



## **BEREC International Roaming compliance report**

May 2011

## Overview

### *Aims and scope of the survey*

Regulation (EC) No 544/2009<sup>1</sup> came into force on 1 July 2009. As a result, a number of new obligations applied that required action on the part of the mobile operators within the EU. In accordance with the Regulation, national regulatory authorities (NRAs) are required to monitor and ensure compliance (Article 7).

Following entry into force of the Regulation, in September 2009 members of the European Regulators Group (ERG), BEREC's predecessor, launched a compliance survey into the way that mobile operators had implemented the new requirements and the way they were dealing with the additional requirements due to enter into force in 2010.

Specifically, ERG members agreed on a standardised questionnaire that each individual NRA sent to its national mobile operators. This covered the availability of the regulated retail tariffs on 1 July 2009, the implementation of the regulated wholesale tariffs, the provision of tariff information to consumers, and the current status of the implementation of future regulation.

Overall ERG found a high level of compliance. The results were published by BEREC in the 'International Roaming Compliance Report' of March 2010<sup>2</sup>.

In September 2010, BEREC ran a second survey to check compliance with the requirements under the Regulation that had come into force since March 2010. This Report provides a summary of the results of that questionnaire (113 responses).

The first section of the Report confirms that operators are providing pricing information to users as required by Article 6, as the first compliance survey had identified a few delays. The second section deals with implementation of the new retail data roaming bill control measure, in accordance with Article 6a(3) of the Regulation. This is followed by a section summarising operator proposals invited by BEREC about the drafting of anti-bill shock measures in any future legislation, so that they take account of likely technical and commercial developments. The Report then gives an overview of compliance with the prohibition on charging roaming customers for the receipt by them of a roaming voicemail message, without prejudice to other applicable charges such as those for listening to such messages (Article 4(2)).

### *Summary of findings*

In the first compliance survey, when ERG asked about the implementation of the retail data roaming bill control and voicemail charging obligations in 2010, most operators replied that they were working hard to ensure all systems were in place on time. Around 20% of

<sup>1</sup> Regulation (EC) No 544/2009 of the European Parliament and of the Council of 18 June 2009 amending Regulation (EC) No 717/2007 on roaming on public mobile telephone networks within the Community and Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services

<sup>2</sup> BEREC Roaming Compliance Report, [http://erg.eu.int/doc/berec/bor\\_10\\_12.pdf](http://erg.eu.int/doc/berec/bor_10_12.pdf)

respondent operators reported that they already did not charge their customers for the receipt of roaming voicemail messages. The remaining operators indicated they expected to be able to comply by the deadline of 1 July 2010.

In the second compliance survey, the subject of this Report, BEREC has found a high compliance rate overall based on operators' responses. This finding is without prejudice to any actions which NRAs might undertake in individual cases to ensure full compliance.

In terms of implementing the bill control measures, operators highlighted various technical and commercial challenges, including VPN, M2M SIMs, prepaid services, the ability of devices to receive SMS notifications, and the time and resources required to implement this type of provision.

## **1. Implementation of the provisions on transparency of retail charges (Article 6)**

The amended Regulation requires operators to inform their customers, when they first connect to a network in another EU country, about the applicable voice roaming price, SMS roaming price, and the possibility of accessing emergency services by dialling the European emergency number 112 free of charge.

Of the 126 operators that responded to the first compliance questionnaire, 23 replied that they were not able to provide the required information on 1 July 2009. By spring 2010, the majority of these 23 had fully complied with the Regulation. Those that were not in compliance were mostly new entrants (MVNOs) that had launched after 1 July 2009. BEREC understands that the responsible NRAs were in contact with the operators about compliance.

The second compliance survey asked again about this provision, to check progress towards full compliance. Practically all respondents indicated that they had met the obligations. The only exceptions were two MVNOs that had experienced delays in launching all of their activities. Both confirmed that technical development was underway and that the service would be launched shortly.

One operator highlighted that it is not possible to send SMS to a particular brand of tablet device, so that transparency information must be provided in other ways. Interestingly, one compliant MNO commented that it was making further technical developments in order to send more personalised data prices to certain postpaid consumer segments.

## **2. Implementation of the retail data roaming bill control measure (Article 6a(3))**

The amended Regulation contains two retail obligations that came into force in 2010. The first of these is that from 1 March 2010 operators must offer their roaming customers the opportunity to opt deliberately and free of charge for a facility that guarantees that, without the customer's explicit consent, the accumulated expenditure for data roaming services during a month does not exceed a certain financial or volume limit. Operators must offer at least one of these limits (the default limit), which must be close to (but not exceed) €50 per monthly billing period (excluding VAT), or the equivalent volume amount.

From 1 July 2010, all consumers who have not previously opted for another limit must be automatically protected by the default limit.

Operators must notify customers who enjoy the protection of a limit when they reach 80% and 100% of the agreed limit. The notification at 100% must inform consumers of the procedure they must follow if they wish to continue using data roaming services.

The final stage of implementation of this obligation was on 1 November 2010. As of that date, a consumer request to access or to remove the bill control measure must be acted upon within one working day of receipt.

In the first compliance survey, ERG asked operators what steps they had already taken to meet these requirements. A small number of operators reported having implemented parts of the system, such as the notification messages. Most however replied that they were still busy implementing systems that would meet the requirements of the Regulation on 1 March 2010. Of these operators, a number also indicated that although they were doing their utmost to implement systems on time they were uncertain whether they would be able to meet the 1 March 2010 deadline, but hoped to be in compliance as soon as possible afterwards.

In the second survey, BEREC asked the following question to check compliance with all aspects of the bill control measure. Operator responses are summarised after each part of the question.

**Have you provided a mechanism to consumers guaranteeing that their monthly expenditure on data roaming services does not exceed a specified limit for a specified period of time? Please describe the mechanism you have implemented with regard to the requirements of Article 6a(3). In particular:**

- i) Have you made available a default financial limit close to, but not exceeding, €50 of outstanding charges per monthly billing period, or the volume equivalent?**

All respondents confirmed that they had met this requirement, with the following exceptions or limitations, relating to prepaid customers and MMS services: one MNO said that it only allows prepaid retail data roaming on its partner networks (on-net), in which case roaming is included in the domestic bundle for no additional charge. One MNO said that prepaid customers were only able to use data roaming services if they agreed to opt-out of the bill control measure. One operator reported a delay for prepaid customers, during which it implemented an interim solution of re-crediting any expenditure over €50 per month, confirmed in an SMS. A couple of operators said that they do not apply the bill control measure to prepaid because this was disproportionate considering the spending patterns of prepaid customers and the credit limit already provides protection. One MNO said that MMS would only be included in the bill control facility from Q4 2010, as further technical development was needed to make this possible.

One operator commented that, instead of cutting consumers off when they reached the default €50 per month limit, it simply did not bill any further data consumption in the relevant billing period. If the customer consumes a further 30 MB or more, it throttles the speed back to 64Kb/s, and after 200 MB it slows the speed again to 2 Kb/s. The customer is notified at 80% of the €50 per month limit and each time the speed is slowed.

**ii) Have you chosen to offer any higher or lower limits? If so, what are they?**

Some operators offered only the €50 default limit. It was commented that offering other options was too costly and too technically complex. Other operators offered a range of alternative approaches based on spending or volume. Meanwhile, some said they intended to launch a range of options as a second phase of development during 2010.

Some available options based on spend were:

- A range from €9 to €200
- €20, €40, €80 or €100
- €30 or €100
- €80, €125 or €165
- €100, €250 or €500
- €100, €150, €200
- €200, €400, €500

Some options based on volume (less common than spend):

- 3 MB, 4MB, 6MB, 9MB (all lower than the default)
- 25MB, 50MB, 100MB
- Business customers with tariffs including more than €50 per month of data roaming: cut-off at 100MB for business plans below 100MB per month; 300MB for plans between 100MB and 300MB; 500MB for higher plans

A few operators said that the customer could set its own alternative threshold. Another operator planned to enable consumers to commit to an additional €50 via its website (and further €50 limits). The website would also give further information about the service and prices.

One operator said that, in addition to the chosen limit, it applies a €300 limit to all postpaid customers who use linear data roaming services (rather than a data bundle). In order to continue using data roaming services beyond the €300 limit, the customer must provide a four digit security pin.

Interestingly, most options were for a higher, rather than a lower limit compared to the default. In some cases, there were targeted at business customers, or at residential customers on data-centric domestic price plans (e.g. smartphone packages).

**iii) By 1 July 2010, was the default limit automatically provided to all customers who had not chosen another limit?**

Nearly all operators confirmed that they had complied with this requirement by the deadline.

One operator said that, while the limit had been implemented as a default for business customers, residential customers had been given a €0 default limit, with the option to top up with €50.

Another operator reported a 2-month delay for business customers, who benefitted from the notifications as default from 1 July but only received the cut-off mechanism from 1 September. This delay was due to technical difficulties. Customer services refunded any expenditure over €50 made before September on a complaints-led basis. One operator reported a delay for prepaid customers, to the end of 2010. A further operator reported a 2-week delay for technical reasons, to the second half of July.

**iv) Is a notification sent to the customer's device when the data roaming services reach 80% of the agreed financial or volume limit? Do you allow customers to opt-out of receiving such notifications, and to opt back in to receiving notifications again, at any time and free of charge?**

Nearly all operators reported that they had complied with these requirements on time. A couple reported delays for technical reasons, to be resolved over the following months.

Various operators chose to include information on pricing and how to authorise further data use in the notification sent at 80% of the limit, in addition or instead of providing this information in the notification sent at 100%. This was intended to ensure that the consumer had sufficient time to make an informed decision about continuing data use, reducing the possible impact of a delay in the consumer receiving or seeing the notification. Some operators also highlighted that they provide information at point of sale, on their website, and via customer services. BEREC understands that this is a widespread practice.

Some operators chose a slightly different point at which to send notifications. One operator group chose to send the first notification at 70% of the agreed limit, to take account of possible delays in the visited network communicating with the home network and the consumer receiving the message. Another operator said it send the first notification at 60% of the limit for postpaid customers and 80% for prepaid. Two operators said they had chosen to send the first notification at 75% of the limit for the same reason. One operator said that it sends additional SMS notifications after each segment of consumption (MB or minutes).

A number of operators said that, while it was possible for the consumer to opt in or out of the whole bill control measure at any time and free of charge, it was not possible for customers to opt out of receiving the notifications alone. Indeed, that could result in the unwelcome experience of being cut off without warning, if the limit alone remained in place. One operator highlighted that it had never received such a request. A further operator said that its customers would be given the option of opting out of the notifications alone during 2011, as

part of the second implementation phase of the bill control facility.

One operator elaborated on the mechanism in place, explaining that when 80% of the selected limit is reached, the home operator sends a notification by SMS and shows a redirect page in the browser. From this browser window, the customer can choose to continue to 100% of his or her chosen limit, change the limit, or use unlimited data (lift the bill control measure) for the rest of the month. When 100% of a chosen limit is reached, another redirect page appears in the browser.

One MVNO, which serves MNCs and business customers and only provides postpaid services, said that the postpaid billing platform that interfaces with its host MNO's network systems does not allow it (i) to monitor usage in real time, whether in financial or volume terms, or (ii) to intervene in real time when the limit is exceeded. The operator was working on a technical solution. In the meantime, it provided a €250 limit, as it considers this meets its business users' needs, and applied no further charges to data consumption beyond the limit.

Lastly, one operator said that customers who have opted out of the bill control measure still receive a notification that provides financial spend information at every €20 (gross). The customer can choose to opt out of this service as well.

**v) When the financial or volume limit would otherwise be exceeded, do you send a notification to the customer's device? Does the notification indicate the procedure to be followed if the customer wishes to continue provision of the services and the cost for each additional unit to be consumed?**

**vi) What type of notification do you use to inform the customer that they have reached either 80% or 100% of their financial or volume limit?**

Operators confirmed that a notification is sent to the customer indicating that 100% of the agreed limit has been reached. In most cases, this notification contains information on pricing and how to continue data use, if desired. A few operators said that it did not contain any tariff information for technical reasons. Some said that this would be rolled out as part of the second implementation phase of the bill shock measure, in 2011. Others commented that the information was instead provided when the customer firsts connects to the data session and in the notification sent at 80% of the agreed limit.

Operators generally chose to send notifications by SMS. In many cases, the customer is also redirected (depending on the device) to a landing page with further information on the bill control measure, including prices, information on contacting customer services, or the facility to confirm further data use on-line.

One operator explained that, when the customer receives an SMS indicating that 100% of the limit has been reached, they are given the opportunity to call a freephone number to get pricing information and to agree to further data consumption, or to send an SMS with the message "stop s" to continue use. In that case, the customer is sent a confirmation SMS

containing pricing information. In addition, a denial page appears if the customer attempts to connect to the Internet beyond the agreed limit. This page redirects the customer to a free webpage explaining why he or she has been cut off and how to reconnect, if required.

Another operator explained that the SMS triggers a pop-up window in the data manager highlighting the SMS information to the customer. Another said that the customer can access a landing page at any time, to view his or her expenditure. A few operators also mentioned e-mail and MMS for the 100% notification.

Some operators said that, while SMS notifications were currently in place, they would provide notifications by means of a pop-up window as part of a second phase of technical development.

**vii) If the customer does not respond as prompted in the notification received, do you immediately cease to provide and to charge the roaming customer for data roaming services, unless and until the customer requests the continued provision of the service? If not, what type of action do you take?**

Operators confirmed that they comply with this requirement.

In order to access data roaming services again, most operators require the customer to call customer services. Some also allow the customer to respond to the SMS notification of the limit by SMS, or redirect the customer to a webpage (as above).

One operator specified that, for business customers (except small business customers) it is the contract manager who manages the bill control measure on behalf of the employees. The contract manager provides the operator with a list of users who should benefit from the bill control measure. Those employees then receive notifications at 75% and 100% of the limit. The employees themselves are not able to choose to opt-out of the measure or to continue data use. The contract manager can do this within 1 working day by contacting a dedicated agent within the operator.

Another operator said that, for its business customers, in addition to notifications and the cut-off mechanism for individual employees, the company's contract manager also receives a mail listing all lines that have received notifications or been cut off, with information on the associated data use.

A further operator commented that, if the customer does not respond to the notification at 100% of the limit, the data connection speed is slowed and the customer is given an extra 5MB of data roaming traffic free of charge. Once the additional 5MB are used up, the provision of data roaming services is immediately ceased.

For the first 6 months of operation of the bill control measure, one operator gave prepaid and postpaid customers a 1-hour grace period following the notification at 100%, allowing them to use data for free during this time.



**viii) From 1 November 2010, when a customer requests to opt for or to remove a financial or volume facility, will the change be made within 1 working day of receipt of the request, free of charge, and without entailing any conditions or restrictions pertaining to other elements of the subscription?**

**ix) If not, when do you expect to become compliant and how will you deal with such customer requests in the meantime?**

The deadline for compliance was after circulation of the compliance questionnaire. In their responses, operators confirmed that the requirement would be met on time. In many cases, it was already in place. Some said that the change could be made more quickly than 1 working day, including in near real-time. A few operators said that there might be a delay of one month for some of their consumer segments, for technical reasons. BEREC understands that the requirement has been implemented well.

**b) If you have not yet provided a mechanism to consumers, at what date will you become compliant and what steps have you taken to compensate any consumers billed more than the regulation allows?**

As mentioned above, one operator reported a 2-month delay for business customers, who benefitted from the notifications as default from 1 July but only received the cut-off mechanism from 1 September. This delay was due to technical difficulties. Customer services refunded any expenditure over €50 made before September on a complaints-led basis. Another operator reported a 2-week delay for technical reasons, to the second half of July.

See also the responses to questions (c) and (d) below, regarding customers using a VPN, M2M devices and applications, and prepaid customers.

**c) Are there any customer segments, tariff types or customer devices for which it is particularly difficult to comply with the Regulation, or will be in the future? Please explain why, and the steps you are taking / plan to take to protect customers from bill shock in these cases.**

Operators raised difficulties with complying for various services or devices, including secure data connections (VPNs), new devices or software that are unable to receive SMS notifications, machine-to-machine devices and applications (M2M), business rather than residential consumers (different needs), prepaid customers (different billing platform and consumption patterns from postpaid), bundles that include domestic and roaming data in neighbouring countries for the same price, and groups of SIMs under the same subscription (e.g. for families). Operators had taken a variety of commercial and technical measures to address these difficulties, illustrated below.

In terms of proposals for future legislation, while most operators welcomed some form of bill control measure, they also favoured a principles-led approach that would be more future-proof and more easily adaptable to different consumer segments, services and devices.

They also highlighted the considerable time and resources required to implement measures of this kind, which could take resources away from other innovations that would benefit consumers. Lastly, it was advised that the industry should be consulted on the technical and commercial feasibility of any future legislative proposals, to ensure that they are practical and will meet consumer needs.

### ***Secure data connections***

A number of operators said that it was difficult or technically impossible to comply with the regulation for business customers with a dedicated VPN, used to provide an encrypted link to secure traffic over the Internet. Because all data traffic is carried over the secure connection between the mobile device and the customer's own company network, operators said that it was not technically possible to measure traffic volumes carried, or to detect if consumption has reached a certain limit, in anything like real time.

One operator remarked that it nonetheless provides the bill control measure for those customers based on a 'hot-batch' charging solution, which ensures that the customer will not be charged for more than the limit, and is barred once it is detected that he has exceeded the limit.

### ***New devices or software***

Many operators commented that some new devices are not able to receive SMS due to a decision by the manufacturer, making it impossible to send notifications in accordance with their current technical approach. A particular make of tablet computer was frequently cited.

One operator highlighted that it has no control over the devices that a customer may use, e.g. they might chose a dongle or data card without a built-on SMS manager, or certain tablet computers. In light of this, it informs its customers via its website and other available means of communication that notifications will be sent by SMS to the telephone number linked to the data consumption. It recommends that customers use a device that supports SMS. The operator said that it has chosen to use SMS because it is the means of communication supported by the devices used by the vast majority of its customers, is well-understood by customers, receiving SMS free of charge is included in all tariff plans, and they can be sent in real time. On the other hand, one operator cautioned about the possible delay in the sending and receipt of SMS (best efforts basis).

Various operators said that they were in dialogue with the device manufacturer about developing an SMS manager, at least enabling the device to receive SMS from certain pre-designated numbers (i.e. to permit the bill control facility to function).

In the meantime, one operator said that it had addressed this problem by redirecting the customer to a webpage when he or she tried to access roaming data, showing their current usage, current bill control limit, and offering the ability to top-up. Another said it was developing such a service, for launch in 2011. One operator said that it limits such customers to prepaid data bundles, to avoid bill shock. A further operator said that, as a short-term measure, it provides notifications by e-mail and informs customers of this at point of sale and on its website. The cut-off limit is in place.

Similarly, one operator remarked that, if the customer chooses to use different software from the software provided with its mobile broadband dongle, SMS notifications will not be delivered. The operator endeavoured to inform these customers of this risk on its webpage and in its dongle packages.

### ***Machine-to-machine (M2M)***

Another point made by many numerous operators was that SIMs may be used in machine-to-machine (M2M) applications and devices. Operators said that the effective delivery of notifications is impossible on such devices or, if the notifications could be delivered, no one would be able to respond. As such, the device would be cut-off at the limit, which would be a great inconvenience to the end-user. An operator recommends its M2M customers use unlimited data tariffs with such devices. Another said that it contacts all such customers directly, to discuss tariff options or opting out of the bill shock measure. One operator said that such customers prefer not to benefit from the bill control measure (notifications or cut-off limit).

### ***Differentiating between business and residential consumer segments***

Operators said that it was necessary to allow for differentiation between different consumer segments, in particular between residential and business users, when defining regulatory requirements.

In particular, many operators said that the bill control measure was not adapted to business customers, due to a different customer relationship (with an account manager, not the end-user) and different customer needs.

An operator said that many account managers require the operator not to inform end-users of the tariffs, which is complicated in light of the transparency requirements. Various operators felt that the default limit of €50 per month was too low for business purposes. Data is an important tool for economic activities - it is important not to cut-off important business because the data limit has been reached.

To deal with this, one operator said it has adopted a tailored approach: when an end-user reaches 500MB, customer care contacts the account manager to discuss different options, including other tariffs like bundles; at 1GB the same process is repeated, plus the data connection is suspended. Another operator proposed that the bill control measure should only have to be implemented for business users at their specific request. As data roaming prices decrease, this measure could be phased out.

### ***Bundles of domestic and roaming data***

A couple of operators highlighted the case of data bundles, which may be used at home and while roaming in a neighbouring country for the same price. In this case, it could be technically challenging to differentiate between domestic and roaming use in order to apply the limit to roaming only. One operator partially addressed this by allowing customers to opt-

out of the bill control measure for roaming in the neighbouring country while retaining it for the rest of the EU/EEA. Another operator felt that, in such cases, the customer was already protected from bill shock by the single monthly price paid for the bundle. Notifications and tariff advice are already available, while technical developments are underway to give increased control over data use.

### ***Prepaid and postpaid customers***

Various operators highlighted the complexities of implementing the bill shock measure for both postpaid and prepaid customers, as these use separate billing platforms. Indeed, operators questioned the need to develop the measure for prepaid at all, as implementation costs are high, prepaid data revenues are very low, and hardly any prepaid customers ever reach €50 with data roaming. Some operators said that they had received complaints about the bill control measure from prepaid customers, who did not understand why the service was cut off and why they have to opt in again, because prepaid offers spend control in itself. Another operator said that it was too expensive to develop the measure for prepaid and, as a result, no longer offered data roaming services to prepaid customers.

### ***Groups of SIMs under the same subscription***

A further issue was raised for groups of SIMs belonging to the same subscription. The data network sees each SIM as a separate subscription. Therefore the operator applies the bill control measure to each one.

### ***Additional operator measures to address the risk of bill shock***

The following were mentioned:

- Proactively contacting customers with smartphones with auto-connect features for data, to offer appropriate products to avoid bill shocks
- Offering time-based data tariffs (e.g. per day) instead of volume based (per X MB) for better consumer understanding
- Offering an opt-in service that sends SMS notifications when the customer's expenditure reaches one of a selection of limits for all mobile communications (voice + SMS + data)
- Customers can switch off mobile data to avoid unwanted connections
- An automatic SMS notification when the customer reaches a threshold and/or end of a bundle
- Ability to check data expenditure using freephone numbers or the operator's website
- Implementing a similar notifications service for domestic data usage (no cut-off), at 80% and 100% of their data option, then at €10 and €12.50 above their chosen data option (postpaid). Prepaid customers get notifications at €10 and €12.50 expenditure.

Furthermore, AGCOM has adopted a decision requiring Italian operators to:

- 1) provide the customer with the possibility to choose among different percentages of the bundle at which he will receive an alert (e.g. at 80% or 90% or 100%);
- 2) cut off the data connection when a data bundle is exceeded (except if the customer asks

the operator not to block the service); for non-bundle subscribers, to cut off the connection when a limit of €50 /month for consumers and €150 /month for business customers is reached. The same cut-off is to be applied to roaming data traffic outside of the EU/EEA. 3) provide customers with a meter and data barring tool that can be accessed from both the SIM menu and the device menu.

One operator group said that it had adopted a new approach to data roaming tariffs from 2011. New customers and existing customers who opt-in will only be able to buy day passes for data roaming. Linear tariffs will not be available. This enables customers to avoid bill shock, as they must always opt for a new pass in order to continue data use. The group considers that any future legislation should allow for such bundles to be offered instead of the bill control measures currently described in Article 6a(3), as in the ERG Guidelines<sup>3</sup>:

*28) Some customers pay for data roaming services according to a tariff where data access is bought separately from other mobile services, paid for in advance and for a fixed, pre-defined non-recurring sum and non-recurring duration, after which the data session ends unless and until the customer gives their express consent to resume data access. These customers are automatically protected from bill shock and there is no need to make special arrangements for them. This meets the policy intention behind the Article, because consumers are unable to spend more than they have consented to before starting the connection, giving control. This exception does not apply to any data tariffs that are part fixed and part variable or that recur automatically in price and/or duration, for example a fixed sum for initial period and a variable rate thereafter, or a daily tariff that recurs until the customer withdraws their consent. A cut-off limit must be available for such tariffs.*

One operator said that it had chosen to implement the bill control measure for roaming throughout the world, and not only within the EU/EEA. A technical issue makes this system difficult to implement and maintain: not all operators send the PLMNID (MCC+MNC) in the radius request in order to identify the originating network and subsequently the correct tariff. Consequently, the anti-bill shock platform needs to recognize the SGSN IP address of many operators around the world (including EU). As we know, an IP address may change due to operational changes in each operator's network and is hard to track. PLMNID is static and is easy to track. The operator considers that communicating PLMNID in the radius request (for a data session) should be mandatory at least within EU. It has been mandatory in the 3GPP specification since 2003, but many operators choose not to support the feature due to licensing costs with their core network vendor.

One operator said that it had chosen to implement the bill control measure for roaming throughout the world and not only within the EU/EEA. To apply the appropriate data tariff, the operator needs to correctly identify the visited network when the end-user initiates a data connection. A technical issue that the operator is facing in implementing and maintaining this system is that not all visited networks submit their static network ID (known as PLMNID) when requesting authorization from the home operator. In such cases, the home operator tries to identify the visited network using a non-static address (IP address). Using a non-static address for identification creates the risk that the visited network is incorrectly

<sup>3</sup> International Roaming Regulation ERG Guidelines (09) 24 final, section 28, [http://erg.eu.int/doc/publications/erg\\_09\\_24\\_final\\_roaming\\_regulation\\_erg\\_guidelines.pdf](http://erg.eu.int/doc/publications/erg_09_24_final_roaming_regulation_erg_guidelines.pdf)

identified and the incorrect tariff is used when assessing the cut-off limit. This could lead to either the customer exceeding the bill control limit, or having their data access disconnected early. The operator considers that communicating the PLMNID in the authorisation request (for a data session) should be mandatory at least within EU. It said that this has been mandatory in the relevant mobile specification (3GPP) since 2003, but many operators choose not to support the feature due to licensing costs with their core network vendor.

Another operator expressed interest in an inter-operator agreement for faster access to TAP files, containing information on customer usage. This would enable operators to inform consumers about high usage more quickly. Another operator noted that converting information on usage into currency to apply a limit in financial terms also requires time.

**d) Please describe any proposals you have about the drafting of anti-bill shock measures in any future legislation, so that they take account of likely technical and commercial developments.**

In addition to the specific difficulties highlighted in response to the previous section, operators made some general proposals about any future legislative amendments or additions on bill control measures.

Operators highlighted the significant commercial and technical developments involved in implementing the current system. They were reluctant to see any changes that would undo the development work already undertaken. One noted that the measures in place ensure a high level of transparency and consumer protection, to the extent that any new measures would be disproportionate and unjustified. Another operator said that implementing the current measures has had a large impact on resources and has restricted its ability to innovate and offer services requested by customers. Future amendments require a good impact assessment, as all non-tariff obligations have a high impact on operations. A further operator considered that the amount of time given to implement such a large and highly complex project was far too small. It has a planned IS/IT road map on at least a 2-3 year sliding window, in which activities are scheduled on previous implementations and so on. Introducing a large and complex task such as the bill control measures less than 1 year before compliance the date completely caused a serious impact on the schedule and required the operator to postpone activities that might have been planned for years and were vital to the company's core functionality. The project took a substantial part of its development resources over 12 months. Any project of this size and scale must be given a chance to be implemented within at least 1-2 years period.

One operator argued that a better regulatory approach would be to regulate the monthly limit but to give freedom to operators about how and at what stages they notify their customers. That would have made implementation of the current requirements much simpler, and enabled approaches that are more consumer-friendly, e.g. allowing the customer to choose from a selection on notification points. In general, it would help operators and customers to take a principles-led approach by agreeing on a goal that needs to be achieved rather than regulating every technical and operational detail: operators know and understand best the specific needs of their customers.

Lastly, one operator proposed that draft legislative proposals should be shared with operators, including full MVNOs, and any technical problems raised should be taken into account.

### **3. As at 1 July 2010, had charges for roaming voicemail messages left in the customer's voicemail account been removed in line with the Regulation?**

The second additional obligation that operators must fulfil from 1 2010 is the requirement to ensure that no charge is levied when a roaming voicemail message is left in the customer's mailbox.

In the first compliance survey, 26 operators reported that they already did not charge their customers when they were left voicemail messages. Of these, one operator reported this was only true for prepaid customers, while another reported this was only true for postpaid customers. The remaining operators mostly reported that they were actively working on complying with the Regulation and expected to do so on time. A number of MVNOs responded that they were in contact with their host MNO in order to be able to comply with their obligations.

In response to the second compliance survey, nearly all operators confirmed that they had ceased to charge for voicemail messages left by 1 July 2010. One operator reported delays for technical reasons until early 2011, and said that it refunded any charges in the meantime.

However, a couple operators reported that, for technical reasons, the only way they avoided charging was to prevent a message from being left. One operator said that it sends customers an SMS with details of the missed call and the caller's number.

## **Conclusions and Next Steps**

Overall BEREC is satisfied that there is a good level of compliance with the Roaming Regulation, and that operators have undertaken timely initiatives to find technical or commercial solutions where they have encountered implementation difficulties. This has benefitted consumers throughout the EU.

BEREC members are available to provide guidance to operators on complying with the Regulation, and work together to ensure a consistent approach across the EU.

The results of BEREC's compliance surveys have informed BEREC's input to the European Commission's interim and full reviews, due in June 2010 and 2011 respectively, on the functioning of the Regulation and the future of roaming regulation in general.