

## **ROAMING REGULATION – CHOICE OF DECOUPLING METHOD**

**Summary of responses received during the public consultation and  
BEREC view on issues raised by stakeholders**

**27 September 2012**

## **Introduction**

The BEREC consultation on roaming regulation launched on 9 July included a document on the analysis of the choice of the decoupling method to be used to comply with Articles 4 and 5 about separate selling of international roaming services under the new roaming regulation.

The responses on this document have been used to get feedback about BEREC analysis on decoupling methods, as well as a valuable input to complete BEREC opinion on Article 5, that is to be delivered to the EC. The European Commission will produce Implementing Acts for Article 5 based on this BEREC opinion.

Additionally, BEREC will produce in the next months a document on guidelines for the application of Article 5.

## **Responses from stakeholders**

BEREC has received 31 responses from stakeholders comprising different type of actors. Most of the responses are coming from MNOs (both large groups with footprint in several EU countries and small MNOs present in just one country), having also the GSMA sent a respond on behalf of all MNOs in the EU and raising issues common to all of them. Among the stakeholders responding to the public consultation there are also some MVNOs (including the association of full MVNOs in Europe), as well as a citizen's association (Europeans for fair roaming), a roaming enabler (Transatel), one telco equipment supplier (Ericsson) and some software vendors supplying solutions for roaming (Roamware and Starhome). In general it can be said that the responses are a good representation of stakeholders affected or to be involved in the application of Articles 4 and 5 on decoupling.

## **Summary on EWG conclusions**

In general, the EWG confirms the analysis opened to public consultation and basic LBO implementations, together with the single IMSI model are to be considered the recommended methods of decoupling. Both decoupling methods are feasible for its implementation for July 2014, its complexity for implementation and burden to be imposed is significantly lower than Dual IMSI and Single IMSI+, and its combination may give room to relevant competition among stakeholders for separate sale of roaming.

The issues related to barring and steering when LBO is used as a decoupling method need a more careful consideration by the EWG. In principle, the EWG maintains its initial conclusions on not imposing any additional obligation for steering nor for OTA updates of preferred networks list. This is also the case for barring issues, where additionally to the obligations considered derived from the regulation, BEREC opinion should be explicitly address that potential LBO consumers should not be impeded to contract LBO from any LBO provider, and if needed for selective barring the LBO provider must inform domestic provider about the initiation of LBO use and its finalization when known by the LBO provider.

Terminal equipment openness and ability for apps to be provided by LBO operators to manage APNs (facilities to configure the universal APN and restoring domestic operators APNs), as well as monitoring of the network being use (and, if possible even consumer selection of the network done by the app) are very relevant issues to make an easy use of LBO for customers. Additionally, terminals should not override consumer network selection or at least inform customers about it. BEREC has no powers on terminals standardization,

but will call the commission to closely follow terminals evolution and address any issue facilitating a good consumer experience, a key issue for LBO success.

Dual IMSI is ruled out as decoupling method for July 2014, although a close monitoring of its technical evolution will be performed by BEREC in order to reassess the need of its implementation in 2016 (but not before in any case). Single IMSI+ is also discarded for July 2014, mainly for its high complexity and costs (especially regarding steering issues), not commensurate to its potential benefits for competition.

BEREC recognises the need for a detailed definition of technical interfaces and processes for the implementation of the decoupling measures raised by some stakeholders, especially for Single IMSI. In this line, the proposal from the EWG is to launch as soon as possible a standardization activity with stakeholders (MNOs, but also MVNOs and other actors) coordinated by the EC with the participation of the BEREC to define the implementation of these interfaces. This would allow a smooth unique implementation along the EU, lowering costs for all stakeholders and benefitting also customers in the long term.

In the next section we explain with more detail our conclusions from the responses received.

### **Questions on LBO**

Most respondents agreed on the BEREC approach for LBO, consisting on setting a minimum set of obligations enabling potential LBO providers to offer local data access while the consumer maintains his/her voice and SMS services provided in a traditional way by the domestic provider.

However, some additional comments were raised by stakeholders that are addressed and analysed in the following paragraphs.

Most MNOs point out that basic LBO is more complex to implement than BEREC initial assessment shows. Although it is true that some additional developments must be done (for example, management of LBO use attempted by non-EU providers), the complexity for the basic LBO flavour recommended by BEREC is still low (or low/medium) and the decoupling method for local data access is simpler for domestic providers and alternative roaming providers than other alternative methods for local data use, as most of the stakeholders state in their responses.

Many stakeholders raise the issue of the relevance of openness in terminal equipment (smartphones and tablets) to allow for building good apps facilitating consumer experience and smooth operation of LBO. Also, one of the stakeholders raises the issue on potential anticompetitive practices by terminal and mobile operating systems suppliers potentially favouring some LBO actors against others. In any case, Android terminals allow for the implementation of convenient apps managing APNs and monitoring of the selected network in the visited country. Additionally, it is expected that market actors will encourage the development of good solutions for terminals. BEREC agrees with concerns raised on this issue and, although BEREC itself has no powers to address terminal equipment issues, BEREC opinion will address the relevance of close following and –if needed- imposition of obligations on terminal to allow for LBO use and avoid anti-competitive practices.

BEREC inquired about additional obligations for domestic providers to enhance consumer experience. Except for two responses, most stakeholders agreed on that there was no clear justification to increase the burden for operators to impose additional obligations to providers in order to facilitate LBO use.

One of the respondents (DTAG) proposed the imposition of obligations for ARPs using LBO to improve customer experience (implementation of landing page, phone customer support in customer language, etc.). BEREC considers that there is no need for additional obligations in this line for LBO providers, as it is of their interest to facilitate as much as possible LBO use. However, obligations on customer information on tariffs, point of contact in case of incidences and bill-shock measure implementation should be considered in the Implement Acts.

Other respondent (Telecom Italia) proposed the obligation for domestic providers to “suspend” steering for LBO customers. BEREC agrees that this would improve consumer experience as a quicker network attachment would be possible (when a request to connect to a different network than the preferred by the domestic operators arrives, steering systems refuse the connection a maximum of 4 times according to the GSMA rules). However, other potential issues with selection of the network (as terminal automatic selection) would not be solved with this solution. Additionally, its implementation would entail relevant additional costs still not assessed (functionality in the steering system for suspending roaming in real time, the need to implement a real time communication between the LBO and domestic provider informing about LBO use, as well as monitoring of consumer location to activate steering when leaving the country). More study is needed on the imposition of obligations related to steering suspension for LBO customers.

The use of OTA interactions to update steering list in the terminal could be used to avoid terminal equipment overriding manual selections (it may happen in some terminal types when updating consumer location or periodically at 4-5 hours periods). However, respondents share the initial view from BEREC and consider that it would not be an adequate method to be used in real time for LBO use as it is far from perfect, and not always feasible to be done in the moment, it would need real time interaction between the LBO provider and the domestic provider on LBO customers, and when leaving the visited countries, steering preferences should again be restored. If that restoration fails (as it may happen with OTA interactions), the domestic operator could not use their preferred network for traditional roaming in the country where the LBO provider operates in case of the customer does not use LBO service anymore. For all of these reasons, we maintain our conclusions on not imposing obligations on OTA use for updating steering list in the SIM card. In any case, it is important to assure that terminals do not override network manual selection done by the consumer. It is expected that the market will solve this issue and it is of the interest of terminal suppliers to allow a good consumer experience for consumers, but a monitoring by the EC on this specific issue is recommendable.

A minority of stakeholders (some MNOs) have concerns about the obligations on not barring LBO customers. Barring is claimed by these stakeholders as a legal and valid practice for wholesale negotiation, and according to their view, LBO use would not allow the application of this tool for LBO customers or even LBO providers. Being that true, it is also clear that not barring LBO customers is directly derived from the regulation. In order to allow for selective barring for non LBO customers, notification would be needed on real time on LBO provision (this is not so problematic and can be done by the LBO provider using an USSD message). However, it is not clear how selective barring would be implemented in real time by domestic providers, especially considering that potential LBO consumers should be able to select the LBO provider network in order to close the contract before starting to use LBO. Taking into consideration these issues, BEREC maintains the recommendation on imposing the obligation not to bar LBO customers, adding that also potential LBO customers should

not be impeded to contract LBO. Even recognising that selective barring is not easy to be done by the domestic provider, if any domestic provider is to effectively implement a selective barring fulfilling the obligation on not barring LBO customers nor impeding LBO contracting with any LBO provider, they should be entitled to request notifications in real time from the LBO provider (using USSD messages) when consumers start to use LBO and when quitting LBO and returning traditional roaming use (in the cases when it is known by the LBO provider).

All MNOs and other stakeholders agree on not imposing obligations to LBO providers (MNOs in the visited country) to supply functionalities for MVNOs to offer an LBO-based data services. On the contrary, MVNOs in general claim for the imposition of that obligation to visited operators, supporting their view on that MNOs providing LBO are alternative roaming providers subjected to the obligations of the regulation.

BEREC view on this issue is that decoupling based on LBO may be rather complex and that the regulation does not support compulsory decoupling for visited networks. In any case, commercial agreements can be freely reached between visited networks and MVNOs to support this LBO decoupling for MVNOs.

Some respondents asked for the imposition of obligations for LBO providers to restore APNs when the consumer quit LBO. BEREC will include in its opinion on Article 5 a recommendation to impose the obligation to LBO providers on including APN restoration functionality in the apps governing LBO contracting, as well as informing consumers how to restore APNs manually. This will help maintain a good traditional roaming experience when introducing LBO.

### **Questions on Dual IMSI**

Most respondents agreed on BEREC analysis on Dual IMSI approaches and about discarding them as a method for decoupling for July, 2014. Also, many of them agreed on the close monitoring of Dual/Multi IMSI solutions faced to assessment of the impact of the decoupling measures to be done in 2016.

Full MVNOs and a roaming enabler disagree on BEREC assessment and they state that Dual IMSI is the best solution to encourage competition, considering Single IMSI a pure reselling option with no potential to increase competition. This is not surprise, as full MVNO would be in a more independent position under a dual IMSI model to contract their own wholesale services independently of the domestic providers. BEREC however disagrees on the assessment of hard limitations for competition for the Single IMSI approach, as alternative roaming providers will be in a position of offering different tariffs focused on different market segments, they will be able to use their own on-line charging system, and the high margin considered in regulation for retail services allow for differentiation among providers. In any case, full MVNOs do not address the technical issues identified by BEREC as problems for dual IMSI implementation (and confirmed by other stakeholders, including equipment suppliers). As no rationales are included for discarding BEREC concerns for Dual IMSI complexity and lack of standardization, these issues remain and there is no reason to change BEREC assessment for Dual IMSI. This means that Dual IMSI is ruled out as a decoupling method to be supported by obligations for July, 2014.

Although many of the stakeholders agree on a careful monitoring on dual/multi IMSI technical evolution in order to consider it potentially as a decoupling method for 2016, part of the stakeholders (some MNOs potentially subjected to the associated obligations) and the

GSMA, claim that it would not be fair to impose a burden now for Single IMSI, and consider in 2016 an additional burden for Dual IMSI implementation. This additional investment that would be done is a factor to take into consideration for 2016. However, BEREC considers that as now dual/multi IMSI approaches should not be ruled out in advance for 2016, as it may well happen that Single IMSI combined with LBO will not be enough to lower prices and encourage competition and the technical evolution of dual/multi IMSI or reprogrammable IMSI cards approaches will perhaps make its implementation easier and cheaper than now.

So, the conclusion for Dual IMSI is to confirm its ruling out as a decoupling method supported by obligations for July 2014. Also, BEREC will monitor the technological evolution for this type of solutions with the aim of its future assessment if justified considering its future consolidation, impact on competition of the selected methods, as well as the additional burden that it would suppose for operators already implementing single IMSI and LBO obligations.

### **Questions on Single IMSI**

Most respondents agreed with BEREC on the selection of Single IMSI as the decoupling method BEREC most adequate to be supported by obligations in order to implement Article 5.

The more relevant comments received on Single IMSI are focused on its complexity, the need of detailed definition of interfaces and its limitations for encouraging competition among players.

Most MNOs point out that the Single IMSI decoupling method is more complex to implement than assessed by BEREC. BEREC considered that Single IMSI implementation complexity is low for post-paid billing and customer provision in the case of MNOs already supporting MVNOs, and medium in general for prepaid and bill-shock measures. Some of the MNOs present several issues supporting their position and addressing communication complexity between OCS, as well of differences between Single IMSI and MVNO support in the domestic market.

Some operators that will potentially act as domestic providers claim for reducing the set of obligations for single IMSI: in some cases the proposal is just to support OCS-interconnection for alternative operators, not considering any support for retail billing, in others, to limit decoupling for postpaid billing. BEREC do not agree on that view, as a complete support for decoupling under different situations is needed to encourage competition. If these limitations would be considered in the implementing acts, there would be a relevant risk on imposing a significant burden for decoupling with no effects at all on competition.

Proposals for limitations for decoupling are also raised on the response from Europeans for full roaming (a citizen association linked to the federalist party). They claim for not allowing LBO use for consumers opting for a bundle in the domestic provider or opting out for an Alternative roaming provider. BEREC does not agree with this view, as the regulation clearly states the right of use local data services for all consumers in any situation. Additionally, this would limit the attractiveness of LBO for potential consumers and business cases for potential providers.

The analysis of the issues raised by MNOs in the complexity of Single IMSI implementation give room to consider that implementation complexity (and accordingly, costs) is probably

higher than initially assessed by BEREC, but in any case, Single IMSI is still, as assessed in the BEREC document subjected to public consultation, the simpler and less costly method of decoupling and the one with more certainty to be available for July 2014.

A relevant part of the stakeholders requested BEREC to specify detailed interfaces and processes among domestic providers and alternative roaming providers for decoupling implementation. BEREC agrees that, once the decoupling methods are selected (and the proposal by BEREC for selection is done), this detailed specification is needed in order to assure a smooth common implementation of the decoupling measure along the EU, lower costs for all players, and at the end of the day, benefiting also consumers in the long term.

The proposal from BEREC in this line is to constitute as soon as possible a forum of stakeholders (mainly, but not only mobile services operators) monitored by the EC where BEREC can participate supporting the EC and taking inputs for BEREC guidelines on Article 5. It should be taken account that participation of BEREC in this taskforce should be focused on assuring that interfaces are rich enough to facilitate competition from alternative roaming providers.

As addressed in the analysis of responses for dual IMSI, some full MVNOs argue that Single IMSI is just a resale method not allowing real competition. As also explained in the previous section, BEREC considers that Single IMSI allow for flexibility on the offers by alternative roaming providers who can use their own tariffs schemes and on-line charging systems.

Some of the MNOs request that it should be clear that the domestic provider is not in the obligation to provide functionalities not available for own use (for example, a domestic operator not supporting prepay, should not be obliged to acquire a prepaid platform for ARP use). We agree and will apply rules defined for Article 3 on non-discrimination. Additionally, the decoupling service provided should be demonstrably such that an ARP would be practically and economically able to offer its end users a specification and standard of service at least as good as those offered to end users of the host MNO

Part of the responses raised the need on recovering a fair and reasonable charge for termination of incoming calls by the domestic provider. This issue is similar to the same problem detected by BEREC under Article 3 and BEREC guideline 20 for Article 3 apply also for decoupling under Article 5.

One of the stakeholders asks for SLAs in the application of Article 5. Guidelines defined in Article 3 will be adopted in BEREC guidelines for Article 5.

### **Questions on Single IMSI+**

Most respondents to the questions related to Single IMSI+ agreed on its higher complexity costs and on the lack of justification to impose Single IMSI+ obligations compared to the potential benefits to be obtained. Only some software vendors (the ones that would supply these solutions) consider that there is a case for single IMSI+ as a method for decoupling supported by obligations for domestic providers. The main issue identified as rather complex and costly is the support of ARP steering preferences in the domestic provider's steering system. Based on the research and meetings done by the EWG in July 2012, BEREC agrees on this issue (adaptation in steering systems are costly and would be an additional relevant burden for all domestic providers). It is interesting to note that two large groups, that were initially claiming for the implementation of a single IMSI+ solutions in the meetings

BEREC had with operators, have responded accepting BEREC analysis and agreeing on discarding Single IMSI+ for July 2014.

Additionally, all of the stakeholders agree with BEREC on that compulsory implementation of discount flows among visited networks, ARPs and domestic providers is not justified by its potential impact on competition. As pointed out by some stakeholders, in any case commercial agreements could be potentially done among operators to implement these discount flows, especially between ARPs and visited networks.

As a conclusion, BEREC has not found evidence in the responses to modify its initial assessment for Single IMSI+ and rule out the implementation of any single IMSI+ approach for July, 2014.

### **Other alternative methods of decoupling**

Some software vendors are proposing different methods of decoupling not initially considered by BEREC on the document subjected to public consultation. One of the methods proposed by Roamware is an alternative to Single IMSI+ facilitating interconnection of the domestic provider HLR and the ARP HLR. Being interesting and flexible for ARPs, the method is not mature enough and would need development and standardizations on HLR interconnection posing relevant risks for implementation for July, 2014.

Another interesting proposal from Starhome and Roamware is a decoupling method for LBO not using the universal APN, but maintaining APNs from the domestic provider. Compared to the universal APN approach, implementation of this proposal would imply additional developments in address resolution for APNs (no surprise that the proposal comes from a software vendor) and it is not clear that the 3GPP standards are fulfilled under this model.

In any case, BEREC will take account of the proposals and will consider when reviewing the situation of the market in 2016, if adaptations for the decoupling methods will be needed in the future to encourage competition.

### **Additional issues raised by stakeholders**

Some stakeholders (for example 3 Group) claim for an obligation for the domestic provider to maintain voicemail service under LBO. It will be considered in BEREC opinion, as consumers should maintain all their voice and SMS services when using LBO.

Part of the stakeholders request some clarification on portability issues when the consumer opts out for an ARP. ARPs must make clear in the contract that when consumers change domestic operator, the service from the ARP may not be available (BEREC analysis shows that maintaining ARP service when changing mobile provider would make the portability process much more complex and it may well happen that the ARP will not have a decoupling agreement with the new domestic provider).

Some of the stakeholders requested to impose the obligation for the LBO provider to inform about limitations of LBO (for example, the non-availability of VPNs supported in the domestic provider), as well as make clear that the LBO provider must not send TAP records on LBO use to the domestic provider. BEREC agrees and it will be considered in BEREC opinion on Article 5.

At request of some stakeholders, BEREC guidelines on fraud management and refusal of requests will be also applicable for decoupling under Article 5. Clarifications on legal interception and data retention issues for separate sale of roaming will also be included. Also



provisions on supplying support of the bill-shock measure for ARPs at fair and reasonable costs will be considered in BEREC opinion.

BEREC will also recommend, as suggested by one of the stakeholders (BT) that the implementation of the decoupling method by domestic providers should be available several months before July 2014 to allow for testing and preparation of commercial launching in the summer of 2014.

In general, many stakeholders pointed out the need to stress in BEREC opinion that interfaces and functionalities for implementation of decoupling solutions must follow standardized solutions based on 3GPP and OMA specifications, as well as GSMA recommendations. The EWG agrees on this point and it is raised in BEREC opinion. Although in general GSMA recommendations are a good reference and common market practices, we will not endorse automatically all GSMA rules in general, as there may be issues in normal practices among MNOs that perhaps will not fit well in the context of decoupling.

As addressed by two stakeholders, this is the case, for example, for BA.47 GSMA rule, stating the wholesale provider must refrain for publicizing its own services when acting as a visited network. This clearly does not fit well with publicity needed by LBO providers to attract customers, so BEREC opinion will include a consideration stating the right of the LBO provider to make publicity of their LBO based services.

On the issue of standards, several stakeholders (the GSMA among them) make a proposal on basing Single IMSI OCSs interconnection on standard real time protocols, that will be considered in the BEREC opinion, as these are the most common standardized methods to interconnect on line charging systems. BEREC agree with that and it is raised it in its opinion on Article 5.

At request of one respondent, BEREC will make clear that the existing authorization regime applied along the EU applies also for roaming, and an ARP offering services in a specific country should follow the notification and authorization rules defined in that country for mobile providers.

Some operators were claiming for the definition of legal terms and conditions for customers when opting out for an ARP. It will be addressed in BEREC guidelines for Article 5 (to be done in a later stage).

One of the software vendors makes a proposal to impose the obligation for all mobile providers to use dual IMSI SIM Cards when needed to issue a new card for customers, in order to allow a smooth implementation of dual IMSI methods in the future. Although it is clear that it would solve in the long term one of the issues for dual IMSI, the EWG does not agree on imposing this burden to operators just for an hypothetical case, as dual IMSI is not considered by now a mature enough method for decoupling, and it may well happen that a multi IMSI or even a reconfigurable IMSI approach will match better in the future. In any case, we will review the cost of such a measure in conversations to be maintained with SIM Cards providers.

A couple of stakeholders claim for exemption of the decoupling measure for small MNOs and MNOs in outermost regions, and other claims for that exemption for MVNOs. The EWG have not seen the case for that exemption in the regulation.

Finally, one of the stakeholders have pointed out that BEREC opinion should state clearly that consumers can only use one ARP at a time. This is derived from the selection of the decoupling method, but there are no problems in making it clear in BEREC opinion, stating that apart from the ARP, consumers can choose additionally any LBO service provider when visiting a country.

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