Latin America

International Roaming Best Practices

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INTERNATIONAL ROAMING BEST PRACTICES

1-Summary:

At the beginning of the roaming operations in GSM, the operators focused on establishing the wholesale business entering into a number of important roaming agreements as soon as possible. They then looked to improving integration of services adding GPRS, CAMEL and finally 3G.

They also worked on developing their retail business establishing rate schemes that were more and more in accordance with customer needs, even absorbing certain risks (exchange, cost increases, etc) in order to be able to offer understandable and predictable prices to customers.

Based on the net “sender” or “receiver” position of the traffic, operators comparatively focused more on the wholesale or retail business.

On the other hand, the size and characteristics of each market imply that some operators develop roaming more extensively than others.

Most international services require investments in platforms and involve significant operating costs that cannot be justified in all cases. Smaller operators, in countries with low international traffic cannot make the investments that larger operators can make in order to provide a particular service.

Therefore it is not expected or recommendable that services and level of quality should be homogenous in all markets in the region. However, certain minimum levels should be fulfilled.

In addition, the markets in CALA are very different. There are cases of strong asymmetries and economic and social variables even between neighbouring operators that can distort international roaming services. For example the case of Venezuela-Colombia where due to exchange differences it is advantageous to cross the border and systematically purchases certain regular use assets in the neighbouring country.

The tax burden faced by roaming services is very heavy and varied, especially since there is double taxation in most of the markets in the region. This has a decisive influence on the price of services and therefore in repaying any investment.

The objective of this Position Paper is to identify the services that CALA operators should adopt depending on the particularities of the region, and also to identify what their evolution should be for the next few years.

Considering the above, it is not expected that all CALA operators will be able to achieve the same levels of quality and service and therefore this Position Paper will distinguish between different sized Operators.

Our intention is not to generate an exhaustive guide since we are aware that there are particular cases and that the roaming industry evolves very quickly. In addition international roaming has greater or lesser visibility/relevance for each operator in their commercial practices.

We will adopt the following manner of ordering and classifying the services in this Position Paper:

2. Background

The objective of the GSMA LA BARG Working Group is to encourage development of Roaming services in the region, seeking to elevate the general level to the greatest extent possible.

Along this line the Working Group has worked in the last few years on encouraging development of services tending to improve the Roaming user's experience in the region. In particular, a Position Paper has been generated on issues such as **Cross-border and Inadvertent Roaming** and on **Roaming Quality.**

In addition we worked on identifying existing barriers for deployment of tools that allow monitoring the quality of the Roaming service and a recommendation was approved regarding a model for not charging international traffic generated during those quality measurements.

As a continuation of this effort, we surveyed the region's operators to identify the Roaming services that they offer to their customers. The results are detailed in the attached file.

Encuesta de
servicios.pptx

Based on this survey and discussion held at the Working Group meetings in the framework of Plenary Meeting #36 of the GSMA LA held in El Salvador in 2011, we developed a consensus for the minimum services presented in this Position Paper.

3. Operator segmentation

Keeping in mind the different particularities of each market and type of operator we opted to segment them based on total subscribers.

Therefore the recommendation for minimum services to be offered and their evolution will be different for each of the following 3 types of operators:

- Large Size (>7 million subscribers)
- Medium Size (3 million < and < 7 million)
- Small Size (<3 million)

4.1-Communication

The region's operators have worked intensely to guarantee the transparency of customer prices and services but, due to the nature of the services and the fact that it is sporadically used, the customer frequently does not know about them.

For this reason, working on educating on international services is a priority for operators to guarantee customer satisfaction.

Generating efficient communication with consumers is a main concern to provide them with information on prices, services, coverage and on the spot offers, all in a timely manner.

Therefore the availability of information on the operator's webpage is essential and is considered to be a basic service that any operator regardless if its size should currently fulfil.

Each operator must have a section that directly addresses international roaming services. It should be divided on the basis of the two main types of roaming users, which are their own abroad and foreign ones on their network.

Logically the information to be presented in each case differs as does the language in which it should be expressed.

The websites should include prices, services and coverage in a manner that is clear and understandable to a customer that is not an expert on the service.

The most efficient communication method to date is the "SMS Welcome" which allows contacting the customer at the precise moment that he/she begins to use the roaming service.

It is considered basic for any operator to have this tool. However, larger operators will normally have more advanced versions that allow discrimination of messages sent based on the particularities of the customer (Prepaid, Pospaid, etc…).

There are other efficient methods of communication such as USSD which allow providing dynamic information to the customer without incurring significant costs. However, deployment of these tools requires greater effort and investments and they cannot be used massively in the operator's entire international coverage. Therefore, this tool is an important evolution for larger operators but is not included within minimum services that should be currently offered. Operators should however implement them during the next few years (Large Operators in 2013, Medium Operators in 2014, Small Operators in 2015).

Another way of communicating prices, services, coverage and other types of information is through wap portals. Larger operators should have already implemented them while the rest should have them before the end of 2013.

For data services it is very convenient to have captive web portal in smartphone handsets and boards in order to report to the customer on rates and plans before he/she begins to use the service. Used properly and complemented with adequate offers they can prevent cases of Bill Shock, improve customer experience, drive development of demand and in the long-term increase revenues for the operator. Keeping in mind the difficulty that this implementation implies we consider that large operators should have it active in 2014, whereas the rest should have it in the following 2 years.

Call centre calls should have a reduced rate or be free of charge in order for the customer to be able to make the call without fear of receiving a large bill. Larger operators should already have this service implemented. We suggest that medium sized operators should adopt it during 2013 whereas smaller sized operators should do so within the following year.

Wholesaler agreements that in turn eliminate inter-operator charges for these calls are also recommendable.

In the EU operators were forced to send notifications when a customer consumed more than a certain amount of Euros in Data. This type of notification is recommended to prevent "Bill Shock" and make costs foreseeable.

The generation of these customer warnings as they exceed certain consumption thresholds is still considered a very good practice that larger operators should implement before the end of 2013 whereas medium and small-sized operators should do son in successive years.

Minimum levels of service recommended for each case are explained in the tables below.

Summary:

Comunicación	Grande	Mediano	Chico
Web Roaming	In place	In place	In place
SMS Welcome	Existe	In place	In place
USSD	2013	2014	2015
WAP info	In place	2013	2013
Differential price for Customer Care calls	In place	2013	2014
Consumption thresholds Alers	2013	2014	2015
Captive Portal	2014	2016	2016

4.2-Services

It is currently not enough to have VOICE service in the main destinations, it is necessary to complete integration of services including GPRS/3G and CAMEL.

This latter service is not only interesting for Prepay customers but also for Postpay customers using the VPN functions.

Larger operators already have and extensive VOICE and DATA Footprint, and there are few destinations where they provide VOICE without providing connectivity at least through GPRS.

However, smaller operators can be delayed in their deployment of coverage due to not having the necessary resources in the past and/or due to lack of interest from their Roaming Partners. Deployment of roaming HUBs in these cases can be an adequate tool to rapidly improve international coverage.

At the end of this subsection, this Position Paper recommends a minimum number of countries covered by VOICE and a percentage of these additionally covered by DATA for each type of operator.

Currently, having CAMEL agreements is also highly important. Not only to be able to provide roaming to the prepay segment but also to improve the services provided to VPN customers. CAMEL agreements should focus first on neighbouring countries to facilitate mass segment entry to the service.

This Position Paper differentiates between 3 Roaming CAMEL service statements, i.e.:

- Basic: having a CAMEL agreement with the main country of destination (Bordering).
- Medium: having coverage in at least 10 countries.
- Advanced: having sufficient agreements to guarantee 90% coverage of potential CAMEL traffic.

In addition, Inbound CAMEL agreements are a significant way of providing differentiation for the owned network in the wholesale business.

Logically, as operators implement CAMEL Roaming agreements and extend their customer service, they should also work to make the possibility of top up available in an increasingly simple and extensive manner.

The methods for online top up with credit cards are regardless of the location of the customer and therefore a valid option which they surely already have for their local market. Therefore this mode is understood to be currently basic for all operators regardless of their size.

There are other means of top up based on the use of IVRs, sending SMS or USSD charged against a credit card. These methods are being amply used by a large part of operators therefore they are understood to be basic for larger operators and should be in the next few years also basic for medium and small operators.

In any case, they are not the only option available. There are different suppliers that allow top up through agreements that in turn they have with international or national payment chains. They integrate the operator in the payment network allowing the customer to go to any authorized point of top up and pay with cash or credit card.

This service can also be provided through direct integration between the operator and the payment chain but requires more effort and logically coverage will not be as extensive.

In any of the modes, with a supplier or a direct agreement, having top up at points of sale in the main destinations is currently an advanced stage even for large operators. However it is still advisable to progress in that sense.

Initially customers settled for a basic service abroad. They currently require high quality and transparent service. That is why operators in general, but especially the larger ones should have Virtual Home Environment (VHE) tools in order to allow the customer to make roaming calls just as if he/she were in his/her home network. To be able to make calls directly from the agenda or to short numbers without having to use international codes.

These tools, together with the Intelligent Call Assistant (ICA) can also be applied in the inbound service in order to differentiate their own network and capture an increased amount of traffic.

International SMS is a service that must be offered to the customer at a full destination country level. Offering guaranteed service only with part of the destination operators of a country is perceived as low quality by the customer who does not generally know which is the operator of the destination number and therefore perceives it as a service that frequently does not work.

On the other hand, to achieve quality service both the sending and subsequent reception of the response must be guaranteed (Full Two Ways). The service provided only one way is a source of lack of satisfaction and loss of traffic.

Implementation of Hubs is highly advantageous not only to increase destination coverage including non-GSM operators but also to help make the service reliable and guarantee the service “Full Two Ways”.

In those markets where there is Numeric Portability, ported customers often suffer by losing the guarantee of receiving international SMS since the foreign operator will provide the SMS to the customer’s original operator instead of the receiving operator after the porting.

Operators should explore and implement solutions to ensure that Ported numbers have the same level of service as the rest of the customers of the receiving operator.

This Position Paper differentiates between 3 stages of providing international SMS service, i.e.:

- Basic: Guarantee coverage for the entire country.
- Medium: Guarantee Full Two Way
- Advanced: Have enough operators with operating international SMS and Full Two Way to guarantee coverage to 90% of potential traffic.

Minimum service levels recommended for each case are explained in the tables below. We include a recommended status for 2012 and how it should evolve as of 2014.

Summary:

Estado 2012

Comunicación	Grande	Mediano	Chico
Voice Coverage	140 (indicador PAIS)	90 (indicador PAIS)	60 (indicador PAIS)
Data coverage (3G)	85%	80%	75%
Prepaid	Medio	2013 Basico	2014 Basico
TOP UP	WEB, & IVR or SMS or USSD	WEB	WEB
VHE OUTBOUND	2014	RECOMENDADO	RECOMENDADO
SMS Internacional	Medio	RECOMENDADO	RECOMENDADO

Prepago	Nivel de cobertura
Basico	Solo algun país (fronterizo)
Medio	al menos 10 paises
Avanzado	% de la cobertura de voz

SMS	Nivel de cobertura
Basico	Garantizar cobertura por Pais
Medio	Garantizar la 2 way
Avanzado	% cobertura

Evolución 2014

Comunicación	Grande	Mediano	Chico
Voice Coverage	140 (indicador PAIS)	90 (indicador PAIS)	60 (indicador PAIS)
Data coverage (3G)	85%	80%	75%
Prepaid	Avanzado	Medio	Basico
TOP UP	WEB & IVR or SMS or USSD	WEB & IVR or SMS or USSD	WEB
VHE OUTBOUND	Existente	RECOMENDADO	RECOMENDADO
SMS Internacional	Avanzado	RECOMENDADO	RECOMENDADO

4.3-Price

Initially, operators focused more on the wholesale than the retail business. They applied a mark up system to define prices to customers. In this manner they ensured a margin but offered a tariff scheme that was very hard for the customer to understand.

There were cases where customers were charged very different values for the same calls based on the time of day, network used, exchange rate with the currency of the visited country, etc…

There are even cases of high level of incoherence in operators that apply the same percentage of mark up to each network and therefore in theory obtain greater income if the customer uses the higher cost network.

In summary, the mark up scheme is not a practice that is currently recommended.

The appearance of traffic directing tools and delving into processes for negotiation of bilateral preferential agreements between the main partners accentuated the already existing need to migrate to more transparent schemes.

Larger operators today offer models of zoned prices where the network used by the customer is generally no longer relevant, only the country in which he/she is located is relevant. Likewise, they simplified their tariff schemes so that few values are necessary to explain the possible traffic scenarios.

Customers benefitted by being able to exactly predict the amounts that they would be billed.

We suggest elimination of mark up for all operators and the use of unified price schemes. We understand that Large and Medium operators should have already migrated to this scheme whereas some of the small operators still have to do so. At the end of 2013 all operators should have migrated to these schemes that are simpler and more transparent for the customer.

Based on the tax particularities of each market, prices should be published if possible at final values especially for the individuals segment.

Packs and credit offers are another good way to reduce or eliminate the service entry barrier which implies unpredictability of the expense to the customer.

Customers seem willing to pre purchase traffic if with that they limit the total expense. These packs must be easy to purchase both in the home country and when the customer is using roaming.

The sale of packs and special discount credits are very important tools to eliminate the fear of high bills. We suggest that all large operators currently include this type of offer while all medium and small operators work to be able to achieve it during the next few years.

Data service pricing is the hardest. Development of 3G and mass use of Smartphones, tablets, and dongles which consume data with different magnitudes of intensity than the traditional handsets and Blackberries leave the current models of wholesale and retail valuation obsolete.

The change to valuation models that are not so dependent on the volume of data consumed is a medium to long-term need. The region should delve into a process of dialogue and discussion on the evolution of wholesale valuation models to make development of the Roaming data service sustainable.

The region’s operators are exploring wholesale collection models with daily maximum charges per subscriber registered.

Minimum service levels recommended for each case are detailed in the tables below.

Summary:

Comunicación	Grande	Mediano	Chico
Mark Up elimination	In place	In place	2013
Unique Price per Country	In place	In place	2013
Discounts & Promotions	In place	2014	2015
Differential model for data charging	No	No	No

4.4-Quality

Guaranteeing the quality of the roaming service is practically an unending task. Large operators have hundreds of roaming agreements covering almost the entire world. In addition they have various suppliers of services and platforms that altogether compose the chain that allows them to provide international roaming services to their customers. Controlling and managing this chain from end to end is highly difficult and at times even impossible. Even more so considering that the signing of SLAs (Service Level Agreement) is not a mass practice among operators and the rest of the chain.

The change to IR21 from RAEX is welcome in order to simplify the process of updating network data. Since the GSMA offers a web tool free of charge that allows the generation of IR21 in HTML RAEX format, it is natural that all the region's operators, large or small should make use of it.

In order for this change to be advantageous, each operator must maintain an updated list of its Roaming Partners in Infocentre.

Sending AA14 in RAEX format has been mandatory for quite a while. All operators in the region should be capable of sending any update of their AA14 in that format. Although it is not mandatory, logically it is highly important that they also be capable of receiving the RAEX AA14 of its partners and interpret them.

For all operators guaranteeing the quality of the roaming service they provide to their customers is very relevant. Even more so if one takes into consideration that roamers are generally the most valuable segment that a company has. Likewise, guaranteeing the service for foreign customers that roam in their network is also fundamental to maintaining income and can result in a decisive differentiator in this market.

For the aforementioned reasons, monitoring quality through passive mediums (SS7) and active mediums (Probes, Standard GRQ) is a highly recommended practice for all operators. Clearly the necessary investments will be more easily justified for larger sized operators.

This Position Paper differentiates between 3 stages of providing quality measurement services i.e.:

- Basic: Have a passive or Active system
- Medium: Have both types of systems
- Advanced: In addition guarantee continuous testing of operators which altogether represent more than 85% of outbound.

On the other hand, to reduce barriers for the implementation of these active measurements, operators should sign agreements for the elimination or reduction of roaming cost between operators associated to traffic occurring during those tests.

The signing of these agreements should not be restricted only to those that have implemented GRQ since the measurement of the quality of roaming services is a first link in a continuous quality improvement process. It is unquestionably a benefit for all industry participants and for the end customers.

Este Position Paper differentiates between 3 stages of compliance, i.e.:

- Basic: Having signed agreements for not charging traffic involving measurement tests with 1 operator.
- Medium: Reach 10 operators with agreements for not charging for test traffic.
- Advanced: Reach an equivalent of 85% of outbound traffic.

The GSMA LA issued a Position Paper that addresses quality in Roaming and worked on a model to reduce the cost of test traffic.

Minimum levels of service recommended for each case are detailed in the following tables.

Summary:

Comunicación	Large	Medium	Small
RAEX AA14	In place	In place	In place
RAEX IR 21	In place	In place	In place
GRQ	Basic (2014 Medium)	Basic (2013)	Basic (2014)
GRQ (no charge)	Basic (2014 More than 10)	Basic (2014 More than 10)	Basic (2014 More than 10)

GRQ	
Basic	Pasive or active
Medium	Pasive + active
Advanced	High % of active coverage

GRQ no charge	
Basic	At least one Country
Medium	More than 10
Advanced	High % of coverage

4.5-Problem resolution capacity

In the resolution of a roaming service problem, having smooth dialogue with the visited network is key. Only by improving communication between the failure resolution teams can drastically limit resolution times.

Therefore, having 24x7 troubleshooting equipment is important as is the notification of a complaint due to lack of service including the minimum information necessary and essential from the first contact.

The information to be included should have the following as a minimum, if known:

-Location of the customer
-Type of Problem with the highest level of detail possible
-Idiom or text received by the customer
-If the problem occurs in a single network or in all destination networks
-Type of customer, prepay or subscription
-Handset used
-Mapping of the call
-Etc…

On the other hand, the home network should have call tracing tools to be able to rapidly identify the link of the chain of service that is causing the problem. In addition they can contribute information regarding the type of failure and accelerate resolution times in a significant manner.

Once it has been defined that the problem is caused in the visited network, sending the partner's troubleshooting team a map of the case of failure helps in an important manner to establish a more simple dialogue leading to full resolution of the problem.

This Position Paper differentiates between the 3 stages of compliance of mapping tools, i.e.:

- Basic: able to generate the case of failure and trace it online.
- Medium: be able to trace traffic already connected. Be able to trace the call of a customer that failed in previous days.
- Advanced: In addition to having a 24x7 troubleshooting team.

Minimum service levels recommended for each case are detailed in the following tables.

Summary:

2012 state and 2014 evolution:

	Large	Medium	Small
Traceos	Basic(2014 Advanced)	Medium (2014)	Basic (2014)

Traces	
Basic	Capability of generating traffic and traces
Medium	Over historic traffic
Advanced	Available 7X24hs

5-Conclusions

Operators in the region have developed the Roaming service in a notable manner. Several of them, Large, Medium and Small offer comparable (or superior in certain cases) services to operators in regions such as Europe or the USA.

Along general lines, the survey performed shows the region's good general performance.

Particularly, in the resolution of Cross-border Roaming, the region is on the leading edge, with several successful cases. Likewise, there are also many operators that are very advanced in the implementation of measurement tools and ensuring service quality. Due to the important incidence of international ByPass in the region, these tools become especially relevant.

In terms of offers tailored to the needs of customers, plans, credits and packs, the region also has operators with a high level of progress.

However, there are also operators that are relegated for various reasons. This Position Paper will help them to establish a benchmark to guide them to improve their position and achieve homogenization in the region.

Logically, the evolution of the business will imply that these proposed services must be added to or replaced by new ones during the following years.