**3GPP TSG CN Plenary Meeting #22** **NP-030474**
**10th - 12th December 2003. Hawaii, USA.**

**Source:** **TSG CN WG 1**

**Title:** **CR to R98 on Work Item TEI towards 04.08**

**Agenda item:** **7.11**

**Document for:** **APPROVAL**

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**Introduction:**

This document contains **1** CR, **R98** Work Item **"TEI"**, that have been agreed by **TSG CN WG1 in CN1#32 meeting**, and are forwarded to TSG CN Plenary meeting #22 for approval.

| TDoc # | Tdoc Title | Spec | CR # | Rev | CAT | C_Version | Rel |
|---|---|---|---|---|---|---|---|
| N1-031523 | Correction of MS network capability IE | 04.08 | A1143 | | F | 7.20.1 | R98 |

**3GPP TSG-CN1 Meeting #32** **Tdoc N1-031523**
**Bangkok, Thailand, 27 – 31 October 2003**

*CR-Form-v7*

# CHANGE REQUEST

⌘ **04.08** **CR** **A1143** ⌘ **rev** **-** ⌘ Current version: **7.20.1** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

***Proposed change affects:*** UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☒

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Correction of MS network capability IE |
| ***Source:*** | ⌘ | Siemens AG |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 20/10/2003 |
| ***Category:*** | ⌘ | **F** |
| ***Release:*** | ⌘ | R98 |

*Use one of the following categories:*
***F*** *(correction)*
***A*** *(corresponds to a correction in an earlier release)*
***B*** *(addition of feature),*
***C*** *(functional modification of feature)*
***D*** *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

*Use one of the following releases:*
*2 (GSM Phase 2)*
*R96 (Release 1996)*
*R97 (Release 1997)*
*R98 (Release 1998)*
*R99 (Release 1999)*
*Rel-4 (Release 4)*
*Rel-5 (Release 5)*
*Rel-6 (Release 6)*

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | Wrong implementation of CR 04.08-A1047r1 (NP-000437, approved at TSG CN#9):<br><br>During implementation of the CR a spare bit got lost, with the result that the position of the <Extended GEA bits> in the MS Network Capability for R98 is different from the position for all other releases (R97, R99, Rel-4, ...).<br><br>Since the network is not able to distinguish between R97 and R98 mobile stations this means that the Extended GEA bits cannot be decoded reliably by the network. |
| ***Summary of change:*** | ⌘ | The missing spare bit is inserted. |
| ***Consequences if not approved:*** | ⌘ | If the error is not corrected then the Extended GEA bits cannot be decoded reliably by the network and GEA/2 … GEA/7 cannot be activated for R97/98 mobile stations. |

| | | |
|---|---|---|
| ***Clauses affected:*** | ⌘ | 10.5.5.12 |

| ***Other specs affected:*** ⌘ | Y | N | | ⌘ |
|---|---|---|---|---|
| | | X | Other core specifications | |
| | | X | Test specifications | |
| | | X | O&M Specifications | |

| | | |
|---|---|---|
| ***Other comments:*** | ⌘ | |

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

### 10.5.5.12 MS network capability

The purpose of the *MS network capability* information element is to provide the network with information concerning aspects of the mobile station related to GPRS. The contents might affect the manner in which the network handles the operation of the mobile station. The *MS network capability* information indicates general mobile station characteristics and it shall therefore, except for fields explicitly indicated, be independent of the frequency band of the channel it is sent on.

The *MS network capability* is a type 4 information element with a minimum of 3 and a maximum of 4 octets length.

Octet 4 shall be included by the MS, if it supports in addition to GEA/1 at least one of the GPRS Encryption Algorithm GEA/2 to GEA/7. In this version of the protocol the network shall ignore octet 4.

The value part of a *MS network capability*information element is coded as shown in figure 10.5.128/3GPP TS 04.08 and table 10.5.145/3GPP TS 04.08.

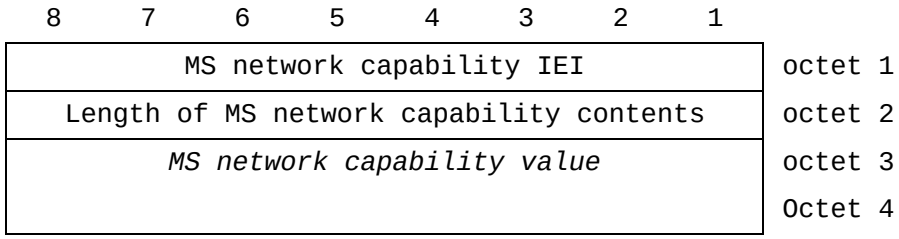


**Figure 10.5.128/3GPP TS 04.08: MS network capability information element**

**Table 10.5.145/3GPP TS 04.08: *MS network capability* information element**

**<MS network capability value part> ::=**

<**GEA1 bit**>
<**SM capabilities via dedicated channels**: bit>
<**SM capabilities via GPRS channels**: bit>
<**UCS2 support**: bit>
<**SS Screening Indicator**: bit string(2)>
<SoLSA Capability : bit>
<**Spare bit**>
<**Spare bit**>
<Extended GEA bits>
<**Spare bit**>;

<**GEA1 bits**> ::= < **GEA/1** :bit>;

<Extended GEA bits> ::= <GEA/2:bit><GEA/3:bit>< GEA/4:bit >< GEA/5:bit >< GEA/6:bit ><GEA/7:bit>;

<**Spare bits**> ::= null | {<spare bit> < **Spare bits** >};

**SS Screening Indicator**
0 0 defined in 3GPP TS 04.80
0 1 defined in 3GPP TS 04.80
1 0 defined in 3GPP TS 04.80
1 1 defined in 3GPP TS 04.80

**SM capabilities via dedicated channels**
0 Mobile station does not support mobile terminated point to point SMS via dedicated signalling channels
1 Mobile station supports mobile terminated point to point SMS via dedicated signalling channels

**SM capabilities via GPRS channels**
0 Mobile station does not support mobile terminated point to point SMS via

GPRS packet data channels
1 Mobile station supports mobile terminated point to point SMS via GPRS packet data channels

**UCS2 support**
This information field indicates the likely treatment by the mobile station of UCS2 encoded character strings.
0 the ME has a preference for the default alphabet (defined in 3GPP TS 03.38) over UCS2.
1 the ME has no preference between the use of the default alphabet and the use of UCS2.

**GPRS Encryption Algorithm GEA/1**
0 encryption algorithm **GEA/1**not available
1 encryption algorithm **GEA/1** available

**SoLSA Capability**
0 The ME does not support SoLSA.
1 The ME supports SoLSA.

**GPRS Encryption Algorithm GEA/2**
0 encryption algorithm **GEA/2** not available
1 encryption algorithm **GEA/2** available

**GPRS Encryption Algorithm GEA/3**
0 encryption algorithm **GEA/3** not available
1 encryption algorithm **GEA/3** available

**GPRS Encryption Algorithm GEA/4**
0 encryption algorithm **GEA/4** not available
1 encryption algorithm **GEA/4** available

**GPRS Encryption Algorithm GEA/5**
0 encryption algorithm **GEA/5** not available
1 encryption algorithm **GEA/5** available

**GPRS Encryption Algorithm GEA/6**
0 encryption algorithm **GEA/6** not available
1 encryption algorithm **GEA/6** available

**GPRS Encryption Algorithm GEA/7**
0 encryption algorithm GEA/7 not available
1 encryption algorithm GEA/7 available

# ***** FOLLOWING SECTIONS PROVIDED FOR INFORMATION ONLY *****

## TS 04.08, v 6.21.0:

### 10.5.5.12 MS network capability

The purpose of the *MS network capability* information element is to provide the network with information concerning aspects of the mobile station related to GPRS. The contents might affect the manner in which the network handles the operation of the mobile station. The *MS network capability* information indicates general mobile station characteristics and it shall therefore, except for fields explicitly indicated, be independent of the frequency band of the channel it is sent on.

The *MS network capability* is a type 4 information element with a minimum of 3 and a maximum of 4 octets length.

Octet 4 shall be included by the MS, if it supports in addition to GEA/1 at least one of the GPRS Encryption Algorithm GEA/2 to GEA/7.
In this version of the protocol the network shall ignore octet 4.

The value part of a *MS network capability*information element is coded as shown in figure 10.5.128/3GPP TS 04.08 and table 10.5.145/3GPP TS 04.08.

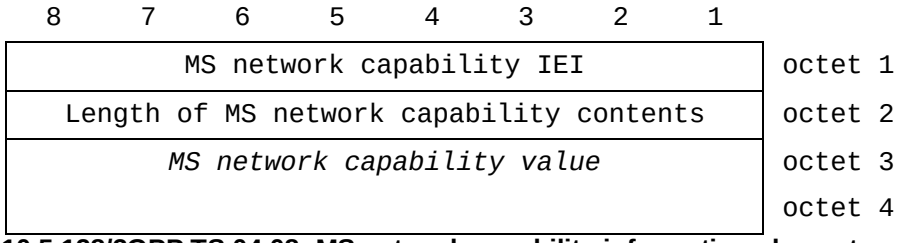


**Figure 10.5.128/3GPP TS 04.08: MS network capability information element**

**Table 10.5.145/3GPP TS 04.08: *MS network capability* information element**

**<MS network capability value part> ::=**

<**GEA1 bit**>
<**SM capabilities via dedicated channels**: bit>
<**SM capabilities via GPRS channels**: bit>
<**UCS2 support**: bit>
<**SS Screening Indicator**: bit string(2)>
<**Spare bit**>;
<**Spare bit**>
<**Spare bit**>
<Extended GEA bits>
<**Spare bit**>

<**GEA1 bit**> ::= < **GEA/1** :bit>;

<Extended GEA bits> ::= <GEA/2:bit><GEA/3:bit>< GEA/4:bit >< GEA/5:bit >< GEA/6:bit ><GEA/7:bit>;

<**Spare bits**> ::= null | {<spare bit> < **Spare bits** >};

**SS Screening Indicator**
0 0 defined in 3GPP TS 04.80
0 1 defined in 3GPP TS 04.80
1 0 defined in 3GPP TS 04.80
1 1 defined in 3GPP TS 04.80

**SM capabilities via dedicated channels**
0 Mobile station does not support mobile terminated point to point SMS via dedicated signalling channels
1 Mobile station supports mobile terminated point to point SMS via dedicated signalling channels

**Table 10.5.145/3GPP TS 04.08: *MS network capability* information element (cont'd)**

## ***** FOR INFORMATION ONLY *****

## TS 24.008, v 3.17.0:

### 10.5.5.12 MS network capability

The purpose of the *MS network capability* information element is to provide the network with information concerning aspects of the mobile station related to GPRS. The contents might affect the manner in which the network handles the operation of the mobile station. The *MS network capability* information indicates general mobile station characteristics and it shall therefore, except for fields explicitly indicated, be independent of the frequency band of the channel it is sent on.

The *MS network capability* is a type 4 information element with a maximum of 10 octets length.

The value part of a *MS network capability*information element is coded as shown in figure 10.5.128/3GPP TS 24.008 and table 10.5.145/3GPP TS 24.008.

| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|---|---|---|
| MS network capability IEI | | | | | | | | octet 1 |
| Length of MS network capability contents | | | | | | | | octet 2 |
| *MS network capability value* | | | | | | | | octet 3-10 |

**Figure 10.5.128/3GPP TS 24.008 MS network capability information element**

**Table 10.5.145/3GPP TS 24.008 *MS network capability* information element**

**<MS network capability value part> ::=**

<**GEA1 bits**>
<**SM capabilities via dedicated channels**: bit>
<**SM capabilities via GPRS channels**: bit>
<**UCS2 support**: bit>
<**SS Screening Indicator**: bit string(2)>
<SoLSA Capability : bit>
<Revision level indicator: bit>
<PFC feature mode: bit>
<Extended GEA bits>
<Spare bits>;

<**GEA1 bits**> ::= < **GEA/1** :bit>;

<Extended GEA bits> ::= <GEA/2:bit><GEA/3:bit>< GEA/4:bit >< GEA/5:bit >< GEA/6:bit ><GEA/7:bit>;

<**Spare bits**> ::= null | {<spare bit> < **Spare bits** >};

SS Screening Indicator
0 0 defined in 3GPP TS 24.080

0 1 defined in 3GPP TS 24.080
1 0 defined in 3GPP TS 24.080
1 1 defined in 3GPP TS 24.080

**SM capabilities via dedicated channels**
0 Mobile station does not support mobile terminated point to point SMS via dedicated signalling channels
1 Mobile station supports mobile terminated point to point SMS via dedicated signalling channels

**SM capabilities via GPRS channels**
0 Mobile station does not support mobile terminated point to point SMS via GPRS packet data channels
1 Mobile station supports mobile terminated point to point SMS via GPRS packet data channels

**UCS2 support**
This information field indicates the likely treatment by the mobile station of UCS2 encoded character strings.
0 the ME has a preference for the default alphabet (defined in 3GPP TS 23.038 [8b]) over UCS2.
1 the ME has no preference between the use of the default alphabet and the use of UCS2.

**GPRS Encryption Algorithm GEA/1**
0 encryption algorithm **GEA/1**not available
1 encryption algorithm **GEA/1** available

**SoLSA Capability**
0 The ME does not support SoLSA.
1 The ME supports SoLSA.

**Revision level indicator**
0 used by a mobile station not supporting R99 or later versions of the protocol
1 used by a mobile station supporting R99 or later version of the protocol

**PFC feature mode**
0 Mobile station does not support BSS packet flow procedures
1 Mobile station does support BSS packet flow procedures

**GEA/2**
0 encryption algorithm GEA/2 not available
1 encryption algorithm GEA/2 available

**GEA/3**
0 encryption algorithm GEA/3 not available
1 encryption algorithm GEA/3 available

**GEA/4**
0 encryption algorithm GEA/4 not available
1 encryption algorithm GEA/4 available

**GEA/5**
0 encryption algorithm GEA/5 not available
1 encryption algorithm GEA/5 available

**GEA/6**
0 encryption algorithm GEA/6 not available
1 encryption algorithm GEA/6 available

**GEA/7**
0 encryption algorithm GEA/7 not available
1 encryption algorithm GEA/7 available