SID Seminar

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What is a SID?

- System Identifier.
- A globally unique number that identifies a portion of a cellular system (from one cell to the entire system).
- Broadcast by base stations to identify an Analog, TDMA or CDMA system.
- Used by Mobiles, Billing Systems and other Network Elements.

Types of SID Codes

- Transmissible SID is a 15 bit identifier (0–32,767).
- BID (Billing ID) is a 16 bit identifier used to identify a system serving a cellular call.
- Every Transmissible SID is a valid BID.

Uses of SID

- Analog (AMPS) used it to identify Home vs. Roam, and for home system signaling optimizations.
- Digital mobiles maintain databases of systems to determine whether the system should be accessed. Often these are indexed by SID.
- Billing systems use SID or BID to identify the system that served a portion of a call.

IFAST Role

- Assignment of SID code ranges to countries or international entities (e.g. Satellite Carriers).
- Reclamation of un-needed SID code ranges.
- Publication of SID code range information.
- Education on SID issues, particularly to new carriers.
- Maintenance of SID assignment guidelines.

History of SID Assignment

- FCC assigned SIDs sequentially, beginning with 1, to original cellular carrier licensees.
- TIA TR-45.2 assigned ranges to every recognized country in the mid-1980's.
- National regulators took over assignment within the TIA TSB29 ranges.
- IFAST took over from TR-45.2 in 2002.

International SID Assignment

- IFAST assigns blocks of unused SID codes to countries that do not have a block, or need more codes.
- IFAST will make a tentative assignment on carrier request, as it takes a long time for regulators to set up a SID assignment system.
- IFAST does not charge for this service, as requests occur only once every few months.

National SID Assignment

- National regulatory authorities are expected to assign groups of their assigned SID codes to carriers in their country.
- Regulators request more codes from IFAST when they need them.

Current Utilization

- Of 32,766 transmissible SID codes, only 3,724 have not been assigned.
- SID utilization is 89%.
- This is not a big problem because most countries have excess codes, and SID requirements do not increase with the number of subscribers.

Major Challenges

- Need for SID code ranges in ‘new’ countries, most notably in the former Russian republics.
- Resolving SID conflicts, most notably in Brazil, where the regulator imposed SID assignments in conflict with TSB29.
- Careful management to avoid exhaust including reclamation of unused SID codes from countries.

Conclusions

- IFAST has a critical role in SID management.
- The initial allocation of the resource has now become obsolete.
- Careful management is required to avoid total exhaustion of the resource.
- SID expansion may need to be considered if SID reclamation is unsuccessful.