Title

TR-45 UIM/ESN Ad Hoc Group Report to TR-45

Source

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Abstract

This is the TR-45 UIM/ESN Ad Hoc Group Report to the TR-45 Committee.

Recommendation

Approve the recommendations and requirements for support of IMEI or MEID as the ESN replacement for Mobile Equipment Identifier.

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Recommendation for ESN Replacement

The TR-45 UIM/ESN Ad Hoc Group provided input to the 3GPP2 MEID JEM on February 11-12, 2002. The input correspondence is attached to this report. Based on this correspondence and positive feedback, the Ad Hoc Group recommends that support for a 56-bit IMEI or MEID be developed before ESN exhaust as the long term replacement for ESN as the Mobile Equipment Identifier. Below are requirements that the Ad Hoc Group supports in order for the TR-45 Subcommittees to develop their standards to support this ESN replacement as the Mobile Equipment Identifier. This work should be completed in 18 months or less from the date of this recommendation.

Along with the requirements identified below, the TR-45 Committee should begin addressing the IMEI or MEID assignment guidelines that are used by an IMEI or MEID Administrator for the TR-45 defined wireless standards.

Requirements Submitted by TR-45 UIM/ESN AHG

A. The following are assumptions to support IMEI or MEID as the ESN replacement:

1. MS's that support IMEI or MEID shall not use ESN Code resources except as noted below.
2. The Analog air interface shall not be required to support IMEI or MEID. An MS that supports an IMEI or MEID and accesses an Analog Control Channel shall send the UIM ID or H'80ZZZZZZ as the ESN, where Z corresponds to a 24 bit hash of the IMEI or MEID.
3. The Digital Air Interfaces shall provide a mechanism to notify the MS that it supports IMEI or MEID on Digital only. This may require new messages and procedures for requesting the IMEI or MEID from the MS by the network. It is presently NOT a requirement that the IMEI or MEID be sent by the mobile station for every access.
4. The *TIA/EIA-41* standard shall define a new parameter for IMEI or MEID. If there is no requirement for sending the IMEI or MEID by the MS on every access, then new procedures for requesting the IMEI or MEID from the MS may be required.
5. For backward compatibility in *TIA/EIA-41*, a system that supports IMEI or MEID shall send the IMEI or MEID, if received from the MS. The ESN parameter received from the MS is also sent and used as the ESN input to the CAVE algorithm. ESN Manufacturer Code D'128 (H'80) is reserved for expanded ESN use and shall be used for IMEI or MEID purposes also.
6. When an MS that supports IMEI or MEID accesses a system that does not support IMEI or MEID, the MS shall send the UIM ID or H'80ZZZZZZ as the ESN, where Z corresponds to a 24 bit hash of the IMEI or MEID.
7. For backward compatibility, the MS that supports IMEI or MEID shall use the UIM ID or H'80ZZZZZZ, where Z corresponds to a 24 bit hash of the IMEI or MEID, as the ESN input to the CAVE algorithm per home carrier choice of ID.
8. The hash algorithm should be defined by the TR-45 AHAG.

B. Impacts on the Network and Third party ESN fraud prevention applications should be considered by initiating industry notification of proposals for review & comment prior to adoption.

C. If a migration path is required, it should be clearly defined and tested before adoption to mitigate any legacy system interoperability issues, e.g., hashing.

D. ESN & UIM guidelines may be amended to include any IMEI or MEID approved decisions for insight.

E. Consider any implications of an expected response from the FCC regarding the letter sent to Steven Markendorf addressing the question of reassigning ESNs effective June 2002 and Part 22 amendments.

F. Ensure that a viable ESN replacement is developed and implemented before ESN exhaust.

BUILDING GLOBAL COMMUNICATIONS

COMMITTEE CORRESPONDENCE

February 1, 2002

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via electronic mail

3GPP2 MEID JEM
February 11-12, 2002
Seattle, WA

RE: TR-45 UIM/ESN Ad Hoc Group Input to MEID JEM

Dear JEM Participants,

The TR-45 UIM/ESN Ad Hoc Group took an assignment from the TR-45 Committee to provide input to the 3GPP2 MEID JEM. Attached is a list of assumptions for MEID as a replacement for ESN as the MS equipment identification. These assumptions are provided as input to the JEM if the JEM will be considering MEID as a replacement for ESN.

Please don't hesitate to contact me (terry.watts@cingular.com or 512-372-5844) if you have any further questions.

Regards,

Terry L. Watts

Terry L. Watts
Chair, TIA TR-45 UIM/ESN Ad Hoc Group

ATT: Assumptions

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Assumptions Submitted by TR-45 UIM/ESN AHG

A. If the JEM decides to consider MEID as ESN replacement the following are assumptions to support MEID:

1. MS's that support MEID shall not use ESN Code resources except as noted below.
2. The Analog air interface shall not be required to support MEID. An MS that supports an MEID and accesses an Analog Control Channel shall send the UIM ID or H'80ZZZZZZ as the ESN, where Z corresponds to a 24 bit hash of the MEID.
3. The Digital Air Interfaces shall provide a mechanism to notify the MS that it supports MEID on Digital only. It is NOT a requirement that the MEID be sent by the mobile station for every access, unless the FCC does not change the current regulation. This may require new messages and procedures for requesting the MEID from the MS by the network.
4. The *TIA/EIA-41* standard shall define a new parameter for MEID. If there is no requirement for sending the MEID by the MS on every access, then new procedures for requesting the MEID from the MS may be required.
5. For backward compatibility in *TIA/EIA-41*, a system that supports MEID shall send the MEID, if received from the MS. The ESN parameter received from the MS is also sent and used as the ESN input to the CAVE algorithm. ESN Manufacturer Code D'128 (H'80) is reserved for expanded ESN use and shall be used for MEID purposes also.
6. When an MS that supports MEID accesses a system that does not support MEID, the MS shall send the UIM ID or H'80ZZZZZZ as the ESN, where Z corresponds to a 24 bit hash of the MEID.
7. For backward compatibility, the MS that supports MEID shall use the UIM ID or H'80ZZZZZZ, where Z corresponds to a 24 bit hash of the MEID, as the ESN input to the CAVE algorithm per home carrier choice of ID.
8. The hash algorithm should be defined by the TR-45 AHAG.

B. Impacts on the Network and Third party ESN fraud prevention applications should be considered by initiating industry notification of proposals for review & comment prior to adoption.

C. If a migration path is required, it should be clearly defined and tested before adoption to mitigate any legacy system interoperability issues, e.g., hashing.

D. ESN & UIM guidelines may be amended to include any MEID approved decisions for insight.

E. Consider any implications of an expected response from the FCC regarding the letter sent to Steven Markendorf addressing the question of reassigning ESNs effective June 2002 and Part 22 amendments.

F. Ensure that a viable ESN replacement is developed and implemented before ESN exhaust.