BEREC Analysis of the European Commission's Proposal for a Regulation on Roaming COM(2011)402 of 6 July 2011

August 2011

1. SUMMARY

1. This document sets out the analysis of BEREC on the proposals published by the Commission for extension of the Regulation on International Roaming[1]. It follows up BEREC's Report of December 2010[2] and its response[3] to the subsequent Commission consultation.

2. BEREC is committed to providing any support that may be necessary and appropriate to the European Institutions during the forthcoming period of negotiations in Council and Parliament. It is publishing this paper as a contribution to the clarification of the issues that will be discussed during the negotiations and the accompanying public discussions.

   Points of analysis shared with the Commission

3. BEREC shares a considerable amount of the Commission's analysis, in particular:

   a. That the market failures that lead to high roaming prices will continue. Over the next few years, market forces will not be sufficient to constrain retail prices and other terms of supply in a way consistent with consumer interests and reasonable expectations. Therefore, regulation of roaming services continues to be necessary

   b. That wholesale price regulation continues to be appropriate. There is no strong reason to believe that wholesale competition will be more intensive in the future than it has been in the past. On the other hand, costs of provision should reduce rather steeply, for example as a result of anticipated reductions in regulated mobile termination rates

[1] Regulation of the European Parliament and of the Council on roaming on public mobile communications networks within the Union, COM(2011) 402 final, http://ec.europa.eu/information_society/activities/roaming/docs/roaming_recast11.pdf

[2] December 2010 BEREC Report on International Mobile Roaming Regulation http://www.erg.eu.int/doc/berec/bor_10_58.pdf

[3] February 2011 BEREC Response to the European Commission 'Public Consultation on a Review of the Functioning of Regulation (EC) No 544/2009 (the "Roaming Regulation")', February 2011, http://erg.eu.int/doc/berec/bor_11_09.pdf

c. That retail price regulation continues to be necessary; in particular that it is appropriate to introduce new safeguard price caps for retail data roaming to eliminate the current extremely high unit prices charged to some customers – even in light of new retail data offers, which see some significant price decreases but not yet consistently across Europe

d. That the disparity between costs of provision and roaming prices (and between domestic prices and roaming prices) is sufficient to justify ongoing reductions in regulated price caps, in line with the Commission's target for roaming prices to approach domestic prices by 2015

e. That, to strengthen competition for the longer term, it would be desirable to introduce effective "structural" measures to facilitate the entry of new players in the retail markets; while recognising that such measures cannot realistically be expected to have material effect in the short term

f. That it sees potential in the general right of wholesale access proposed by the Commission, which BEREC believes should increase consumer choice by facilitating the provision of retail roaming services by new players and by permitting established MVNOs and others to offer more attractive tariffs.

g. That once competition has taken root in roaming markets, bringing the benefits of greater choice and reduced prices to all market segments, regulatory price caps can be removed

h. That the measures already introduced to increase transparency and consumer protection, in particular by reducing bill-shock, have been broadly successful and should be retained

Extent of beneficial effects of competition

4. The final three points in the above list lead naturally to the matters where BEREC has a different analysis from the Commission. BEREC considers that, over the last 5 years, roaming regulation has brought considerable benefits to consumers. These should not be jeopardised by removing obligations before it is clear that market forces are enough to protect consumer interests. The Commission has placed considerable belief in the efficacy of structural measures to inject further competition, thereby generating pressure to reduce prices. BEREC considers that the Commission is too optimistic when it states that a 'significant impact on competition in the roaming market' will be achieved by the introduction of the structural measures and the price caps that they propose[4].

[4] Commission Impact Assessment, p.46
http://ec.europa.eu/information_society/activities/roaming/docs/impac_ass_11.pdf

5. As a consequence, BEREC considers that it is not appropriate to lift retail caps without a mechanism which provides confidence that competition can sufficiently be relied upon to regulate prices and otherwise protect consumer interests, or to set wholesale price caps for a 10-year period without an interim review of the evolution in costs in light of market developments, more up to date and comprehensive information on costs and the latest cost methodologies. The review proposed by the Commission for 2015 is a suitable vehicle, although not expressed in the draft Regulation as being sufficiently broad in scope (see below). BEREC is comfortable with an automatic trigger for early removal of caps where sufficient progress in price reduction has been made to give confidence in the future operation of market forces. However, BEREC believes that the triggers proposed by the Commission for removal of the retail caps before 2016 should be redefined in order to provide reasonable confidence that market forces are working well in all Member States before safeguard caps are removed.

Relationship between price caps and costs

6. BEREC believes that, in the absence of exceptional justification, regulatory price caps should be set so as to cover with reasonable confidence all efficiently and reasonably incurred costs (together with an allowance for reasonable profit). For the most part, BEREC considers that the caps proposed by the Commission (which appear to have taken full account of BEREC's own cost analysis) easily pass this test. It notes however that this is not beyond doubt for some of the 2014 wholesale caps. Some of these are below BEREC's "upper bound" estimate of costs, although BEREC recognises the significant degree of caution associated with the latter figures.

Relationship between wholesale and retail price caps

7. In its December Report, having examined thoroughly a range of alternatives, BEREC expressed the view that the most effective way of reducing prices over the next few years would be to continue with price caps on a downward glidepath to the level defined by policymakers. BEREC recognises that the Commission's aim is not only to reduce prices short-term but also to promote market entry to stimulate competition and remove the need for long-term price regulation. An attractive retail margin at the outset would be necessary to realise that aim; if competition is stimulated, it could then be expected to erode the margin progressively. Nevertheless, BEREC considers that the extent of gaps proposed by the Commission between some of the corresponding wholesale and retail caps seems hard to justify. Smaller gaps

(in general, with retail no more than 3x wholesale) should still leave sufficient room for new entry and for retail competition to develop. If competition nevertheless does not develop sufficiently in practice and caps have to be retained, even the reduced gaps suggested by BEREC as sufficient to permit market entry would be unjustifiably wide. It seems this is also the Commission's view, on the basis of option 2b in the Commission's Impact Assessment[5].

Structural measures - General right of wholesale access

8. On the wholesale access provisions (Article 3), BEREC understands that this covers both providers seeking to buy wholesale inbound roaming directly from a foreign network, and those seeking to buy wholesale resale roaming from their host MNO. BEREC considers it sensible that both scenarios should indeed be covered. Indeed, BEREC believes that the drafting is (and should be) sufficiently broad to allow the introduction of other well-designed forms of access ("structural solutions") yet to be developed.

Structural measures - Decoupling

9. BEREC sees the attraction of the proposal to promote separation of the sale of roaming services from domestic services ("decoupling") proposed by the Commission. It is not possible at this stage to quantify the extent of the benefits which can realistically be expected from such a measure. Nevertheless, on the basis of BEREC's competition analysis, there is a risk that such a measure will deliver little incremental competition benefit, over and above the competition benefits likely to result from the combination of wholesale price reductions and wholesale access. BEREC therefore recommends considerable caution over the introduction of any remedy which would have significant implementation costs.

10. The reservations apply to a greater extent to the variant which has been most discussed so far and which the Commission appeared to have in mind in drafting its Impact Assessment, the "dual IMSI" implementation solution. This is a complex remedy. BEREC understands that the estimate of the one-off cost of implementation (€300m) referred to in the Assessment[6] cannot be regarded as a firm estimate. Although apparently based on information supplied by market players, it appears to be only an initial assessment; BEREC understands that a more definitive evaluation is underway. In any case, the estimate does not include any allowance either for swapping out of SIM cards or for ongoing operational costs, either of which could be

[5] Commission Impact Assessment, p.28. This option deals with extension of the current approach with adjusted price ceilings together with a cap on data roaming

[6] Commission Impact Assessment, footnote 64 at p.51

significant. The necessary systems and infrastructure development work, in particular for the network operators, will thus demand significant resources which would otherwise be available for other projects possibly of more benefit to consumers.

A generic approach to decoupling

11. BEREC notes that the wording of the proposed Regulation itself seems to be broader, possibly allowing for other types of mechanism to deliver the separate sale of roaming services instead of ‘dual-IMSI’, and not only while still in the home country. BEREC supports a generic approach, because new industry ideas for a decoupling solution are still emerging, to allow for in-depth consideration of the commercial and technical implications, and to avoid requiring implementation of a solution that could become obsolete in a few years given technology and market developments. Importantly, this approach would also avoid the risk of picking a winner without the necessary critical mass of industry commitment to actually offer competitive tariffs. BEREC would be very happy, in close co-operation with the Commission, to discuss options with market players for structural retail remedies, using the generic mechanism provided by Articles 3-5 of the Regulation.

12. BEREC considers that, with a few minor changes to the drafting, the introduction of a decoupling solution by 2014 can be achieved, whichever decoupling solution in practice finds most favour with the market players. BEREC notes that the current drafting provides for the right of a consumer to take roaming service from a separate provider without the necessity to change his number, and requires providers to have technical and commercial arrangements in place to permit such consumer switches. These are important principles to be retained in any redraft. BEREC looks forward to working with the market players and the Commission in drawing up guidelines for the provision of such a solution. The evaluation criteria set out in BEREC’s December Report would be relevant for this purpose[7], alongside the Commission’s objectives in its Impact Assessment and draft Regulation.

Geographical extension of bill shock provisions for data roaming

13. Finally, BEREC believes that there would be considerable merit in extending the successful provisions governing “bill-shock” to apply to data roaming outside the EU. Some operators have already implemented such measures voluntarily. BEREC therefore considers that this would be cheap and quick to implement and could be justified as a “single market” measure given that retail

[7] Effectiveness (price, competition and transparency), regulatory burden, impact on national markets, consumer friendliness, feasibility and avoidance of regular reviews.

data roaming services are provided by companies established in Europe to citizens based in Europe.

Regulatory strategy for reduction of prices

14. BEREC's analysis leads to the following high-level strategy for reducing price levels for roaming services within Europe to more reasonable levels:

- For the next few years, only price controls can be expected to be effective in putting further material downward pressure on prices. The Commission's objective of allowing room for competition to develop could be amply met by a consistent and lower retail margin. While this is not an exact science, BEREC's professional view is that a margin of 200% (i.e. where the retail cap is 3x the wholesale cap) would be comfortably sufficient to allow market entry and the development of competition.

- Price controls should be lifted when – and only when – there can be confidence that market forces are sufficient to limit prices to the extent considered appropriate by the legislators, across the EU and for mass market travellers as well as frequent roamers. Otherwise, protection of consumers from unreasonable prices cannot be guaranteed. The proposed "sunset clause" for automatic removal of caps in 2016 is inconsistent with this principle. The triggers for early removal price caps also appear currently too high to meet this aim. Moreover, an analysis based on the results of only one quarter of data would not provide sufficient confidence, given the frequency of temporary (usually seasonal) offers for these services. A longer evaluation period would be appropriate.

- BEREC is positive about the concept of using structural measures to stimulate more competition in roaming services, in anticipation of a further reduction in prices. Articles 3-5 of the proposed Regulation seem to provide suitably generic enabling mechanisms to allow effective and proportionate structural remedies to be introduced in a timely manner. However, BEREC has reservations concerning the dual-IMSI variant of "decoupling", as envisaged by the Impact Assessment. It doubts that this approach will generate sufficient added value to justify the significant implementation cost.

- A thorough review of strategy will be necessary after a reasonable period to re-assess:

    a. The extent to which market forces (whether stimulated by structural measures or not) are having an impact on prices

b. The extent to which expectations about costs have been borne out

c. The need for continuation of the price caps and, if so, the levels of those caps and the relationship between wholesale and retail caps, including the size of the retail margin

15. Despite some reservations about the timing, BEREC considers that the 2015 review proposed by the Commission is a suitable vehicle for such a strategy review. BEREC considers it is very important that Regulation should explicitly provide for the scope of the Review to include the points above. BEREC notes in particular that consideration of costs leads to the conclusion that very much lower prices in 2015 (than the maximum levels which are allowable in compliance with the caps proposed by the Commission) would be likely to be observed if roaming were a competitive market.

16. BEREC believes that such a strategy would represent a good balance between achievement of certainty of worthwhile and justified price reductions while providing reasonable incentives and stimulus for a significant injection of competition.

17. To implement such a strategy, BEREC considers that drafting changes in accordance with the suggestions of Annex 1 are worthy of consideration by the legislators. BEREC is of course willing to assist in any detailed redrafting which may be necessary.

2. COMPETITION

18. Price regulation of wholesale and retail roaming services has been justified because market forces have been clearly insufficient to regulate prices to levels considered reasonable by policymakers: there remains a huge gap between domestic and roaming retail prices whereas the underlying costs of provision differ little.

19. In its December Report[8] and February Response to the Commission's consultation[9], BEREC took the view that price regulation would remain justified for the foreseeable future. The Commission has proposed a package of measures which aim to enhance competition and, for a transition period, provide safeguard price regulation. BEREC has therefore re-examined the extent to which these measures could be expected to have an impact on competition and on the level of prices when considered accumulatively.

20. BEREC recognises that quantification of competition benefits resulting from any of the measures proposed by the Commission is not possible at this stage. This is reinforced by the likelihood of some interactions between the different effects. Nevertheless, a qualitative analysis can bring insights as to the relative efficacy of the different measures. According to BEREC's analysis summarised below, competition (leading in particular to lower prices) may come about in a number of different ways:

    (a) the inclusion of roaming services in standard bundles, perhaps with a small fixed subscription or other charge. Such an option tends not to make commercial sense at present for operators without an extensive network of their own, as wholesale roaming charges are too high. It would be more viable when such charges are reduced significantly, in accordance with the Commission's proposed price caps. This does not lead to competition in roaming, per se. But the effect is surely even more desirable for consumers as it means that the surcharge for roaming is small or even zero. An analogous effect on domestic bundles

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[8] December 2010 BEREC Report on International Mobile Roaming Regulation http://www.erg.eu.int/doc/berec/bor_10_58.pdf

[9] February 2011 BEREC Response to the European Commission 'Public Consultation on a Review of the Functioning of Regulation (EC) No 544/2009 (the "Roaming Regulation")', February 2011, http://erg.eu.int/doc/berec/bor_11_09.pdf

has been noted in some countries where mobile termination rates have been sharply reduced;

(b) Lower roaming prices by domestic MVNOs as a consequence of reductions in charges by their host networks for resale of wholesale roaming by virtue of Art 3 of the Regulation. The extent to which MVNOs will pass through such cost reductions to the retail level is unclear, as apparently many do not see it as commercially attractive to differentiate their roaming offers from those of their host networks;

(c) Lower roaming prices by “global MVNOs” as a consequence of regulated wholesale access agreements negotiated directly with foreign MNOs, in addition to regulated wholesale resale roaming from a host MNO, again by virtue of Art 3. These seem likely to be of most benefit to heavy users of roaming;

(d) Lower roaming prices as a consequence of roaming competition brought about by “decoupling” in accordance with Arts 4 and 5. Whatever benefits might be realised by decoupling in isolation (BEREC commented on that in its December Report), BEREC has doubts about the extent of the benefits which can realistically be expected in addition to those already resulting from routes (a) to (c) above.

Wholesale roaming access via Article 3

21. As we understand the proposed Regulation and the IA, the Commission envisages that this would apply to both:

i. providers requesting access and regulated wholesale *inbound* roaming rates from foreign MNOs for the purposes of providing roaming services, and

ii. providers requesting access and regulated wholesale *resale* roaming rates from their host MNO in the home country

22. BEREC considers it sensible that the Article 3 should indeed cover both options above. As discussed below, the options provide different competitive effects and it is not clear in advance which would produce the larger effect in practice.

23. BEREC notes that option (i) is in reality only open to full MVNOs and MNOs for technical reasons, but the drafting is future proof by allowing for all types of providers. Option (ii) is open to all types of MVNO and resellers.

24. The wholesale access obligation (Art 3) could increase competition in two different ways. For option (i) above, Article 3 enables those full MVNOs that

are interested in competing on roaming prices to negotiate a deal on regulated terms directly with foreign networks.

25. Under option (ii), MVNOs and service providers would be able to renegotiate existing commercial deals with their host networks so that the price paid for wholesale roaming did not exceed the wholesale regulated price cap (which, up to now, has only been relevant for transactions amongst MNOs). In many cases, this should lead to a considerable cost reduction for the MVNOs. BEREC does not have comprehensive information on the current (unregulated) deals but current wholesale resale roaming prices are believed to be typically much closer to the retail roaming caps than the regulated wholesale caps.

26. The extent to which lower wholesale resale prices for MVNOs will be passed through to consumers in the form of lower retail prices is unclear. From discussions with stakeholders, most NRAs take the view that the bulk of MVNOs that also offer domestic mobile services are not very interested in competing on roaming prices. As such, price reductions are unlikely to be a big driver for recruitment of new customers or of increased roaming volumes. If this turns out to be the case, consumers will not notice much difference. A few NRAs are, however, more optimistic that MVNOs will seek to differentiate themselves by offering lower roaming rates, as they do for domestic services.

27. Equally, MVNOs and service providers could use option (ii) to negotiate a new hosting arrangement with an MNO in the home country for the purpose of providing roaming services to that MNO's customers, using the same IMSI range (this could also be used by foreign MNOs and MVNOs). The global MVNO could seek a hosting agreement with all or most MNOs in the same country, to allow for the scenario where the customer wishes to switch its domestic service. The global MVNO would focus on consumer top-up distribution and billing. On initial analysis, this may be simpler and cheaper to implement than option (i). However, the competition analysis may be similar.

28. Up to now, global MVNOs have negotiated such agreements in some countries on commercial terms but have found it impossible to negotiate agreements on reasonable terms in others. Such companies, which focus on the provision of roaming services, can be expected to pass through cost savings to their customers.

29. BEREC believes that the impact may nevertheless be rather limited. Such providers focus on the provision of services to frequent roamers as they lack the much more extensive customer support operations to service the mass market, and require a certain margin and regular revenues (i.e. regular roaming) per customer to make the business worthwhile. Their tariffs are therefore likely to be designed to appeal particularly to high volume users but

to be relatively uninteresting for mass market customers. In that case, frequent roamers could expect price reductions while mass market customers would be hardly affected.

30. In addition, BEREC considers there is a problem with the pricing rule formulated by the Commission. According to BEREC's reading, for option (ii) above, MVNOs will be entitled to purchase a wholesale resale roaming service from their host MNO in the home country at a price no greater than the wholesale roaming cap. Depending on the circumstances, this could be unreasonable. The MNO might have to resell the service at or just above the price paid, despite the fact that legitimate additional billing and other commercial costs are incurred in providing the wholesale resale service. Therefore, in BEREC's view, a more general pricing formulation should be considered which achieves the following effect:

    - Where resale of wholesale roaming is provided, the host network is entitled to charge up to the wholesale cap for the roaming service itself

- The host network should be also entitled to levy a fair and reasonable charge for any alternative or additional services provided, including a charge to cover the commercial costs associated with re-selling. This charge could be defined in the guidelines for wholesale access conditions for the purpose of providing roaming services that BEREC, in close co-operation with the Commission, is required to lay down. This will promote a consistent approach to such charges throughout Europe.

31. BEREC also believes that Article 3 has further potential, as a vehicle for the introduction in due course of one or more structural solutions which have yet to be identified.

Separate sale of retail roaming services via Articles 4 and 5 (Decoupling)

32. The Commission proposes the introduction of the 'separate sale of roaming services', through Articles 4 and 5. This would enable customers to 'easily choose and purchase roaming services from an operator other than the provider of the domestic services, while in the home country.

33. In its December Report, BEREC considered various options for implementing the separate sale of retail roaming services[10] both in the home and the visited countries, and identified a number of practical obstacles to their implementation, together with concern about the extent of the beneficial effect which could be expected on competition. However, that competition analysis was a stand-alone analysis; it did not consider any linkages in competition effect with those of any other measure. Therefore, BEREC has now

[10] December Report, p.99 – p.109

considered the likely additional impact of “decoupling” retail roaming services on competition, over and above the impact of the wholesale access measure analysed above and wholesale price reductions.

34. For the reasons described below, BEREC considers that the option will in practice be rather unappealing to most consumers who generally have a preference for “one stop shops”. In that case, most will not readily switch. Recognising this fact, providers will target their marketing effort on the most promising potential customers. These are the heavy users of roaming who have most financial incentive to switch. The providers are therefore likely to design tariffs which particularly appeal to heavy users. This would further reduce the incentives of mass market customers to switch.

35. The Commission believes that consumers who do not switch will nevertheless benefit from the better tariffs available to all. This seems unduly optimistic. It seems more likely that providers will segment their tariffs between customers who use roaming fairly intensively (who will be much more motivated to seek a better offer) and those who do not. In that case, the bulk of customers can hardly be expected to benefit significantly.

36. However, the heavy users do not need a decoupling option; there are already a number of specialist providers who offer competitive domestic rates on the basis of commercially negotiated access together with roaming rates, which attract heavy users. The competitive position of such providers would be strengthened on the basis of the wholesale access available under Article 3 of the proposed Regulation. Moreover, as noted above, providers may take advantage of lower wholesale roaming rates to include roaming services in standard retail bundles. There is therefore a considerable risk that the decoupling option will produce little additional competition benefit over and above that which is already available via wholesale access and lower regulated wholesale roaming prices.

The dual IMSI solution envisaged as a mean of delivering the separate sale of retail roaming services –

37. Considering the characteristics of the particular measure to be implemented, while the drafting of Articles 4 and 5 of the Regulation is otherwise quite generic in nature, Article 5 provides that ‘In order to enable the separate sale of roaming services, operators may in particular allow the use of a "EU roaming profile" on the same SIM card and the use of the same terminal alongside domestic mobile services’. The Impact Assessment envisages that ‘The practical implementation would involves (sic) issues such as implementation of multi IMSI SIM cards with an EU-wide roaming

authentication algorithm, special signalling protocol to reroute incoming calls, adapting billing procedures'[11].

38. The technical work necessary to implement this "dual IMSI" solution as a particular means of delivering the separate sale of retail roaming services represents a formidable programme, as described in the December Report[12]. Even though BEREC has so far identified no insuperable obstacles, the 2-year lead time proposed by the Commission seems optimistic. BEREC notes that complex technical development programmes have a tendency to take longer than originally hoped, sometimes a lot longer. Further, implementation costs will have to be borne by all MNOs. Since the costs will not be especially highly correlated with scale of operation, they will bear particularly heavily on the smaller providers. Finally, BEREC believes that the cost estimate (€300m) is tentative at present and that the assessment does not include all relevant costs, some of which could be significant. BEREC understands, for example, that no allowance has been made for swapping out of SIMs for customers who wish to switch some time after their initial provider choice; nor for the ongoing operational costs of such a measure which will inevitably be passed on to consumers.

39. An implementation of the "decoupling" obligation based on the wholesale access option discussed above, where a provider negotiates an MVNO hosting agreement with an MNO purely for the purpose of providing retail roaming services to the customers of those networks, would not appear to necessitate the general introduction of dual-IMSI SIMs. Other implementation approaches may well emerge. On the face of it, the technical complexities would be significantly less if dual-IMSI could be avoided. On the other hand, BEREC believes that the end-user and other competition considerations described below are likely to be much the same for any decoupling implementation which aims at promoting competition mainly amongst "home providers".

40. Given the doubts about the extent of the additional competition which would be generated by any such decoupling solution, BEREC considers it would not be a sound approach to prescribe a specific implementation which was technically complex and expensive to implement. An implementation of decoupling – or any other structural solution - which avoided the cost and technical complexity but which had similar potential upside would be easier to justify. BEREC notes that Article 5 of the Commission proposal refers to a specific solution without prescribing it. Nevertheless, there appears to be an expectation that the Commission is firmly committed to dual-IMSI. BEREC

[11] Commission Impact Assessment p.54

[12] December Report, 'Carrier select – alternative home provider', p.108

believes that it would be helpful for this expectation to be removed, pending further discussions with market players.

Competition analysis – end user considerations

41. While the details remain to be worked out, it is clearly the intention of the Commission that the process of switching to a different supplier should be as user-friendly as possible. The Commission appears to be relying on the fact that a significant number of customers choosing a new network will, at the time of choice, be motivated to choose a different roaming provider from the provider of domestic services. BEREC is not convinced this will be the effect. Customers will not in general welcome a more complex purchase process than they experience today. Most will not in general be interested in thinking about roaming at the time of network choice; for most consumers, roaming represents a small part of their annual mobile spend. BEREC believes that most will follow the line of least resistance and choose the same provider for domestic and roaming services, whatever objective information on the roaming options is theoretically made available to them at the point of sale. This is reinforced by the fact that the sales staff of the retail providers have absolutely no incentive to promote the roaming services of an alternative provider.

42. Despite initially opting for a package of domestic and roaming services from a single supplier, a customer may of course switch later. However, to take advantage of the decoupling option, the consumer will have to research and make his roaming choice sufficiently far in advance of the foreign trip to allow that choice to be implemented (at least 5 days and up to 3 months, under the draft Regulation). Depending on the solution, implementation may not be done instantly. For example, in the “dual IMSI” solution, a replacement SIM is likely to be required.

43. BEREC notes that it is well-established that consumers are often very reluctant to switch supplier, even where there is a material financial incentive. Such inertia is observed not only in communications services but also in other network industries.

Competition analysis – supplier considerations

44. It is also instructive to consider which providers might be interested in offering such a service. Established providers would be concerned to avoid a major price war which would reduce revenues without any reasonable expectation of a significant offsetting increase in volumes. (Certainly for voice and SMS, there is no convincing evidence so far that lower prices will generate a significant increase in new customer subscriptions and volumes, since any customer gains are likely to be substantially offset by customer losses as competitors respond by lowering their own prices). Therefore, only a

"disruptive" player, typically one not currently present in the market (and taking advantage of the wholesale access obligation) would have incentives to make a really significant downward price move. By elimination, the only remaining possibility would be a large MVNO (which could be an MNO in another Member State). But any such player with the ambition to compete for mass market customers would surely not wish to confine its services to roaming. Such a player would be more likely to wish to deploy its marketing resources on attracting customers for the full range of services in preference to the much more difficult and less rewarding strategy of attracting customers only for roaming. In that case, they would not particularly seek to attract customers via decoupling but would need to negotiate a more general access agreement.

45. One or two market players appear to see a commercial opportunity from the separate sale of retail roaming services in the home country, although BEREC understands that this view is not currently widely shared. Nevertheless, existing retail providers may consider it preferable to a possible alternative regulatory approach. In its Impact Assessment, the Commission analyses Scenario 2B, in which reliance is placed only on price controls. The levels proposed by the Commission under that scenario would lead to industry-wide revenue reduction estimated by BEREC to be of the order of €1 billion[13] per year. Set against that figure, the cost of introducing decoupling might appear a price worth paying to the market players, especially if they shared BEREC's assessment that not much mass market competition would be likely to result. The views of market players on this proposal will therefore undoubtedly depend critically on their assessment of what would be proposed in its absence.

Technical analysis – dual IMSI

46. Under the Commission's proposal, BEREC would be required to develop implementation guidelines for a decoupling solution. As described in BEREC's December Report and February response to the Commission's consultation, significant systems development and standardization activities are required to implement a dual IMSI solution. BEREC would like to highlight the main technical questions that would have to be covered in such guidelines. These questions in particular relate to:

- how to enable the routing of inbound calls and SMS from the domestic to the roaming provider – an analogous issue arises in connection with number portability and there are currently varied national practices;

[13] Based on the roaming revenues recorded in successive BEREC Benchmark Data Reports, coupled with the assumption that these will vary in direct proportion to variations in price cap. This is a very broad brush assessment but should give the correct order of magnitude.

- the fact that two unrelated operators have security and identification information on the same SIM, and the way in which this sensitive information can be registered on the SIM;
- the sharing of a single phone number between two operators; and
- certain practicalities in switching between the domestic and roaming providers.

47. The problem with having two unrelated operators sharing security and identification information is that operators regard this information as confidential. Unauthorised access to this information could put the end user’s personal information at risk. The security and authentication information of the roaming provider would have to be transferred onto the SIM card of the domestic MNO. In particular, if the quickest and most efficient method of over the air (OTA) messaging were to be used, there would be a need to ensure that security keys could not be disclosed. There would have to be some mechanism that allows operators to keep their encryption codes secret when authenticating and transmitting those relevant data. It would be necessary to standardize such a procedure. Alternatively, if programming the roaming security and authentication information requires physical access to the SIM, there would need to be appropriate mechanisms to prevent access to the domestic information and vice-versa.

48. Some new network components used for traffic signalling and the HLR/HLR interface would also need to be standardized. Traffic signalling in a dual IMSI world would require additional signalling operations, and to separate signalling related to steering traffic from authentication/authorization and billing in case the latter is provided by the roaming operator. The HLR of the roaming provider needs to communicate with the HLR of the domestic provider to indicate that the user is roaming and change the traffic routing accordingly. This requires providers to specify and standardize additional communication interfaces and parameters.

49. Another issue concerns the need for matching the subscriber number to the MNO. As the draft Regulation provides for just one subscriber number, in a dual IMSI world this would force the domestic and the roaming providers to share one number.

50. There are also practical issues relating to the ability of the phone to switch automatically between the roaming and domestic networks depending on the country where the customer is. It is not clear whether this procedure can be automated; if not, the user will need to switch between networks manually. Furthermore, there need to be adequate measures to ensure the roaming provider uses the access granted only for the purpose of providing roaming services, unless access for provision of domestic services is negotiated commercially or provided for under national rules.

51. Other structural solutions may raise different technical challenges, albeit that those associated with dual-IMSI appear to be especially complex and resource-intensive to solve.

Other options for implementing the separate sale of roaming services

52. As an alternative to the Commission's vision of decoupling based on the "dual IMSI" solution, BEREC has recently also given some consideration to a variation not mentioned in its December and February Reports – local break-out for data (LBO). A description and brief assessment of LBO is found in Annex 2. BEREC is aware of at least one other option which has recently been discussed by the market players. Given (on the basis of the Commission's Scenario 2B) that the possibility of significant further reductions in price caps might in practice be the consequence of a failure for pro-competitive measures to emerge for adoption, BEREC believes that market players have strong incentives at present to look constructively at such opportunities. Moreover, other approaches seem likely to be capable of introduction on significantly shorter timescales than dual-IMSI.

53. BEREC does not at this stage put forward a specific alternative to decoupling. However, if sufficient market players had a commercial interest in a specific measure (and subject to a full assessment of the practical implementation issues and consequential benefits and implementation costs), BEREC would be very open to discussions aimed at allowing that measure to be foreseen by the access guidelines required under Article 3. The measure could then be covered unambiguously by the general right of wholesale access.

54. To conclude on decoupling options, BEREC believes that no such measure can be effective unless it works with the grain of the market. In particular, it has to be capable of creating options for consumers which are sufficiently attractive that the consequential competition benefits are material and outweigh the implementation costs. Notably, this means that a critical mass of market players is committed to decoupling making it work. BEREC is not aware of any measure which can be confidently assessed to pass those tests. It is very willing to participate in discussions with the Commission and market players to identify a suitable candidate with a critical mass of support. BEREC believes that the generic mechanisms already provided for in the Regulation (Articles 3-5) can (with some expedient redrafting) allow such a measure to be implemented effectively and speedily, without the need for further regulation.

3. PRICE REGULATION

a. Wholesale caps: voice, SMS, data services

55. In the Articles 6, 8 and 11 of its proposal, the European Commission has proposed *inter alia* to continue to set wholesale caps for regulated roaming calls, SMS messages and data services.

56. According to the Commission's impact assessment and its objective that prices are at levels reflecting underlying costs (as they would result from competitive market forces), the proposed wholesale caps are based on estimated 2009 costs published by BEREC in its December Report[14].

57. For wholesale voice, a continued reduction of 4 c€ per year over a three year period 2012 - 2014 would lead to approximately the average cost estimated by BEREC for the year 2009. This reduction corresponds to a compound annual reduction of around 30%. For wholesale SMS, the Commission envisages a wholesale reduction from 4 c€ to 2 c€, introducing a glide path for the SMS price ceilings. Finally, for wholesale data, the Commission considers that a glide path towards the level of BEREC's average wholesale cost estimate is reasonable, considering that BEREC's cost estimate could be overestimated.

58. It should be noted that the proposed wholesale caps decrease between 2012 and 2014 and then are flat to 2022.

Wholesale caps proposed by the Commission

	2012/13	**2013/14**	**2014-2022**
Voice (c€/min)	14	10	6
SMS (c€/SMS)	3	3	2
Data (c€/Mo)	30	20	10

Wholesale costs estimated by the BEREC for year 2009

	2009 upper bound for countries	**2009 average EU cost**	**Cautious estimate of maximum**

[14] International Mobile Roaming BEREC Report, December 2010: http://www.erg.eu.int/doc/berec/bor_10_58.pdf
See the Report for an explanation of the methodology used .

	analysed	estimate	EU 2012 costs[15]
Voice (c€/min)	9.73	4.08	10
SMS (c€/SMS)	2.67	0.61	3
Data (c€/Mo)	14.99	8.71	15

59. In its December Report, BEREC also made a cautious estimate of the maximum EU roaming costs for 2012 (these would be expected, other things being equal, to be materially lower than in 2009 for a number of reasons, for example reductions in regulated mobile voice termination rates. Further reductions would be expected in later years). Since most NRAs are in the process of updating their cost models, BEREC's estimates were based on data from a fairly small number of NRAs. BEREC decided that an accurate forward estimate was not available and that therefore a conservative approach was appropriate. The 2009 upper bound gives a cautious estimate of the maximum EU cost in 2012. Comparing those costs estimates to the caps proposed by the Commission, BEREC considers that the 2012 and 2013 wholesale caps seem to be set at levels that can comfortably be assumed to remain above costs.

60. Regarding the 2014 proposed caps, especially for voice (6 c€/min) and data (10 c€/Mb), for which BEREC's conservative estimated 2012 maxima were 10 c€ and 15 c€ respectively, BEREC does not, conversely, have sufficient data available to be sure that the caps will be above costs, even though it believes its own estimates are conservative. For voice, the degree of conservatism depends partly on whether MTRs evolve as the Commission envisages. For data, BEREC noted in its December Report that '*recent experience has proved that usage forecasts and technical progress predicted by models built in the early years of mobile data services were too conservative ... there are strong reasons to believe that underlying costs of providing mobile data services by 2012 would be more in line with the lower boundaries known at present [1.63 €c/MB] that with upper bound results [15 €c/MB]*'.

15 Estimates greater than Commission proposed caps are highlighted

61. This is one reason why BEREC considers it important to include a review mechanism in the Roaming Regulation in order to make sure that the length and level of the wholesale caps takes account of the latest data on efficiently incurred costs; 10 years is a long time to set wholesale caps which are intended to mimic the effect of a competitive market, given the possible market and technology developments.

62. BEREC has checked for updated cost estimates this summer, but very few new data points have become available since it published its December Report. However, BEREC understands that a range of new data points should be available during the first half of 2012. Taking into account the significant uncertainty related to the 2014 cost estimates, BEREC will keep its cost estimations under review and will make any new information available to inform the negotiations, in the event that any new cost models are ready in time.

B. Retail caps: voice, SMS, data services

63. While the size of a retail mark-up for roaming services in a hypothetical competitive market is near-impossible to predict, BEREC believes that a 50% mark-up is more than enough to cover costs and allow a reasonable return on retail activities. This question was examined by BEREC in its December Report, taking into account the fact that the incremental retail costs relating to roaming are very low when averaged over all roaming calls. Indeed, BEREC notes that the Commission has in previous work[16] used a lower indicative figure.

64. BEREC understands that a significantly higher mark-up would be needed to stimulate market entry and development of competition for roaming. Nevertheless, common to the retail caps for voice calls made, SMS and data, BEREC considers that the very large retail margins proposed by the Commission, in particular for 2014 (retail at 4-5 times wholesale) seem hard to justify. Smaller gaps (not more than 200%, so that the retail cap did not exceed 3x the wholesale cap) would still leave a very significant amount of room for retail competition to emerge in line with the Commission's objectives. BEREC notes that the business plan of any new entrant would have to allow for reasonably intensive competition from the outset. It would not be realistic to enter in the hope that a margin of even 200% could be retained for very long. On the other hand, if little competition is stimulated, consumers are obviously significantly better off with a lower cap. Indeed, in this event, even the reduced gaps suggested by BEREC would be unjustifiably wide.

[16] COM(2006) 382 final Impact Assessment, http://ec.europa.eu/information_society/activities/roaming/docs/assessment_en.pdf

i. Voice calls made

65. The retail cap for outgoing calls needs to cover the wholesale roaming charge and a share of retail sales and marketing costs and common costs. In its December Report, BEREC noted that the discussion on appropriate levels for sales and marketing mark-ups should be included in a more global debate on the policy approach to price caps and any other regulatory measures in place. Pending availability of benchmarks enabling an alternative approach to estimating retail costs, BEREC explored a range of mark-up levels from 5% to 50% of the total wholesale costs.

66. According to the Commission's approach, the proposed retail caps are calculated allowing an extra retail margin to leave room for the structural solutions to deliver lower prices based on genuine competition, giving a retail mark-up of around twice the wholesale cap in 2012/13, rising to four times the cap from 2014 onwards.

67. As discussed earlier, BEREC doubts that the proposed structural solutions will have a major impact on competition, especially for mass market consumers. The impact would, on the contrary, need to be highly significant in order to achieve the retail price reductions envisaged. Taking 10€c as a benchmark for a reasonable retail price for 2014[17], this would correspond to a mark-up of around 0.66 times the wholesale cap of 6 €c proposed by the Commission. The structural solutions would need to drive prices down by 14 €c from the last regulated retail cap (24 €c), or a 58% price reduction from the 2014 retail cap in order to achieve the same effect.

68.. As noted above, BEREC considers the Commission's aims could be amply served with a smaller margin, for example a downwards glide path towards a retail cap of no more than 3 times the wholesale costs. This could be achieved, for example, either by steepening the retail glidepath or by extending the glidepath for one further year to reach 18c in 2015. In the latter case, an appropriate adjustment to the wholesale glidepath should also be considered.

Retail caps proposed by the Commission and Alternative retail caps: outgoing voice

	2012/13	2013/14	Lowest level defined[18]

[17] Consistent with Scenario 2b in the Commission's Impact Assessment

[18] Under the Commission's proposal, this would be for 2014-16. This is left open under the alternative proposal to allow for the possibility for the glidepath to be shorter and steeper or longer and less steep, according to the policy preference.

Commission's proposed retail outgoing voice cap (€c/min)	32	28	24
Alternative retail outgoing voice cap (€c/min)	-	-	18
Commission's proposed wholesale voice cap (€c/min)	14	10	6
Commission retail margin	x 2.3	x 2.8	x 4
Alternative retail margin	-	-	x 3

ii. Voice calls received

69. In the Commission's proposed approach, the retail caps would be calculated based on the current regulated MTRs, adding a mark-up for retail costs, and an additional margin to allow room for the structural solutions to deliver prices below the caps.

70. BEREC considers that prospective pure LRIC MTRs are a better basis for estimating the wholesale costs of incoming calls than current MTRs in the time horizon to 2014. This is consistent with the 2009 Commission Recommendation on termination rates, which recommends a harmonisation path towards pure LRIC regulatory accounting models by 2012. In its December Report, BEREC's cautious estimate of costs was 2.64 €c. Allowing a 200% retail margin, as discussed above, suggests a cap of 8 €c. BEREC notes that the Commission's Impact Assessment envisages a retail incoming voice cap of 8 €c for 2014 in the scenario where there is a continuation of the price caps with a downward glide path and no structural solutions, and that the proposed caps allow a reasonable amount of room above that.

Retail caps proposed by the Commission and alternative cap incoming voice

	2012/13	**2013/14**	**2014 - 16**
Commission's proposed retail incoming	11	10	10

voice cap (€c/min)			
BEREC estimate of 2012 cost[19]	2.64	2.64	2.64
Alternative cap	-	-	8
Commission retail margin	x 4.2	x 3.8	x 3.8
Alternative retail margin	-	-	x 3

iii. SMS

71. The SMS retail cap needs to allow for the wholesale roaming costs, SMS TR, a share of retail sales and marketing costs and common costs, and the cost of retail incoming roaming SMS as these are not billed to consumers under the Regulation (assuming a ratio of one roaming SMS sent to one received).

72. An SMS roaming retail provider faces a prospective termination charge of around 3.5 €c[20] to terminate it in the home country, and 6.4 €c to terminate it in another Member State. Both these figures are several multiples of cost; BEREC estimates that the underlying cost of termination for a domestic SMS is around 0.5 €c while the corresponding cost of terminating elsewhere in the EU is barely greater. While retail providers are faced with the actual termination charge, rather than the underlying cost, they also benefit from receiving such charges in respect of incoming messages. The net cost varies from provider to provider, depending in particular on national termination rates and traffic balance. Considering that most SMS are terminated in the home country, BEREC considers that 6 €c per SMS would be sufficient to cover the net termination costs[21], the wholesale cost and a reasonable mark-up. If the current levels of termination charge which are surely anomalous fall nearer to the cost of provision (whether by regulatory action or otherwise), this level could appear over-generous.

73. This level also corresponds to the 3x wholesale benchmark (from 2014) which BEREC has suggested provides a sufficient margin for the emergence of

[19] A cautious estimate – see December Report. Firmer estimates will progressively become available as a greater number of NRAs release new cost models

[20] Insert references

[21] Assuming 80% of SMS are terminated in the home country and 20% abroad, the average gross termination charge would be around 4 €c.

competition.

Retail caps proposed by the Commission and Alternative retail caps: SMS

	2012/13	**2013/14**	**Lowest point on glidepath**
Commission's proposed retail SMS cap (€c)	10	10	10
Alternative retail SMS cap (€c)	-	-	6
Commission's proposed wholesale SMS cap (€c)	3	3	2
Commission's retail margin	x 3.3	x 3.3	x 5
Alternative retail margin	-	-	x 3

iv. Data

74. BEREC welcomes the proposal for safeguard caps for retail data; indeed, setting price caps is the most practical and effective measure to regulate prices (and in particular, to remove from the market some extremely high prices) in the short term. Furthermore, setting linear price caps at a safeguard level allows operators room to create different pricing models. However, other options need to be pursued in the long term, in view of the expectation that the implementation of LTE will give rise to a massive take up of "always on" devices and the introduction of new high-speed packet services. Even today, a typical regular user of mobile broadband or a smartphone who had to pay the rates derived from the Commission caps would generally find roaming unaffordable[22].

75. Although EU average retail data prices have not experienced a decline similar to wholesale data prices, BEREC's data shows that they have also decreased

[22] For example, in one Member State with fairly high mobile data use, a regular user of mobile broadband may consume 4-5GB per month and a smartphone user about half that.

over time, as can be seen from the latest figures (average off-net retail data prices) in the BEREC Benchmark Data Report of May 2011[23]:

€	Q3/2010	Q4/ 2010
Off-net pre-pay	3.463	2.712
Off-net post-pay	2.512	2.309

76. These figures do not include the tariff offers that have been introduced from 1 January 2011. Operators in different Member States have launched new retail data offers in the first half of this year. These offers include some form of flat rate pricing limited to short periods such as one day, several days or week passes and offer prices of, for example, 10€c per MB if the whole bundle is used[24]. Therefore, the resulting rate per MB for these offers can be very low, at least for those consumers who make intensive use of their bundle. On the other hand, they may not be attractive for occasional use. In any case, other Member States have not seen such tariff innovation and prices remain higher.

77. The purpose of safeguard caps at the retail level is to prevent end users from paying exorbitant prices. While the caps proposed by the Commission appear to fulfil that aim for traditional technology or light usage, they provide relatively low protection for intensive users of the most recent technology. In order to stimulate competition, these caps nevertheless need to leave enough room for operators to design alternative tariff models other than the Eurotariff so that competition on retail data services - which has evidently started - is not obstructed.

78. BEREC assumes that price elasticity of demand for retail data is higher than for retail voice and SMS.[25] Roaming data use seems likely to increase in light of growing take-up of new data-enabled mobile devices like smartphones and tablets and (innovative) data applications, and especially as data is increasingly included in domestic bundles. BEREC notes that industry stakeholders also expect data demand to develop in this direction.

79. If retail caps are set too low, operators might not have sufficient incentive to offer alternative tariffs apart from the regulated default tariff, or those on offer might include roaming prices that are in fact higher than the caps, for example a high minimum charge or larger billing increment.

[23] http://erg.eu.int/doc/berec/bor_11_21.pdf

[24] E.g. Frequent roamers surf&mail offer/ Blackberry options in Belgium: 50€ incl. 500MB; daily pass offer in Germany: 5€ incl. 50MB.

[25] http://erg.eu.int/doc/berec/bor_11_21.pdf

80. As for voice and SMS, BEREC considers the retail margin goes well beyond what is necessary to allow competition to intensify, especially from 2014, when the retail cap reaches five times the wholesale cap.

81. The following table summarises the Commission's proposed caps, an alternative cap, consistent with the analysis above, and the corresponding retail margin:

Commission and Alternative retail caps: data

€/MB	**2012/13**	**2013/14**	**Lowest point on glidepath**
Commission's proposed retail data cap	0.90	0.70	0.50
Alternative data cap	-	-	0.30
Commission's proposed wholesale data cap	0.30	0.20	0.10
Commission retail margin	x 3	x 3.5	x 5
Alternative retail margin	-	-	x 3

C. Withdrawal of the retail price caps

82. Under the Commission's proposal, the regulated retail caps will remain valid until June 2016 only, subject to a review of the functioning of the Regulation. This is two years after the implementation date for its proposed structural solution 'Separation of roaming services' (Article 4) and four years after introduction of the wholesale access obligation (Article 3). The Commission's review the functioning of the Regulation is due by the end of June 2015. If it is shown '*that the structural measures provided for by the present Regulation are not sufficient to promote competition in the roaming market for the benefit of European consumers, the Commission shall make appropriate proposals to the European Parliament and the Council to address this situation. The Commission shall examine, in particular, whether it is necessary to modify the structural measures or to extend the duration of any of the maximum retail charges*...' (Article 19(2)).

83. BEREC supports the Commission's general objectives to stimulate and strengthen sustainable competition, and to ensure a high level of consumer protection in the EU. We believe very strongly that removal of the retail price caps should be dependent upon the findings of a full review of the state of competition and the level of prices in the market. While BEREC shares the view of the Commission and many others that price caps should be removed when no longer necessary, it is nevertheless important not to remove them too early before there is evidence that all consumers will continue to benefit from lower and more transparent roaming prices.

84. BEREC therefore considers that the Regulation should not provide for removal of the retail caps in 2016. This should be dependent on the results of the Commission's Review. In the event that the Review shows that market forces are still insufficient to justify removal of retail price caps, BEREC believes that the review must involve reconsideration of the level of the caps, as well as their period of application. To promote regulatory certainty, it would be appropriate to set a clear target for the evolution of retail prices, relative to corresponding domestic prices. At present, there is no such clarity. The target needs to be unambiguous at that stage, whether or not the market forces unleashed by wholesale access and any decoupling measures introduced have been sufficient to justify removal of retail price caps. In the event that the structural solutions will not facilitate sufficient competition to get roaming prices close to the target set, the retail caps will need to continue on a downward path. The precise levels should be for consideration at the time but the Commission's Impact Assessment scenario (2b) for a continuation of price regulation with no structural measures seems to provide a suitable starting point for consideration. The level of the retail caps should be aligned with the level of the wholesale caps so that in the longer term, the retail margin is consistent with what would be expected in a competitive market. BEREC considers that they should also be reviewed in light of new information on costs (many more cost models will be available by 2015 giving a much more comprehensive view than is available at present, and MTRs are likely to have fallen) and also technological developments in networks, devices and services.

85. BEREC also notes that the proposed review has to be finished by June 2015, which is one year after the implementation date for its proposed structural solution 'Separation of roaming services' (Articles 4 and 5) and four years after introduction of the wholesale access obligation (Article 3). Considering the lead time for gathering data for such a review, this may not leave much time for alternative providers to develop business models, reach wholesale agreements, bring tariffs to market and engage with consumers, especially as the only summer travel period will have been straight after the 2014

implementation date. While BEREC feels it is appropriate for there to be the utmost clarity about what market forces are expected to deliver in order to justify the removal of regulation, it is also important to be realistic about the delivery date.

Trigger for early withdrawal of the retail and wholesale caps

86. Article 13 of the Commission's proposed Regulation provides that the wholesale and retail caps for one or more of the roaming services may be withdrawn earlier than planned, where the average EU prices fall to 75% or less of the caps, according to data regularly collected by BEREC. At the retail level, early withdrawal is available from implementation of the separate sale of roaming services (Article 5) and before 1 July 2016, when the retail caps are due to expire anyway subject to the Commission's 2015 review. At the wholesale level, early removal is available from 30 June 2018.

87. While it supports the general objective to remove price regulation once strong, sustainable price competition has developed, BEREC has some concerns about the detail of this proposal.

88. BEREC suggests that 75% is a high level for the trigger at the retail level - even if the average EU charge falls to 75% of a given cap, (especially if this is a simple average rather than a traffic-weighted average), prices in some countries could be considerably higher. At the wholesale level, BEREC is concerned by the reference to 'unbalanced' traffic. It has carried out some preliminary work into the practicality of collecting such information and considers that an alternative test should be found. The policy intention is to identify a criterion which distinguishes between traffic subject to effective price competition and traffic where there is little incentive, for a variety of reasons, not always obvious or straightforward, to negotiate reduced prices. While many arbitrary definitions of "balanced" traffic could be made, to provide statistical clarity, BEREC is not aware of one which plainly and consistently distinguishes between the two states of competition. Leaving aside the methodological difficulties which arise from the rich variety of commercial contracts, wholesale agreements are generally reached on an annual basis. Companies will not generally have accurate information on the volumes and final prices for unbalanced traffic until the end of the applicable 12-month period, and this may fall at different times for different agreements. As a practical alternative to using unbalanced traffic for calculating average prices, BEREC proposes the use of average prices for total traffic between operators that do not belong to the same group. These prices are already calculated in BEREC Benchmark Reports, which use an established and successful method. This is by no means an ideal statistic for the purpose identified by the Commission but BEREC advises that it is the most practical, taking into account the cost and complexity of data collection.

89. As regards defining a more challenging threshold for removal of the retail cap than proposed by the Commission, one reasonable possibility for retail voice would be to set the threshold at half the level of the retail caps from 2014 onwards[26] [27]. BEREC considers that a reasonably competitive market would be likely to deliver a retail mark up less than 50%; the threshold suggested above would represent good progress towards that benchmark. Removal of retail price regulation in response to such a market outcome still carries a calculated risk of little progress towards general alignment of domestic and roaming prices but would at least guarantee that very substantial progress had been made towards that goal.

90. This approach is of dubious validity for retail SMS and data. In the case of SMS, much depends on the evolution of (mostly currently unregulated) termination rates. In the case of data, given that the caps are safeguard caps which are likely to be relevant only for occasional roamers, BEREC believes that a reasonably competitive market should deliver **average** prices at a very considerably lower level. Therefore, if average retail prices were measured to be even below 50% of the cap, BEREC would be most reluctant to conclude that market forces were sufficiently strongly established. On this basis, BEREC considers that it would be more reasonable to defer consideration of removal of the retail data caps until the 2015 Review. Any other approach risks delivering arbitrary results. A more reliable method for coming to that conclusion would be based on alignment with domestic prices or on considerations of affordability.

91. On balance, BEREC considers that it might be more realistic to abandon the idea of removal of retail caps before the 2015 Review, especially for SMS and data where there is a large risk of setting a trigger which is arbitrary.

92. In any case, BEREC considers that, if the trigger point for the retail caps has not been reached by 2016, that would give rise to considerable concern about whether competition ever will be effective. In that case, it would be appropriate that the retail caps should be re-set from 2016 in light of the Commission's full review, especially as it is likely that technology developments will have given rise in the meantime to expectations about further material cost savings.

93. For the wholesale triggers, since these are not intended to apply before 2018 at the earliest, BEREC considers that the matter is best dealt with in the

[26] It would be appropriate to use a higher percentage of the retail cap for earlier years, reflecting the fact that competition will take some time to develop

[27] An alternative approach, worthy of consideration, is to retain the 75% threshold but to apply it to every individual member state rather than the European average. That would guarantee that the pro-competitive measures were having a significant effect throughout Europe.

Commission's Review, by which stage there will be much more clarity about future costs.

94. One concern about automatic removal of retail caps is that there would be an incentive to reduce prices below the threshold for removal in order to have the freedom to increase them again once caps have been removed, leaving consumers less protected than intended. If competition has really taken hold, this is most unlikely to occur. But the point does support the arguments above that the test for removal should not be purely mechanical and that it may be better to await the 2015 Review. Similar care should be taken over any subsequent removal of wholesale caps. Price levels below the threshold over a significant period should be observed before removal would be fully justified.

95. The table below sets out some figures for the retail caps, which are consistent with the principles discussed above:

Retail Service	**Period**	**Commission proposed retail cap (2014)**	**Commission proposed trigger for removal**	**Alternative cap**	**Alternative trigger for removal**
Outgoing voice	2014 onward	24	18	18	9 (or review in 2015)
Incoming voice	2014 onward	10	7.5	-	-
SMS	2014 onward	10	7.5	6	review in 2015
Data	2014 onward	50	37.5	30	review in 2015

4. REGULATION OF NON-PRICE ISSUES

96. In its December Report, BEREC identified some areas where the transparency and bill control provisions should be reviewed during any future legislative negotiations in order to ensure that all consumers are well protected.

i. Transparency of retail charges for regulated roaming calls and SMS messages

97. The Commission proposes that the obligation for providers of roaming services to provide the customer with basic personalised pricing information on roaming charges shall not apply to machine to machine (M2M) devices, which use mobile communication.

98. BEREC shares the view of the Commission and finds the welcome SMS to M2M devices redundant as M2M SIMs are not able to process the messages received. Furthermore, BEREC suggests for the same reason that the notifications at 80% and 100% of the bill shock limit should also be removed for M2M. In its regular market reviews, BEREC has neither seen any actual demand for these services nor received complaints that would justify the maintenance of these obligations for M2M. On the other hand, BEREC understands that some companies using M2M communications might want to benefit from the final data cut-off limit and recommends that opting out or selecting another limit should be left to individual contract discussions.

99. On the basis of past consumer experience, BEREC also considers that the welcome SMS should refer to the maximum prices to be paid by the customer for intra-EU roaming **standard** calls and SMS, in order to avoid that customers erroneously think that the maximum prices mentioned in that welcome SMS also refer to other intra-EU calls (e.g. value added services).

ii. Transparency and safeguard mechanism for retail data roaming services

100. BEREC understands that the policy intention in the current Roaming Regulation is that the financial or volume limit on roaming data expenditure applies to both postpaid and prepaid communications.

101. BEREC welcomes the Commission’s current proposal that the cut off limit provisions should not apply to customers under prepaid contracts.

102. Concern has been expressed that some prepaid users may top up by a large amount and not intend to spend the full amount on data roaming, so that unexpectedly doing so could result in bill shock. However, BEREC understands that, in response to the requirement to offer the data cut off limit to prepaid customers, some operators have ceased to allow such customers to use data roaming at all. This was not the policy intention. The data cut off limit has to be developed separately for the postpaid and prepaid platforms and, in the case of prepaid, the amount by which customers top up did not justify such an investment. BEREC’s experience in this matter is that very few prepaid customers top up more than 50€ and that the prepaid market is

usually for those who don’t want to top-up by much. In this way, BEREC considers prepaid customers are also largely protected from bill shocks as they pay a chosen amount in advance and cannot spend more than the credit on their account, giving transparency and control.

iii. MMS

103. MMS are included in the definition of 'regulated data roaming service' of the current Regulation (Article 2(2)(k)), and are not explicitly excluded from the scope of Article 6a(3) on the data cut off mechanism. However, BEREC recommends that the fixed price element of MMS should be excluded from the bill shock provisions, as it is technically difficult for operators to tie up the platforms and as the per-unit charge ensures transparency for the customer. In addition, consumers receive pricing information for MMS in the welcome message.

iv. Exchange rate for non-Euro countries

104. In light of the economic climate and significant fluctuations in the values of different currencies against the Euro (which in some cases has meant that the regulated caps could have been raised in the national currency, although they decreased in Euros), some operators have proposed either using an average exchange rate for the preceding quarter or six months (rather than the rate on a single day), or, more simply, giving a longer period than one month between when the applicable exchange rate is known and the new cap comes into force (preferably 2-3 months). Both approaches would help to reduce the impact of currency fluctuations.

v. Extension of bill-shock mechanism to non-European data roaming

105. Data tariffs outside Europe have declined but are high compared to prices within the EU.

106. The retail data tariffs in the 4th quarter of 2010 are 1.14€ per Mb within the EU (excl. VAT), with an average wholesale price of 0.28€ per Mb.

107. Outside the EU, the tariffs average 4.75€ per Mb (excl. VAT), with an average wholesale price of 1.70 per Mb.

108. With the increase in use of smart phones in particular, this leads to problems with unexpectedly high bills for data roaming outside the EU. Customers are often accustomed to flat fee tariffs or data included in bundles at home and the protection of the Regulation when travelling in the EU. However, most operators have only implemented the data cut off mechanism for countries within the EU/EEA. This has led to bills of hundreds of Euros.

109. Regulating these retail data tariffs is difficult since retail regulation should take into account the wholesale tariffs for outside the EU-zone, which cannot be regulated through an EU instrument. As such, retail regulation only might lead to margin squeeze.

110. To prevent high bills from data roaming outside the EU, BEREC supports extending the bill shock measure to benefit the EU customers when they travel outside of the EU. There already are some experiences with voluntary implementation of extending the bill shock measure outside the EU. In the Netherlands it took an operator two months to adjust its systems (voluntarily) to make the 50 euro cap applicable for countries outside the EU. Some Austrian, Danish, French and UK operators have also made the mechanism available. BEREC considers extending the measure is both commercially and technically feasible. Because roaming data is generally routed back through the home network, operators receive data usage volumes in real time even if their consumers are roaming outside the EU. As regards the legal basis, BEREC notes that the measure would affect EU customers and operators offering their services in the EU, under contracts concluded within the EU.

ANNEX 1 – DRAFTING CHANGES FOR CONSIDERATION

Articles 4 and 5

(1) Remove specific time limits for switching in favour of “a reasonable period”. Reasonableness will depend on the precise solution chosen and can be specified in the required Guidelines. For example, 5 days would be too long for solutions bought on arrival in the visited country.

(2) Ensure the drafting does not refer to any particular technical implementation. In particular, remove reference to the possible ‘*use of a “EU roaming profile” on the same SIM card and the use of the same terminal alongside domestic mobile services*’.

<u>Articles 6-9, 11,12</u>

(3) Consider reducing the final wholesale and retail caps so that retail is no more than 3x wholesale. This could be achieved fairly naturally either by steepening the glidepaths or by extending them by one year.

(4) Consider alternative approaches (such as 3 month average) to setting reference exchange rate, to avoid arbitrary disruptions caused by short-term market volatility.

<u>Articles 7, 9, 12</u>

Remove the “sunset clause” for retail price caps in 2016. Unless removed earlier by automatic trigger (see point (6)), this decision should be left to the 2015 Review.

<u>Article 13</u>

(6) Reconsider the triggers for early removal of retail price caps; the current 75% threshold should be redefined in order to provide reasonable confidence that market forces are working well in all Member States before safeguard caps are removed. Since any trigger defined for retail SMS and data is at risk of appearing arbitrary, on balance, it may be best to accept that caps will not be removed before the 2015 Review.

<u>Article 14</u>

(7) Clarify the definition of the calls to which the retail price caps apply. This should also be expressed in recitals 28 and 51.

<u>Article 15</u>

(8) Exempt the fixed element of any retail MMS charge from the provisions relating to the data cut-off limit.

(9) Extend the provisions relating to data cut-off limit to roaming outside the EU.

Article 19

(10) Delete the word “structural” in paragraph 2. Competition benefits may be realised in ways which do not depend on the structural solutions, such as resulting from the significant reductions in wholesale caps; such benefits should be fully taken into account in any assessment.

(11) Redraft paragraph 2 to provide explicitly for the possibility of appropriate revisions to the levels of the price caps and not simply to extension in time.

(12) Set clear targets for the assessment of whether market forces will, after 2016, be sufficient for the removal of retail price caps.

(13) Specify that the Review will reconsider the levels of any future caps in the event that market forces have been found insufficient.

(14) Reconsider the timing of the Review to ensure it makes sense, in the context of the timing of introduction of the various pro-competitive measures

Annex 2:

Case study of a newly emerged decoupling solution – “local break-out (LBO)”

The local break-out solution (LBO) is a standardised solution implemented by mobile networks, in principle covering voice, SMS or data.

LBO was not discussed at the time of BEREC’s December and February Reports, because this model, in its native form, was exclusively tailored to data and therefore could not by itself achieve a significant reduction in prices for voice, SMS and data roaming over the next few years.

BEREC has analysed it now because retail data service is the area where potential competition problems are most likely to hinder overall market development over the next years and so where most effort may be justified, given the increasing use of data devices and services. Furthermore, since a structural solution should be designed in order to have a long term perspective, LBO can be seen as naturally matching the foreseen technological development towards all-IP networks. In that longer-term perspective, the voice and SMS roaming services can be expected to cease to exist.

This Annex is best considered as a case study of an alternative decoupling solution which could be implemented via the generic provisions in Articles 3-5 of the draft Regulation. Only a brief initial assessment of the pros and cons is set out below. BEREC believes that a pre-requisite for the implementation of any structural solution is a critical mass of support from market players who have a credible plan which will result in lower prices and other benefits for consumers. In the event that such a critical mass emerges, it would be appropriate to carry out a thorough assessment of costs and benefits which, in this case, would vary materially depending on the variant chosen for implementation.

The case study describes for the most part only a basic form of LBO; more sophisticated and complete solutions could be viable, since LBO architecture is a mandatory part of all LTE networks.

Description

This scenario allows an operator in the visited country to provide data roaming services directly to the end-user, and to bill them directly, for example using a credit card or scratch card. Such charging mechanisms are often used for access to WiFi hotspots. On arrival, the customer would open the web browser in their smartphone, tablet or laptop, and select a local network. They would then see a landing page describing the data services and tariffs offered, similar to the system for registration on WiFi hotspots. Where more than one local network is available, they could select another network to compare offers before buying.

In principle, other contractual arrangements could also support the provision of an LBO service, besides the credit card or scratchcard models (including a sound contractual architecture, such as pre-selection of data provider and billing by the home operator, or selection of an EU-wide provider for data services).

At the wholesale level, in the simplest case, the local network would be able to internalise its wholesale costs, providing for an additional retail margin compared to home providers constrained by wholesale roaming prices. This would be available for pass-through to the retail level; the extent of the pass-through would of course depend on how competition develops in practice.

For voice and SMS roaming services, the consumer would continue to use the roaming services of the home network, and would be billed by the home network as usual. On the other hand, billing for data services would depend on contractual agreements and/or on consumer choice.[28] This might encourage more attractive retail data prices, as the local network could gain not only additional retail data traffic but also wholesale voice and SMS roaming traffic. Against that, there would be a potential loss of wholesale data roaming traffic.

Regulation

It would be necessary to require the home network to allow their customer to take services directly from another network when abroad. The home network would also have to authorise access to the visited network's APN. This could be facilitated through the Commission's proposed Article 3 on wholesale access, possibly with some suitable amendments, and the guidelines the BEREC would be required to develop.

Technical implementation

Standards have already been defined for this solution, for all current (GPRS, 3G), and future (LTE) mobile data services. Procedures that prevent steering of the user away from the selected host network would need to be implemented[29].

The solution avoids resource-intensive technical development and standardisation associated with the need for the roaming customer to retain his number for legacy voice and SMS services. While some development would be required of commercial relationships and corresponding systems, implementation would reasonably be expected to be significantly shorter than for dual IMSI.

[28] E.g. in the case of single bill, the billing will be provided by the home operator and, in the case of pre-selection or direct customers selection, the billing might be provided by the local operator.

[29] Mobile operators use traffic steering mechanisms to distribute roaming traffic across their roaming partners and without the knowledge of their customers.

Pros & Cons – initial assessment

This solution could bring greater competition and lower prices to data services. On the other hand, it does not deal (in the basic design described here) with competition for voice and SMS roaming services. Other methods (price controls would be the most natural) would be needed to achieve the required price reductions for voice and SMS. In the longer term, lower data roaming prices could place pressure on roaming voice and SMS services to the extent that applications like VoIP and instant messaging became more affordable. That seems more likely at the stage that LTE is becoming common.

This solution enables switching at the time of travel, when consumers may be most engaged with roaming prices. It offers a similar consumer experience to using a WiFi hotspot, which confident mobile broadband and smartphone users may be familiar with but that may be more difficult or unappealing for mass-market, infrequent roamers. The latter category might be deterred from choosing a provider on arrival in a foreign country, owing to unfamiliarity with the local companies or language difficulties, for example. This can be reduced in the case of a permanent contractual agreement for access to LBO services. This would naturally require greater development and implementation costs although still less than those required for dual IMSI.

Lastly, the consumer's choice would be limited to the small number of network operators with which the home operator has in practice negotiated wholesale roaming agreements. Not all such operators will necessarily be familiar names to the user and this might dampen the competitive effect. Nevertheless, this does not appear to be a big issue in the context of WiFi access.