availability of NP, subscribers will be more likely to both inform and ask calling partners whether they have shifted network, and thereafter make strategic calling decisions. Effectively, each caller only needs to be told once that the recipient has switched networks.

Third, all the providers operate fully throughout each member state and retail costs between providers, though different, do not substantially vary. The advent of major “bill shocks” from an unmonitored off-network call is therefore likely to be small. Or put in other terms, even the relatively higher costs of cross-network calls are likely to be generally predictable to the average subscriber.

In any event, tariff predictability issues are not an argument against the adoption of NP. Given the number of countries that have implemented NP worldwide, it is clear that the relative merits of portability far outweigh the potential initial inconvenience to customers as a result of its implementation. NP is also the only means by which regulatory authorities can give true recognition to the principle, that telephone numbers are a public national resource, not owned by providers but allocated ultimately to subscribers.

Fortunately, the issue can be resolved through proper regulatory management. To address the problem, providers internationally employ several strategies, including sending SMS notices to customers making cross-network calls or enabling an audible warning when a call to a ported number is being made. Fundamentally therefore, the issue is addressed through the provision of strategic customer information by providers.

### **Recommendation**

Providers should be required to provide basic customer education to inform customers of the implications of NP for calling across networks once implemented and suggest means of dealing with tariff transparency issues.

**18) ECTEL invites comments on the requirements for informing customers of the circumstances in which ported numbers may attract new or different charges.**

**19) ECTEL invites comments on any other issues that may be considered relevant to the consultation.**

### **CONCLUSION**

Based on the responses received to the current consultation, ECTEL will submit a final recommendation to its Council of Ministers for adoption before onward submission to NTRCs.