3GPP
Technical Specification Group Core Networks
Meeting #3, Yokohama, 21-23 April 1999

Document **NP-99120**

ETSI STC SMG1 meeting # 63 (99/1)
Edinburgh, Scotland 8th - 9th March 1999

SMG1 (99)117

Agenda Item: 6 (NITZ)

Source: **SMG1**

Title: LS to SMG3 on “Addition of Daylight Saving Time (DST) parameter”

Document for: Approval

SMG1 has agreed a CR to 02.42 on addition of a Daylight Saving Time (DST) parameter as part of the NITZ information. Details are found in the attached CR.

SMG1 is now asking SMG3 to implement this addition in the relevant specification(s), so that the package of CRs can be approved at SMG#29.

ETSI STC SMG1 meeting # 63 (99/1)
Edinburgh, Scotland 8th - 9th March 1999

SMG1 (99)114

Agenda Item: 6 (NITZ)
Source: Ericsson
Title: Addition of Daylight Saving Time (DST) parameter
Document for: Approval

CHANGE REQUEST No : *Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.*

Technical Specification GSM 02.42 Version: 5.1.0

Submitted to SMG 1 *list SMG plenary meeting no. here ↑* for approval X / for information — without presentation ("non-strategic") X / with presentation ("strategic")

PT SMG CR cover form is available from: http://docbox.etsi.org/tech-org/smg/Document/smg/tools/CR_form/crf28_1.zip

Proposed change affects: *(at least one should be marked with an X)* SIM [ ] ME [X] Network [X]

Work item: NITZ

Source: Ericsson **Date:** 1999-03-07

Subject: Addition of Daylight Saving Time (DST) parameter

Category: *(one category and one release only shall be marked with an X)*

F	Correction		**Release:** Phase 2	
A	Corresponds to a correction in an earlier release		Release 96	
B	Addition of feature	X	Release 97	
C	Functional modification of feature		Release 98	
D	Editorial modification		Release 99	X

Reason for change: The current NITZ specification states that Daylight Saving Time (DST) may be part of the Time Zone information. Most other electronic time managers (PCs, PDA) handles the DST separate from the local time zone information The addition of an explicit DST indication in NITZ allows an error-free communication between applications in the MS and similar applications in other devices.
When the Local Time Zone is updated, the DST parameter will then indicate whether the change was due to the user roaming between time zones or if it was an update from winter/summer time.

Clauses affected: 1, 3, 4, 6.1

Other specs affected:

Other releases of same spec		→ List of CRs:	
Other core specifications	X	→ List of CRs:	(04.08)
MS test specifications / TBRs		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

help.doc

<--------- double-click here for help and instructions on how to create a CR.

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, 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 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.~~

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 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 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 [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.

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 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, 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 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.