REPORT How will CSPs achieve trust and benefit from origin based rating?

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# CSPs look to ramp up revenues with origin-based rating

Communications service providers (CSPs) have woken up to the fact they have been leaving revenue on the table by not charging termination rates based on the origin of a call. For years, CSPs had charged flat rate termination fees regardless of the call's originating country, the service provider and the type of connection used. The last decade's increased pressure on voice and data revenues has sent CSPs searching for new sources of revenue and this previously flat rate business has now been identified to have a potentially substantial upside as CSPs can charge higher revenues and even levy penalty charges if a call's origin is not clearly identified.

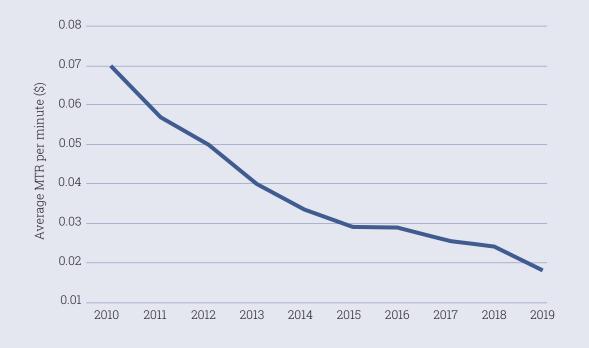
Substantial revenue is at stake from origin-based rating (OBR) but where there is opportunity, there is also the potential for fraud to be committed so trust in the caller line identification (CLID) is essential if CSPs are to accurately and fairly generate revenues from origin-based termination

OBR describes a situation in which both the origination location and the termination destination of a voice call are used to determine the amount to be billed for the call. The terminating CSP will apply a charge to the mobile termination rates (MTRs) it offers based on the call's originating country, the service provider involved and whether the call is fixed or mobile. The terminating CSP may also add an increased surcharge to the rate if CLID is not provided by the originating service provider or is inaccurately supplied. Such penalties can result in substantial increases of many times a CSP's standard termination rate. "Network operators have been charging each other fees for years for terminating calls with set rates agreed by operators," says David Estes, a solutions engineer at **iconectiv**. "What's new is the origin-based part of this charging, which replaces the historical set rate fee by taking into account where and which operator the call is actually from."

Until the adoption of OBR, CSPs had charged only a flat rate for termination so a caller using a tier-one carrier in New Zealand, for example, who called a German carrier user would result in termination fees being paid by the New Zealand carrier to the

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#### Figure 1: Falling mobile termination rates worldwide 2010-2019

Source: TeleGeography

German carrier at a set rate that didn't take into account where the call came from, which CSPs were involved or which type of line was utilised. This comfortable and simplistic approach to termination rates continued uninterrupted while the telecoms industry made substantial profits from voice calls but, as data usage started to replace voice consumption and services were increasingly provided by over-thetop (OTT) providers, CSPs have needed to find to new sources of revenue.

As **Figure 1** illustrates, CSPs have been suffering substantial reductions in the MTR they receive with per minute rates falling below two cents. These figures pre-date the pandemic and the acceleration of the move towards unified communications, further hampers the voice industry.

The situation has been placed under further pressure by industry regulators lowering rates in the EU and reduction of revenues from services such as roaming as well as EU regulation regarding MTR caps within the EU. CSPs, therefore, began to see the opportunity of applying OBR to the calls they terminate. For many, and especially CSPs that identified markets from which there is an imbalance of calls, such as Nigeria to France for example, there are significant revenues to tap into.

In markets where regulators have allowed OBR, the practice is being adopted and currently OBR is charged for in:

#### **Europe**:

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

#### **Mid-East and Africa:**

Algeria, Saudi Arabia, South Africa, Tunisia, Turkey and United Arab Emirates

The OBR model is similar to the traditional termination process but adds charges based on where the call originates. In the scenario outlined earlier, instead of paying a flat rate to the German carrier for terminating its customer's call, the New Zealand carrier has to ensure that its CLID is accurately sent out and crosses the CSP it uses for international voice and delivers the correct information to the German carrier so it can perform OBR and charge accordingly.

The situation becomes more complex if the originating CSP does not provide the correct caller ID because it allows the terminating CSP to add a surcharge. This surcharge could result in the rates charged to originator service providers to go up significantly if their calls are not delivered with caller ID. One CSP has reported potential losses of more than US\$120,000 due to OBR penalty surcharges on three million minutes originating from a single OBR destination. That figure is 30 times the margin generated on that traffic<sup>1</sup>.

#### The OBR advantage

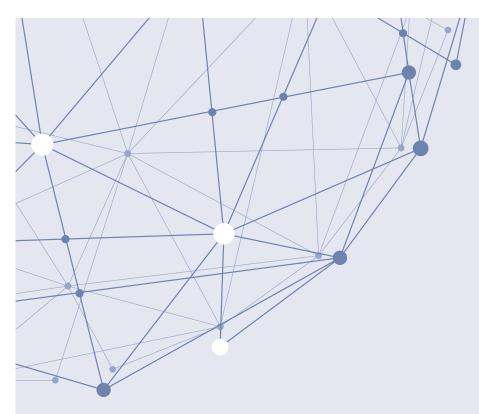
Originating CSPs have benefited for years when OBR was not used but in the converged voice and data

world this approach has become unsustainable. CSPs therefore, instead of increasing rates for all traffic across all points of origin, have focused on ensuring that originating CSPs pay the right rates for the calls that originate on their networks. This provides a level of visibility and transparency for all companies involved in the transmission of voice calls and text messages.

The additional charges for calls that do not have CallerID (CLI), or automatic numbering identification (ANI) have the potential to stimulate provision of correct identification by CSPs and to encourage originating CSPs to stamp out fraudulent usage of their networks. Preventing surcharges for incorrect CLI/ANI information may also help to reduce spoofing and fraud because the costs may become a barrier for the originating CSP that will need to pass on additional charges to its customers.

OBR can affect any network operator that originates or terminates international voice traffic. Many operators in the European Economic Area (EEA), the Middle East and Africa have introduced charges for termination rates based on the country of call origination. OBR is beneficial to the terminating CSPs because it ensures that calls are rated appropriately. For the originating CSPs, they will now have to pay for the traffic that they send instead of paying one, flat fee for all traffic, as in the past. **>** 

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#### Could surcharges outstrip revenue gains?

Originating operators need to be aware of OBR and the fees they will be charged. They, in turn, may need to renegotiate the fees they charge customers for carrying their traffic and consider implementing CLI or ANI to further contain their costs. However, although there will be some originating locations that are harder to enforce CallerID from, many operators will find that the cases in which they face surcharges in their own business are far less frequent than the cases in which they can generate additional revenues through OBR. Don't forget in most cases in global telecoms, terminators are also originators so one network operator's penalty is another's revenue. The challenge, therefore, is to ensure the call profile handled by a network operator involves it receiving more origin-rated termination revenue than it pays out in surcharges.

A straightforward way to ensure this is to adopt products that enable CLI and ANI to be assured. iconectiv's TruNumber Protect, for example, enables CSPs to utilise a global database of telephone number ranges in order to identify the originating location, the originating CSP, the type of network and the call's validity. By bringing this reliable database to CSPs, TruNumber Protect can be used to validate any worldwide telephone number range.

CSPs can now charge based on call origin and

increase their revenues. By using a call validation product, they can perform a number query and see the origination information that enables them to bill accurately, using the correct rate based on the country of origin, line type and provider. The adoption of OBR allows both originating and terminating operators to have visibility into the costs involved in sending and receiving voice calls and that will help with their operations and vendor and operator contracts. In addition, OBR will help mitigate some of the discrepancies identified in rating and provide accurate traffic data that would be needed for wholesale agreements. OBR also benefits consumers by increasing the adoption of valid CLI/ANI by CSPs. In addition, OBR helps to force CLI information to be accessible, benefiting consumers because they can identify who is calling and recognise that the call is from a genuine caller.

Having clean data, understanding the true cost for sending or terminating traffic and the benefits of including CLI/ANI data will benefit the CSPs, those whose traffic they are sending and the consumers receiving the texts and calls. The biggest question remains why have CSPs waited so long to cash-in on the potential of OBR.

To learn more about how to ensure the calls you originate or terminate can be validated, visit: **www.iconectiv.com/trunumber/protect** 



David Estes solutions engineer iconectiv

# Interview: David Estes, iconectiv

#### Why is OBR being adopted now?

There are several factors involved across global markets. If you look at the EU, industry regulations are focused on capping wholesale charges within the EU so CSPs have had to look at what they can charge for. If there's an imbalance of trade with a CSP outside the region, there's an opportunity. It can still be limited by regulations, but it gives flexibility. The focus is very much on revenue realisation.

#### What happens when voice traverses a long-distance or global CSP? How is the origin identification maintained?

This is where CSPs need to ensure they have service level agreements (SLAs) in place from their international voice transit provider. If this is a second or third tier provider that has been selected in order to reduce cost, there is a greater risk that they will have to pay the additional penalty charges for not supplying the accurate CallerID. It is up to the origin provider to work with its international service provider and use the correct method to ensure that the identification is provided in a trustworthy and accurate way.

### Do you see greater uptake of OBR resulting in increased fraud?

No, the fraud was already there and already happening with spoofing of the Caller ID. You are going to see more regulators allowing OBR to be adopted because they will get increased pressure to charge different rates to countries that are not providing Caller ID or where there's an imbalance of trade.

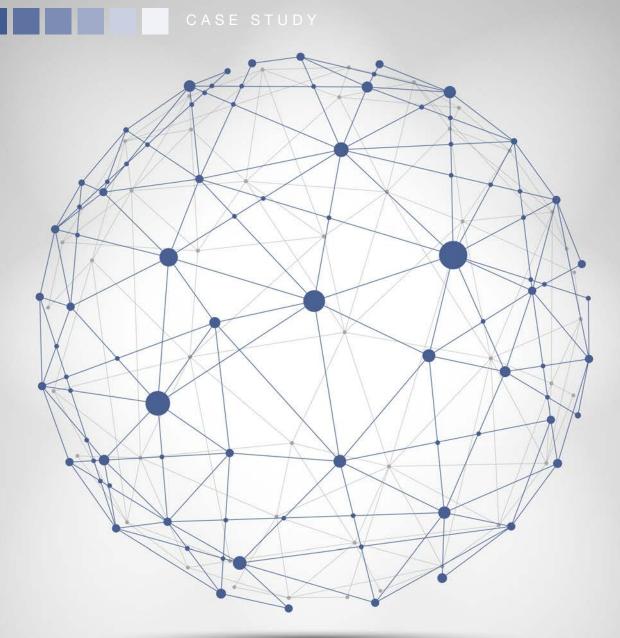
OBR may have always been considered but it hasn't been a revenue generator until recently. CSPs are coming to us and saying they need to implement OBR but they need tools and systems like iconectiv's TruNumber Protect numbering database to bring value to this OBR solution.

## How is TruNumber Protect used to assist with this new way of rating?

At its heart, TruNumber protect provides a comprehensive database of high-risk and unallocated number ranges which helps operators identify fraudulent OBR. This wealth of data enables fraudfighting vendors to help their customers pinpoint potential fraudulent calls and take immediate preventive action in real-time.

TruNumber Protect can be used to quickly identify and block fraudulent calls to and from high-risk number ranges or origin locations. It also enables the operator to obtain early warnings so they can alert fraud prevention teams about impending frauds or likely frauds based on origin – or many other fraud types. The system is forward-looking so you don't need to rely on past fraud events to stop future fraud attempts. Instead, it immediately blocks fraudulent calls including unallocated and premium rate numbers.

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# Mobile operator saves millions in battle to eradicate revenue share fraud

Revenue share fraud is one of the most significant threats to communications service provider (CSP) revenues but there are methods to fight back and eliminate threats as one CSP has discovered with its deployment of iconectiv TruNumber Protect

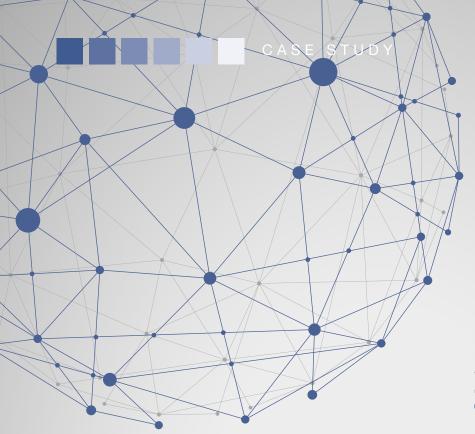
One of the largest mobile operators in Europe, which services more than 31 million customers, was facing massive losses generated by fraudulent calls to expensive premium rate and satellite numbers. The amount of organised fraud forced the CSP to severely restrict its service to roamers and it encountered significant fraud from visitors roaming onto the network.

The service provider runs one of the biggest and fastest mobile networks, with its 4G coverage reaching more than 95% of the country's

population. One of the country's largest and most advanced digital communications companies, it delivers mobile and fixed communications services and provides extensive fibre and ADSL broadband services.

The situation was compounded because business growth requires more staff to be hired and new employees may be unfamiliar with telecoms terminology and concepts. This can lead to miscommunication, operational inefficiencies and unnecessary expenses. For example, when sales **>** 

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In 2005, the company suffered substantial losses from organised fraud, where roamers visiting the country made fraudulent calls to expensive premium rate numbers

and engineering teams do not use the same nomenclature, inaccurate billing and change orders often result, undermining profitability. In the context of fraud these disconnects and miscommunications can be highly costly.

#### The fight against organised roaming fraud

In 2005, the company suffered substantial losses from organised fraud, where roamers visiting the country made fraudulent calls to expensive premium rate numbers. A few months later, it was again hit again by huge losses; this time from fraudulent calls to satellite numbers generated by subscribers roaming on one network in Italy.

The fraud incidents took place predominantly during weekends and the use of reactive, rather than proactive, fraud measures introduced a level of latency that the fraudsters could exploit. Looking for a way to stem the losses, the service provider took the drastic decision to block all roaming service on that particular network in Italy.

Turning off all roaming stopped the fraud for the time being. After that, the service provider started routing all roaming calls back to its home country, so that it could block any call that was not terminating in its home country or in Italy. While this scheme was able to stop most of the fraud losses, it had a customer experience impact. The company sought network improvements to prevent future fraud losses and ensure customer satisfaction.

## The TruNumber Protect number range database

The CSP turned to **iconectiv** and its trusted global database of number ranges. The TruNumber Protect offer includes all high-risk numbers in the world, such as premium rate and special service number ranges, as well as all unallocated numbers, which are often abused by fraudsters.

Thanks to this data, fraudulent calls can be proactively blocked and eliminated by checking each dialled number at call setup against the iconectiv database using customised applications for mobile network enhanced logic (CAMEL).

#### How to combat fraud efficiently

Deploying TruNumber Protect allowed the service provider to:

- Significantly reduce revenue share and roaming fraud with minimal customer complaints
- Achieve a payback time of three months on initial investment
- Save millions since initial deployment in 2007
- Enhance its existing fraud management system with proactive fraud prevention based on comprehensive and continuously updated global number range information

"As a customer of iconectiv's TruNumber Protect for almost a decade, we have been able to significantly reduce revenue share and roaming fraud losses by blocking fraudulent calls to high-risk revenue share and premium rate numbers," says the company's fraud strategy manager. "iconectiv's global number range database allows us to be proactive in fighting revenue share fraud."

iconectiv draws on its experience to provide trusted global numbering database and managed services that prevent revenue share fraud, SIM-box fraud and interconnection-related revenue leakage. The company frequently contributes to industry organisation that are committed to fighting telecoms fraud including the **GSMA Fraud and Security Group** and the **CFCA**. By battling in this way, revenue share fraud can be eliminated.

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