



Commission for  
**Communications Regulation**

## Consultation Paper

### **Addressing the impact of Mobile Number Portability on user awareness of calls to other networks.**

<b>Document No:</b>	<b>03/121</b>
<b>Date:</b>	<b>10, October 2003</b>

All responses to this consultation should be clearly marked:-  
“Reference: Submission re ComReg 03/121” as indicated above,  
and sent by post, facsimile or e-mail, to arrive on or before 5pm  
on Friday 31<sup>st</sup> October, to:

**FREEPOST**  
**Ms. Karen Kavanagh**  
**Commission for Communications Regulation**  
**Irish Life Centre**  
**Abbey Street**  
**Dublin 1**  
**Ireland**

**Ph: +353-1-8049600    Fax: +353-1-804 9680**  
**Email: [karen.kavanagh@comreg.ie](mailto:karen.kavanagh@comreg.ie)**

## Contents

1	Foreword.....	2
2	Background .....	3
3	Options to Provide Tariff Transparency .....	4
3.1	TONE ALERT OR ANNOUNCEMENT .....	4
3.1.1	<i>Form of aural signal</i> .....	5
3.1.2	<i>Opt in or Opt out?</i> .....	6
3.2	TARIFF CONSTRAINTS .....	7
3.3	INFORMATION SERVICES .....	8
3.4	THE ZERO OPTION.....	9
3.5	OTHER APPROACHES .....	10
4	Legislation .....	11
5	Submitting Comments.....	12
	Appendix 1:Belgian solution .....	13

## 1 Foreword

In the two months since the introduction of Mobile Number Portability on the 25<sup>th</sup> of July 2003, approximately 20,000 mobile users in Ireland have been able to move between operators without the need to change their mobile phone numbers. The benefits of Mobile Number Portability are obvious for those users, who avoid the inconvenience and cost of advising their friends, family and business contacts of a number change. For business users, there are additional potential cost savings by avoiding the need to change numbers on stationery, signage and advertising.

The impact on competition of users being able to change operator more easily is less measurable but nonetheless already evident. All three existing mobile operators are advertising to encourage consumers to switch to their network, whilst also seeking to retain their existing customer base.

The Mobile Number Portability process that has been developed in Ireland is one of the world's most efficient, with the majority of 'ports' for single line users being completed in under an hour, compared to up to 30 days elsewhere in Europe. Since the Irish solution is quick and relatively easy to use, the percentage of customers changing operator who choose to take their number with them is likely to be very high by international standards.

Some initial post-launch problems have been largely resolved by the operators and we look forward to the majority of consumers who decide to change operators benefiting from this facility in the coming years.

While the introduction of Mobile Number Portability brings significant competitive and user benefits, given the current structure of mobile tariffs it can also reduce tariff transparency – particularly in the case of mobile to mobile calls. A mobile caller will no longer be able to tell from the mobile number being called whether the call is an *on-net* or *off-net* call. Such calls in Ireland can be charged at significantly different rates, although these differentials may reduce or be eliminated over time. In the interim, all three operators had given undertakings to address the tariff transparency issue, and this has been reported in the press and on radio. Nevertheless, solutions have been slow to emerge or preliminary attempts have been considered unsatisfactory by consumers.

The purpose of this paper is therefore to remind operators of the requirement to provide appropriate solutions to the tariff transparency issue, to seek to develop an informed view on the optimum solution and then to ensure it is implemented in a timely and uniform way.

Responses to this consultation document will be accepted up to 31<sup>st</sup> October 2003 and a Response to Consultation will be issued by mid-November 2003. Responses from consumers and their representative organisations are especially welcomed on this important issue for mobile users.

**Etain Doyle,**

**Chairperson, Commission for Communications Regulation**

## 2 Background

The introduction of Mobile Number Portability (MNP) stimulates competition and brings significant consumer benefits by removing a major barrier to changing from one operator to another.

However, MNP means the 08X prefix no longer automatically denotes the network to which a customer belongs. For example, a Vodafone customer having an 087 prefix to their number may now transfer to the Meteor or O2 networks and still retain their full number, including the 087 prefix. This can reduce tariff transparency, particularly in the context of mobile to mobile calls, since the mobile caller will no longer be sure whether a mobile number being called is *on-net* or *off-net* – which are currently charged at significantly different rates. This issue will become increasingly significant as the proportion of the overall mobile customer base that have ‘ported’ between operators increases over time.

The differential in charges for calls from fixed lines to each of the mobile networks is less pronounced. In general, fixed operators will charge for these calls on the basis of the network rather than the number. For example, if the customer dials an 087 number, but the called party has moved that 087 number to the Meteor network, the customer will pay the fixed to mobile rate for calls to the Meteor network. For eircom customers, daytime calls to mobile networks currently vary from 23.07c to 29.19c per minute depending on the network called, evening calls from 18.67c to 19.46c per minute and weekend calls from 14.99c to 15.23c per minute. Other fixed operators’ tariffs have a broadly similar range, although prices may often be lower.

A related issue was highlighted by one of the network operators at an industry meeting on the topic - Since some operators may have better coverage than others in some areas, a calling customer may incorrectly conclude that a particular operator has inferior (or superior) coverage in an area based on incorrect identification of the operator based on the 08X code of the number being called.

This tariff transparency issue has been studied elsewhere, and various approaches have been implemented or are being considered to improve tariff transparency. In a report for the Information Society Directorate General, Ovum (a leading telecommunications consultancy company) indicate that the two generic approaches are:-

- To restrict the tariffs charged
- To require enhanced tariff transparency services.

Several countries in Europe are adopting solutions in line with these generic approaches. Based on these precedents and other information, ComReg has set out a range of possible solutions for the Irish market in Section 3 of this consultation paper.

### 3 Options to Provide Tariff Transparency

This paper concentrates on developing a uniform solution to provide tariff transparency in the context of mobile to mobile calls, since the tariff differentials between *on-net* and *off-net* calls are currently significant, although these differentials may reduce or be eliminated over time, given technological, market and pricing developments. The range of tariffs for calls from fixed networks to the mobile networks is arguably not so broad to oblige fixed operators to introduce measures to address the tariff transparency issue. In addition, it may also be possible for fixed line users to use certain tariff transparency facilities provided by the mobile operators in the fixed to mobile calling context. For example, the information services described in section 3.3 below would allow any user to check whether a number was on a particular mobile network or not.

Given the current tariff differentials between *on-net* and *off-net* calls originating on the public mobile networks, the industry should initially concentrate on a solution to address this. There are several approaches, including:-

- Announcement or tone alert
- Tariff constraints
- Information services
- The Zero option

ComReg's generic understanding and regulatory position is set out below for each of the above approaches. Questions have been included for respondents in order to obtain feedback on their assessment of the impact of these approaches on improving tariff transparency and on the technical implementation issues.

The first requirement is to improve tariff transparency for mobile-originated voice calls. In addition, the need to improve tariff transparency for mobile-originated SMS should be considered.

#### 3.1 Tone Alert or Announcement

With this approach, the caller will hear a tone alert or voice announcement at the call set-up stage when the number dialled is an *off-net* number. This potentially gives the caller the option to abandon the call at no charge. This aural signal will be generated and inserted by the originating mobile network and receipt will not be dependent on the functionality of the originating customer's handset.

Calls to *off-net* numbers can cover various destination traffic cases. ComReg has identified the following basic options: -

1. Identify 'unexpected' *off-net* calls to national mobile numbers. In other words, the aural signal would be only be applied when a call was to a mobile number that appeared from the prefix to be *on-net*, but had in fact been ported.
2. Identify calls to all *off-net* national mobile numbers, including ported numbers.

3. Identify all *off-net* calls. This could potentially include calls to all *off-net* mobile numbers, fixed line numbers in Ireland, fixed and mobile numbers abroad, non-geographic numbers such as Freephone and Premium Rate numbers, etc.

Arguably, mobile users will be reasonably aware by examining the dialled number whether the call is *off-net* to a fixed national or fixed or mobile international destination and be cognisant of the charging implications of this. Similarly, non-geographic numbers provide some indication of the expected tariff (e.g. calls to 1800 numbers are free).

ComReg therefore considers that the industry should concentrate on a solution for national mobile to mobile *off-net* calls. As identified, the aural signal could be applied to calls to all *off-net* mobile numbers, or potentially only to numbers that appear to be *on-net*, but are in fact *off-net*, since they have been ported. The tariff transparency issue caused by MNP is addressed by the latter (Option 1, above), so identifying only 'unexpected' *off-net* calls may suffice in the short to medium term, assuming it is technically viable to implement.

ComReg notes that one operator is considering the transparency issue for mobile to mobile calls, but is suggesting that the aural signal could be applied to signal that the call is *on-net*, with no indication being provided for *off-net* calls. This is a unique perspective that may have some merit on technical implementation or other grounds, but ComReg suggests that this could be confusing for consumers if other networks adopt the converse implementation.

### 3.1.1 Form of aural signal

The form of the aural signal must be non-discriminatory in content and if an announcement is considered, it must be in compliance with statutory data protection requirements in terms of the additional information given to the calling party about the called party's circumstances.

The aural signal is likely to consist of a unique tone or a short series of bursts of tone. (A sample tone from the Belgian solution is appended to the Annex of this document in MP3 format. It consists of three short 'bips' within the space of around 1 second). If a tone or burst of tones is selected, it is important that it is distinguishable from other tones that a caller may hear. Mobile operators would also have a responsibility to inform customers of the significance of the tone via billing inserts, advertising, SMS or voicemail broadcasts or other means.

As an alternative, a voice announcement could be provided, but ComReg has serious concerns about this approach. One of the three mobile operators has already used this approach, and their solution has been the subject of complaints<sup>1</sup> to ComReg. The thrust of these complaints was concerned with the length and the repetitive nature of the announcement which is implemented on every call and deemed to be a nuisance.

---

<sup>1</sup> Accounted for 43% of all complaints to ComReg on MNP

Consumers have also complained to ComReg that the message conveyed an unfavourable impression with regard to the (ported) called party (in some cases interpreted that the called party's service had been suspended) and was not in compliance with statutory data protection requirements. In addition, there were complaints that the call did not always complete after the announcement was played.

ComReg has a strong preference for a tone based solution similar to that which is implemented in Belgium. It believes that this solution will provide a simple and easily understood language independent indication to the caller that the call is not *on-net* and that a higher tariff may apply.

### 3.1.2 Opt in or Opt out?

If this approach is adopted, ComReg proposes that the aural signal should be capable of being activated or deactivated<sup>2</sup> by the customer, according to the customer's preference. This raises a further issue of whether it should be initially activated and customers opt out, or whether customers must opt in and activate the facility for themselves. ComReg considers that the facility should be opt-out to initially ensure customer awareness of the facility but that the ability to deactivate the facility would be highlighted in customer awareness initiatives.

Finally, ComReg considers that operators could implement this type of tariff transparency solution in less than 2 months. This is based on the Belgian precedent and taking into account that operators may have done some preliminary development work.

**Q. 1. To what extent do you consider that the provision of a tone alert/announcement at the call set-up stage for certain *off-net* calls will improve tariff transparency?**

**Q. 2. In the event of tone alert/announcement being introduced, which *off-net* destination traffic cases should be identified?**

**Q. 3. In the event of tone alert/announcement identification being introduced, which method, i.e., single tone, tone bursts or recorded message, is the best solution from the mobile phone user's perspective?**

---

<sup>2</sup> Deactivation may be under the control of the subscriber by, for example, dialling a short code or may be done by the network operator on request from the subscriber.

Addressing the impact of Mobile Number Portability on user awareness of calls to other networks.

**Q. 4. Do you agree with ComReg's viewpoint that this solution, if adopted, should be utilised to identify *off-net*, rather than *on-net* calls and that this should be standardised for all operators?**

**Q. 5. Should the facility be optional for users and if so, should it be offered on an opt-in or opt-out basis?**

Questions for mobile network operators: -

**Q. 6. As a mobile network operator, what would be your preferred specification for a solution using tone alert and what would be the scope of effort and timescales for implementation? What facility would you provide to subscribers to disable the tone indication?**

**Q. 7. As a mobile network operator, what would be your preferred specification for an announcement based solution and what would be the scope of effort and timescales for implementation? What facility would you provide to subscribers to disable the message function?**

**Q. 8. As a mobile network operator, what would be your preferred solution for indicating to callers that the number address for a SMS message is *off-net*?**

### **3.2 Tariff Constraints**

With this approach, all calls to mobile numbers with the same network prefix as that of the caller's number are charged at the *on-net* tariff to the caller, including those that have been ported to other networks. This approach can have some attractions during the initial period after the introduction of MNP when the number of ports are small, as the revenues lost are marginal and are offset by the savings realised by deferring the implementation of an aural signal solution.



Addressing the impact of Mobile Number Portability on user awareness of calls to other networks.

ComReg does not regard this solution as a proper permanent solution, as it could seriously distort pricing decisions when the number of ported subscribers becomes large in relation to the overall subscriber base. Such a solution could also lead to opportunities for arbitrage where a mobile user takes out a subscription to network A and then migrates to network B in order that callers using network A and B can make calls to the arbitrage subscriber at *on-net* rates.

**Q. 9. Do you consider that there is merit in adopting a solution based on tariff constraints?**

### **3.3 Information Services**

This approach requires each mobile network operator to provide users with access to information on the status of any mobile number. The generic form of such a service would be that the customer would access the service, enter the full mobile number and receive information along the following lines:

*The number you have entered is an active Vodafone/O<sub>2</sub>/Meteor number  
or*

*The number you have entered is not an active Vodafone/O<sub>2</sub>/Meteor number*

Information could also be made available on prevailing tariffs.

The preferred access medium would probably be SMS, which would be offered free of charge, but other mediums could also be considered such as offering the facility on each operator's website or a common site or via Interactive Voice Response on a well publicised Freephone number or short code.

ComReg's position on this approach is that while it would provide a helpful supplementary service to verify frequently used numbers, in particular when itemised bills are being checked, it is not a substitute for real time *off-net* call indication. It suffers from the need for callers to query number allocations before making a call which could be regarded as slow and inconvenient by many people when compared with the proposed aural signal solution.

**Q. 10. Do you consider it worthwhile for network operators to provide an information service solution to improve tariff transparency?**

**Q. 11. In the event of an information service solution being provided, should it be provided as the primary solution or supplementary to an aural signal/message based solution?**

**Q. 12. In the event of an information service solution being introduced, which access medium(s) would you prefer?**

Question for mobile network operators: -

**Q. 13. As a mobile network operator, what is the scope of effort required to implement an information service solution using your preferred access medium and what are the expected implementation time scales?**

### **3.4 The Zero Option**

This approach amounts to retaining the status quo and taking no actions to improve tariff transparency. Arguments in favour of this approach centre on the claim that callers tend to get to know whether frequently called numbers are *off-net* or *on-net*. Proponents also suggest that in the medium term, *on-net* and *off-net* tariffs will converge and the differential will become insignificant due to competitive market forces. Finally, some press commentary suggests that the myriad of operators' tariff packages and offers reduces users' ability to distinguish between the charging significance of *on-net* versus *off-net* as much or more than the impact of Mobile Number Portability.

Having regard to complaints received and adverse comments in the media, ComReg is not convinced that callers tend to get to know whether frequently called numbers are *off-net* or *on-net*.

**Q. 14. Do you consider that there is any merit in adopting the Zero option approach, taking no actions to improve tariff transparency in the medium term?**

### **3.5 Other Approaches**

**Q. 15. If you do not support any of the solutions set out in this paper for improving tariff transparency or the Zero option, please set out your alternative solution to address the tariff transparency deficit identified by ComReg?**

## 4 Legislation

Mobile Number Portability is required by the Universal Service and Users' Rights Regulations (S.I. No. 308 of 2003) which came into operation on 25<sup>th</sup> July 2003. These Regulations transpose Directive No. 2002/22/EC of the European Parliament and of the Council on universal service and users' rights relating to electronic communications networks and services. Regulation 26(1) of the Universal Service and Users' Rights Regulations 2003 transposes the requirement in the Directive to provide Mobile Number Portability and places an obligation on undertakings providing a publicly available telephone service, including a mobile service, in respect of number portability.

The need for National Regulatory Authorities to address the issue of tariff transparency in the context of number portability is highlighted in recital 41 of the Universal Services Directive (2002/22/EC), which states that:

*The impact of number portability is considerably strengthened when there is transparent tariff information, both for end-users who port their numbers and also for end-users who call those who have ported their numbers. National Regulatory Authorities should, where feasible, facilitate appropriate tariff transparency as part of the implementation of number portability.*

The requirement to address tariff transparency in the context of Mobile Number Portability in Ireland is not disputed by 02, Vodafone or Meteor. In fact, ComReg has facilitated the discussion of the issue in industry working groups and all three operators have formally indicated that they were prepared to develop measures to address the issue. What is now of concern to ComReg is that this is not being done in a timely, customer-centric or uniform way.

This consultation process seeks to establish what uniform measure(s) could be introduced by all operators and what timescale would be reasonable for its introduction. In the absence of consensus on a common approach and/or agreement of realistic timescales, ComReg may issue Directions to the operators, taking account of the consultation responses received. Regulation 31 of the Universal Service and Users' Rights Regulations permits ComReg to issue Directions for the purpose of further specifying requirements to be complied with relating to an obligation imposed by or under the Universal Service and Users' Rights Regulations.

## 5 Submitting Comments

All comments are welcome. However it would make the task of analysing responses easier if comments were referenced to the relevant question numbers from this document.

The consultation period will run from 10<sup>th</sup> October 2003 to 31<sup>st</sup> October 2003 during which time the Commission welcomes written comments on any of the issues raised in this paper. The consultation period is shorter than the standard consultation period of 4 weeks since the issues have been subject to prior discussion with operators and should have been resolved some time ago. In view of the continuing inconvenience for customers and the relative simplicity of the issues, it is considered that a 3 week consultation period is sufficient.

Having analysed and considered the comments received, ComReg will publish a report by mid - November on the consultation which will, *inter alia* summarise the responses to the consultation.

In order to promote further openness and transparency ComReg will publish the names of all respondents and make available for inspection responses to the consultation at its Offices.

ComReg appreciates that many of the issues raised in this paper may require respondents to provide confidential information if their comments are to be meaningful. Respondents are requested to clearly identify such confidential material and if possible to include it in a separate annex to the response. Such information will be treated as strictly confidential.

## Appendix 1: Belgian solution

As mentioned in Section 3.1, ComReg favours a solution similar to that adopted in Belgium. This solution was developed by all operators in Belgium in a short period, in response to a ministerial instruction issued close to the initial target launch date that the tariff transparency issue needed to be addressed prior to the launch of MNP. This was as a result of lobbying by consumer groups, although the main lobbyist later claimed that launch should not have been postponed, but that the tariff transparency issue could have been addressed retrospectively.

The Belgian solution uses a short burst of tones (three ‘bips’ within the space of approximately one second – MP3 attachment below is a sample) to indicate that the call is *off-net*. This was chosen because it was perceived to be sufficiently differentiated from other tones that may be used on a GSM network. (There may be some merit in adopting this tone for an Irish solution, if this is the chosen approach - for the benefit of Irish travellers to Belgium or Belgians travelling here and in the context of broader harmonisation). The tones identify all *off-net* calls. This facility is offered on an opt-in basis – users must activate the facility for themselves. The Belgian experience is that certain market segments (e.g. corporate customers) are less price sensitive and choose not to activate the facility.

Attached sample of the Belgian tone: -

950c.mp3