



**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
Network Identity and TimeZone (NITZ);
Service description;
Stage 1
(3GPP TS 22.042 version 19.0.0 Release 19)**



ReferenceRTS/TSGS-0122042vj00

KeywordsGSM, LTE, UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Important notice

The present document can be downloaded from the
[ETSI Search & Browse Standards](#) application.

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format on [ETSI deliver](#) repository.

Users should be aware that the present document may be revised or have its status changed,
this information is available in the [Milestones listing](#).

If you find errors in the present document, please send your comments to
the relevant service listed under [Committee Support Staff](#).

If you find a security vulnerability in the present document, please report it through our
[Coordinated Vulnerability Disclosure \(CVD\)](#) program.

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

No representation or warranty is made that this deliverable is technically accurate or sufficient or conforms to any law and/or governmental rule and/or regulation and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2025.
All rights reserved.

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the [ETSI IPR online database](#).

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™**, **LTE™** and **5G™** logo are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

Legal Notice

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 3GPP and ETSI identities can be found at [3GPP to ETSI numbering cross-referencing](#).

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

Intellectual Property Rights2
Legal Notice2
Modal verbs terminology.....2
Foreword.....4
1 Scope5
2 References5
3 Definitions and abbreviations.....5
4 Description5
5 Applicability.....6
6 Normal procedure.....6
6.1 Transfer of NITZ information6
6.2 Use of NITZ information7
Annex A (informative): Change history8
History9

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

The present document describes the feature Network Identity and Timezone (NITZ).

This feature provides the means for serving PLMNs to transfer current identity, time, Daylight Saving 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, Daylight Saving Time and timezone information can be utilised by MEs as desired.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core Network Protocols - Stage 3".

[3] 3GPP TS 23.038: "Alphabets and Languages".

3 Definitions and abbreviations

In addition to the following definitions, abbreviations used in the present document are listed in 3GPP TR 21.905 [1].

NITZ	The feature Network Identity and Timezone as described in the present document.
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.
DST	Daylight Saving Time. Adjustment for summer time.

4 Description

The feature Network Identities and Timezone shall make it possible for a serving PLMN to transfer its current identity, universal time, DST 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 it enables 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 character set (see 3GPP TS 23.038 [3]), 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 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, Timezone and DST. The expected accuracy of the time information is in the order of minutes.

NOTE: Universal time indicates the time at which this information element (see 3GPP TS 24.008 [2]) 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 15 minutes.

When the LTZ is compensated for DST (summertime), the serving PLMN shall provide a DST parameter to indicate this. The adjustment for DST can be +1h or +2h.

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 the present document.

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, DST 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/USIM 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												
TSG SA#	SA Doc.	SA1 Doc	Spec	CR	Rev	Rel	Cat	Subject/Comment	Old	New	Work Item	
June 1999			GSM 02.42					Transferred to 3GPP SA1	8.0.0			
SA#04			22.042							3.0.0		
SA#05			22.042	001				Editorial update of references for GSM/3GPP use.	3.0.0	3.0.1		
SP-11	SP-010065	S1-010258	22.042			Rel-4		Transferred to 3GPP Release 4	3.0.1	4.0.0		
SP-15	SP-020045	S1-020457	22.042	003	-	Rel-4	F	Editorial CR to correct terms and references	4.0.0	4.1.0	TEI	
SP-16	SP-020267	S1-021043	22.042			Rel-5		Updated from Rel-4 to Rel5	4.1.0	5.0.0		
SP-20	SP-030241	S1-030378	22.042	005	-	Rel-5	A	Alignment of TS 22.042 (NITZ) with implementation in TS 24.008	5.0.0	5.1.0	TEI5	
SP-26	SP-040744	S1-040997	22.042			Rel-6		Updated from Rel-5 to Rel-6	5.1.0	6.0.0		
SP-36			22.042			Rel-7		Updated from Rel-6 to Rel-7	6.0.0	7.0.0		
SP-42	-	-				Rel-8		Updated from Rel-7 to Rel-8	7.0.0	8.0.0		
SP-46	-	-	-	-	-	-	-	Updated to Rel-9 by MCC	8.0.0	9.0.0		
2011-03	-	-	-	-	-	-	-	Update to Rel-10 version (MCC)	9.0.0	10.0.0		
2012-09	-	-	-	-	-	-	-	Update to Rel-11 version (MCC)	10.0.0	11.0.0		
2014-10	-	-	-	-	-	-	-	Update to Rel-12 version (MCC)	11.0.0	12.0.0		
2015-12								Update to Rel-13 version (MCC)	12.0.0	13.0.0		
2017-03	-	-	-	-	-	-	-	Updated to Rel-14 by MCC	13.0.0	14.0.0		
2018-06	-	-	-	-	-	-	-	Updated to Rel-15 by MCC	14.0.0	15.0.0		
SA#88e	-	-	-	-	-	-	-	Updated to Rel-16 by MCC	15.0.0	16.0.0		
2022-03	-	-	-	-	-	-	-	Updated to Rel-17 by MCC	16.0.0	17.0.0		
2024-03	-	-	-	-	-	-	-	Updated to Rel-18 by MCC (and issue with v.18.0.0 upload)	17.0.0	18.0.1		
2025-10	-	-	-	-	-	-	-	Updated to Rel-19 by MCC	18.0.1	19.0.0		

History

Document history		
V19.0.0	October 2025	Publication