Equipment Identity Register

Enables network operators to enter the IMEI of stolen handsets into a "blacklist", thus preventing them from being registered on the network.

Overview

Mobile phone theft has become a growing problem worldwide, with hundreds of thousands of phones reported stolen each year. In many countries, GSM handset theft has become a major factor in rising street crime, particularly among young people.

A stolen GSM handset can be reused with a different subscriber's subscriber identity module (SIM) card, possibly in a different mobile network. Upon subscribing to a network and obtaining a legitimate SIM card and subscriber information, the perpetrator will initially buy an inexpensive handset and later steal a better model from another subscriber. The SIM card is then switched, the phone will function, and the network operator is unaware that a stolen handset is being used.

Product Description

Tekelec's EAGLE 5 EIR helps to deter mobile handset theft. The application enables network operators to enter the IMEI of stolen handsets into a "blacklist", thus preventing them from being registered on the network. Tekelec simplifies IMEI screening by integrating advanced database management and signaling functions directly into its EAGLE 5 platform. Tekelec's industry-proven EAGLE 5 platform is a high-capacity, multi-protocol, advanced signaling solution, which provides efficient signaling solutions in multi-vendor networks. EIR data can be provisioned in the same database as Tekelec's Number Portability (NP), or the Home Location Register (HLR) Router traffic management applications.

Benefits

- **Reduced costs.** Eliminates the operating and recurring costs associated with external databases and improves network reliability. Faster call processing. Reduces total time to screen and process calls by minimizing signaling hops
- **Integrated number portability.** Database capacity allows 30 million individual and 50,000 range entries
- **Reliability and scalability.** The EAGLE 5 platform is 99.999% reliable. The EIR

application is scalable up to 32 million database entries, with connectivity for two to 2,000 links

-   **Unparalleled performance.** Tekelec's application handles up to 75,000 EIR database queries per second.
-   **Simplified deployment.** The EIR application can be deployed with a simple upgrade to the EAGLE 5 platfor

Tekelec's EAGLE 5 EIR allows mobile operators to assign individual and/or ranges of IMEIs to white (allowed), black (blocked), or gray (track) lists. The IMEI is used to identify the actual handset, and is not dependent upon the international mobile subscriber identity (IMSI), mobile station international ISDN number (MSISDN) or the SIM, which are all subscriber-specific

The database is queried using a standard mobile application part (MAP) message to determine whether a particular handset may be used in the network.

When a subscriber roams, the handset attempts registration with the mobile switching center (MSC) and visitor location register (VLR). Tekelec's application allows the MSC to send a MAP_CHECK_IMEI query to the EAGLE 5 EIR. The EIR returns a response indicating whether the IMEI is allowed or not.