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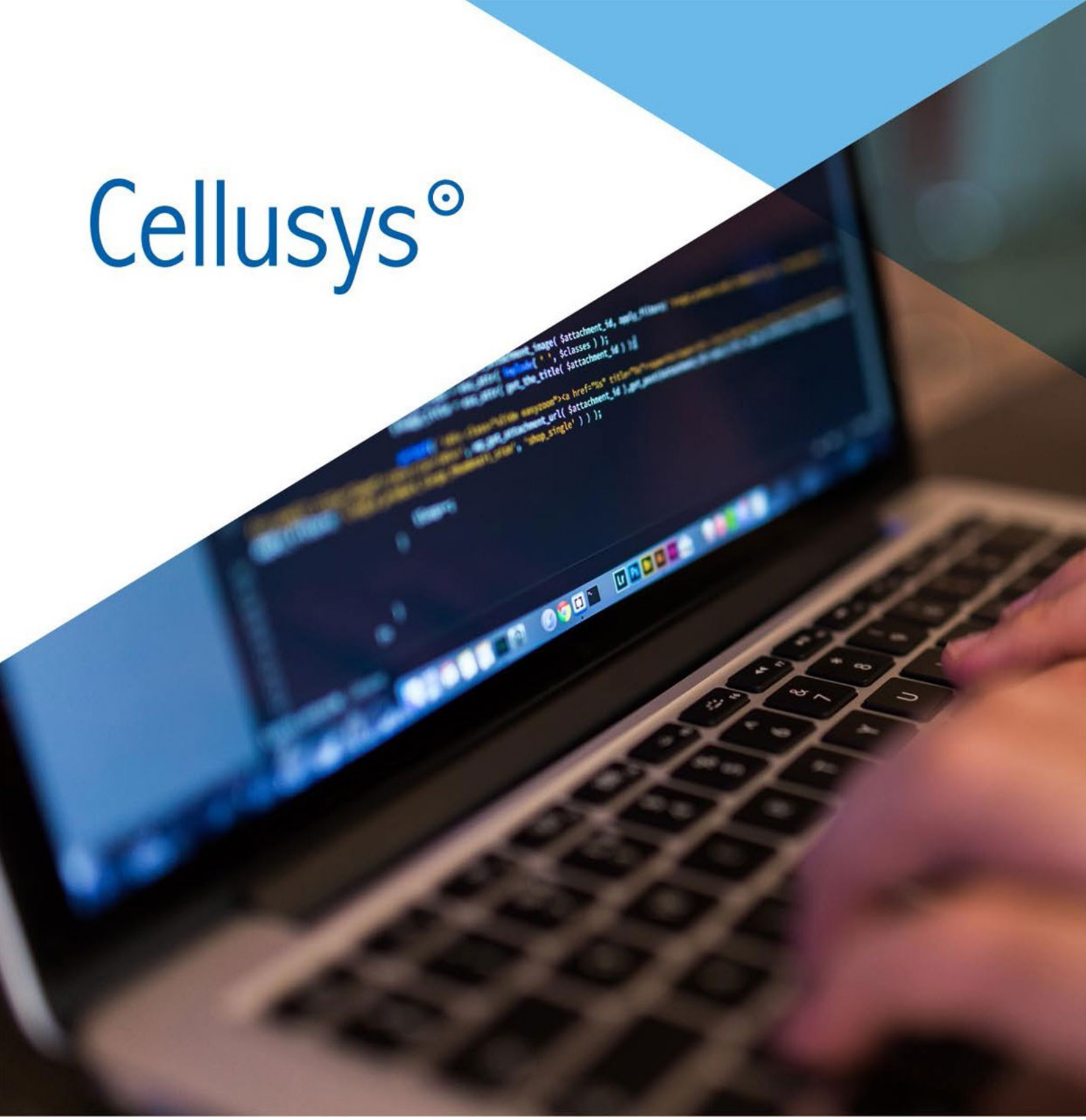


Anti-Steering Detection

Keep your outbound roamers on the network you have directed them to

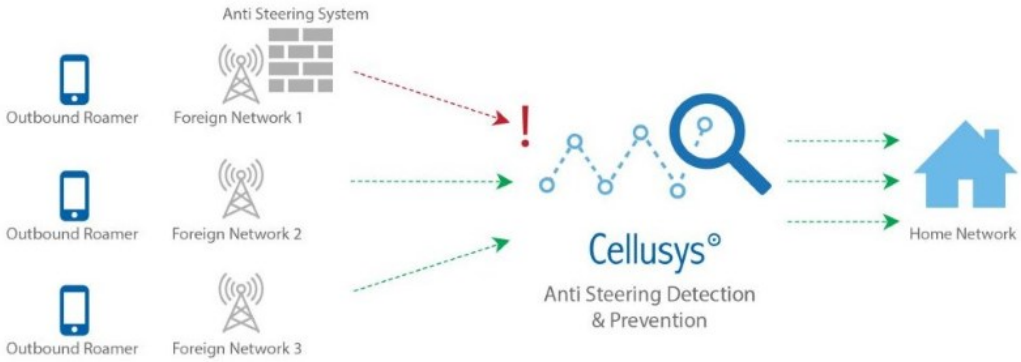
Cellusys®

Anti-Steering Detection

Cellusys Anti-Steering Detection provides Active Filtering as well as automatic and manual blocking. The Active Filtering can be updated quickly to neutralise new Anti-Steering resubmission methods. Additional Anti-Steering detection modules are released quickly to market after newly designed threats being detected. Cellusys works in co-operation with network operators in supporting them to help analyse and assess any new Anti-Steering threats.

The Challenge

Due to the significant challenges in growing roaming revenues, operators are finding new ways to capture more roamers and maintain them. Anti-Steering system enables the operators to detect and dynamically capture inbound roamers, even if their home network uses Steering of Roaming system to steer them away to the preferred network. Anti-steering system works independently from the handset and has a dynamic SS7 mechanism to overcome any steering attempt coming from the home network.



Cellusys Anti-Steering of Roaming Detection

Detects and blocks: Identifies suspected events, marks and blocks them

Provides an Anti-Steering detection reports for each operator who performs Anti-Steering to the outbound roamer.

Whole Suite of Anti Steering Detection Methods including Over The Air (OTA)

Identifies steering violators

Enacts measures to stop Anti-Steering activities

Creates event statistics per visited network: Identifies suspected events, marks and blocks them

- Records and identifies exceptional behavior
- Unusual drops or rises in traffic statistics
- Unexpected signaling

Comprehensive reports: Reporting Tool that provides in depth analysis and proof of anti-steering events with graphs and charts backed up with the individual messages that comprised this event.

Cellusys®

Anti-Steering Detection

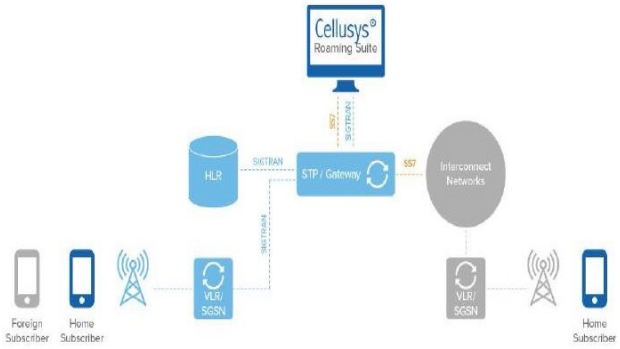
Active Prevention

The Anti-Steering of Roaming provides active prevention. This protects the existing home steering system against both signalling and Over The Air (OTA) Anti-Steering by:

-Registration Resubmission -Direct to HLR -Steering OTA Blocking -Interference in UL

Integration into your network

Cellusys Roaming Suite is engineered to integrate with the network's Signalling Transfer Points (STP) or Signaling Gateways. The system supports both traditional TDM links and SIGTRAN M2PA or M3UA links, in order to tailor the solution to the technical capabilities of your network elements.



All Cellusys solutions are designed to be very scalable. If there is a need to upgrade the system to handle higher traffic volume, this can be easily accommodated by adding further Message Processor machines to handle the load increase. Only minor configuration items are required in order to integrate these additional machines, therefore making the cost up upgrade negligible and requiring minimal effort for installation.

Benefits of Cellusys solution

Detects when a network in a visited territory has an anti steering system; enables a countering mechanism, to route your outbound roamer to the desired network.

Detects variations in numbers and patterns of update-location messages, identifying fake update-location messages – these are indicative of attempts by networks in the visited territory to retain roamers for longer than necessary.

Unique SS7 and Diameter features provide support for legacy SS7 based networks and next generation LTE/ Diameter based networks. It gives you full LTE integration, allowing anti steering detection across 2G/3G SS7 based networks and LTE/EPC Diameter based networks. Rules are developed independent of the underlying protocol thus reducing the complex changes required to support roamers on different technologies.

Cellusys

Cellusys founded in 2004 is a privately held company, based in Dublin, Ireland. It provides leading edge solutions for mobile networks including comprehensive Data Solutions, Security Solutions and Roaming Management Solutions.

Dublin, Ireland

- Research & Development
- Signalling Solution & Circuit Switched Engineering

Berlin, Germany

- Research & Development
- Mobile Broadband & Pocket Switched Solutions Engineering

Bangkok, Thailand

- Sale & Technical Support Asia Pacific

Atlanta, USA

- Sales & Technical Presales

Dubai, UAE

- Sales & Technical Presales

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