Telecommunications Authority of Trinidad and Tobago

Application Procedures for Home Network Identity (HNI)

Maintenance History		
Date	Change Details	Version
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1   Background

Mobile service providers that permit their customers to use their mobile handsets outside of their home country (roaming) without changing their telephone number do so by the use of the Home Network Identity (HNI). The HNI enables the mobile customers of a particular network in one country to roam freely across national borders and to enjoy mobile services which they subscribed to in their country of origin as far as the visited network allows. There must be a roaming agreement in place between the various service providers in the different countries for this to happen.

2   Purpose of Document

The purpose of this document is to provide the mobile service providers in Trinidad & Tobago with the procedure for applying for an HNI which will be programmed into every mobile telephone handset that they sell for use in Trinidad & Tobago.

As a NANP participating country, Trinidad and Tobago observes the Assignment and Management Guidelines and Procedures developed by the IMSI Oversight Committee (IOC). These guidelines have been altered, where necessary, to conform to the requirements of the Telecommunications Act chapter 43:31 and the requirements of the Telecommunications Authority of Trinidad and Tobago.

3   The Home Network Identity

The Home Network Identity (HNI) is part of the IMSI (International Mobile Subscriber Identity) number which is assigned to all mobile telephones when they are activated. The IMSI number is 15 digits in length and consists of the following[1]:

Mobile country code + Mobile network code + Mobile station Identification Number

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[1] ITU-T Rec. E 212 (05/2004)

(MCC) - 3 digits   (MNC) - 2 to3 digits   (MSIN) - max. of 10 digits

3.1   Structure of the HNI

The HNI consists of the Mobile Country Code and the Mobile Network code. These two codes identify the country in which the mobile telephone is registered and the network to which it is subscribed. This information is used to authenticate the mobile telephone requesting service on the visited network by querying the home network. This authentication is necessary for billing purposes when roaming on a network other than the one to which the mobile telephone is subscribed.

The format of the HNI is

Mobile Country Code   +   Mobile Network Code

  (MCC) - 3 digits   (MNC) - 2 to3 digits

The Mobile Country Code is assigned by the ITU –T to the country where the mobile is registered and the Mobile Network Code is assigned to the network to which the mobile telephone is subscribed by the local Regulatory Authority.

4   Assignment of codes

The Mobile Country Code (MCC) is assigned by the ITU. The Mobile Country Code for Trinidad & Tobago is 374. More than one Mobile Country Code may be assigned to a country when its supply of numbers is in jeopardy of exhaust depending on its subscriber base.

The Mobile Network Code (MNC) is assigned by the Telecommunications Authority of Trinidad & Tobago (hereafter designated the Authority). The Authority has assigned three digit Mobile Network Codes to the mobile service providers in Trinidad & Tobago in accordance with the practice in the NANP. A service provider may have more than one Mobile Network code associated with its public mobile services.

The Mobile Station Identification Number (MSIN) is assigned by the public mobile service provider to the mobile telephone subscriber in the format

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868-NXX-XXXX

868 is the NPA assigned to Trinidad & Tobago under the North American Numbering Plan (NANP).

The NXX is assigned by the Authority to the mobile service provider in accordance with the National Numbering Plan of Trinidad & Tobago.

5 Procedure for assignment of HNI

The Telecommunications Authority of Trinidad & Tobago is responsible for assigning the HNI to the public mobile service provider and applications will be made on the prescribed forms in Section 12 of this document.

5.1 Criteria for assignment of HNI's

The following criteria shall be used when assigning an HNI:

1. HNI's will be assigned to authorized service providers of public mobile telephone service in Trinidad & Tobago
2. Mobile service providers must be in possession of a valid concession, issued by the Authority, to provide public mobile telephone service in Trinidad & Tobago
3. The Authority shall advise the ITU Operational Bulletin Board of the assignment of the HNI
4. The public mobile service provider is responsible to advising its foreign correspondents of its HNI and Mobile Station Identity Number ranges
5. The public mobile service provider shall pay such fees as determined by the Authority on submission of the HNI application form (Form HNI-01)

6 Responsibilities of HNI Applicants and Assignees

Service providers of public mobile telephone service requesting HNI assignments and those already assigned an HNI shall comply with the following:

1. HNI applicants and assignees must meet all conditions specified in these guidelines

2. HNI applicants must apply in writing to the Authority on the prescribed form HNI-01 which can be found under the heading of Forms on the Authority's website www.tatt.org.tt.

3. HNI Assignees shall:

   a) Advise the Authority of its in-service date on the Notification of In-service form (Form HNI -02) which can be found under the heading of Forms on the Authority's website www.tatt.org.tt

   b) Utilize efficient and effective management procedures and practices to assign Mobile Station Identity Numbers so as to maximize the available numbering resources

   c) Furnish all assistance to the Authority in the discharge of its monitoring and auditing functions by complying with requests for reports and meetings

7   Processing of applications

The Authority is responsible for managing the HNI resources of Trinidad & Tobago and shall process applications in a fair and transparent manner. All applications for initial or additional HNIs shall be made on form HNI-01. Applicants shall be advised on the status of their application by letter within 90 days of the receipt of the satisfactorily completed form.

8   Reclamation

The Authority reserves the right to reclaim an assigned HNI under the following conditions:

1. The authorised provider has not met the roll out obligations of their mobile concession

The authorised provider who does not meet the roll out obligations of their concession and does not use the HNI assigned for their public mobile service within 6 months after the roll out date, may request an extension of the assignment from the Authority with reasons for the delay. Should the Authority accept the reasons submitted for the delay, a time frame for such deployment will be mutually agreed between the Authority and the authorised provider. If there is no extension of time, the Authority may reclaim the HNI.

Should the HNI still not be deployed after an extended period, the Authority has the option of a further extension or reclamation of the HNI.

2. The public mobile service provider has ceased mobile operations

Should an authorised mobile service provider cease mobile operations in Trinidad and Tobago for whatever reason, the Authority shall act to recover the HNI assigned to the now defunct authorised mobile service provider should the HNI not be returned voluntarily.

3. The HNI is not used in conformance with these guidelines including the failure to remit fees where applicable

The Authority shall reclaim an HNI assigned to an authorised mobile service provider should there be non - compliance to these guidelines. The Authority may reclaim the HNI from an authorised service provider should the applicable fees not be paid.

9   Appeals Process

The Authority will make all reasonable efforts to resolve any issues which may negatively affect holders of HNI's or applicants for HNI's consistent with these procedures. However should these efforts fail to appease the aggrieved party, the appeals procedure in the Telecommunications Act No 4 of 2001, section 83.may be invoked.

10   Glossary

Definitions of commonly used terms use[2]

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

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[2] Definitions taken from IMSI Assignment and Management Guidelines and Procedures Ver. 15.0 March 2014

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Home Authentication, Authorization and Accounting (AAA) – A server(s) in the home network of the HNI assignee that provides authentication, authorization and accounting service profile management functions

Home Location Register (HLR) – The HLR is a central database that contains details of each mobile device subscriber that is authorized to use the core network; the HLR stores details of every SIM card issued by the network operator

Home Network Identifier (HNI) – The HNI is the aggregate of the MCC and MNC and is uniquely required in countries with more than a single MCC. The existence of multiple MCCs in a country necessitates that both the MCC and MNC must be analyzed to determine the home network of a roaming terminal/user, hence the need for HNI functionality. The HNI is the resource for which these Assignment Guidelines were developed and which the IMSI-A administers.

HNI assignee – The entity to which an HNI has been assigned for the provision of public mobility services and international roaming capability.

Home network – The network to which a given mobile terminal/user is subscribed.

Home Subscriber System – The HSS is a system that provides subscriber identification and authorization service profile management functions

International Mobile Subscriber Identity (IMSI) – The string of decimal digits up to a maximum of 15 digits that identifies a unique mobile terminal or mobile subscriber internationally. The IMSI consists of three fields; the Mobile Country Code (MCC), the Mobile Network Code (MNC), and the Mobile Station Identification Number (MSIN). The MCC is uniformly 3-digits in length and identifies the home country of a roaming terminal/user. The MNC is 3-digits in length in the United States (NANP) and identifies the home network of a roaming terminal/user (see HNI definition above). The MSIN is 9-digits in length in the United States (NANP) and uniquely identifies the roaming subscriber/terminal. The use of an IMSI enables international roaming capability.

International Roaming Capability – The ability of a mobile terminal/user to originate and receive calls and other telecommunications services while outside their home country.

Mobile Country Code (MCC) – The first field of the IMSI that is 3 digits in length. An MCC either identifies a country or a group of Networks that share an MCC for international services.

Mobile Network Code – The second field of the IMSI that is 3 digits in length, The MNC, in combination with the MCC, uniquely identifies the home network of the mobile terminal or mobile user. In the US, the combination of the MCC and MNC is the HNI.

Mobile Subscriber – An entity or person that contracts to receive or pay for a public mobility service.

Mobile Subscriber Identification Number (MSIN) – The third field of the IMSI that is a maximum of 10 digits. The MSIN within a given MCC+MNC (HNI) identifies a unique mobile terminal or mobile subscriber within a public network.

Mobile Terminal – Any portable, transportable, or handheld terminal supporting public mobility service.

Mobile User – A user that utilizes a subscription to access a public mobility service.

Network Operator – The entity responsible for the maintenance and operation of a public telecommunications network which supports public mobility services.

Public Mobility Service – A public telecommunications service that supports voice and/or data mobility for terminals or users by providing access to and from the public network via a home network and/or visited network(s).

Visited network – The network providing service to a subscriber when the subscriber roams outside the home network.

11 Home Network Identity Application and Related Form Package

The forms in this section are necessary for the administration of HNI's by the Authority in Trinidad & Tobago and can be found in the Forms section of the Authority's website www.tatt.org.tt. The forms included in this package are as follows:

HNI-01   Application form used by a mobile service provider for requesting an HNI

HNI-02   The form used by the mobile service provider to inform the Authority that the HNI has been put into service.

12 Bibliography

ATIS Web Site. May 1, 2015. www.atis.org/inc/incguides.asp (accessed June 22, 2015).