

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 GSM and 3G devices (e.g. mobile phones, laptop data cards) that are in use across the world's GSM networks. The IMEI is a 15-digit number that is used to identify the device when it is used on a GSM mobile phone network. The IMEI must be unique for each GSM 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 reserving IMEIs for 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 handset and some of its technical capabilities (e.g. frequency bands supported by the handset, the handset power class).

The GSM Association provides access to the IMEI DB to its members, the GSM and 3G 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 they support, so that they can offer and support the latest services to these customers through their networks.

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 GSM or 3G 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 IMEI DB system every day to share their latest lists of blacklisted devices with other operators. Every day since 1996, the IMEI DB has taken all 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 IMEI DB, it downloads the latest big black list for its own use. By loading that big black list onto the local 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 GSM and 3G 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, there are 78 operators connected to the IMEI DB from the following countries:

Belgium
Chile
Costa Rica
Cyprus
Denmark
Finland
France

Germany
Ghana
Hungary
Ireland
Italy
Malta
Norway

Portugal
South Africa
Sweden
United Kingdom
Venezuela

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.