



# Revenue Leakage & Fraud Detection

Make sure your roaming revenues are not being detoured

“Fraud” - the word sounds quite exciting when it appears on a cinema billboard or a TV programme schedule but when it hits you personally, professionally, or in a corporate environment, it is much less enticing. Fraud will never be completely eliminated but, unless fraud management countermeasures are undertaken, it is unlikely that it will be reduced to a manageable level.

## SIM Box Detection

The business goal is to gradually “clean” incoming traffic terminating through SIM boxes by disconnecting all SIM Box numbers detected and to protect the network from any potential fraudulent upsurge in their use.



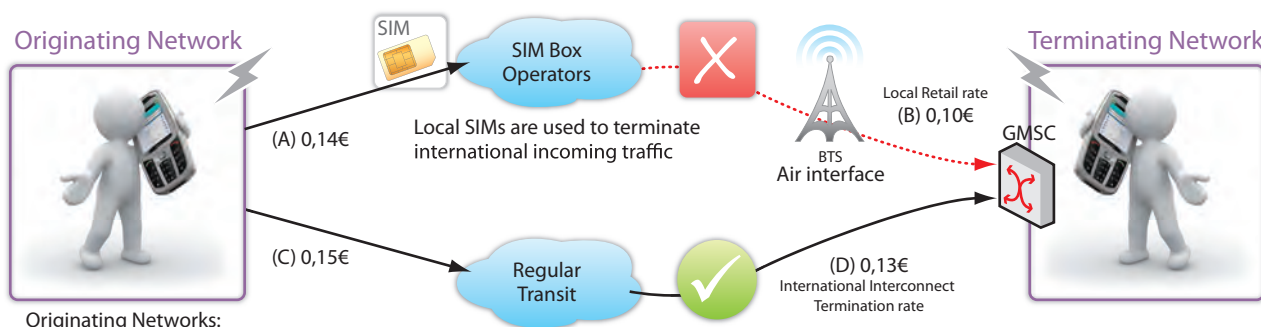
Identify leaks in your revenue stream

SIM boxes have multiple negative effects on operators, roaming hub providers and customers alike, e.g.:

- **revenue loss** due to call redirection - roaming calls are intercepted, redirected and terminated via fraudulent SIM Box equipment.
- **unnecessary investment** due to service inaccessibility as a result of SIM Boxes creating false network congestion issues revenue loss through CLI Quality Problems; immediate impact is the inability to “call back”.
- **image loss** through bad QoS as SIM Boxes often redirect calls over inadequate, highly compressed IP connections, resulting in poor voice quality. Call setup time is extended which leads to the impression of bad call quality from the home network operator.

### Fraud Bypass Detection Features:

- Reliable detection of SIM boxes
- Safeguard your revenues
- Cost-effective concept for fraud bypass detection
- Ensure first-class end user experience through quick elimination of SIM boxes
- High test density possible while avoiding network congestion



- Originating Networks:
- > PSTN
  - > Mobile
  - > VoIP
  - > Carrier Select (CS)
  - > Calling Cards



# Early Charging Detection

Get it right for your customers

A common phenomenon is the scenario of Early or False Answer during voice call setup procedures. How do you detect and fight these cases?

Calls are being charged as though connected without ever reaching the called party, or additional connection time charged. The lack of Active End-to-End monitoring has led to millions of minutes being inaccurately billed to the originating calling parties world-wide. These fraudulent billings sometimes go unnoticed because the incremental billed call duration per user may be in the fraction of seconds.

Prepaid SIMs used in GSM Gateways (SIM Boxes) could lead to false answers when the fraudulent SIM Box SIM credit has been consumed resulting in an announcement being played. In this instance the caller has to pay for the call connection leading to customer complaints and dissatisfaction with the service rendered.

Fight fraudulent charges to your customers' accounts with GlobalRoamer, the world-wide distributed test infrastructure for end-to-end testing.

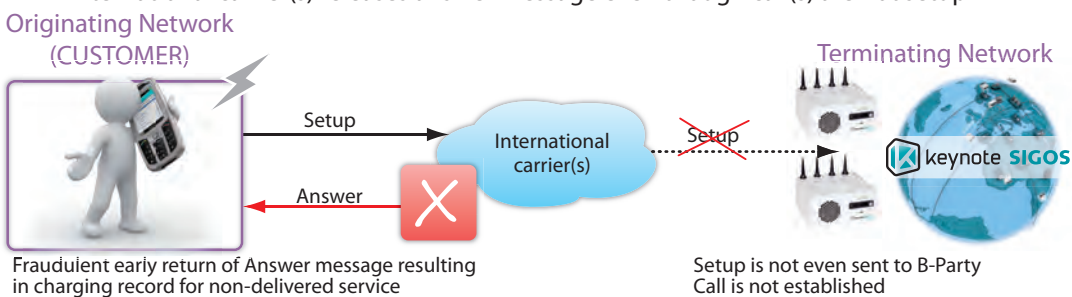
**Benefits:**

- Reduce revenue leakage caused by early charging / false answers
- Ensure billing accuracy and fight interconnect fraud
- Improve quality of calls leading to a reduction in customer complaints and dissatisfaction
- Active end-to-end monitoring ensures consistency in billing



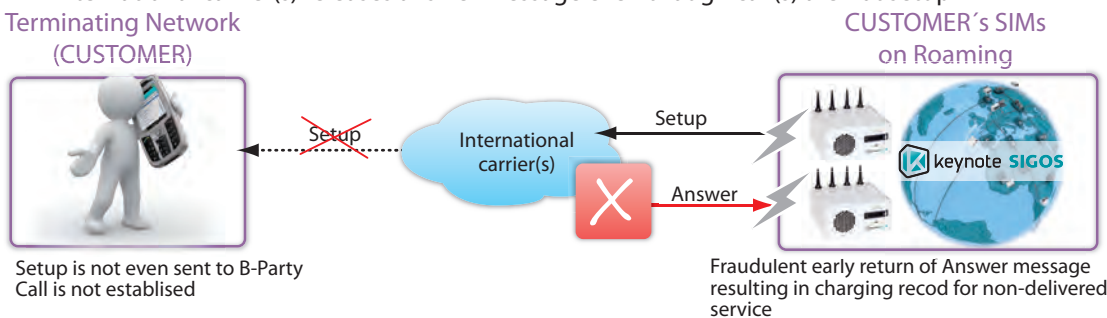
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International carrier(s) releases answer message even though call(s) are not setup



Unexpected answer on A-side detected and NO incoming setup on B-side

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