3RD GENERATION PARTNERSHIP PROJECT 2 "3GPP2"

MOBILE EQUIPMENT IDENTIFIER (MEID)

GHA (Global Hexadecimal Administrator) A S S I G N M E N T G U I D E L I N E S AND P R O C E D U R E S

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1.0   PREFACE

This document contains the guidelines and procedures for the assignment of Mobile Equipment IDentifiers (MEIDs) for Mobile Stations (MSs), and Short Form Extended UIM Identifiers (SF_EUIMID) for R-UIMs.

Correspondence relating to the administration herein should be directed to the MEID Global Hexadecimal Administrator.

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2.0   PURPOSE AND SCOPE

The Mobile Equipment IDentifier (MEID) [1] is used as a means to facilitate mobile equipment identification and to track mobiles. Short Form Expanded UIM Identifier (SF_EUIMID) [6, [7], with similar format to MEID, may be stored on a Removable UIM (R-UIM) and used to identify it for certain functions. The Global Equipment Identifier (GEID) coordinated range encourages global roaming and harmonization between 3G technologies as a universal mobile equipment identifier.

The fields in the MEID or SF_EUIMID are coded with hexadecimal coding (note: SF_EUIMID shall use RR=A0-FF (regardless if it is a CDMA only or GSM+CDMA card)). The addressing space is quite large and exhaustion issues are not expected. In further text, unless specifically noted otherwise, the term MEID will be used to mean either MEID in the narrow sense (i.e. identifier stored on the mobile equipment hardware), or SF_EUIMID (i.e. identifier stored on the Removable User Identity Module (R-UIM), often called the Subscriber Identity Module (SIM) card).

GEID (i.e., IMEI and MEID) provides the manufacturer identity of the ME, and information such as type allocation (for multi-mode MEID assignments) and serial number. By means of manufacturer's data base lookup, MEID may help service providers identify the ME to the levels of model, manufactured factory and lot numbers. The information can be used for corrective or preventive actions to improve the service quality. The MEID allows a list of MEs that have been stolen or denied service to be maintained e.g., Central Equipment Identity Register (*CEIR*).

The MEID has a number structure and allocation system that is globally recognized and applied in multiple access technologies.

Regulatory requirements associated with MEID are a subject of relevant laws and regulations, and relevant technical specifications in the country where equipment is placed on the market.

These guidelines are in the context of international cellular telecommunications industry standards. It is recommended that systems compliant with the industry standards follow these guidelines to facilitate international roaming and to minimize fraud.

The MEID is entered into the MS by the manufacturer of the MS. The MEID is composed mainly of two basic components, the manufacturer's code and the serial number. These guidelines specify the procedure for acquisition, transfer, return and regulation of the MEID Manufacturer's (MFR) Codes.

These guidelines pertain to all digit segments of the MEID format. The GHA manages all digit segments of the MEID, but directly administers only the MEID MFR Code segment. The manufacturer to which the MEID MFR Code or subdivided segmented block is assigned directly administers the assigned Serial Number segment. See the Mobile Equipment Identifier (MEID) Global Hexadecimal Administration (GHA) report provided by the GHA for detailed listings. Note; the GHA report is a controlled distribution.

These guidelines apply globally; however, they do not supersede the regulations, procedures or requirements of any appropriate legal or regulatory authority.

A compliant MS must have an MEID in accordance with these guidelines.

Equipment identifiers other than MEID and SF_EUIMID (e.g., ESN, UIM-ID [3],[4]) are not addressed here.

If a multi-mode MS supports one or more 3GPP2 defined radio interfaces (e.g., analog, CDMA) and utilizes a single mobile equipment identifier, that identifier conforms to the MEID guidelines. If a multi-mode MS supports both 3GPP2 and 3GPP defined radio interfaces (e.g., CDMA, GSM), the mobile equipment identifier conforms to the IMEI guidelines [3.2] and/or these guidelines.

3.0 REFERENCES

Normative

[1]	3GPP2 S.R0048-A v4.0	3G Mobile Equipment Identifier (MEID)
[2]	GSMA PRD TW.06	IMEI Allocation and Approval Guidelines
[3]	3GPP2 SC.R4004-0	UIM ID Manufacturer's Code Assignment Guidelines and Procedures
[4]	TIA	ESN Manufacturer's Code Assignment Guidelines and Procedures
[5]	3GPP2 SC.R4001-0	Global Equipment Numbering Administrative Procedures
[6]	3GPP2 SC.R4003-0	Expanded R-UIM Numbering Procedures
[7]	3GPP2 S.R0111-0	Expanded R-UIM ID Stage 1
[8]	3GPP2 X.S0008-0	Support for the Mobile Equipment Identity (MEID)

4.0 ASSUMPTIONS AND CONSTRAINTS

These guidelines and procedures are based on the following assumptions and constraints:

4.1 The guidelines are designed to provide the greatest latitude to MS and R-UIM manufacturers while permitting the effective and efficient management of a finite resource.

4.2 The coordinating function of the GEID administration is performed by the Global MEID Administrators. (See Ref. [5]).

4.2.1 The function of the IMEI Global Decimal Administration (GDA) is performed by an appointed IMEI Administrator.

4.2.2 The function of the MEID Global Hexadecimal Administration (GHA) is performed by the 3GPP2 appointed MEID Administrator.
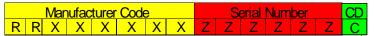
4.3 The guidelines as set forth in this document remain in effect until there is change as a result of 3GPP2 standards development or regulatory policy (where applicable) direction to change them.

4.4 The guidelines do not describe the method by which MEIDs are transmitted across and processed by networks. Network interworking arrangements are contained in other standards, documents, or business agreements.

4.5 The applicant/assignee of an MEID MFR Code(s) should provide evidence of credentials, if requested, to produce MSs.

4.6 The GHA may appoint other regional entities as a regional reporting body with MEID assignment authorization. Note: A regional reporting body process still needs to be defined and coordinated with the GDA.

4.7 Without authorization of 3GPP2, the Administrator shall take no action impacting legacy equipment identifiers. Administration and Implementation of MEID shall have no negative impact on the application and use of legacy equipment and identifiers (e.g., ESN, UIM ID).

5.0 MEID FORMAT AND FUNCTION

5.1 The 56-bit MEID identifier structure is compatible between 3GPP IMEI and 3GPP2.

5.2 Each MS is assigned a unique MEID. When used as SF_EUIMID, it is uniquely assigned to an R-UIM.

5.3 The MEID identifies the manufacturer of the MS. When SF_EUIMID is assigned to an R-UIM, it identifies R-UIM manufacturer.

5.4 MEID Structure and Format

The MEID digit range is hexadecimal and syntactically consistent with the IMEI structure. However, the MEID structure does not utilize all of the fields in the exact semantic manner as in IMEI. The MEID numbering space is allocated in a manner that does not impact the decimally encoded IMEI. The MEID structure is also consistent with the ESN allocation scheme which uses 24-bit Serial Numbers.

The MEID structure:

Manufacturer Code						Serial Number						CD
R	R	X	X	X	X	X	X	Z	Z	Z	Z	Z	Z	C

In the case of MEIDs for terminals conforming exclusively to 3GPP2 technology, all of these fields are defined as hexadecimal values with the following valid range:

      RR - valid range A0 … FF – globally administered

      XXXXXX - valid range 000000… FFFFFF

      ZZZZZZ - valid range 000000…. FFFFFF

      C - valid range 0… F – not transmitted over the air

In the case of MEIDs for terminals designed to comply with both 3GPP and 3GPP2 specifications (i.e., multimode terminals), all of these fields are defined as decimal values with the following valid range:

      RR - valid range '99', '98', '97'… – globally administered

      XXXXXX - valid range 000000… 999999

      ZZZZZZ - valid range 000000… 999999

      C - valid range 0 … 9 – not transmitted over the air

5.4.1 Numbering Capacity

The MEID numbering capacity can be computed as follows:

There are 96 codes when RR is restricted to the A0 .. FF range. Note that additional 60 codes could be made available in the ranges of 0A .. 0F, 1A .. 1F, 2A .. 2F, ... , 9A .. 9F, subject to industry agreement. [3.5]

There are 16,777,216 codes in the XXXXXX field.

There are 16,777,216 Serial Numbers in ZZZZZZ field.

The total numbering capacity exceeds 281 x 10^12 (281 trillion) per RR code.

The current ESN numbering space consists of:

256 Manufacturer Codes (8-bit).

16,777,216 Serial Numbers per Manufacturer Code.

The MEID provides for a raw numbering space that is 65,535 times the size of the existing ESN numbering space per RR code. The total numbering space using 96 RR codes represents a space that is 6,291,456 times as large as the current ESN numbering space.

5.5   The MEID does not specify the frequency band, air-interface technology or supported service associated with the MS.

6.0   GEID SPECIFIC GDA and GHA ASSIGNMENT GUIDELINES COORDINATION

Except as provided for Sections 6.3, 6.4, 6.5 of the Global Numbering document Ref [5], the working procedures and/or terms of reference of the GDA and GHA take precedence over the Global Numbering Administration Procedures (see Ref. [5] Section 3.3).

6.1   GHA shall be responsible for allocation of numbering space in the range: D0 = {'A' .. 'F'}; D1, … , D13 = {'0' .. 'F'}. Requests for number allocation for terminals designed to comply with 3GPP2 specifications shall be fulfilled from this range by GHA or a regional body reporting to GHA. The total size of numbering space for this block exceeds 27.0×10^{15} (see Ref. [5] Section 6.3).

6.2   GDA shall be responsible for allocation of numbering space in the range: D0, … , D13 = {'0' .. '9'}, excluding the numbering space reserved for multimode terminals allocated to GHA, (see Ref. [5] Section 6.5). Requests for number allocation for terminals designed to comply with 3GPP specifications shall be fulfilled from this range by GDA or a regional body reporting to GDA. The total size of numbering space for this block (assumes initial allocation to GHA (see Ref. [5] Section 6.5)) is 99.0 x 10^{12}. Part of this space has been allocated (see Ref. [5] Appendix A table 1). The GDA should make an inventory of the currently available numbering space (see Ref. [5] Section 6.4).

6.3   For the sole use with terminals designed to comply with both 3GPP and 3GPP2 specifications, a numbering space within the decimal range shall be delegated to GHA. GHA shall use the same IMEI TAC format as GDA for these allocations. There shall be an initial allocation described as follows: [D0, D1] = '99', D2, …, D13 = {'0', …, '9'}. This initial numbering space shall be expandable in decrementing

values of [D0, D1] to '98', '97', etc. Expansion of this initial space shall be the subject of written agreement between GDA and GHA. The expansion agreements shall be recorded in the allocation history attached to this document (see Ref. [5] Appendix A table 1). The total size of numbering space of this initial block decimal range allocation to GHA is 1.0×10^{12} (see Ref. [5] Section 6.5).

7.0   ASSIGNMENT PRINCIPLES

7.1   MEID MFR Codes shall be assigned to permit the effective and efficient use of a finite resource in order to maximize the existing allocated resource inventory and to defer, as long as practical, the need to request additional or replacement for MEID MFR Code resources.

7.2   Upon application, the MEID administrator shall assign up to one or more MEID MFR Code(s) to each legitimate MS manufacturer or R-UIM manufacturer. An MEID MFR Code shall not be simultaneously assigned to more than one MEID manufacturer.

   Note: MEID MFR Code block contains 16,048,576 MEIDs. This block can be either assigned by the GHA as a whole, or it can be subdivided and assigned as 16 blocks of 1,048,576 (1,000,000 if multimode Decimal range) MEIDs each.

To responsibly address future numbering resource exhaust and also accommodate smaller manufacturer needs, Segmented Code deployable block assignment is the preferred method to assign MEID resources. See the Mobile Equipment IDentifier (MEID) Global Hexadecimal Administration (GHA) report provided by the GHA for detailed listings. The GHA report is a controlled distribution.

7.3   Reassignment; An unused MEID MFR Code that is recovered or returned from a previous assignee may be reassigned by the GHA to another manufacturer without limitation. A partially used MEID MFR Code may be reassigned to another manufacturer for use with limited serial numbers if a significant block of serial numbers associated to that MEID MFR Code remained unassigned.

7.4   An MEID Serial Number is assigned by the manufacturer to each MS or R-UIM which it manufactures. An MEID is unique to a single MS or R-UIM. The manufacturer exercises due diligence in the design and manufacture of the MS or R-UIM to ensure tamper resistance of the factory set MEID outside of place of manufacture and authorized service centers.

7.5   MEID MFR Codes are a global public resource. The assignment of any MEID MFR Code does not imply ownership of the resource by either the entity to which it is assigned or by the entity performing the administrative function.

7.6   Should a manufacturer transfer production of a type of MS or R-UIM to a different manufacturer, then the use of the assigned MEID MFR Code is transferable to the new manufacturer using the Form D.

7.7   The MEID administrator:

   •   Assigns MEID MFR Codes in a fair, timely and impartial manner to any applicant that meets the criteria for assignment.

   •   Assigns MEID MFR Codes on a first-come, first-served basis from the available pool of unassigned MEID MFR Codes. When all of the codes have been assigned, codes that had

been assigned but never used and subsequently recovered by the MEID Administrator are assigned.

- Makes all assignments based on the procedures in these guidelines.

- Shall treat sensitive information received from applicants as proprietary and confidential, and not share with non-administrator personnel.

7.8   Information that is requested of applicants in support of an MEID MFR Code application shall be uniform and should be kept to a minimum. In the case of multimode IMEI/MEID equipment, the information to be divulged differs and is more detailed than for non-multimode terminals (see Ref. [2].

7.9   Assigned MEID MFR Codes should start to be consumed and deployed as soon as possible, but no later than twelve months after assignment. If the assignee can demonstrate that an assigned MEID MFR Code has not started to be consumed solely due to delays beyond its control, the time period can be extended for up to 90 days. At the discretion of the administrator, three additional 90-day extensions may be granted.

7.10   An entity which is denied an MEID MFR Code assignment or extension under these guidelines has the right to appeal that decision.

7.11   Entities applying for assignment of MEID MFR Code(s) (see Ref. [5] Section 3.3), or entities to which MEID MFR Code(s) have been assigned shall comply with these guidelines.

7.12   An MEID MFR Code(s) recovered or returned to the administrator for reassignment may remain dormant. If no MSs or R-UIMs have been manufactured by the previous assignee, the code(s) may be reissued. If, however, MSs or R-UIMs have been produced and sold, the code(s) shall be blocked from future use. As the need for MEID MFR Codes becomes critical (e.g., only 10% of available codes remain), codes which have been partially used by a previous assignee may be re-assigned with serial number range limitations. That is, if the previous assignee had only produced a limited number of equipment using a contiguous serial number range, the present assignee may use the code to produce equipment with serial numbers that do not duplicate those of the previous assignee. It should be recognized that the re-issue of an MEID MFR Code is considered an exceptional measure anticipated to be invoked only during MEID resource exhaust timeframes.

7.13   There may be an administrative fee associated with an application for an MEID MFR Code(s).

8.0   CRITERIA FOR MEID ASSIGNMENT

The assignment criteria in this section should be considered by a potential MEID MFR Code applicant before submitting an MEID MFR Code application and is used by the MEID administrator in reviewing and processing an MEID MFR Code application:

8.1   Applicants for an MEID Manufacturer Code must satisfy the Administrator that they intend to place equipment on the market. (e.g., FCC Identifier and Grant Date).

8.2   An MEID MFR Code is only assigned by the administrator upon receipt and approval of a completed *Form A – MEID Manufacturer's Code Application*.

8.3   Form A should indicate the anticipated number of MFR Codes initially required. This information is held confidential by the MEID Administrator.

9.0 RESPONSIBILITIES OF MEID MANUFACTURER'S CODE APPLICANTS & ASSIGNEES

Entities requesting MEID MFR Code assignments shall comply with the following:

9.1 MEID MFR Code applicants and assignees must meet all conditions specified in these guidelines. Copies of the guidelines may be obtained from the MEID Administrator or overseeing industry body.

9.2 Applicants must apply in writing to the MEID Administrator by completing *Form A - MEID MFR Codes Application*. Copies of all required forms are included in these guidelines.

9.3 The MEID shall be set by the manufacturer. The manufacturer shall make every reasonable effort for the MEID to be not alterable, not capable of duplication nor removable outside of a manufacturer authorized service center, and any attempt to remove, tamper with, or change the MEID host component or operating system as originally programmed by the manufacturer shall render the MS inoperative. Where a dedicated MEID device is utilized, it must be permanently attached to the device that reads the MEID and the path to the device must be secured. The device shall not be removable and its pins shall not be accessible. The MEID is incorporated in an MS module, which is contained within the MS equipment. The MEID shall not be changed after the ME's final production process. It shall resist tampering, i.e. manipulation and change, by any means (e.g. physical, electrical and software). The manufacturer who is also responsible for ascertaining that each MEID is unique and keeping detailed records of produced and delivered MS or R-UIM should carry out implementation of each individual module.

9.4 MEID MFR Code assignees shall:

9.4.1 Assign a different MEID to each MS or R-UIM, within the range allocated to the manufacturer. Note: R-UIM vendors may subdivide their assigned MC (also known as "Issuer Code" see [6]) or their MC segment among network operators, but all SF_E-UIM_IDs associated with it must be used as E-UIM_IDs (i.e. none can be used as MEIDs for MEs). When submitting *Form A – Mobile Equipment IDentifier (MEID) Application,* one or the other must be identified in the General description of the MS or R-UIM MEID Use Declaration line item.

9.4.2 Assign and efficiently manage the Serial Number associated with the assigned MEID MFR Codes. Maintain up-to-date and accurate assignment records that match MEIDs of their produced MSs or R-UIMs. These records may be required for audit purposes.

9.4.3 Inform the MEID administrator of changes in the information associated with an MEID MFR Code assignment by using *Form D – Request for Change in MEID Assignment Information*. Changes may occur because of the transfer of an MEID MFR Code(s), through merger or acquisition, to a different MS manufacturer. The initial assignee of the MEID MFR Codes involved in a transfer occurring through merger, acquisition or other means must immediately inform the MEID Administrator when such a change becomes effective. Timely submission of change information enables the MEID Administrator to maintain accurate MEID MFR Code assignment records.

9.4.4 Participate in review of the MEID process, when requested.

9.4.5 Deploy any MEID MFR Code, assigned either directly by the administrator or obtained through merger or acquisition, within the time period specified. Inform the

MEID Administrator of MEID MFR Code deployment by submitting *Form C – MEID Use Declaration*.

9.4.6   Apply to the MEID Administrator for an extension if the deployment requirement cannot be met and the MEID MFR Code is still required.

9.4.7   Return to the Administrator, using *Form F – MEID Assignment Return*:

- Any MEID MFR Code no longer needed for the production of MSs,

- Any MEID MFR Code not deployed within the time period specified, including extensions, or

- Any MEID MFR Code not used in conformance with these assignment guidelines.

9.4.8   Return to the MEID Administrator, on an annual basis on the anniversary date of the issuance of the MEID MFR Code, a duly completed and signed *Form G*.

10.0   RESPONSIBILITIES OF THE MEID ADMINISTRATOR

The role of the MEID Administrator is to manage the entire MEID resource and to directly administer the MEID MFR Code segment of the MEID. In this context, the MEID Administrator shall:

10.1   Provide to the industry general and specific information on the structure, proper use and management of MEIDs for MSs or R-UIMs meeting regulatory requirements.

10.2   Provide copies of these guidelines and forms to MEID MFR Code applicants and assignees, and assist them in completing the required forms.

10.3   Review and process MEID MFR Code applications as follows:

10.3.1   Review the application to determine if all requested information is provided and credible. If not, return the application to the applicant requesting that any deficiency be corrected.

10.3.2   Inform applicants of the status of their requests using *Form B – MEID Manufacturer's Code Application Disposition*. There are two possible dispositions: 1) granted or 2) additional information required. Notify the applicant in writing of the disposition within thirty days from receipt of Form A. The response includes:

- If granted, the specific MEID MFR Code(s) assigned,

- If additional information is required, the specific information required.

10.3.3   Keep confidential all information relative to anticipated volume of MSs or R-UIMs and/or market launch details provided by applicant.

10.4   Use the following MEID MFR Code assignment procedures:

10.4.1   The Administrator should assign MEID MFR Codes in numerical sequence.

10.4.2   There may be considerations or limitations on the part of the manufacturer that require a specific assignment or preclude them being able to use the next consecutive MEID MFR Code assignment. These exceptions are set forth below and in the addenda (if any) to this document.

10.4.3   The following MEID MFR Code(s) are not available for MFR Code assignment due to previous assignment and reservation (also see Section 19) e.g., test mobiles, expansion space:

Code A0000000 (Not available)

Code FFFFFFFF (Not available)

10.4.4   MEID MFR Code applicants eligible for multiple MEID MFR Codes (i.e., applicants with high run rates as determined by the MEID Administrator using historical data and unbiased judgment)

may request that such codes be assigned in the next available block of numerically sequential codes (excepting those codes reserved or unavailable for assignment, pursuant to Section 9.4.2 or any subsequent addenda to these guidelines). In such cases, a separate Form A should be submitted for each MEID MFR Code required, along with a cover letter requesting their assignment in a sequential block.

10.5   Maintain accurate and current MEID MFR Code assignment records. Update the records as required to respond to requests for changes in assignment information reported by MEID MFR Code assignees. Respond to these requests within thirty days using *Form E – Confirmation of Change of MEID Assignment Information.*

10.6   Publish, monthly, via the agreed medium, a list of assigned MEID MFR Codes. The list includes the MEID MFR Code number, the manufacturer to which the code is currently assigned, and the entity contact and number. In the case of a code that was reassigned after having been partially used by previous assignee(s), the list shall also identify the serial number range restrictions placed on the current assignee along with the serial number range used (or presumed to have been used) by each previous assignee. Track the number of MEIDs assigned and the assignment rate and report this data regularly to the applicable Standards Development Organizations.

10.7   Investigate any MEID MFR Code that has not started to be deployed within the required time frame, and issue extensions if appropriate. Notify the appropriate Engineering Committee if an assignee fails to start to deploy an assigned MEID MFR Code within two extensions.

10.8   Reclaim assigned MEID MFR Code(s), as needed.

10.9   Direct the MEID conservation program and conduct periodic reviews, as required, of MEID MFR Code assignee records.

10.10   Inform the wireless telecommunications industry, via the agreed method, of any revisions to these guidelines.

10.11   The term of the MEID Administrator shall be for one (1) year from the date of appointment by the overseeing industry body. One (1) extension of the appointment is automatic. The appointment may be reviewed by the overseeing industry body at any time.

11.0   MEID MANUFACTURER'S CODE RETURN AND RECLAMATION PROCEDURES

11.1   Assignee responsibilities:

Assignees shall return MEID MFR Code(s) that are no longer required, not deployed, or not used in conformance with these assignment guidelines. In addition, assignees shall return the Code(s) and an indication of the range of Serial Numbers that have been used if the manufacturer has not manufactured an MEID MS or MEID R-UIM for at least one year.

Assignees shall cooperate with the MEID Administrator in carrying out its reclamation and review responsibilities.

11.2   Administrator responsibilities:

The MEID Administrator shall contact any MEID MFR Code assignee identified as not having returned to the Administrator, for reassignment, any MEID MFR Code(s) no longer required, not deployed, or not used in conformance with these assignment guidelines.

The Administrator shall first seek clarification from the assignee regarding any alleged non-use or misuse. If the assignee provides an explanation satisfactory to the administrator, and in conformance with these assignment guidelines, the MEID MFR Code will remain assigned. If no satisfactory explanation is provided, the Administrator will request a letter from the assignee returning the assigned code(s) for reassignment. If a direct contact can not be made with the assignee to effect the above process, a registered letter will be sent to the assignee address of record requesting that they contact the Administrator within thirty days regarding the alleged code non-use or misuse. If the letter is returned as non-delivered, the Administrator will advise the overseeing industry body i.e., the body that Administrator reports to (e.g. ESN Administrator reports to TIA).

The MEID Administrator will consult with the overseeing industry body for guidance on any instance which is not resolved through the procedures in the paragraph above.   The overseeing industry body will coordinate with appropriate industry fora in seeking a suggested resolution.

If the overseeing industry body cannot suggest a resolution, or if the MEID MFR Code assignee will not comply with the resolution suggested by the overseeing industry body, the MEID Administrator may refer the case to the appropriate regulatory body (pertinent to the jurisdiction where the assignee is located).

11.3   The overseeing industry body responsibilities:

- •   Accept all referrals of alleged non-use or misuse of MEID MFR Codes from the MEID Administrator or any other entity,

- •   Investigate the referral,

- •   Review referrals in the context of these assignment guidelines,

- •   Attempt to identify a suggested resolution of the referral, and

- •   Inform the MEID Administrator of the suggested resolution, if identified, or that the overseeing industry body was unable to identify a suggested resolution,

- •   If a suggested resolution is not in conformance with the existing guidelines, the overseeing industry body may initiate the guidelines revision process [Section 14].

- •   Material changes or exceptions to these procedures should occur with industry consensus reflected in the change process, and in accord with Global Administration Procedure evolution.

12.0   MEID RESOURCE CONSERVATION AND ASSIGNMENT REVIEWS

12.1   Assignment and management of MEID resources are undertaken with the following conservation objectives:

- To efficiently and effectively administer/manage a limited resource through code conservation, and

- To eliminate or delay the potential for MEID exhaustion.

The process to achieve these objectives should not impede the introduction of competitive wireless services which use MEIDs.

12.2   To promote the efficient and effective use of numbering resources, reviews of MEID MFR Code assignments may be performed to ensure consistent compliance with these guidelines.

12.3   The MEID Administrator tracks and monitors MEID MFR Code assignments and assignment procedures to ensure that all segments of the MEIDs are being used in an efficient and effective manner. Ongoing administrator procedures that foster conservation shall include, but not be limited to, the following:

- An active reclamation program to reclaim unused or misused MEID MFR Code,

- Strict conformance with these guidelines by those assigning MEID MFR Codes and MEID Serial Numbers,

- Appropriate and timely modifications to these guidelines to enhance text that may have allowed inefficient use of MEID MFR Codes,

- Periodic specific and random reviews of assignments and assignment procedures.

12.4   The MEID Administrator may initiate a review of an MEID MFR Code assignee's assignment records. The review may be precipitated by a complaint from outside the Administrator's organization or by the Administrator. The review shall be initiated if a request for an MEID MFR Code assignment is received from a manufacturer that already has an MEID MFR Code assignment. The purpose of a review is to verify the MEID MFR Code assignee's compliance with the provisions set forth in these guidelines. The review is performed by the MEID Administrator or by a neutral third party acceptable to the reviewed party and the Administrator.

12.4.1   These reviews are conducted at the MEID MFR Code assignee's premises or at a mutually agreed to location and at a mutually agreed to time.

12.4.2   The MEID Administrator shall not copy or remove the information from the premises nor disclose the information to non-MEID Administrator personnel.

12.4.3   The MEID Administrator reviews the following information to ensure conformance with these guidelines and the proper use of the MEID resource:

- Verification that not more than one MEID MFR Code is assigned unless near serial number exhaustion has been reached under all but one of the assigned MEID MFR Codes, or, if a new MEID MFR Code assignment has been requested, verification that near serial number exhaustion has been reached under all assigned MEID MFR Codes. However, a manufacturer can request the assignment of multiple MEIDs if that manufacturer can certify that they

reasonably expect to exhaust all their assigned MEIDs within six months of issuance.

- Verification of assignment for each working MEID MFR Code, (e.g. declaration from manufacturer)

- Date of assignment of each working MEID MFR Code,

- Implementation date of each working MEID MFR Code,

- Indication of MEID Serial Number assignment to MSs or R-UIMs, and

- Status and status date of each MEID MFR Code unavailable for assignment; *i.e.*, MEID MFR Codes reserved, aging, pending and/or, suspended.

12.5   Review results should be used to identify and recommend to the overseeing industry body specific corrective actions that may be necessary. Examples of specific corrective actions, which may be proposed are as follows:

- Modifications to these assignment guidelines to reflect the specific circumstance revealed by the review,

- Additional training for MEID MFR Code assignees concerning the assignment guidelines,

- Return of assigned MEID MFR Code,

- Requirements for supporting documentation of future MEID MFR Code requests in non-compliant situations, or

- Modifications to the process in which records are maintained or MEID MFR Codes are assigned.

12.6   Review results with respect to MEID MFR Code assignee information and/or recommended MEID MFR Code assignee process modifications shall be treated on a proprietary and confidential basis.

12.7   Failure to participate or cooperate in a review shall result in the activation of MEID MFR Code reclamation procedures.

13.0   MEID EXHAUSTION CONTINGENCY

13.1   When 75% of all the available MEID MFR Codes have been assigned, or assignments are exceeding 10% of the resource per year, the MEID Administrator shall inform the overseeing industry body.

13.2   When the MEID Administrator informs the overseeing industry body that the MEID MFR Codes are approaching exhaustion, the overseeing industry body:

- Conducts a review of current MEID MFR Codes assignments to ensure that efficient MEID MFR Codes utilization is in effect, and, if not,

- Recommends additional procedures to be initiated to effect more efficient MEID MFR Codes utilization, or if efficient utilization is in effect,

- Makes a determination of the most efficient method of expanding the MEID keeping in mind the requisite lead time required to adequately address the network elements which utilize the MEID.

13.3   Using data provided by the overseeing industry body, the wireless industry shall undertake to specify the desired method and time frame needed to implement the proposed changes in the MEID. There should be concurrence from all disciplines in the wireless industry as to the method and time frame for implementation of a replacement for MEID MFR Codes.

14.0   MAINTENANCE OF GUIDELINES

It may be necessary to modify the guidelines periodically to meet changing and unforeseen circumstances. The administrator, any entity in the wireless telecommunications sector or the appropriate wireless industry forum, may identify the need for guidelines modification. When need for modification is identified by other than the forum, the identifying entity submits the modification issue to the forum. The forum coordinates the modification process. Questions or concerns regarding the maintenance of the guidelines may be directed to:

<div align="center">

MEID Global Hexadecimal Administrator

c/o Telecommunications Industry Association

2500 Wilson Boulevard, Suite 300

Arlington, VA 22201-3834 USA

_____

Phone: +1 703-907-7700

Fax: +1 703-907-7728

meidadmin@tiaonline.org

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15.0   APPEALS PROCESS

Disagreements may arise between the MEID Administrator and MEID applicants or assignees in the context of the administration and management of MEIDs and the application of these guidelines. In all cases, the MEID Administrator and MEID applicants/assignees shall make reasonable, good faith efforts to resolve such disagreements among themselves, consistent with the guidelines, prior to pursuing any appeal. Appeals may include, but are not limited to, one or more of the following situations:

- The MEID applicant/assignee shall have the opportunity to resubmit the matter to the Administrator for reconsideration with or without additional input.

- Guidelines interpretation or clarification questions may be referred to the Industry MEID arbitration committee as arranged by the overseeing industry body for resolution. Unless otherwise mutually agreed by the parties, these questions shall be submitted in a generic manner protecting the identity of the appellant.

Reports on any resolution resulting from the above situations, the content of which is mutually agreed upon by the involved parties, and kept on file by the MEID Administrator. At a minimum, the report contains the final disposition of the appeal; e.g., whether or not an MEID was assigned.

16.0   GLOSSARY

3GPP - Third Generation Partnership Project

3GPP2 -– Third Generation Partnership Project Two

Assignee - The entity to which an IMEI, MEID, UIM or ESN has been assigned for the manufacture of mobile stations.

CEIR - Central Equipment Identity Register

CMRS - Commercial Mobile Radio Service. A mobile service (or functional equivalent) that is (1) provided for profit, (2) an interconnected service, and (3) available to the public, or to such classes of eligible users as to be effectively available to a substantial portion of the public.

Conservation - Consideration given to the efficient and effective use of a finite resource in order to minimize the need to expand its availability while at the same time allowing the maximum flexibility in the introduction of new services, capabilities and features.

ESN - The Electronic Serial Number which uniquely identifies the mobile station.

EUIM-ID – Expanded R-UIM Identity

GDA - Global Decimal Administrator

GHA - Global Hexadecimal Administrator

GEID - Global Equipment Identifier encompasses both the GDA and GHA assignable numbering range for coordinated global roaming and harmonization between 3G technologies as a universal mobile equipment identifier.

IMEI - International Mobile Equipment Identity, which uniquely identifies the mobile station

ME - Mobile Equipment. (See also Mobile station or R-UIM)

MEID - Mobile Equipment Identity, which uniquely identifies the mobile station

Mobile station - Interface equipment used to terminate the radio path at the user side. The mobile station contains an Electronic Serial Number and other identification information, either a Mobile Identification Number (MIN) or an International Mobile Station Identification (IMSI).

Multi-Mode IMEI/MEID MS - Mobile Station designed to operate according to more than one air interface or Network specification. Terminals designed to comply with both 3GPP and 3GPP2 specifications.

Overseeing Industry body - The body that the MEID Administrator reports to (e.g. ESN Administrator and MEID Administrator reports to TIA).

Regulatory Approved Licensed two-way CMRS service provider - Any entity that is authorized, as appropriate, by local, state, or federal regulatory authorities to provide two-way mobile stations to the public.

R-UIM – Removable User Identification Module, often called the Subscriber Identity Module (SIM) card.

Sensitive Information – Information expressly identified as such by applicant or information on submitted forms other than manufacturer name and contact information.

Serial Number - The portion of the MEID or IMEI that uniquely identifies the MS within the Manufacturer code allocation space.

SF_EUIMID – Short Form EUIM-ID

UIM - User Identification Module

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17.0 REVISION HISTORY

Version 1.0 – February 2004: S.R0089-0 changed to 3GPP2 SC.R4002-0 publication

Version 2.0 – October 2004: 3GPP2 SC.R4002-0 v1.1 Published as v2.0

Version 3.0 – March 2006: 3GPP2 SC.R4002-0 v3.0 published

Version 4.0 – July 26, 2007: Publication version to address EUIM-ID SF

Version v5.0 – January 18, 2008: Update to clarify MFR Code segment assignments

18.0 MEID ADMINISTRATIVE REPORT INFORMATION

The MEID administrative report will be posted and found at www.tiaonline.org

19.0 MEID MANUFACTURER'S CODE ASSIGNMENT

The MEID administrative code assignment information will be posted and found at www.tiaonline.org

The headings for this table indicate the following:

Manufacturer assignment indicates the manufacturer to whom the range has been assigned.

Manufacturer code hexadecimal range indicates the range of serial numbers including the manufacturer code assignments made by the GHA MEID Administrator.

The following table is an example extracted from a recent GHA MEID Administrator's Report distributed prior to the revised Assignment Guidelines and Procedures approved version.

Manufacturer Code		Manufacturer (list manufacturer name or regional administration body and contact information when allocated)
Hexadecimal	Decimal	
	98dddddd	GHA (for 3GPP/3GPP2 mutli-mode terminals)
	99dddddd	GHA (for 3GPP/3GPP2 mutli-mode terminals) (Start)
A0000000	*00000000*	**Reserved for test / prototype mobiles allocated in small quantities**
A0000001	*00000001*	Available for allocation to regional administration bodies or mobile manufacturers (Start)
--->	--->	Available for allocation to regional administration bodies or mobile manufacturers
FFFFFFFE	*4,294,967,294*	Available for allocation to regional administration bodies or mobile manufacturers
FFFFFFFF	*4,294,967,295*	**Reserved**

20.0   MEID APPLICATION AND RELATED FORMS PACKAGE

The forms in this package are used for communication between the MEID Administrator and applicants for and assignees of these resources. Forms included in this package are:

Form A –   Mobile Equipment Identifier (MEID) Application

Applicants complete, sign, and return this form to apply for an MEID.

Form B –   Mobile Equipment Identifier (MEID) Application Disposition

The MEID GHA Administrator uses this form to notify the applicant of the outcome of his/her application, which may be a code assignment, denial, or a request for additional clarifying information.

Form C –   Mobile Equipment Identifier (MEID) Use Declaration

The recipient of an Mobile Equipment Identifier (MEID) assignment uses this form to notify the MEID Administrator that the assigned code has been deployed.

Form D –   Request for Change in Mobile Equipment Identifier (MEID) Assignment Information

Mobile Equipment Identifier (MEID) assignees use this form to notify the MEID Administrator of a change in any of the assignment information; for example, a change in the name, address, or phone number of the contact person in the company holding the Mobile Equipment Identifier (MEID). As a more complex example, this form should also be used to record the transfer of a Mobile Equipment Identifier (MEID) to a new company, as might happen as a result of a merger or acquisition.

Form E –   Confirmation of Change in Mobile Equipment Identifier (MEID) Assignment Information

The MEID Administrator uses this form to acknowledge a change initiated by a Mobile Equipment Identifier (MEID) assignee through submission of Form D.

Form F –   Mobile Equipment Identifier (MEID) Assignment Return

Mobile Equipment Identifier (MEID) assignees use this form to return to the pool any Mobile Equipment Identifier (MEID) which are no longer required.

Form G –   Certification of Compliance with MEID Guidelines

Mobile Equipment Identifier (MEID) assignees use this form to certify compliance with the MEID Assignment Guidelines and Procedures.

<div align="center">

Return completed forms to:

Engineering Committee TR-45 MEID Global Hexadecimal Administrator

c/o Telecommunications Industry Association

2500 Wilson Boulevard, Suite 300

Arlington, VA 22201-3834 USA

Phone: +1 703-907-7700

Fax: +1 703-907-7728

meidadmin@tiaonline.org

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FORM A – MOBILE EQUIPMENT IDENTIFIER (MEID) APPLICATION

Entity requesting assignment: ....

General description of the MS ☐ or R-UIM ☐ to be provided **(Check One)**
....

....

....

Number of Serial Numbers being requested ....

Regulatory Agency Reference Code (if applicable)……………………………………………...

Multi-Mode MS terminals designed to comply with both 3GPP and 3GPP2 specifications

    ☐   YES   ☐   NO

IMPORTANT: If "YES" please complete page 3 of FORM A

Do special considerations apply or an addendum?

    ☐   YES   ☐   NO

    If YES, please specify the special consideration needed

    ....

    ....

    ....

    ....

    ....

    The MEID shall be set by the manufacturer. The manufacturer shall make every reasonable effort for the MEID to be not alterable, not capable of duplication nor removable outside of a manufacturer authorized service center, and any attempt to remove, tamper with, or change the MEID host component or operating system as originally programmed by the manufacturer shall render the MS inoperative. Where a dedicated MEID device is utilized, it must be permanently attached to the device that reads the MEID and the path to the device must be secured. The device shall not be removable and its pins shall not be accessible. The MEID is incorporated in an MS or R-UIM module, which is contained within the MS equipment. The MEID shall not be changed after the ME's final production process. It shall resist tampering, i.e. manipulation and change, by any means (e.g. physical, electrical and software). The manufacturer who is also responsible for ascertaining that each MEID is unique and keeping detailed records of produced and delivered MSs or R-UIMs should carry out implementation of each individual module.

All Applicants Complete Form "A" Page 4

FORM A – MOBILE EQUIPMENT IDENTIFIER (MEID) APPLICATION (CONTINUED)

Contact name: ....

Company: ....

Address: ....

Room: ....

City, State, ZIP/Postal Code: ....

Country: ....

Phone: .... Fax: .... E-mail: ....

Signature below indicates that the applicant:

- Certifies the accuracy of the information provided in this application,
- Commits to deploy any assigned MEID Manufacturer's Code(s) within the time period specified by the assignment guidelines,
- Certifies that the **MOBILE EQUIPMENT IDENTIFIER** (MEID) Manufacturer's Code will be used in mobile sets for CMRS,
- Certifies that any required authorization has been secured from the appropriate federal, state, or local regulatory bodies, and
- Understands and agrees that the use of any assigned MEID Manufacturer's Code(s) in a manner other than in conformance with the assignment guidelines may result in forfeiture.

Authorized name: ....

Authorized signature: ....

Date of application: ....

Complete page 3 ONLY if you are requesting MEID Mfr Codes for Multi-Mode equipment designed to comply with both 3GPP and 3GPP2 specifications.

All Applicants Complete Form "A" Page 4

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FORM A – MOBILE EQUIPMENT IDENTIFIER (MEID) APPLICATION (CONTINUED)

Complete this page ONLY if you are requesting MEID Mfr Codes for Multi-Mode equipment designed to comply with both 3GPP and 3GPP2 specifications.

Marketing Name(s) (Include all brand names and variants):

....

Previous Mfr Codes issued for this product:

....

Band/Mode:

GSM 450 ☐   GSM 850 ☐   GSM 900 ☐   GSM 1800 ☐   GSM 1900 ☐

Other technologies   ☐

WCDMA (FDD) & GSM Phase 2 (Dual Mode Terminal) ☐

WCDMA (FDD) Only ☐ - Specify Band: ....

Type:

Handheld ☐   Portable (includes PDA)   ☐   Vehicle ☐

POWER CLASS GSM 900:

19W ☐   7.9W ☐   5W ☐   2W ☐   0.8W ☐   Band not supported ☐

POWER CLASS GSM 1800:

1W ☐ Band not supported ☐

POWER CLASS GSM 850:

19W ☐   7.9W ☐   5W ☐   2W ☐   0.8W ☐   Band not supported ☐

POWER CLASS GSM 1900:

1W ☐ Band not supported ☐

POWER CLASS GSM 450:

19W ☐   7.9W ☐   5W ☐   2W ☐   0.8W ☐   Band not supported ☐

POWER CLASS WCDMA Mode:

1.0W ☐   0.5W ☐   Band/mode not supported ☐

All Applicants Complete Form "A" Page 4 (next page)

FORM A – MOBILE EQUIPMENT IDENTIFIER (MEID) APPLICATION (CONTINUED)

There may be a non-refundable application fee for <u>each</u> MEID Manufacturer's Code requested and allocated by the administrator. <u>Pricing for applications are set by the MEID Global Hexadecimal Administrator. Please refer to the TIA website for the current fee structure.</u>   Payment of the non-refundable application fee is:

☐ by enclosed check (made payable to Telecommunications Industry Association) or

☐ by credit card (mark one):   ☐ MasterCard

☐ Visa

☐ American Express

Credit card number_____

Expiration date_____

Signature of card holder_____

Printed name of card holder_____

Dated:_____

Return completed application forms to:

Engineering Committee TR-45 MEID Global Hexadecimal Administrator
c/o Telecommunications Industry Association
2500 Wilson Boulevard, Suite 300
Arlington, VA 22201-3834 USA

_____

Phone: +1 703-907-7700
Fax: +1 703-907-7728
meidadmin@tiaonline.org

FORM B – MOBILE EQUIPMENT IDENTIFIER MANUFACTURER'S CODE APPLICATION DISPOSITION

The MEID Administrator has reviewed your application filed for assignment of an MEID Manufacturer's

Code. The box checked below indicates the action taken:

☐   Your application has been granted. The MEID Manufacturer's Code(s) and serial number code range(s) assigned for your use is/are:
....

The assignment is effective as of: ....

The information recorded for this assignment is shown below. Please notify the MEID Administrator immediately of any errors in or changes to this information.

(*Display computer generated assignment information here.*)

☐   Your application has not been granted at this time for the following reason(s):

....

....

You are entitled to appeal as specified in Section 15 of the assignment guidelines.

☐   The following additional information is needed to process your application:

....

....

Authorized name: ....

Authorized signature: ....

Date: ....

FORM C – MOBILE EQUIPMENT IDENTIFIER USE DECLARATION

By submitting this form, I certify that

MEID Manufacturer's Code and Serial Number Range(s):
....

Assigned to: ....

Is used effective (date):
 ....

Authorized name: ....

Authorized signature: ....

Contact information: ....

Date of this notification: ....

Return completed application forms to:

Engineering Committee TR-45 MEID Global Hexadecimal Administrator
c/o Telecommunications Industry Association
2500 Wilson Boulevard, Suite 300
Arlington, VA 22201-3834 USA

_____

Phone: +1 703-907-7700
Fax: +1 703-907-7728
meidadmin@tiaonline.org

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FORM D – REQUEST FOR CHANGE IN MOBILE EQUIPMENT IDENTIFIER INFORMATION

Effective (date): ....

The assignment information for MEID Manufacturer's Code and Serial Number Range(s):

.... should be changed. The changes are described below:

Authorized name: ....

Authorized signature: ....

Contact information: ....

Date of this notification: ....

Return completed application forms to the:

<div align="center">

Engineering Committee TR-45 MEID Global Hexadecimal Administrator
c/o Telecommunications Industry Association
2500 Wilson Boulevard, Suite 300
Arlington, VA 22201-3834 USA

_____

Phone: +1 703-907-7700
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meidadmin@tiaonline.org

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FORM E – CONFIRMATION OF CHANGE IN MOBILE EQUIPMENT IDENTIFIER ASSIGNMENT INFORMATION

Your request-dated _____ for change(s) to the assignment information for MEID Manufacturer's

Code and Serial Number Range(s)_____ has been processed by the administrator and the

changes have been made. Please verify the revised assignment information below and report any errors or

discrepancies to the administrator.

(*Display computer generated assignment information here.*)

Authorized name: ....

Authorized signature: ....

Contact information: ....

Date of this notification: ....

Report discrepancies to the:

Engineering Committee TR-45 MEID Global Hexadecimal Administrator
c/o Telecommunications Industry Association
2500 Wilson Boulevard, Suite 300
Arlington, VA 22201-3834 USA

_____

Phone: +1 703-907-7700
Fax: +1 703-907-7728
meidadmin@tiaonline.org

FORM F – MOBILE EQUIPMENT IDENTIFIER ASSIGNMENT RETURN

MEID Manufacturer's Code and Serial Number Range(s):
....

Currently held by: ....
is no longer required effective (date) .... and may be returned
to the pool for assignment to another entity.

Serial Numbers used thus far are in the range of _____ to _____.

Multi-mode IMEI/MEID equipment designed to comply with both 3GPP and 3GPP2 specifications ☐

Authorized name: ....

Authorized signature: ....

Contact information: ....

Date of this notification: ....

Return completed forms to the:

Engineering Committee TR-45 MEID Global Hexadecimal Administrator
c/o Telecommunications Industry Association
2500 Wilson Boulevard, Suite 300
Arlington, VA 22201-3834 USA

_____

Phone: +1 703-907-7700
Fax: +1 703-907-7728
meidadmin@tiaonline.org

FORM G - CERTIFICATION OF COMPLIANCE WITH MEID GUIDELINES

We, _____, certify that MEID Code and Serial Number Range(s)_____,
has been used in accordance
      (Assignee)
with all of the terms and provisions set forth in the MEID Guidelines as published by 3GPP2 and posted on
the latter's web site on the date of this certification ("MEID Guidelines"). We further specify that we have
complied in specific with applicable Sections of the MEID Guidelines.

We understand that failure to comply with the MEID Guidelines may result in the forfeiture of the above
MEID Code and Serial Number Range(s).

Serial Numbers used thus far are in the range of _____ to _____.

Signed: _____

Title: _____

Date: _____

Return completed Form G on an annual basis to:

<div align="center">

Engineering Committee TR-45 MEID Global Hexadecimal Administrator
c/o Telecommunications Industry Association
2500 Wilson Boulevard, Suite 300
Arlington, VA 22201-3834 USA

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Phone: +1 703-907-7700
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