IMEI Database

The GSM Association maintains a unique system known as the IMEI Database (IMEI DB). The IMEI DB is a global central database containing basic information on serial number (IMEI) ranges of millions of 3GPP devices (GSM,3G, LTE) e.g. mobile phones, laptop data cards etc. that are in use across the world's 3GPP networks. The IMEI is a 15-digit number that is used to identify the device when it is used on a 3GPP mobile network. The IMEI must be unique for each device, so there needs to be a way of managing allocations of IMEIs to handset manufacturers to ensure that no two devices are made with the same IMEI. The GSM Association performs this role, and records a list of all of the IMEIs that it has allocated in the IMEI DB. When allocating IMEIs to a device manufacturer, the GSM Association stores some basic information associated with the IMEI. This information includes the manufacturer name and the model identifier of the associated device and some of its technical capabilities (e.g. frequency bands, Operating System, WLAN & Bluetooth capability etc.).

The GSM Association provides access to the IMEI DB to its members, the 3GPP network operators across the world, and to qualified industry parties (i.e. manufacturers of device management products). The network operators use the information in the IMEI DB to determine what types of devices are being used by their customers, and what features the device supports, so that they can offer and supply the latest services to their customers through the network.

The IMEI DB also supports what is known as a "black list". The black list is a list of IMEIs that are associated with GSM or 3G devices that should be denied service on 3GPP networks because they have been reported as lost, stolen, faulty or otherwise unsuitable for use. Previously known as the Central Equipment Identify Register (CEIR), the IMEI DB acts as a central system for network operators to share their individual black lists so that devices denied service (blacklisted) by one network will not work on other networks even if the SIM card in the device is changed.

Network operators who deploy Equipment Identity Register (EIR) in their networks use them to keep their own list of blacklisted lost or stolen phones. Operators' EIRs automatically connect to the GSMA Central Equipment Identity Register (CEIR) which is part of the IMEI DB system every day to share their latest list of blacklisted devices with other operators. Every day since 1996, the CEIR has taken the black lists from different operators around the world and added them together into one big black list. When an EIR subsequently connects to the ICEIR, it downloads the latest blacklisted IMEI for its own use. By loading the new black listed IMEI onto the own EIR, all handsets reported as stolen on all other connected networks all over the world up to the previous day are now also blocked on that network.

As 3GPP devices have become more sophisticated and more expensive, they are also unfortunately more attractive to thieves, and since about 2002, there has been an increased need for the IMEI DB to be used as a tool to combat handset theft. Many mobile operators have responded to the problem of handset theft by deploying EIRs in their networks and connecting them to the IMEI DB. At present (Nov 2014), there are in excess of 80 operators connected to the IMEI DB from the following countries:

Argentina	Denmark	Ireland	Portugal
Belgium	Ecuador	Italy	South Africa
Bolivia	El Salvador	Malta	Sweden
Canada	Finland	Mexico	United Arab Emirates
Chile	France	New Zealand	United Kingdom
Colombia	Guatemala	Norway	Uruguay
Costa Rica	Honduras	Panama	Venezuela
Cyprus	Hungary	Peru	

Media and governmental pressure in other countries, especially where handset theft is a problem, is causing many other operators to enquire about connecting to the IMEI DB. The GSM Association strongly encourages use of the IMEI DB and welcomes all of its members to connect to the system.