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3RD GENERATION PARTNERSHIP PROJECT 2 "3GPP2"

Mobile Station Equipment Identifier (MEID) Support for cdma2000 Spread Spectrum Systems

Revision 0

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FOREWORD

(This foreword is not part of this Standard)

This Standard was prepared by Technical Specification Group C of the Third Generation Partnership Project 2 (3GPP2). This Standard contains the air interface requirements for implementing Mobile Station Equipment Identifier (MEID) & enhanced Public Long Code Mask (PLCM) features in a cdma2000®[1] Revision 0, Revision A, Revision B, and Revision C mobile station and base station.

Other specifications are required to complete the air interface and the rest of the system. Some of these specifications are listed in the References section.

This Standard consists of the following sections:

1. General. This section defines the acronyms and terms used in this document.

2. Air Interface Requirements. This section describes the air interface requirements for implementing MEID & enhanced PLCM features in a Revision 0 [3], Revision A [4], Revision B [5], and Revision C [6] mobile station and base station.

[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.

No text.

NOTES

1. Compatibility, as used in connection with this Standard, is understood to mean: Any mobile station is able to place and receive calls. Conversely all base stations are able to place and receive calls for any mobile station.
2. Those wishing to deploy systems compliant with this standard should also take notice of the requirement to be compliant with the applicable rules and regulations of local administrations.
3. "Base station" refers to the functions performed on the land side, which are typically distributed among a cell, a sector of a cell, and a mobile switching center.
4. "Shall" and "shall not" identify requirements to be followed strictly to conform to the standard and from which no deviation is permitted. "Should" and "should not" indicate that one of several possibilities is recommended as particularly suitable, without mentioning or excluding others, that a certain course of action is preferred but not necessarily required, or that (in the negative form) a certain possibility or course of action is discouraged but not prohibited. "May" and "need not" indicate a course of action permissible within the limits of the standard. "Can" and "cannot" are used for statements of possibility and capability, whether material, physical, or causal.
5. Footnotes appear at various points in this Standard to elaborate and further clarify items discussed in the body of the Standard.
6. Unless indicated otherwise, this Standard presents numbers in decimal form. Binary numbers are distinguished in the text by the use of single quotation marks.
7. Each mobile station is assigned either a single unique 32-bit binary serial number (ESN) or a single unique 56-bit binary serial number (MEID) that cannot be changed by the subscriber without rendering the mobile station inoperative.
8. Certain fields in the Tables included in this Standard are highlighted with a different background. This indicates that these fields are set differently in this standard than in the cdma2000® family of standards where they are defined.
9. The following operators define mathematical operations:

   $\times$ indicates multiplication.

   $\lfloor x \rfloor$ indicates the largest integer less than or equal to x: $\lfloor 1.1 \rfloor = 1, \lfloor 1.0 \rfloor = 1$.

   $\lceil x \rceil$ indicates the smallest integer greater or equal to x: $\lceil 1.1 \rceil = 2, \lceil 2.0 \rceil = 2$.

   $|x|$ indicates the absolute value of x: $|-17| = 17, |17| = 17$.

   $\oplus$ indicates exclusive OR (modulo-2 addition).

   min (x, y) indicates the minimum of x and y.

   max (x, y) indicates the maximum of x and y.

   x mod y indicates the remainder after dividing x by y: $x \bmod y = x - (y \times \lfloor x/y \rfloor)$.

   weight(x) indicates the number of '1's in the binary representation of x.

NOTES

>> indicates binary right shift operation.

<< indicates binary left shift operation.

10. The following indentation is advised:

No indentation

- bullet 1
  - bullet 2
    + bullet 3.
      o bullet 4.
        ◊ bullet 5.
          – bullet 6.
            + bullet 7.

REFERENCES

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

1. C.S0004, *Signaling Link Access Control (LAC) Standard for cdma2000 Spread Spectrum Systems*.
2. C.S0005, *Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems*
3. C.S0005-0-2 v1.0, *Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems - Release 0, Addendum 2. May 2001*
4. C.S0005-A v6.0, *Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems - Release A, Addendum 2, February 2002*
5. C.S0005-B v1.0, *Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems - Release B, April 2002*
6. C.S0005-C v2.0, *Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems - Revision C, Addendum 1, August 2004*
7. C.S0005-D v1.0, *Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems - Release D, March 2004*
8. C.S0066-0 v1.0, *Over-the-Air Service Provisioning for MEID-Equipped Mobile Stations in Spread Spectrum Systems, September 2004*
9. C.S0016-C v1.0, *Over-the-Air Service Provisioning of Mobile Stations in Spread Spectrum Systems, November 2004*
10. FIPS 180-1, *National Institute of Standards and Technology, FIPS 180-1, "Secure Hash Standard," April 17, 1995*

No text.

1 GENERAL

1.1 Acronyms and Abbreviations

CDMA. Code Division Multiple Access

ECAM. Extended Channel Assignment Message

ESN. Electronic Serial Number

IMSI. International Mobile Subscriber Identity

PLCM. Public Long Code Mask

MCC. Mobile Country Code

MNC. Mobile Network Code

MEID. Mobile Station Equipment Identifier

MECAM. MEID Extended Channel Assignment Message

MUHDM. MEID Universal Handoff Direction Message

OTASP. Over-the-Air Service Provisioning

SCM. Station Class Mark

SHA-1. Secured Hash Algorithm

UHDM. Universal Handoff Direction Message

1.2 Terms

Base Station. A fixed station used for communicating with mobile stations. Depending upon the context, the term base station may refer to a cell, a sector within a cell, an MSC, or other part of the wireless system.

Code Division Multiple Access (CDMA). A technique for spread-spectrum multiple-access digital communications that creates channels through the use of unique code sequences.

Electronic Serial Number (ESN). A 32-bit number assigned by the mobile station manufacturer, uniquely identifying the mobile station equipment.

IMSI_M. MIN-based IMSI using the lower 10 digits to store the MIN.

IMSI_O. Operational value of IMSI used by the mobile station for operation with the base station.

IMSI_T. True IMSI not associated with MIN. This could be 15 digits or fewer.

International Mobile Subscriber Identity (IMSI). A method of identifying stations in the land mobile service.

Mobile Country Code (MCC). A part of the E.212 IMSI identifying the home country.

Mobile Equipment Identifier (MEID). A 56-bit number assigned by the mobile station manufacturer, uniquely identifying the mobile station equipment.

Mobile Network Code (MNC). A part of the E.212 IMSI identifying the home network within the home country.

Mobile Station. A station in the Public Wireless Radio Telecommunications Service intended to be used while in motion or during halts at unspecified points. Mobile stations include portable units (e.g., hand-held personal units) and units installed in vehicles. The mobile station consists of two parts – ME and UIM.

P_REV_IN_USE. Protocol revision level currently in use by the mobile station. It is the minimum of the mobile station protocol revision and the base station protocol revision.

Private Long Code Mask. The long code mask used to form the private long code. See also Public Long Code Mask.

Pseudo-ESN. A 32 bit number derived from MEID and used in place of ESN.

Public Long Code. The long code characterized by the public long code mask.

Public Long Code Mask. The long code mask used to form the public long code. The mask can contain a permutation of the mobile station's ESN, or the particular mask specified by the base station. See also Private Long Code Mask.

Secured Hash Algorithm (SHA-1). A secured hashing function that computes a message digest.

Station Class Mark (SCM). An identification of certain characteristics of the mobile station.

1.3 Numeric Information

Numeric information is used to describe the operation of the mobile station. The following subscripts are used to clarify the use of the numeric information:

- "s" indicates a value stored in the mobile station's temporary memory.
- "sv" indicates a stored value that varies as the mobile station processes various tasks.
- "sl" indicates the stored limits on values that vary.
- "r" indicates a value received by the mobile station over a forward analog control channel or a CDMA Forward Channel.
- "p" indicates a value set in the mobile station's permanent security and identification memory.
- "s-p" indicates a value stored in the mobile station's semi-permanent security and identification memory.

2 AIR INTERFACE REQUIREMENTS

This section provides the air interface requirements for implementing MEID & enhanced PLCM features in a Revision 0 [3], Revision A [4], Revision B [5], or Revision C [6] mobile station and base station.

The mobile station requirements are specified in section 2.1. A Revision 0, Revision A, Revision B, or Revision C mobile station configured with an MEID shall comply with the requirements in section 2.1. A Revision D [7] and above mobile station shall comply with requirements in section 2.1 to maintain backwards compatibility with a pre-Revision D base station implementing MEID.

The base station requirements are specified in section 2.2. A Revision 0, Revision A, Revision B, or Revision C base station implementing MEID support shall comply with requirements in section 2.2. A Revision D [7] and above base station shall comply with requirements in section 2.2 to maintain backwards compatibility with pre-Revision D mobile station implementing MEID.

2.1 Mobile Station Requirements

2.1.1 MEID and ESN

The mobile station shall be configured with a 56-bit MEID. MEID is used to uniquely identify the mobile station in a wireless system. The MEID value is available to procedures in the mobile station as the value of the variable $MEID_p$ (see Table 2.1.1-1, corresponding to Table F.2.1-1 of [7]). The mobile station shall store a 32-bit pseudo-ESN value, derived from MEID as defined in 2.1.1.1, in ESN_p.

Table 2.1.1-1. Permanent Mobile Station Indicators

Indicator	Number of Bits
ESN_p	32
$MEID_p$	56
SCM_p	8
$SLOT_CYCLE_INDEX_p$	4
$MOB_FIRM_REV_p$	16
MOB_MODEL_p	8
$MOB_MFG_CODE_p$	8
For each band class supported:	
$MOB_P_REV_p$	8

2.1.1.1 Pseudo-ESN

Pseudo-ESN is a 32-bit identifier derived from MEID.

The mobile station shall use the following procedure to derive pseudo-ESN from MEID[2]:

1. The upper 8 bits of pseudo-ESN shall be set to 0x80.
2. The lower 24 bits of pseudo-ESN shall be the 24 least significant bits of the SHA-1 digest of the MEID. See [10] for the specification of the SHA-1 algorithm.

2.1.2 Setting of the Station Class Mark field

The 8-bit Station Class Mark (SCM) field is transmitted in the *Registration Message*, *Origination Message*, *Page Response Message*, and *Terminal Information* information record [2]. Station Class Mark is defined as shown in Table 2.1.2-1 (corresponding to Table 2.3.3-1 of [7]). The mobile station shall set bit 4 (MEID support indicator) of the Station Class Mark field to '1' in the *Registration Message*, *Origination Message*, *Page Response Message*, and *Terminal Information* information record.

[2] Example: if the 56-bit MEID is (hexadecimal) FF 00 00 01 12 34 56, the pseudo-ESN is (hexadecimal) 80 07 37 E1.

Table 2.1.2-1. Station Class Mark

Function	Bit(s)	Setting	
Extended SCM Indicator	7	Band Classes 1,4 Other bands	1XXXXXXX 0XXXXXXX
Dual Mode	6	CDMA Only Dual Mode	X0XXXXXX X1XXXXXX
Slotted Class	5	Non-Slotted Slotted	XX0XXXXX XX1XXXXX
MEID support indicator[3]	4	MEID not configured MEID configured	XXX0XXXX XXX1XXXX
25 MHz Bandwidth	3	Always 1	XXXX1XXX
Transmission	2	Continuous Discontinuous	XXXXX0XX XXXXX1XX
Power Class for Band Class 0 Analog Operation	1 – 0	Class I Class II Class III Reserved	XXXXXX00 XXXXXX01 XXXXXX10 XXXXXX11

2.1.3 Information Records

The MEID information record in Table 2.1.3-1 (corresponding to Table 2.7.4-1 of [7]) can be requested by the base station in *Status Request Message*, and is transmitted by the mobile station in *Status Response Message* or *Extended Status Response Message*.

Table 2.1.3-1. Information Record Types

Information Record	Record Type (binary)	QUAL_INFO_ TYPE (binary)	Message Type	r-csch	r-dsch
MEID	00100111	00000000	Status [1]	Y	Y
[1] This information record may be included in a *Status Response Message* or an *Extended Status Response Message.*					

The mobile station shall support the MEID information record type as shown in Table 2.1.3-1. The MEID information record can be included in a *Status Response Message* or an *Extended Status Response Message* to return the mobile station MEID. Type-specific

[3] The corresponding bit '4' is currently defined in [2] as the IS-54 Power Class which is always set to '0'. The base station uses this field to identify mobile stations that comply with this specification.

fields of MEID information record are defined below (corresponding to Section 2.7.4.38 in [7]):

Type-Specific Field	Length (bits)
MEID_LEN	4
MEID	8 x MEID_LEN
RESERVED	0 - 7 (as needed)

MEID_LEN – The length of the mobile station's Mobile Equipment Identifier.

The mobile station shall set this field to the length, in units of octets, of its Mobile Equipment Identifier.

MEID – Mobile Equipment Identifier.

The mobile station shall set this field to $MEID_P$.

RESERVED - Reserved bits for octet alignment.

The mobile station shall add the minimum number of bits necessary to make the record length in bits an integral multiple of 8. The mobile station shall set these bits to '0'.

2.1.4 Public Long Code Mask Type

The mobile station shall support the following public long code mask types (as defined in Table 2.2.1.4-1 and described in section 2.1.4.1):

- PLCM derived from ESN.
- PLCM specified by the base station.
- PLCM derived from IMSI_O_S when IMSI_O is derived from IMSI_M.
- PLCM derived from IMSI_O_S when IMSI_O is derived from IMSI_T.
- PLCM derived from MEID.

The mobile station shall initialize $PLCM_TYPE_S$ when entering *Page Response Substate* or *Mobile Station Origination Attempt Substate* as follows:

- If $P_REV_IN_USE_S$ is less than 11, set $PLCM_TYPE_S$ to '0000'; otherwise set $PLCM_TYPE_S$ as described in [7].

2.1.4.1 Public Long Code Mask Formats

The PLCM formats described below are exactly as in [7].

The 42 bit Public Long Code Mask PLCM_42 is generated using PLCM_37 or PLCM_40 as defined in section 2.1.4.1.1 where the least significant bits PLCM_37 or PLCM_40 are set as defined in this section below.

If $PLCM_TYPE_S$ is equal to '0000', the 37 least significant bits (PLCM_37) are set as follows:

- Bits M36 through M32 shall be set to '11000';
- Bits M31 through M0 shall be set to a permutation of the mobile station's ESN as follows:

ESN = (E_{31}, E_{30}, E_{29}, E_{28}, E_{27}, E_{26}, E_{25}, . . . E_2, E_1, E_0)

Permuted ESN = (E_0, E_{31}, E_{22}, E_{13}, E_4, E_{26}, E_{17}, E_8, E_{30}, E_{21}, E_{12}, E_3, E_{25}, E_{16}, E_7, E_{29}, E_{20}, E_{11}, E_2, E_{24}, E_{15}, E_6, E_{28}, E_{19}, E_{10}, E_1, E_{23}, E_{14}, E_5, E_{27}, E_{18}, E_9).

If $PLCM_TYPE_S$ is equal to '0001', the 40 least significant bits (PLCM_40) are set as follows:

- Bit M_{39} shall be set to '1';
- Bits M_{38} through M_0 of the public long code mask shall be specified by $PLCM_39_S$ and shall be set as follows:

$PLCM_39_S$ = (P_{38}, P_{37}, P_{36}, P_{35}, P_{34}, P_{33}, P_{32}, . . . P_2, P_1, P_0)

If $PLCM_TYPE_S$ is equal to '0010', the 37 least significant bits (PLCM_37) are set as follows:

- Bits M_{36} through M_{34} shall be set to '001';
- Bits M_{33} through M_0 shall be set to IMSI_O_S.

If $PLCM_TYPE_S$ is equal to '0011', the 37 least significant bits (PLCM_37) are set as follows:

- Bits M_{36} through M_{34} shall be set to '000';
- Bits M_{33} through M_0 shall be set to IMSI_O_S.

If $PLCM_TYPE_S$ is equal to '0100', the 40 least significant bits (PLCM_40) are set as follows:

- Bit M_{39} shall be set to '0';
- Bits M_{38} through M_0 shall be set as follows: the 39 least significant bits of the SHA-1 digest of the MEID[4]. See [10] for the specification of the SHA-1 algorithm.

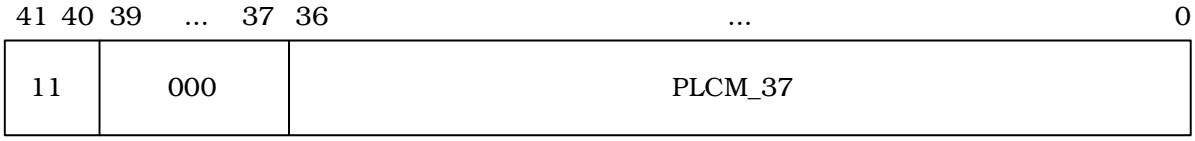
2.1.4.1.1 Public Long Code Mask PLCM_42

If PLCM_37 is defined, the public long code mask PLCM_42 shall be as follows: bits M_{36} through M_0 of the public long code mask shall be specified by PLCM_37 (see 2.1.4.1). Bits M_{41} through M_{37} shall be set to '11000'. The resulting public long code mask PLCM_42 is shown in Figure 2.1.4.1-1 (a).

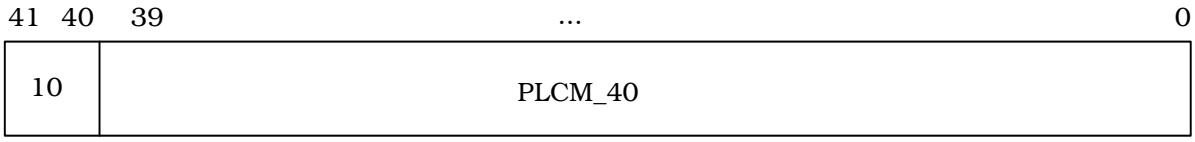
If PLCM_40 is defined, the public long code mask PLCM_42 shall be as follows: bits M_{39} through M_0 of the public long code mask shall be specified by PLCM_40 (see

[4] Example: if the 56-bit MEID is (hexadecimal) FF 00 00 01 12 34 56, the bits M_{38} through M_0 of PLCM are (hexadecimal) 1A 0E 07 37 E1, and (binary) '001 1010 0000 1110 0000 0111 0011 0111 1110 0001'.

2.1.4.1). Bits M_{41} through M_{40} shall be set to '10'. The resulting public long code mask PLCM_42 is shown in Figure 2.1.4.1-1 (b).



a) Public Long Code Mask PLCM_42 given PLCM_37



b) Public Long Code Mask PLCM_42 given PLCM_40

Figure 2.1.4.1-1. Public Long Code Mask PLCM_42 format

2.1.5 Reject Order

The mobile station shall support the *Mobile Station Reject Order* as specified in Table 2.1.5-1 (corresponding to Table 2.7.3-1 of [7]). The structure of the *Mobile Station Reject Order* shall be as specified in [7].

Table 2.1.5-1. Order and Order Qualification Codes Used on r-dsch and r-csch

r-csch Order	r-dsch Order	Order Code, ORDER (binary)	Order Qualification Code, ORDQ (binary)	More Fields other than ORDQ	Support Req'd	Name/Function
Y	Y	011111	00011100	Y	Y	*Mobile Station Reject Order* (PLCM_TYPE mismatch)

2.1.6 Channel Assignment Processing

2.1.6.1 P_REV_IN_USE greater than or equal to 11

If P_REV_IN_USEs is greater than or equal to 11, there are no additional requirements on the mobile station.

2.1.6.2 P_REV_IN_USE equal to 9 or 10

Requirements in this section are applicable if P_REV_IN_USEs is equal to 9 or 10.

The mobile station shall process *Extended Channel Assignment Message* in *Page Response Substate* and *Mobile Station Origination Attempt Substate* as follows:

- If $PLCM_TYPE_r$ equals '0010' and IMSI_O is derived from IMSI_T, or if $PLCM_TYPE_r$ equals '0011' and IMSI_O is derived from IMSI_M, the mobile station shall send a *Mobile Station Reject Order* with the $ORDQ_s$ field set to '00011100' (PLCM_TYPE mismatch), the mobile station shall not process the message.

If the message is not rejected as described above, then the requirements for processing *Extended Channel Assignment Message* shall be as defined in [2] per the $MOB_P_REV_p$ of the mobile station with additional requirements listed below:

- If $PLCM_TYPE_INCL_r$ is equal to '1' and $PLCM_TYPE_r$ is not set to '0000' or '0001', then the mobile station shall perform the following to determine the long code mask to use after the channel assignment:
  - The mobile station shall use the public long code mask derived from $PLCM_TYPE_s$ as specified in 2.1.4.

2.1.6.3 P_REV_IN_USE equal to 6, 7 or 8

Requirements in this section are applicable if $P_REV_IN_USE_s$ is equal to 6, 7 or 8.

The mobile station shall process the *MEID Extended Channel Assignment Message* in *Page Response Substate* and *Mobile Station Origination Attempt Substate* as follows:

- If $PLCM_TYPE_r$ equals '0010' and IMSI_O is derived from IMSI_T, or if $PLCM_TYPE_r$ equals '0011' and IMSI_O is derived from IMSI_M, the mobile station shall send a *Mobile Station Reject Order* with the $ORDQ_s$ field set to '00011100' (PLCM_TYPE mismatch), the mobile station shall not process the message.

If the message is not rejected as described above, then the requirements for processing *MEID Extended Channel Assignment Message* shall be same as requirements for processing *Extended Channel Assignment Message* defined in [2] per the $MOB_P_REV_p$ of the mobile station with additional requirements listed below:

- If $PLCM_TYPE_INCL_r$ is equal to '1' the mobile station shall perform the following to determine the long code mask to use after the channel assignment:
  - The mobile station shall set $PLCM_TYPE_s$ to $PLCM_TYPE_r$.
  - The mobile station shall set $PLCM_39_s$ to $PLCM_39_r$ if $PLCM_TYPE_r$ is equal to '0001'.
  - The mobile station shall use the public long code mask derived from $PLCM_TYPE_s$ as specified in 2.1.4.

2.1.7 Handoff Processing

2.1.7.1 P_REV_IN_USE greater than or equal to 11

If $P_REV_IN_USE_S$ is greater than or equal to 11, there are no additional requirements on the mobile station.

2.1.7.2 P_REV_IN_USE equal to 9 or 10

Requirements in this section are applicable if $P_REV_IN_USE_S$ is equal to 9 or 10.

The mobile station shall process *Universal Handoff Direction Message* in *Traffic Channel Substate* as follows:

- If $PLCM_TYPE_r$ equals '0010' and IMSI_O is derived from IMSI_T, or if $PLCM_TYPE_r$ equals '0011' and IMSI_O is derived from IMSI_M, the mobile station shall send a *Mobile Station Reject Order* with the $ORDQ_s$ field set to '00011100' (PLCM_TYPE mismatch), the mobile station shall not process the message.

If the message is not rejected as described above, then the requirements for processing *Universal Handoff Direction Message* shall be same as defined in [2] per the $MOB_P_REV_p$ of the mobile station with additional requirements listed below:

- If public long code mask is to be used after the handoff and $PLCM_TYPE_s$ is not set to '0000' or '0001'; then the mobile station shall perform the following to determine the long code mask to use after the handoff:
  - The mobile station shall use the public long code mask derived from $PLCM_TYPE_s$ as specified in 2.1.4.

2.1.7.3 P_REV_IN_USE equal to 6, 7 or 8

Requirements in this section are applicable if $P_REV_IN_USE_S$ is equal to 6, 7 or 8.

The mobile station shall process the *MEID Universal Handoff Direction Message* in *Traffic Channel Substate* as follows:

- If $PLCM_TYPE_r$ equals '0010' and IMSI_O is derived from IMSI_T, or if $PLCM_TYPE_r$ equals '0011' and IMSI_O is derived from IMSI_M, the mobile station shall send a *Mobile Station Reject Order* with the $ORDQ_s$ field set to '00011100' (PLCM_TYPE mismatch), the mobile station shall not process the message.

If the message is not rejected as described above, then the requirements for processing *MEID Universal Handoff Direction Message* shall be same as requirements for processing *Universal Handoff Direction Message* defined in [2] per the $MOB_P_REV_p$ of the mobile station with additional requirements listed below:

- The mobile station shall perform the following to determine the long code mask to use after the handoff:

- If the PRIVATE_LCM field is not included and $PLCM_TYPE_INCL_r$ equals '0', the mobile station shall continue to use the long code mask currently in use.
- If the PRIVATE_LCM field is not included and $PLCM_TYPE_INCL_r$ equals '1', the mobile station shall perform the following:
  + The mobile station shall set $PLCM_TYPE_s$ to $PLCM_TYPE_r$; if $PLCM_TYPE_r$ equals '0001', the mobile station shall set $PLCM_39_s$ to $PLCM_39_r$.
  + The mobile station shall use the public long code mask derived from $PLCM_TYPE_s$ as specified in 2.1.4.
- If $PRIVATE_LCM_r$ equals '1' and $PLCM_TYPE_INCL_r$ equals '0', the mobile station shall perform the following:
  + The mobile station shall use the private long code mask.
- If $PRIVATE_LCM_r$ equals '1' and $PLCM_TYPE_INCL_r$ equals '1', the mobile station shall perform the following:
  + The mobile station shall use the private long code mask.
  + The mobile station shall set $PLCM_TYPE_s$ to $PLCM_TYPE_r$; if $PLCM_TYPE_r$ equals '0001', the mobile station shall set $PLCM_39_s$ to $PLCM_39_r$.
- If $PRIVATE_LCM_r$ equals '0' and $PLCM_TYPE_INCL_r$ equals '0', the mobile station shall perform the following:
  + The mobile station shall use the public long code mask derived from $PLCM_TYPE_s$ as specified in 2.1.4.
- If $PRIVATE_LCM_r$ equals '0' and $PLCM_TYPE_INCL_r$ equals '1', the mobile station shall perform the following:
  + The mobile station shall set $PLCM_TYPE_s$ to $PLCM_TYPE_r$; if $PLCM_TYPE_r$ equals '0001', the mobile station shall set $PLCM_39_s$ to $PLCM_39_r$.
  + The mobile station shall use the public long code mask derived from $PLCM_TYPE_s$ as specified in 2.1.4.
- The mobile station shall indicate to the user the voice privacy mode status.

2.1.8 Over-the-Air Service Provisioning

The mobile station shall support either [8] or [9].

2.2 Base Station Requirements

2.2.1 Extended Channel Assignment Message

If the base station determines that the mobile station is equipped with an MEID, the base station may send an *Extended Channel Assignment Message* or an *MEID Extended Channel Assignment Message* including the {PLCM_TYPE_INCL, PLCM_TYPE, PLCM_39} fields.

- If the base station does not send an *MEID Extended Channel Assignment Message*, the base station shall follow the requirements in [2] per the P_REV of the base station unless stated otherwise in this document.
- If the base station sends an *MEID Extended Channel Assignment Message,* the requirements for *MEID Extended Channel Assignment Message* are same as the requirements for *Extended Channel Assignment Message* defined in [2] per the P_REV of the base station except for the changes defined in the subsections below.

2.2.1.1 MSG_ID

If the base station sends an *MEID Extended Channel Assignment Message*, the base station shall set the MSG_ID field [1] of this message to '101110' as specified in Table 2.2.1.1-1 (corresponding to Table 3.1.2.3.1.1.2-1 of [1]).

Table 2.2.1.1-1. MSG_ID Values on f-csch

Message Name	MSG_TAG	MSG_ID (binary)	Logical Channel
System Parameters Message	SPM	000001	broadcast
[…]			
Extended Channel Assignment Message	ECAM	010101	general signaling
[…]			
Broadcast Service Parameters Message	BSPM	101101	broadcast
MEID Extended Channel Assignment Message	MECAM	101110	general signaling

2.2.1.2 P_REV_IN_USE greater than or equal to 11

If P_REV_IN_USE is greater than or equal to 11, the base station shall not use the *MEID Extended Channel Assignment Message*. There are no additional requirements on the base station.

2.2.1.3 P_REV_IN_USE equal to 9 or 10

If P_REV_IN_USE is equal to 9 or 10, the base station shall not use the *MEID Extended Channel Assignment Message*.

The base station requirements for setting the *Extended Channel Assignment Message* shall be as specified in [2] per the P_REV of the base station with the exception of the PLCM_TYPE requirements listed below:

- The base station shall set the PLCM_TYPE field as specified in Table 2.2.1.4-1. Note that not all values in Table 2.2.1.4-1 are defined in [6].
  - PLCM_TYPE '0010' shall not be used when the mobile station is not in its home country (i.e., the MCC of the mobile station is different from the MCC of this base station).
  - PLCM_TYPE '0011' shall not be used when the mobile station is not in its home network (i.e., the MCC or MNC of the mobile station is different from the MCC or MNC of this base station).

2.2.1.4 P_REV_IN_USE equal to 8

If P_REV_IN_USE is equal to 8 and the base station sends an the *MEID Extended Channel Assignment Message*, the base station shall set the ASSIGN_MODE field to '100'.

If ASSIGN_MODE is equal to '100', the additional record fields shall be:

Field	**Length (bits)**	**Notes**
FREQ_INCL	1 (see [5])	
[…]	[…]	
1XRL_FREQ_OFFSET	0 or 2 (see [5])	
RESERVED_BLOB	1	This bit corresponds to MSG_INT_INFO_INCL field defined in [6]
PLCM_TYPE_INCL	1	
PLCM_TYPE	0 or 4	
PLCM_39	0 or 39	
RESERVED	0 – 7 (as needed)	

The base station shall set all fields up to 1XRL_FREQ_OFFSET as specified in [5].

The base station shall set the remaining fields as follows:

RESERVED_BLOB – Reserved block of bits

The base station shall set this field to '0'.

PLCM_TYPE_INCL - The Public Long Code Mask type included indicator.

The base station shall set this field to '1' if the base station includes PLCM_TYPE in the message; otherwise, the base station shall set this field to '0'.

PLCM_TYPE - The Public Long Code Mask type indicator.

If PLCM_TYPE_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the corresponding Public Long Code Mask type as specified in Table 2.2.1.4-1.

Table 2.2.1.4-1. The Public Long Code Mask Type

PLCM_TYPE (binary)	Descriptions
0000	PLCM derived from ESN
0001	PLCM specified by the base station
0010	PLCM derived from IMSI_O_S when IMSI_O is derived from IMSI_M
0011	PLCM derived from IMSI_O_S when IMSI_O is derived from IMSI_T
0100	PLCM derived from MEID
All other values	Reserved

PLCM_TYPE '0010' shall not be used when the mobile station is not in its home country (i.e., the MCC of the mobile station is different from the MCC of this base station).

PLCM_TYPE '0011' shall not be used when the mobile station is not in its home network (i.e., the MCC or MNC of the mobile station is different from the MCC or MNC of this base station).

PLCM_39 - The 39 LSB bits of the Public Long Code Mask.

If PLCM_TYPE is not set to '0001', the base station shall omit this field; otherwise, the base station shall include this field and set it to the 39 least significant bits of the public long code mask as defined in 2.2.3.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

2.2.1.5 P_REV_IN_USE equal to 7

If P_REV_IN_USE is equal to 7 and the base station sends an *MEID Extended Channel Assignment Message*, the base station shall set the ASSIGN_MODE field to '100'.

If the ASSIGN_MODE is equal to '100', the additional record fields shall be:

Field	**Length (bits)**	**Notes**
FREQ_INCL	1 (see [4])	
[…]	[…]	
1XRL_FREQ_OFFSET	0 or 2 (see [4])	
RESERVED_BLOB	1	This bit corresponds to MSG_INT_INFO_INCL field defined in [6]
PLCM_TYPE_INCL	1	
PLCM_TYPE	0 or 4	
PLCM_39	0 or 39	
RESERVED	0 – 7 (as needed)	

The base station shall set all fields up to 1XRL_FREQ_OFFSET as specified in [4].

The base station shall set the remaining fields as follows:

RESERVED_BLOB – Reserved block of bits

The base station shall set this field to '0'.

PLCM_TYPE_INCL - The Public Long Code Mask type included indicator.

The base station shall set this field to '1' if the base station includes PLCM_TYPE in the message; otherwise, the base station shall set this field to '0'.

PLCM_TYPE - The Public Long Code Mask type indicator.

If PLCM_TYPE_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the corresponding Public Long Code Mask type as specified in Table 2.2.1.4-1.

PLCM_TYPE '0010' shall not be used when the mobile station is not in its home country (i.e., the MCC of the mobile station is different from the MCC of this base station).

PLCM_TYPE '0011' shall not be used when the mobile station is not in its home network (i.e., the MCC or MNC of the mobile station is different from the MCC or MNC of this base station).

PLCM_39 - The 39 LSB bits of the Public Long Code Mask.

If PLCM_TYPE is not set to '0001', the base station shall omit this field; otherwise, the base station shall include this field and set it to the 39 least significant bits of the public long code mask as defined in 2.2.3.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

2.2.1.6 P_REV_IN_USE equal to 6

If P_REV_IN_USE is equal to 6 and the base station sends an *MEID Extended Channel Assignment Message*, the base station shall set the ASSIGN_MODE field to '100'.

If ASSIGN_MODE is equal to '100', the additional record fields shall be:

Field	Length (bits)	Notes
FREQ_INCL	1 (see [3])	
[…]	[…]	
REV_PWR_CNTL_DELAY	0 or 2 (see [3])	
RESERVED_BLOB	3 or 6	These bits correspond to ENC_KEY_SIZE, C_SIG_ENCRYPT_MODE_INCL, 3XFL_1XRL_INCL fields defined in [4] & MSG_INT_INFO_INCL field defined in [6] as shown in Table 2.2.1.6-1
PLCM_TYPE_INCL	1	
PLCM_TYPE	0 or 4	
PLCM_39	0 or 39	
RESERVED	0 – 7 (as needed)	

The base station shall set all fields up to REV_PWR_CNTL_DELAY as specified in [3].

The base station shall set the remaining fields as follows:

RESERVED_BLOB – Reserved block of bits

The base station shall set this field as specified in Table 2.2.1.6-1.

Table 2.2.1.66-1. MECAM RESERVED BLOB for P_REV_IN_USE = 6

ENCRYPT_MODE (binary)	RESERVED_BLOB		
	Contributing Fields	Total Length (bits)	Value (binary)
10	ENC_KEY_SIZE (3 bits) C_SIG_ENCRYPT_MODE_INCL (1 bit) 3XFL_1XRL_INCL (1 bit) MSG_INT_INFO_INCL (1 bit)	6	000000
Set to value other than 10	C_SIG_ENCRYPT_MODE_INCL (1 bit) 3XFL_1XRL_INCL (1 bit) MSG_INT_INFO_INCL (1 bit)	3	000

PLCM_TYPE_INCL - The Public Long Code Mask type included indicator.

The base station shall set this field to '1' if the base station includes PLCM_TYPE in the message; otherwise, the base station shall set this field to '0'.

PLCM_TYPE - The Public Long Code Mask type indicator.

If PLCM_TYPE_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the corresponding Public Long Code Mask type as specified in Table 2.2.1.4-1.

PLCM_TYPE '0010' shall not be used when the mobile station is not in its home country (i.e., the MCC of the mobile station is different from the MCC of this base station).

PLCM_TYPE '0011' shall not be used when the mobile station is not in its home network (i.e., the MCC or MNC of the mobile station is different from the MCC or MNC of this base station).

PLCM_39 - The 39 LSB bits of the Public Long Code Mask.

If PLCM_TYPE is not set to '0001', the base station shall omit this field; otherwise, the base station shall include this field and set it to the 39 least significant bits of the public long code mask as defined in 2.2.3.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

2.2.2 Universal Handoff Direction Message

If the base station determines that the mobile station is equipped with an MEID, the base station may send a *Universal Handoff Direction Message* or an *MEID Universal Handoff Direction Message* including the {PLCM_TYPE_INCL, PLCM_TYPE, PLCM_39} fields.

- If the base station does not send an *MEID Universal Handoff Direction Message*, the base station shall follow the requirements in [2] per P_REV of the base station unless stated otherwise in this document.
- If the base station sends an *MEID Universal Handoff Direction Message*, the requirements for *MEID Universal Handoff Direction Message* are same as the requirements for *Universal Handoff Direction Message* defined in [2] per the P_REV of the base station except for the changes defined in subsections below.

2.2.2.1 MSG_TYPE

If the base station sends an *MEID Universal Handoff Direction Message*, the base station shall set the MSG_TYPE field [1] of this message to '00110101' as specified in Table 2.2.2.1-1 (corresponding to Table 3.2.2.2.1.2-1 of [1]).

Table 2.2.2.1-1. MSG_TYPE Values for Regular PDUs on f-dsch

Message Name	MSG_TAG	MSG_TYPE (binary)
Order Message	ORDRM	00000001
[…]		
Universal Handoff Direction Message	UHDM	00100010
[…]		
In-Traffic Broadcast Service Parameters Message	ITBSPM	00110100
MEID Universal Handoff Direction Message	MUHDM	00110101

2.2.2.2 P_REV_IN_USE greater than or equal to 11

If P_REV_IN_USE is greater that or equal to 11, the base station shall not use *MEID Universal Handoff Direction Message*. There are no additional requirements on the base station.

2.2.2.3 P_REV_IN_USE equal to 9 or 10

If P_REV_IN_USE is equal to 9 or 10, the base station shall not use *MEID Universal Handoff Direction Message*.

The base station requirements for setting the *Universal Handoff Direction Message* shall be as specified in [2] per the P_REV of the base station with the exception of the PLCM_TYPE requirements listed below:

- The base station shall set PLCM_TYPE field as specified in Table 2.2.1.4-1. Note that not all values in Table 2.2.1.4-1 are defined in [6].
    - PLCM_TYPE '0010' shall not be used when the mobile station is not in its home country (i.e., the MCC of the mobile station is different from the MCC of this base station).
    - PLCM_TYPE '0011' shall not be used when the mobile station is not in its home network (i.e., the MCC or MNC of the mobile station is different from the MCC or MNC of this base station).

2.2.2.4 P_REV_IN_USE equal to 8

If P_REV_IN_USE is equal to 8, the additional record fields shall be:

Field	Length (bits)	Notes
USE_TIME	1 (see [5])	
[…]	[…]	
CS_SUPPORTED	1 (see [5])	
RESERVED_BLOB	6	These bits correspond to CHM_SUPPORTED, CDMA_OFF_TIME_REP_SUP_IND, RELEASE_TO_IDLE_IND, MSG_INTEGRITY_SUP, GEN_2G_KEY, REGISTER_IN_IDLE fields defined in [6]
PLCM_TYPE_INCL	1	
PLCM_TYPE	0 or 4	
PLCM_39	0 or 39	

The base station shall set all fields up to CS_SUPPORTED as specified in [5].

The base station shall set the remaining fields as follows:

RESERVED_BLOB – Reserved block of bits

The base station shall set this field to '000000'.

PLCM_TYPE_INCL - The Public Long Code Mask type included indicator.

The base station shall set this field to '1' if the base station includes PLCM_TYPE in the message; otherwise, the base station shall set this field to '0'.

PLCM_TYPE - The Public Long Code Mask type indicator.

If PLCM_TYPE_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the corresponding Public Long Code Mask type as specified in Table 2.2.1.4-1.

PLCM_TYPE '0010' shall not be used when the mobile station is not in its home country (i.e., the MCC of the mobile station is different from the MCC of this base station).

PLCM_TYPE '0011' shall not be used when the mobile station is not in its home network (i.e., the MCC or MNC of the mobile station is different from the MCC or MNC of this base station).

PLCM_39 - The 39 LSB bits of the Public Long Code Mask.

If PLCM_TYPE is not set to '0001', the base station shall omit this field; otherwise, the base station shall include this field and set it to the 39 least significant bits of the public long code mask as defined in 2.2.3.

2.2.2.5 P_REV_IN_USE equal to 7

If P_REV_IN_USE is equal to 7, the additional record fields shall be:

Field	**Length (bits)**	**Notes**
USE_TIME	1 (see [4])	
[…]	[…]	
CS_SUPPORTED	1 (see [4])	
RESERVED_BLOB	6	These bits correspond to CHM_SUPPORTED, CDMA_OFF_TIME_REP_SUP_IND, RELEASE_TO_IDLE_IND, MSG_INTEGRITY_SUP, GEN_2G_KEY, REGISTER_IN_IDLE fields defined in [6]
PLCM_TYPE_INCL	1	
PLCM_TYPE	0 or 4	
PLCM_39	0 or 39	

The base station shall set all fields up to CS_SUPPORTED as specified in [4].

The base station shall set the remaining fields as follows:

RESERVED_BLOB – Reserved block of bits

The base station shall set this field to '000000'.

PLCM_TYPE_INCL - The Public Long Code Mask type included indicator.

The base station shall set this field to '1' if the base station includes PLCM_TYPE in the message; otherwise, the base station shall set this field to '0'.

PLCM_TYPE - The Public Long Code Mask type indicator.

If PLCM_TYPE_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the corresponding Public Long Code Mask type as specified in Table 2.2.1.4-1.

PLCM_TYPE '0010' shall not be used when the mobile station is not in its home country (i.e., the MCC of the mobile station is different from the MCC of this base station).

PLCM_TYPE '0011' shall not be used when the mobile station is not in its home network (i.e., the MCC or MNC of the mobile station is different from the MCC or MNC of this base station).

PLCM_39 - The 39 LSB bits of the Public Long Code Mask.

If PLCM_TYPE is not set to '0001', the base station shall omit this field; otherwise, the base station shall include this field and set it to the 39 least significant bits of the public long code mask as defined in 2.2.3.

2.2.2.6 P_REV_IN_USE equal to 6

If P_REV_IN_USE is equal to 6, the additional record fields shall be:

Field	Length (bits)	Notes
USE_TIME	1 (see [3])	
[…]	[…]	
REV_PWR_CNTL_DELAY	0 or 2 (see [3])	
RESERVED_BLOB	Variable	These bits correspond to ENC_KEY_SIZE, 3XFL_1XRL_INCL, SYNC_ID_INCL, CC_INFO_INCL, CS_SUPPORTED fields defined in [4], CHM_SUPPORTED, CDMA_OFF_TIME_REP_SUP_IND, RELEASE_TO_IDLE_IND, MSG_INTEGRITY_SUP, GEN_2G_KEY, REGISTER_IN_IDLE fields defined in [6] as shown in Table 2.2.2.6-1
PLCM_TYPE_INCL	1	
PLCM_TYPE	0 or 4	
PLCM_39	0 or 39	

The base station shall set all fields up to REV_PWR_CNTL_DELAY as specified in [3].

The base station shall set the remaining fields as follows:

RESERVED_BLOB – Reserved block of bits

The base station shall set this field as specified in Table 2.2.2.6-1.

Table 2.2.2.6-1. MUHDM RESERVED_BLOB for P_REV_IN_USE=6

ENCRYPT_MODE (binary)	SCR_INCLUDED (binary)	NNSCR_INCLUDED (binary)	RESERVED_BLOB		
			Contributing Fields	Total Length (bits)	Value (binary)
Not included or set to value other than 10	Not included or set to 0	Not included or set to 0	3XFL_1XRL_INCL (1 bit) CS_SUPPORTED (1 bit) CHM_SUPPORTED (1 bit) CDMA_OFF_TIME_REP_SUP_IND (1 bit) RELEASE_TO_IDLE_IND (1 bit) MSG_INTEGRITY_SUP (1 bit) GEN_2G_KEY (1 bit) REGISTER_IN_IDLE (1 bit)	8	00000000
Not included or set to value other than 10	Not included or set to 0	1	3XFL_1XRL_INCL (1 bit) SYNC_ID_INCL (1 bit) CS_SUPPORTED (1 bit) CHM_SUPPORTED (1 bit) CDMA_OFF_TIME_REP_SUP_IND (1 bit) RELEASE_TO_IDLE_IND (1 bit) MSG_INTEGRITY_SUP (1 bit) GEN_2G_KEY (1 bit) REGISTER_IN_IDLE (1 bit)	9	000000000

ENCRYPT_MODE (binary)	SCR_INCLUDED (binary)	NNSCR_INCLUDED (binary)	RESERVED_BLOB		
			Contributing Fields	Total Length (bits)	Value (binary)
Not included or set to value other than 10	1	Not included or set to 0	3XFL_1XRL_INCL (1 bit) SYNC_ID_INCL (1 bit) CC_INFO_INCL (1 bit) CS_SUPPORTED (1 bit) CHM_SUPPORTED (1 bit) CDMA_OFF_TIME_REP_SUP_IND (1 bit) RELEASE_TO_IDLE_IND (1 bit) MSG_INTEGRITY_SUP (1 bit) GEN_2G_KEY (1 bit) REGISTER_IN_IDLE (1 bit)	10	0000000000
Not included or set to value other than 10	1	1	3XFL_1XRL_INCL (1 bit) SYNC_ID_INCL (1 bit) CC_INFO_INCL (1 bit) CS_SUPPORTED (1 bit) CHM_SUPPORTED (1 bit) CDMA_OFF_TIME_REP_SUP_IND (1 bit) RELEASE_TO_IDLE_IND (1 bit) MSG_INTEGRITY_SUP (1 bit) GEN_2G_KEY (1 bit) REGISTER_IN_IDLE (1 bit)	10	0000000000

ENCRYPT_MODE (binary)	SCR_INCLUDED (binary)	NNSCR_INCLUDED (binary)	RESERVED_BLOB		
			Contributing Fields	Total Length (bits)	Value (binary)
10	Not included or set to 0	Not included or set to 0	3XFL_1XRL_INCL (1 bit) ENC_KEY_SIZE (3 bits) CS_SUPPORTED (1 bit) CHM_SUPPORTED (1 bit) CDMA_OFF_TIME_REP_SUP_IND (1 bit) RELEASE_TO_IDLE_IND (1 bit) MSG_INTEGRITY_SUP (1 bit) GEN_2G_KEY (1 bit) REGISTER_IN_IDLE (1 bit)	11	00000000000
10	Not included or set to 0	1	3XFL_1XRL_INCL (1 bit) ENC_KEY_SIZE (3 bits) SYNC_ID_INCL (1 bit) CS_SUPPORTED (1 bit) CHM_SUPPORTED (1 bit) CDMA_OFF_TIME_REP_SUP_IND (1 bit) RELEASE_TO_IDLE_IND (1 bit) MSG_INTEGRITY_SUP (1 bit) GEN_2G_KEY (1 bit) REGISTER_IN_IDLE (1 bit)	12	000000000000

ENCRYPT_MODE (binary)	SCR_INCLUDED (binary)	NNSCR_INCLUDED (binary)	RESERVED_BLOB		
			Contributing Fields	Total Length (bits)	Value (binary)
10	1	Not included or set to 0	3XFL_1XRL_INCL (1 bit) ENC_KEY_SIZE (3 bits) SYNC_ID_INCL (1 bit) CC_INFO_INCL (1 bit) CS_SUPPORTED (1 bit) CHM_SUPPORTED (1 bit) CDMA_OFF_TIME_REP_SUP_IND (1 bit) RELEASE_TO_IDLE_IND (1 bit) MSG_INTEGRITY_SUP (1 bit) GEN_2G_KEY (1 bit) REGISTER_IN_IDLE (1 bit)	13	0000000000000
10	1	1	3XFL_1XRL_INCL (1 bit) ENC_KEY_SIZE (3 bits) SYNC_ID_INCL (1 bit) CC_INFO_INCL (1 bit) CS_SUPPORTED (1 bit) CHM_SUPPORTED (1 bit) CDMA_OFF_TIME_REP_SUP_IND (1 bit) RELEASE_TO_IDLE_IND (1 bit) MSG_INTEGRITY_SUP (1 bit) GEN_2G_KEY (1 bit) REGISTER_IN_IDLE (1 bit)	13	0000000000000

[1]

PLCM_TYPE_INCL - The Public Long Code Mask type included indicator.

The base station shall set this field to '1' if the base station includes PLCM_TYPE in the message; otherwise, the base station shall set this field to '0'.

PLCM_TYPE - The Public Long Code Mask type indicator.

If PLCM_TYPE_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the corresponding Public Long Code Mask type as specified in Table 2.2.1.4-1.

PLCM_TYPE '0010' shall not be used when the mobile station is not in its home country (i.e., the MCC of the mobile station is different from the MCC of this base station).

PLCM_TYPE '0011' shall not be used when the mobile station is not in its home network (i.e., the MCC or MNC of the mobile station is different from the MCC or MNC of this base station).

PLCM_39 - The 39 LSB bits of the Public Long Code Mask.

If PLCM_TYPE is not set to '0001', the base station shall omit this field; otherwise, the base station shall include this field and set it to the 39 least significant bits of the public long code mask as defined in 2.2.3.

2.2.3 Base Station Assigned PLCM

If PLCM_TYPE field is included in *Extended Channel Assignment Message*, *Universal Handoff Direction Message*, *MEID Extended Channel Assignment Message* or *MEID Universal Handoff Direction Message* and is set to '0001', the base station shall include PLCM_39 field in the message and shall set it as follows (this is exactly as defined in [7]):

P38 P37 are set as specified in the Table 2.2.3-1 (corresponding to Table 3.6.4.1.10-1 of [7]):

Table 2.2.3-1. The Base Station Assigned Public Long Code Mask Type

P38 P37 (binary)	**Descriptions**
00	Proprietary Approach
01	Latitude-Longitude Approach
10	Reserved
11	Reserved

If P_{38} P_{37} is equal to '01'; the base station shall set the fields as follows:

P_{36}, P_{35}, P_{34}, P_{33}, P_{32}, P_{31}, P_{30}, P_{29}, P_{28}, P_{27}, P_{26} = ((BASE_LONG>>5) × cos|BASE_LAT|) mod (2^{11}),

P_{25}, P_{24}, P_{23}, P_{22}, P_{21}, P_{20}, P_{19}, P_{18}, P_{17}, P_{16}, P_{15} = (BASE_LAT>>5) mod (2^{11}),

P_{14}, P_{13},…, P_2, P_1, P_0 = identifiers assigned by the base station,

where:

BASE_LONG is the longitude of the base station in units of 0.25 seconds, expressed as a two's complement signed number with positive numbers signifying East longitude, and,

BASE_LAT is the latitude of the base station in units of 0.25 seconds, expressed as a two's complement signed number with positive numbers signifying North latitude.