

Electronic Serial Numbers (ESNs) Migrating to Mobile Equipment Identifiers (MEIDs)

After a five year effort by the Telecommunications Industry Association (TIA), Electronic Serial Numbers (ESNs) as well as Mobile Equipment Identifiers (MEIDs) will be seen in systems. This change could have an impact on wireless carrier networks, back-office billing and fraud systems, and roaming capabilities starting in 2006.

An ESN is a 32-bit number originally invented for AMPS that are "burned" into handsets. In addition to handset authentication, ESNs are typically used by service providers for critical applications including Billing, Fraud Detection, Inventory Management and Activation. ESNs are a global resource originally assigned by the Federal Communications Commission (FCC) and administered by TIA on behalf of the FCC since 1997. TIA continues to Administer ESN resources and is also the MEID Administrator.

As the result of the growth in the wireless industry and the shortened life cycles for handsets, available ESNs will be exhausting. With the need for more numbering resources to accommodate future subscriber growth beyond the finite ESN pool, the wireless industry developed a next-generation 56-bit MEID numbering resource. The MEIDs larger 56-bit structure should allow for enough serial numbers to last well into the future. Through global cooperation with industry bodies including the Third Generation Partnership Projects (3GPP, 3GPP2) and the formation of a Numbering Joint Experts Meeting (JEM) in April 2002, it was ensured there would be compatibility with 3G terminals for multi-technology devices (GSM, CDMA, W-CDMA, TIA-136-E).

ESN exhaust is conservatively estimated to occur as soon as the first quarter of 2006, although conservation guidelines developed by TR-45 ESN/UIM/MEID AHG, chaired by Gary Pellegrino, have been implemented by the ESN Administrator to help the industry plan for a smooth migration. The ESN assignment and MEID assignment process will be done in parallel to ensure a smooth migration from ESNs to MEIDs. Once ESNs exhaust, only MEIDs will be assigned. For more information regarding the migration, please check <http://www.tiaonline.org/standards/esn> where information on MEID is available including an MEID FAQ.

TIA is urging wireless carriers to carefully review their "back office" systems and determine how the migration to MEIDs will affect their systems. In particular, software for these systems may need to be updated and tested in advance of MEID-capable handsets being deployed. It is recommended that carriers investigate all internal uses of ESN application (Fraud, Revenue Assurance, IT, Repair & Customer Service, Network, Roaming, Service Contracts etc.). In addition carriers need to check with their infrastructure vendors for system updates that may be necessary. Carriers should also make sure that their Rating and Billing Clearinghouse vendors are MEID capable.

Carriers may contact Gary Pellegrino (gary@commflowresources.com) who is the chair of the TIA TR-45 standards group with questions or major issues they come across. The committee may be able to ask the ESN administrator to take additional steps

to conserve or reuse ESN's if a show-stopper is identified. For any other questions please contact Art Prest (prest@prest.biz).