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3RD GENERATION PARTNERSHIP PROJECT 2 "3GPP2"

EXPANDED R-UIM NUMBERING ADMINISTRATION PROCEDURES

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1 PURPOSE AND SCOPE

This document defines administrative guidelines and procedures ("Administration Procedures" in further text) governing allocation of Expanded R-UIM Identifiers (EUIM-ID in further text) designed for use with wireless terminals compliant with cdma2000® [1]specifications.

The Administration Procedures described herein apply to two different styles of EUIM-IDs (see [4]):

- An identifier whose format is compliant with ITU-T E.118 (see [7]), hereafter referred to as Long Form EUIMID (or LF_EUIMID)
- The 56-bit identifier with format similar to MEID (see [8]), hereafter referred to as Short Form EUIMID (or SF_EUIMID)

The main purpose of these Administration Guidelines is to ensure allocation of unique R-UIM identifiers.

2 REFERENCES

The documents that are referenced herein are for the sole purpose of identifying related normative reference sources and were used in the formulation of this document. There are no direct or indirect claims regarding the property rights, legal, or regulatory status of those documents listed.

[1] ISO/IEC 7812-1	Identification cards -- Identification of issuers -- Part 1: Numbering system
[2] ITU-T E.164	The International Public Telecommunication Numbering Plan
[3] SC.R4002	Mobile Equipment Identifier (MEID) Assignment Guidelines and Procedures
[4] S.R0111	Expanded R-UIM Identifier Stage 1
[5] X.S0008	Support for the Mobile Equipment Identity (MEID)
[6] SC.R4001	Global Wireless Equipment Numbering Administration Procedures
[7] ITU-T E.118	The International Telecommunication Charge Card
[8] S.R0048	Mobile Equipment Identity (MEID)
[9] S.R0034-0	User Identification Module ID Manufacturer's Code Assignment Guidelines and Procedures

3 NOTATION

The following notational conventions are used in this document:

[1] cdma2000® is the trademark for the technical nomenclature for certain specifications and standards of the Organizational Partners (OPs) of 3GPP2. Geographically (and as of the date of publication), cdma2000® is a registered trademark of the Telecommunications Industry Association (TIA-USA) in the United States.

Hexadecimal notation is typically used to designate values of EUIM-ID digits, e.g., 0xA signifies decimal 10, or binary '1010'. Preamble 0x is used to designate hexadecimal notation. Single quotes (') is used to designate binary notation.

The ordered sequence of EUIMID digits is designated as $[D_x \ldots D_y]$, where y is a decimal value.

A range of values is designated as $\{V_{MIN} \ldots V_{MAX}\}$.

4 LONG FORM EUIM-ID ADMINISTRATION PROCEDURES

The Long Form EUIMID (LF_EUIMID) is a telecommunications charge card number defined in full in [7]. Its format is as shown in Figure 1.

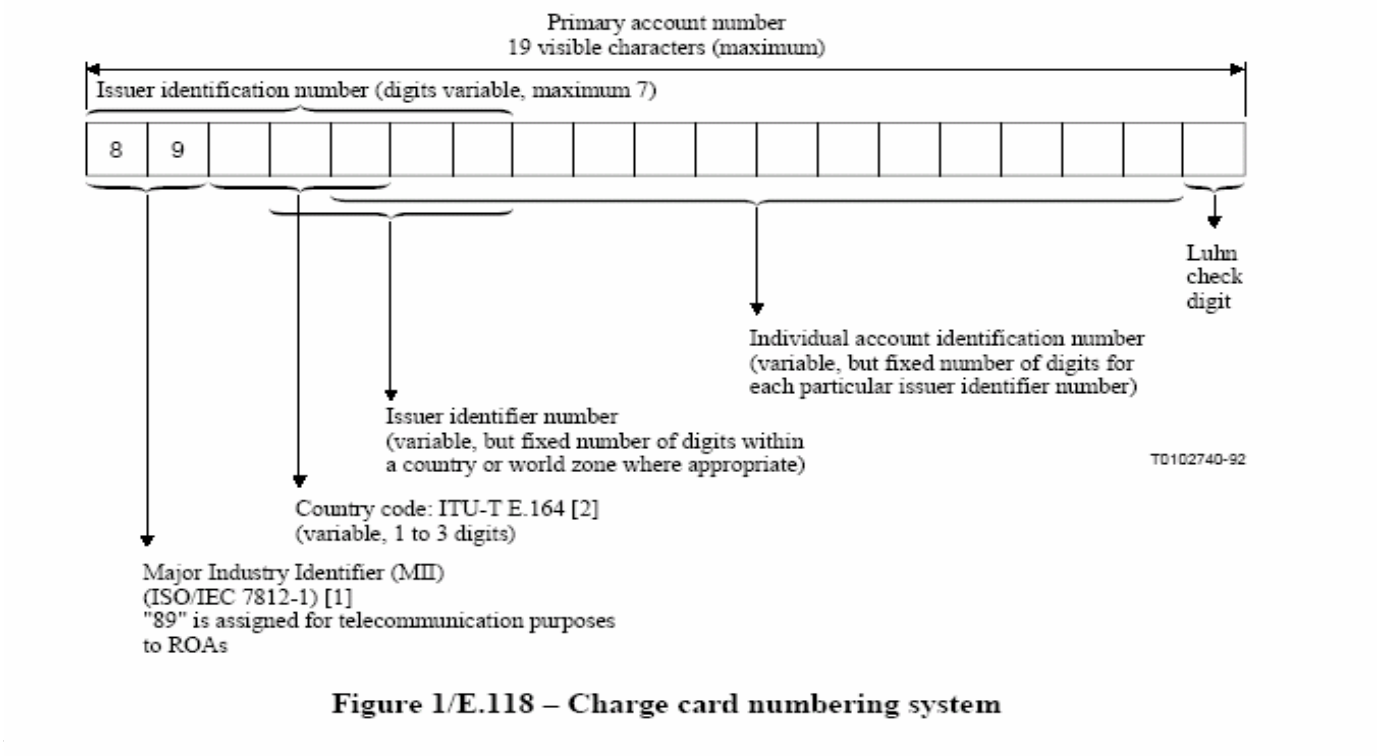

Figure 1/E.118 – Charge card numbering system

Figure 1: LF_EUIMID Format

Note: Referring to Figure 1, in subsequent text, the ordinal digits in the E.118 format are numbered D1 through D19 starting from the left-hand side.

4.1 The LF_EUIMID format shall be per ITU-T E.118, as shown in Figure 1. Each digit shall be in BCD format, assuming binary values in the range {'0000'..'1001'} (hexadecimal values (0x0..0x9)). The LF_EUIMID shall always be 18 digits in length (19 when the check digit is included)

4.2 Digits [D1 .. D2] of the LF_EUIMID are used as Major Industry Identifier (MII), and shall be assigned the value of 0x89, designating R-UIM for telecommunication purposes

4.3 Digits [D3], or [D3 .. D4], or [D3 .. D5], as appropriate, of the LF_EUIMID shall be assigned the value corresponding to the Country Code (see [2]) of the country where the wireless operator distributes the R-UIM for use on its network.

4.4 As depicted in Figure 1, if the mobile network is in a country or world zone with a single digit Country Code (e.g. "1" for the countries of the North American Numbering Plan), then the Issuer Identifier digit(s) shall be placed starting from [D4], with a maximum length of 4 digits up to [D7]. If the mobile network is in a country with a 2-digit Country Code (e.g. "86" for China), then the Issuer Identifier digit(s) shall be placed starting from [D5], with a maximum length of 3 digits up to [D7]. If the mobile network is in a country with a 3-digit Country Code (e.g. "855" for Cambodia), then digits [D6 .. D7], or digit [D6] alone, shall be used for Issuer Identifier.

Note: There can be up to 10,000 Issuer Identifiers in each of the single-digit Country Code countries or world zones, up to 1,000 Issuer Identifiers in each of the two-digit Country Code countries, and up to 100 Issuer Identifiers in each of the 3-digit Country Code countries.

4.5 There may be one or more Issuer Identifiers assigned to a wireless network operator in a given country.

4.6 A unique combination of "issuer identification number" and "individual account identification number" digits shall be assigned to each R-UIM distributed by the wireless operator for use in its network..

Note: There can be up to 10^{11} (100 billion) LF_EUIMID values for each Issuer Identifier Number that consumes digits up to D7. Additional LF_UIMID capacity can be added in increments of 10-fold for each digit unused by the Issuer Identifier.

4.7 The "individual account identification number" portion of the LF_EUIMIDs shall be managed in an autonomous fashion by each wireless network operator that distributes R-UIMs to subscribers for use on that operator's network.

4.8 Digit D_{19} of the LF_EUIMID shall be the check digit computed using the Luhn algorithm (see Reference [1], Annex B).

4.9 Each wireless network operator planning to deploy R-UIMs must first register an Issuer Identifier (see Section 4.5) with the applicable

administration authority in the country where it operates (See [7] Section 2.2). This registration shall be accomplished by filing the form F1 (See Annex A) with ITU-T.

5 SHORT FORM EUIM-ID ADMINISTRATION PROCEDURES

The Short Form EUIMID (SF_EUIMID) format is as shown in Figure 2.

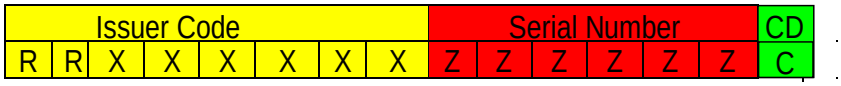

Figure 2: SF_EUIMID Format

Note: Referring to Figure 2, in subsequent text, the ordinal digits in the SF_EUIMID format are numbered D_1 through D_{14} starting from the left-hand side. The check digit may be referred to as D_{15}.

5.1 The format of SF_EUIMID shall be similar to MEID described in Reference [8], as shown in Figure 2. The SF_EUIMID shall consist of 14-digit (56 bits). The first SF_EUIMID digit shall be in hexadecimal format and it may assume a binary value in the range of '1010' to '1111' (hexadecimal value of 0xA to 0xF). Other digits shall be in hexadecimal format, assuming binary values '0000' through '1111', which corresponds to hexadecimal values 0x0 to 0xF.

5.2 SF_EUIMIDs shall be managed in a centralized fashion by MEID Global Hexadecimal Administrator, in accordance with Reference [3].

5.2a The Issuer Code is an MEID Manufacturer Code [3] assigned to a manufacturer of R-UIMs rather than a manufacturer of MEs.

5.2b Issuer Code ranges may be allocated from MEID RR code ranges that also contain ME Manufacturer Codes (note: SF_EUIMID shall use RR=A0-FF regardless if it is a CDMA only or GSM+CDMA card).

5.2c A R-UIM vendor may subdivide an Issuer Code among network operators, but all SF_EUIMIDs associated with it must be used as E-UIMIDs (i.e. none can be used as MEIDs for MEs).

5.3 An Issuer Code shall be assigned by GHA upon receipt of a legitimate request from the Issuer (based on the GHA guidelines [3]) which asserts that the R-UIMs containing these values will be used in compliance with [3] and deployed within one year.

5.4 No combination of “Issuer Code” and “Serial Number” shall be assigned as SF_EUIMID to more than one R-UIM.

5.5 Digit D15 of the SF_EUIMID (not transmitted over the air) shall be the check digit computed using the modified Luhn algorithm described in Reference [5].

5.6 Forms for allocation of SF_EUIMID are defined in Reference [3].

ANNEX A – ISSUER REGISTRATION FORM F1

Registration Form for Issuer Identifier Number – International Telecommunication Charge Card (LF_EUIMID)

Please return along with registration fee to:

International Telecommunication Union
Telecommunication Standards Bureau
Place des Nations
CH – 1211 Geneve 20
Switzerland
Fax: +41 22 730 5853

A: Applicant (Card Issuer) to complete:

Name of Organization		
Registration Address (2 lines max, 30 chars per line)		
Contact Person Name		
Phone	E-mail	Fax
Correspondence Address		
Effective Date (Assignment or Cancellation)		
Date	Signature	

B: To be completed and approved by the telecommunications administration of duly authorized coordination organization

a) Action Requested (check one): □ Registration □ Cancellation

b) Major Industry Identifier (MII): 89

c) Country Code (CC) _____

d) Issuer Identifier Number (per ITU-T Recommendation E.118): _____

Name of approving Organization	
Date	Signature

C: To be completed by ITU (Central Registration Authority):

Issuer Identification Number registered or cancelled **8** **9**	Date:

ANNEX B - GLOSSARY AND LIST OF ACRONYMS AND ABBREVIATIONS

BCD	Binary Coded Decimal
EUIMID	Expanded (Removable) User Identity Module Identifier
IEC	International …
ISO	International Standardization Organization
ITU	International Telecommunication Union
ITU-R	International Telecommunication Union – Radio Sector
ITU-T	International Telecommunication Union – Telecom Sector
LF	Long Form
MEID	Mobile Equipment Identity
MII	Major Industry Identifier (first two digits of ICCID format)
R-UIM	Removable User Identity Module
SDO	Standards Development Organization
SF	Short Form

REVISION HISTORY

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Version 1.0	May 17,2007	Initial Publication