



F5 Networks response to:

**“BoR (13) 53: BEREC GUIDELINES on the separate sale of regulated retail
Roaming services and the implementation of separate sale of regulated retail
roaming services under article 4 & 5 of the roaming regulation – a consultation”**



F5 Networks reaction to BEREC Consultation on EU Roaming Regulation III

This document answers to questions as raised in the document “BoR (13) 53: **BEREC GUIDELINES on the separate sale of regulated retail Roaming services and the implementation of separate sale of regulated retail roaming services under article 4 & 5 of the roaming regulation – a consultation**” published on May 14th 2013.

GENERAL QUESTIONS

1. Time for implementation of the decoupling method (Guideline 1)

BEREC has discussed the timing of the provision of the decoupling solutions and whether there is any scope for implementing the decoupling solutions in a different timeframe than 1 July 2014. Pursuant to Article 4 of the Regulation the separate sale of roaming services (including access to local data roaming services) have to be provisioned from 1 July 2014. BEREC is aware of the complexity of implementing the decoupling solutions and understands that the burden may be high particularly when operators face no wholesale access requests. As the Regulation does not set out a time frame for implementation, BEREC considers a period of 4 months after receipt of an access request to be reasonable. This is in line with the time frame set out for processing wholesale access requests pursuant to Article 3(5) of the Regulation.

Q1: Do you consider that a period of 4 months is sufficient for MNOs as well as for ARPs to prepare the functionalities for decoupling in order to allow ARPs to provide retail roaming services on 1st of July 2014? If your answer is no, please specify what period should be sufficient and provide justification why the period should be longer.

F5 A1: F5 believes that the period of 4 months is sufficient as many preparations can be done before 1st of July and the physical implementation can be done within the 4 months, for some operators even within 2 months as was learned from Roaming for LTE implementations we accomplished in the past.

2. Standardization and documentation (Guideline 3)

BEREC considers that interfaces necessary for decoupling should be based on common standards developed and used by generally recognized standardization organizations as well as on the output of the stakeholder forum, where the standardization organizations also take part. Any relevant reference documents developed by market participants may be applied as long as they are free of charge for any potential access seeker and there are no limitations in their use. Such documents shall be in line with the provisions set out in the Regulation and the Implementing Act.



Q2: Is there any additional provision to be considered regarding the use of standards, reference documents and access to documentation by access seekers?

F5 A2: F5 suggests checking if all GSMA related information on Roaming (like IR.88, IR34, etc.) can be made accessible to non-GSMA members. As typically mobile operators, IPX carriers and the vendors supplying them are GSMA members (not in all cases) but for ARPs GSMA membership doesn't necessarily apply

3. Authorization regime (Guideline 4)

BEREC believes the authorization regime for ARPs to be the same as the one for any other ECS provider and no "EU license is required. ARPs should follow any notification procedures defined by the Member States where the service is contracted.

Q3: Do you have any concerns the authorization regime for the ARP?

F5 A3: F5 has no concerns on using the same ECS=Electronic Communication Service licensing considerations

4. Fraud management and M2M services (Guidelines 7,8)

With regard to fraud management, BEREC is of the opinion that the DP and the ARP are responsible for taking any necessary measure to avoid fraud and the misuse of roaming services. Those measures should comply with legal obligations or should be in accordance with normal commercial practice.

On M2M services, BEREC considers that the regulation on separate sale of services applies also for M2M services based on a public communication network as defined in Article 2(d) of the Framework Directive (Directive EU 2002/21).

Q4: Is there any additional issue that should be considered in the BEREC guidelines for interception and data retention, fraud management and M2M services?

F5 A4: F5 believes it could be recommended by BEREC that the DP offers a "fraud and misuse of roaming services" notification upon request of the ARP to avoid fraudulent use of ARP services that cannot be detected by the ARP, with ultimate result they have to stop their ARP business. This notification service can be offered for an additional cost according normal commercial practice (if needed a maximum incremental cost per usage unit can be defined)



F5 assumes lawful intercept and data retention guidelines remain applicable for the offered services according the country where the services are offered (or are involved with and therefor have obligations towards their local regulations).

QUESTIONS ON LOCAL DATA ROAMING SERVICES

5. Customers' right to return to the default roaming mode (Guideline 9)

Customers contracting local data roaming services in the visited network are to be automatically provided with their default roaming services when they terminate the use of local data roaming upon return to the home country or travelling to another country. This means that ARPs should not hinder roaming customers from returning to the roaming default mode so that customers can switch to traditional roaming any time. BEREC advises that ARPs provide their customers with all necessary information such as prices, contact details in case of problems, standard terms and conditions, as well as services that may not be available when using local data roaming.

Q5: Do you consider that the fallback from ARP providing local data roaming services to the previous roaming provider needs more clarification? Is there any additional issue that BEREC should take into account in the guidelines regarding the switching process from local data roaming services to traditional roaming and the rights of the customers when using local data roaming services?

F5 A5: F5 believes that it would be good to consider the obligation of the ARP to inform the DP that the ARP will no longer provide local data roaming services. This uniquely identifies and records the moment that customer control shifts back from ARP to DP. This notification allows the DP to apply its procedures to get the customer back to default settings, avoiding potential issues with changing APNs etc.

This notification needs to be stored by both parties to proof when responsibilities changed.

6. Provision of local data roaming services by third operators (Guideline 10)

The Regulation and the Implementing Act do not include an obligation for visited networks to supply the necessary wholesale services to ARPs to provide local data roaming services. On the other hand there is no legal obstacle which would prohibit visited networks from settling wholesale agreements with MVNO and resellers. BEREC expects stakeholders do so.

Q6: Do you consider that there is any provision in the regulation supporting obligations for MNOs to provide wholesale services to other stakeholders for allowing them to provide local data roaming services? If so, please provide your justification based on the regulation.



F5 A6: F5 believes that it would be good to allow the mobile customer to select his ARP and have the option to select LBO via that ARP (assuming that ARP wants to offer that option). The LBO via the ARP can be done by default like if the mobile customer indicates to use the service of the ARP than depending on the situation the LBO will be per default to the ARP and if no LBO available it will be routed via the DP and only the Billing will be managed by the ARP. In this way the ARP selected by the customer will be leading in whether or not LBO is used and not per default the visited network that will always manage the LBO service.

Next to the upfront registration to use the LBO service (and ARP) it should also be possible to offer the roaming mobile subscriber a dynamic selection. When he is roaming and didn't indicate upfront what ARP and/or LBO to offer he should be offered a choice to select LBO and/or ARP or continues to use the roaming service of the home network. Also agreements can be made on how long that dynamic choice is valid, like if the mobile customer visits another EU country he could again be offered that dynamic choice or per default will get that choice again after 24 hours.

7. Local data roaming services outside the EEA and use of universal Access Point Name by non-EEA roamers (Guidelines 11, 12)

The Regulation does not cover the provision of local data roaming services in countries outside the EEA. However, BEREC considers that domestic providers can freely settle commercial agreements to allow their customers to use local data roaming services outside the EEA and also considers that there is nothing in the Regulation preventing voluntary extension outside the EEA.

The Regulation also does not include any provision prohibiting non-EEA customers from using the universal APN in EEA countries.

Q7: Do you consider that the guidelines should address any additional issues about using local data roaming services outside the EEA or by non EEA customers? (Please, consider in your response that the roaming regulation does not apply to non EEA operators)

F5 A7: F5 believes that the EU should stimulate EU operators to avoid any complications when their customers ask for local data roaming services outside of the EU. The DP is not allowed to charge costs to the mobile customer for provisioning his preferences different than selecting local data roaming services inside the EU.

8. Universal APN in HLR (Guideline 14)

Local data roaming requires the use of the universal APN. All operators that have a HLR must add the universal APN into their HLR in order to allow customers to use it by default. The universal APN cannot



be used by the donor roaming provider to supply traditional roaming data services while the customer is abroad. The Universal APN is EUInternet.

Q8: Do you consider that there is a technical constraint pointing a different model for allowing by default the use of the Universal APN? If so, please explain.

F5 A8: F5 believes that all that applies to HLRs also should apply to HSS (in LTE typically an HSS is used where in 2G and 3G networks an HLR is used).

If agreed upon bilaterally it should also be allowed to use other APNs to provide the same kind of service, allowing operators that want to use one general APN for any service or want to use a specific APN for other business reasons (like for example APN=WorldInternet that would cover EU and non-EU local roaming services)

9. Barring and blocking ARPs providing local data roaming services (Guideline 15)

The Regulation provides that customers are free to sign up to local data roaming services with any ARP of their choice. Therefore the host network is not allowed to bar, block or disrupt ARPs that provide such services to roaming customers. This also applies to any potential customer that may want to use local data roaming services.

However there may be exceptional cases when barring can be justified, such as when the ARP does not meet the necessary technical conditions or fails to pay for contracted services or other objectively justified reasons.

Q9: Do you consider that the BEREC guidelines should consider any additional exception for barring and/or blocking? If so, please explain and justify the compliance of the proposal with the regulation.

F5 A9: F5 believes that the “other objectively justified reasons” could cover indeed other reasons than technical conditions or failing to pay. For example security and protecting privacy sensitive information might fall under that category

10. Traffic steering (Guideline 16)

Retail customers should not face difficulties when selecting a visited network for local data roaming services. As a result traffic steering and other mechanism applied in the home network or in the terminal shall be configured to allow selection of a visited network. In order to make effective use of local data roaming services, customers should not be disconnected from their chosen network due to traffic steering or any other mechanism. Customers should also be informed by the domestic provider about how to avoid traffic steering upon request.



Q10: Should BEREC consider any other issue about traffic steering? Please describe and justify the need according to the regulation.

F5 A10: F5 believes that there will be cases where it is in the interest of the mobile customer that intelligent roaming management will be enforced to avoid the customer having no service or undesirable degraded service. If for instance the mobile customer uses an LTE enable device it will prefer attaching to an LTE network, if however there is no commercial roaming in place there will be a waste of resources and costs if the DP could avoid that with intelligent roaming management (like with F5's solution). Also when a customer indicates that local roaming services are not working but he cannot avoid his device to keep trying the LBO ARP there should be an option that the DP can apply intelligent roaming management to allow the mobile customer to have data roaming services again.

11. Manual selection of networks and automatic reconfiguration of the terminal (Guidelines 17, 18)

Restricted usage of terminal equipment could hamper the take-up of local data roaming services. For that reason domestic providers or ARP shall not apply any restrictions or limitations in the terminal equipment and SIM.

Donor roaming providers can reconfigure the customer's handset once it is connected to the network of the donor roaming provider in the home country.

Q11: Is there any additional issue or obligation to be considered in the guidelines about manual selection of networks in the terminal and about rights for donor roaming providers to perform automatic restoration?

F5 A11: F5 believes it should also be allowed to remotely reconfigure the customer's handset if the DP has the capabilities to do so and is requested by the mobile customer or the ARP to reconfigure the handset. BTW it might be recommendable to use the word device as handset would potentially not cover all devices that could be used for roaming.

12. Restoration of APNs by local data access providers (Guideline 21)

BEREC believes that customers should have easy access to local data roaming services, i.e. to contract and select a visited network as well as to easily return to their roaming default mode. This can only be achieved when APN restoration facilities are included in the applications that are provided to those customers using local data roaming services, and customers are provided with the necessary information for manual restoration. It is clear that automatic restoration procedures shall not conflict with the manual configuration chosen by the customer.



Q12: Do you consider that ARPs providing local data roaming services are to take any other responsibilities regarding the restoration of APNs? If so, please provide justification based on the regulation.

F5 A12: F5 believes that the ARP should have the obligation to inform the DP that the customer stopped using the ARP local data roaming service. This will allow the DP to restore the mobile customer's device to the default settings when the ARP failed to do so.

13. Local data access notification to donor roaming providers (Guideline 23)

When customers make use of or terminate local data roaming services in a visited network, the donor roaming provider can request to receive a real-time notification. This notification can be used to perform selective barring of the local data access provider for users of traditional roaming not willing to use local data roaming services to suspend steering or to update the SIM for users who want to use local data roaming services.

Q13: Do you consider that it is necessary to use a real time interface between ARPs providing local data roaming services and donor roaming providers for switching off steering and selected barring?

F5 A13: F5 believes that the DP network should receive real-time notifications to allow the DP to (continue) to offer services it has agreed upon with its customer. It could also be considered that upon request the DP network will receive real-time information allowing it to keep track of the usage.

QUESTIONS ON SINGLE IMSI

14. Termination of Single-IMSI roaming (Guideline 25)

BEREC discussed various options for such cases when customers terminate their contract with an ARP. Similar to the terms and conditions set out in most of the retail contracts in other markets, customers shall automatically fall back either to the tariffs agreed previously with their domestic provider before switching to the ARP or to the Eurotariff. BEREC prefers not to make a choice for the customer with regard to the specific fallback-tariff, as either the Eurotariff or an alternative roaming tariff of the domestic provider could be the best possible option. It is clear that the ARP has to inform the domestic provider about the termination of the contract.

Q14: Do you agree with the fallback model stated in the guideline? Are there any additional issues BEREC should take into account with regard to the process described in the Guideline?



F5 A14: F5 believes that the described fallback model should apply as a minimum. It might be agreed upon upfront between DP and mobile subscriber what other rates will be applicable once fallback applies. So default behavior could be as described above but if other agreement has been reached this should be allowed as well

15. Reasonable requests (Guideline 27)

According to Article 5(1) of the Regulation domestic providers have to meet all reasonable requests with regard to access to decoupling functionalities where the purpose is to offer separate regulated retail roaming services. The same principle is set out in Article 3 of the Regulation, where MNOs have to meet reasonable access requests with regard to wholesale roaming access. In its Guidelines on Article 3 BEREC has set out a general rule on how reasonable requests are to be interpreted. It states that any request which does not require deployment of an undue level of resources would be considered as reasonable. In order to be consistent, it makes sense for this principle to be applicable also when processing access requests in connection with decoupling.

It follows that requests for decoupling which are not intended to providing regulated roaming services are not covered by Article 4 and 5 of the Regulation, the Implementing Act or by these Guidelines.

Q15: Is there any reason justifying a different approach for the separate sale of roaming services than for wholesale roaming access pursuant to Article 3? If so, please provide a justification.

F5 A15: F5 agrees with the above however it might occur that the DP gets too many requests at the same moment that it cannot handle all requests in the preferred time. To cover for this it should be indicated upfront what the maximum time will be for implementing a request and this maximum time can never be twice the agreed implementation time of maximum 4 months (to cover for an unexpected peak of parallel requests during one cycle of 4 months)

16. Refusal of requests of decoupling (Guideline 28)

As set out in its Guidelines on Article 3, BEREC is concerned about the potential for reasonable requests to be refused on spurious grounds such as delaying market entry. Similar to refusing reasonable wholesale access requests, refusal of requests for decoupling could obstruct competition in the roaming market and counter the idea of establishing more competition. For the same reasons set out in its Article 3 Guidelines, this guideline is attempting to minimize the scope for the use of tactics to delay or impede market entry. BEREC would welcome advice on how this risk could be reduced further.



Q16: Do you agree with BEREC's general approach to refusal of requests? Do you have any specific suggestions on how the guidance in this area could be strengthened so as to deter refusals on spurious grounds while not constraining the right of ARPs on the basis of careful objective justification?

F5 A16: F5 agrees with BEREC's approach. It could be considered to use examples of successful implementation in other EU countries to enforce that a request to be interconnected cannot be refused.

17. Prioritization of requests (Guideline 29)

BEREC considers that prioritization of requests may be necessary. Hence requests should generally be processed applying the non-discriminatory principle. BEREC would like to point out that the commercial interests of the domestic provider do not provide any grounds for prioritization.

Q17: Do you agree with BEREC's approach to prioritization of requests?

F5 A17: F5 has no opinion on this matter as it is not clear at this stage what could be valid reasons for prioritization.

18. Timing issues for requests after 1 July 2014 (Guideline 30)

Requests for decoupling and local data services can be received after 1 July 2014, because there may be several reasons for delaying the offer of separate roaming services. BEREC considers that access to decoupling and local data roaming should be processed within a reasonable period as set out in Article 3 of the Regulation. This principle is also to be applied to requests that are filed after 1 July 2014. It follows that the ARP is to be provided with a draft contract in a maximum period of one month after filing the request and access is to be granted within a reasonable period not exceeding three months from the conclusion of the contract.

Q18: Do you consider that the time limits are reasonable? If not, please explain and justify why?

F5 A18: F5 believes the timelines are reasonable when considering the maximum times mentioned.

19. Bundling of services (Guideline 31)

According to Article 4(1) of the Regulation the ARP must be able to allow its retail customers to subscribe to regulated voice, SMS and data roaming services as a bundle. As a result, the domestic provider is required to provide the corresponding regulated wholesale roaming services as a bundle to ARPs.



Q19: Do you agree with BEREC's approach on wholesale bundled offers?

F5 A19: F5 believes if the ARP is requesting for such a bundle it should be granted, if however the ARP is just requesting a local data roaming service this service can in that case not be charged higher than when part of a bundled service.

20. MVNOs and Resellers being domestic providers (Guideline 32)

BEREC understands that stakeholders discussed the question whether the obligation for decoupling also includes MVNOs and resellers. Article 4(1) of the Regulation sets out that domestic providers shall enable access to decoupling. In this regard, BEREC considers that domestic providers can be MNOs as well as MVNOs, resellers or any other undertaking offering retail mobile services in the customer's home country.

For decoupling to work it is clear that the necessary decoupling functionalities are to be provided. In such cases where the domestic provider is technically not able to meet the decoupling request, the necessary functionalities are to be supplied by the hosting network, which is capable of doing so. Naturally this is the provider located further upstream in the value chain.

Q20: Do you agree with the obligation for domestic providers and host operators stated in the guidelines? If not, please explain.

F5 A20: F5 believes that if the MVNO fails to offer the services as per regulation it allows to mobile customer without any costs to change his service the hosting network provider. In that situation the normal subscriptions and durations for contractual agreement apply, which include the obligation to provide the regulated services as well.

21. Required information (Guidelines 33, 34, 35)

Domestic providers are entitled to request necessary information for decoupling requests by ARPs. This is a similar principle that BEREC considers relevant for wholesale roaming access requests and this is based on the notion of the information required in normal commercial agreements. The domestic provider can ask for relevant information prior to signing a decoupling agreement with ARPs as well as on an ongoing basis. Reasonably, commercially sensitive information should not fall under the information required from ARPs. In turn the domestic provider has to make sure that ARPs receive necessary information on time to allow them to make adequate access requests.



Information that is required on an ongoing basis can be depicted in a reasonable procedure to be developed by the domestic provider. BEREC advises that the degree of foresight or precision should not to be excessive so as to delay market entry by ARPs.

Q21: Do you agree with the suggested level of information required from access seekers? Is there any reason why this level of information may either not be necessary, or may be inadequate?

F5 A21: F5 agrees with BEREC's views on this matter. It might be considered that the DP is obliged to indicate with initial contact if the maximum implementation time will be met, allowing for exceptional cases where the DP receives too many parallel requests and the ARP will only be informed at a later stage that the maximum implementation time cannot be met.

22. Customer profile (Guideline 36)

According to the Regulation retail customers should have access to regulated voice, SMS and data roaming services. As this entails ARPs offering pre-pay or post-pay roaming services to their customers, this means that no restriction on the billing profile of the customer that uses an ARP is allowed.

Q22: Do you agree with BEREC's approach regarding the customer profile? If not, please provide a justification based on the regulation. If you have any proposal or comments on issues to consider in the guidelines about interfaces between ARPs and domestic providers for prepaid or postpaid services, please include this in your response.

F5 A22: F5 believes that at least a Diameter Gy interface (as specified by 3GPP in 3GPP TS 32.299, TS 32.251 & RFC 4006) should be offered by both the ARP and the DP to also allow LTE networks to offer the regulated services. If either one of them doesn't support the Gy interface natively yet it has the obligation to install a gateway in order to do so before 1st July 2014.

23. Functionalities to be provided free of charge by domestic providers (Guideline 37)

BEREC understands that domestic providers must supply a minimum set of functionalities for decoupling for free in order to allow ARPs to provide separate retail roaming services to their customers. On the other hand all services that domestic providers do not provide for their own customers do not have to be offered to ARPs. For instance does the domestic provider not have to support pre-pay functionalities if it does not have a pre-pay platform.

Q23: Should BEREC consider additional functionalities to be provided for free? If yes, please explain?



F5 A23: F5 believes that if the domestic provider provides services for free that are subject to the regulated roaming services it should also offer these services for free to the ARP. If however these services are for free as they are bundled with other services or are part of a special welcome or introduction service the domestic provider is not obliged to offer these services for free to the ARP.

24. Termination of incoming and outgoing SMS (Guideline 39)

The wholesale roaming charge does not include costs for incoming voice calls or termination of outgoing roaming SMS and therefore these services cannot be considered to be part of a wholesale service. As these services are nevertheless to be offered to ARPs, BEREC considers that fair and reasonable prices may be charged by domestic providers for them.

BEREC follows the same approach here as for requests for wholesale roaming access pursuant to Article 3.

Q24: Do you agree with BEREC's approach for termination of incoming calls and outgoing SMS? (If not, please explain and justify)

F5 A24: F5 believes that BEREC should also consider enforcing a maximum charge for these services to avoid that the ARP will be hindered to offer a competitive package.

25. Extra-EEA services to customers roaming in the EEA and special rate services (Guideline 41, 42)

BEREC considers that access to decoupled services must include extra-EEA roaming for mobile originated calls from EEA to outside EEA and mobile terminated calls from outside EEA to the EEA when requested by the ARP. The domestic provider shall apply fair and reasonable charges for these services. BEREC believes that customers would find it inconvenient to have separate suppliers for intra-EEA and extra-EEA roaming while roaming in the EEA.

As for special rate services, BEREC notes that only the wholesale part is subject to the wholesale caps set out in the Regulation. Where ARPs request access to such services, domestic providers are to apply the prices that shall not exceed the wholesale caps.

Q25: Do you agree with BEREC's approach on roaming outside the EEA and on special rate services? (If not, please explain and justify)

F5 A25: F5 agrees with BEREC's approach on this point



26. Fair and reasonable prices and non discrimination (Guidelines 44, 45)

BEREC sets out general principles which it considers to be sufficient to allow parties negotiating in good faith to reach reasonable agreements, as laying down detailed guidance covering the meaning of fair and reasonable charges risks being over-prescriptive. This follows the principle laid down in BEREC's Guidelines on Article 3.

The non discrimination principle applies to decoupled services as well. It follows that all terms and conditions must be equivalent to those that the domestic provider grants itself. In this regard Guideline 47 makes reference to certain services.

Q27. Should BEREC consider additional rules beyond normal commercial practices for the separate sale of roaming services or do you consider any reason to apply different rules for decoupling functionalities than for wholesale roaming access pursuant to Article 3 of the Regulation?

F5 A27: F5 sees no need BEREC to cover additional rules at this point in time.

27. Loss of service when switching domestic provider (Guideline 46)

BEREC cannot expect that customers maintain all contracted services when they switch the domestic provider. In such cases customers are to be informed by the ARP that they may lose their alternative roaming service.

Q26. Is there any additional issue to be considered about switching of domestic provider by customers?

F5 A26: F5 believes that next to changing domestic provider also changing of prices paid by the ARP to DP allows the ARP to suspend alternative roaming services

28. Further questions

Q28. Do you consider that the Guidelines should cover additional issues or should any of the draft guidelines be further developed?

F5 A28: F5 believes the Guidelines should not cover additional issues beyond what has been addressed now.



Q29. Do you have any other comments on the draft Guidelines?

F5 A29: F5 believes that the Guidelines cover the relevant issues, one recommendation is also to consider relatively new technologies like LTE and IMS based services when agreeing on the Guidelines. F5 is also considering the possibility to allow ARP data roaming services based on types of services, like if DP and ARP support this only specific data roaming services could be offered by a specific ARP and the remaining services by either the DP or alternative ARP. For example while roaming the mobile subscriber might want to only use the ARP service for web browsing and video download but for email services he might prefer continuing the DP roaming service.

F5 is also considering the possibility that a mobile subscriber agrees a certain QoS with the ARP, if that is not met (with mutually agreed conditions) the mobile subscriber automatically fallback to its DP roaming service. This allows the mobile subscriber to get the best price and quality available for upfront agreed criteria