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GLOBAL SYSTEM FOR
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Digital cellular telecommunications system (Phase 2+); Network Identity and Timezone (NITZ); Service Description, Stage 1 (GSM 02.42 version 5.1.0)

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Foreword

This Global System for Mobile communications Technical Specification (GTS) has been produced by the Special Mobile Group (SMG) of the European Telecommunications Standards Institute (ETSI).

This GSM Technical Specification (GTS) describes the feature Network Identity and Timezone (NITZ).

The contents of this GTS are subject to continuing work within SMG and may change following formal SMG approval. Should SMG modify the contents of this GTS it will then be republished by ETSI with an identifying change of release date and an increase in version number as follows:

Version 5.x.y

where:

- y the third digit is incremented when editorial only changes have been incorporated in the specification;

- x the second digit is incremented for all other types of changes, i.e. technical enhancements, corrections, updates, etc.

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1 Scope

This GSM specification describes the feature Network Identity and Timezone (NITZ).

This feature provides the means for serving PLMNs to transfer current identity, time and the local timezone to Mobile Stations (MS)s, and for the MSs to store and use this information. This enhances roaming by permitting accurate indication of PLMN identities that are either newer than the Mobile Equipment (ME) or have changed their name since the ME was sold. Additionally time and timezone information can be utilised by MEs as desired.

2 Normative references

This GTS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this GTS only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

[1] GSM 01.04 (ETR 350): "Digital cellular telecommunication system (Phase 2+); Abbreviations and acronyms".

[2] GSM 02.07 (ETS 300 906): "Digital cellular telecommunications system (Phase 2+); Mobile Stations (MS) features".

[3] GSM 04.08: "Digital cellular telecommunication system (Phase 2+); Mobile radio interface layer 3 specification".

3 Definitions and abbreviations

In addition to the following definitions, abbreviations used in this specification are listed in GSM 01.04.

NITZ	The feature Network Identity and Timezone as described in this specification.
UCS2	Universal Character Set 2
UT	Universal Time
LTZ	Local Time Zone, the offset from UT applying in that locality, including any adjustments for summer time, etc.

4 Description

The feature Network Identities and Timezone shall make it possible for a serving PLMN to transfer its current identity, universal time and LTZ to MSs, and for the MS to store and use this information. Each one of these elements is optional. The feature significantly enhances roaming as itenables the accurate indication of network identities that are either newer than the ME or have changed their name since the ME was manufactured or sold. Additionally time and timezone information can be utilised by MEs as desired.

When using the default GSM character set, the serving PLMN shall make both a "short" and a "long" name available to the MS. As an alternative or, in addition, to the default GSM character set, the serving PLMN can make a name available in UCS2. The MS shall be free to choose one of these names depending upon its own characteristics and/or limitations, such as those of its display.

NOTE: Guidance is sought, particularly from non-European operators, as to whether long and short name is required in UCS2 format.

The Network Operator may change the network identity at any time. However the change of network identity need not force immediate transfer of information to the MS.

As a network option, it shall be possible to send universal time (UT) by the network. Time information shall include: Year, Month, Day, Hour, Minute, Second and Timezone. The expected accuracy of the time information is in the order of minutes.

NOTE: Universal time indicates the time at which this information element [3] may have been sent by the network. Thus it can be assumed that the accuracy of the time information when it arrives at the MS is usually within a couple minutes.

The serving PLMN shall make Local Time Zone (LTZ) available to the MS as an offset from Universal Time in units of no greater than 15 minutes.

For PLMNs which cover more than one timezone, it is assumed that the Network Operator will arrange for boundaries between subsets of the PLMN service area to be approximately aligned with timezone boundaries. When an MS changes Local Time Zone the PLMN is not required to immediately transfer new time zone information. Similarly the PLMN will transfer the LTZ changes arising from summer/winter adjustments when convenient to the network operator.

The MS will implement the new time zone information at an appropriate time following receipt.

The information passed to MSs supporting the NITZ feature is controlled by the serving PLMN Operator through administrative interaction. The interface necessary to support this administrative interaction is outside the scope of this specification.

5 Applicability

Network Identity and Timezone is both an optional network feature and an optional MS feature.

The NITZ feature is not intended to replace the existing method of PLMN Indication, nor is it intended to discharge the administration and maintenance of the associated MoU Permanent Document, SE13.

6 Normal procedure

6.1 Transfer of NITZ information

Network name, time and timezone information can be transferred from the serving PLMN to the MS:

1) Upon registering on the network.

2) When the MS geographically relocates to a different Local Time Zone.

3) When the network changes its Local Time Zone, e.g. between summer and winter time.

4) When the network changes its identity.

5) At any time during a signalling connection with mobile station.

Transfer of relevant information shall not unduly consume scarce network resources.

6.2 Use of NITZ information

Relevant information shall be presented to the MS user at the earliest opportunity.

It is expected that the MS will display the most up to date information transferred to it.

Switching off the MS should not cause the updated name of the network(s) to be deleted.

Removal of the SIM should not cause the updated name of the network(s) to be deleted.

However, the number of different network identities retained in the ME is a manufacturer issue.

Usage of time information in MS is a ME manufacturer issue. For example, time information can be utilised to time stamp transactions for logging purposes.

Annex A (Informative): Change history

Change history					
SMG No.	**TDoc. No.**	**CR. No.**	**Section affected**	**New version**	**Subject/Comments**
SMG#		A001			
SMG#24	972/97	A002	Scope, Normative references, Description, 6.1,	5.1.0	Alignment of NITZ (Network Identity and Time Zone) to 04.08 Correct inconsistency within specs & add value to GSM system, it is proposed to add the possibility to utilise time info into 02.42.

History

Document history	
July 1996	Publication of Version 5.0.0
November 1996	Publication of Version 5.0.1
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