IFAST, IRMs and Number Portability

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IFAST

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IFAST, Ltd

- Established in 1995 as a follow-on to the Joint Committee on Cellular Roaming (JCCR).
- Coordinates and assigns International Roaming MINs (IRM) and International (and by request, National) SIDs.
- Governed by a Board of Directors.
- Membership is open to all interested bodies.

IRM SID Global Roaming
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IRM Codes

- IRM = International Roaming MIN.
- MIN (Mobile Identification Number) is used by ANSI-41 networks supporting CDMA, TDMA and AMPS.
- IRMs are:
  - Intended to provide globally unique numbering resources to voice carriers outside North America, and some specialized companies within North America.
  - Assigned by IFAST
  - Only 3,600 IRM Network Identifiers are available, and more than 50% are utilized.

Number Portability

- Ability to move a directory number from one carrier to another.
- Usually allows porting between wireless carriers, often wireline to wireless and wireless to wireline as well.

MIN versus MDN

- MIN is a fixed length, 10 digit number that identifies a CDMA, TDMA or AMPS *wireless* subscription. First few digits of MIN also identify home wireless carrier.
- MDN (Mobile Directory Number, aka ‘phone number’) varies in length from country to country.

MIN/MDN Connections

- Traditionally the North American MIN was the 10 digit form of the MDN (NPA-NXX-xxxx).
- International carriers often have an ‘algorithmic’ conversion between IRM and MDN (e.g. remove first ‘x’ digits and then prefix ‘y’ digits).

MIN/MDN Separation

- MIN/MDN Separation breaks any ties between the MIN and MDN.
- A phone can be given a new MDN without changing the MIN (e.g. due to numbering plan changes).
- A subscriber can also be given a new MIN without changing the MDN.

Benefits of Separation

- CDMA carriers that have invested in MIN/ MDN separation have found benefits for both themselves and their customers in:
  - Billing
  - Handsets
  - MSC Operations
  - Provisioning
  - and more…

Separation and Portability

- MIN/MDN Separation allows the MIN of a ported mobile to identify the HLR directly.
- MIN will have to be reprogrammed when a mobile is ported.

MNP and OTASP

- Over-the-Air Service Provisioning (OTASP) may allow the MIN of a mobile to be updated at the time of porting.
- This reduces the cost of portability and increases customer satisfaction.

Consequences of Not Separating

- Every block of MIN codes in a competing carrier's network requires a block in your network.
- If there are 3 carriers in a country, IRM requirements are tripled!

Benefits of Separation

- MIN/MDN Separation conserves IRM codes and reduces IRM fees.
- Makes network operations more efficient.
- Protects your operations against massive MIN reprogramming due to number plan changes.

MNP and IMSI

- IMSI is an alternative 15 digit Mobile Station Identifier.
- IMSI is always separate from MDN.
- IMSI can be allocated separately by each country.
- There are many more IMSIs than MINs.
- True IMSI is not yet used in CDMA.

Conclusions

- Number Portability without MIN/MDN Separation is a threat to the IRM resource.
- MIN/MDN Separation is a good solution.
- An even better solution is IMSI, but it will be several years before IMSI is implemented if all carriers were to start now.

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