3GPP TSG CN Plenary Meeting #15 **NP-020037**
6th – 8th March 2002. Jeju, Korea.

Source: **TSG CN WG 1**

Title: **CR to R99 (with mirror CRs) on Work Item GSM/UMTS interworking towards 29.018**

Agenda item: **7.15**

Document for: **APPROVAL**

Introduction:

This document contains **3** CRs on **R99 (with mirror CRs) to** Work Item **" GSM/UMTS interworking"**, that have been agreed by **TSG CN WG1**, and are forwarded to TSG CN Plenary meeting #15 for approval.

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level
29.018	026		R99	Addition of missing Mobile Station States for UMTS	F	3.8.0	3.9.0	N1-020199
29.018	027		Rel-4	Addition of missing Mobile Station States for UMTS	A	4.2.0	4.3.0	N1-020200
29.018	028		Rel-5	Addition of missing Mobile Station States for UMTS	A	5.0.0	5.1.0	N1-020201

3GPP TSG-CN1 Meeting #22 ***Tdoc N1-020199***
Sophia Antipolis, France, 28. January - 1. February 2002

CR-Form-v5

CHANGE REQUEST

⌘ **29.018** **CR** **026** ⌘ **rev** **-** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Addition of Mobile Station States for UMTS
Source:	⌘	Siemens AG
Work item code:	⌘	GSM/UMTS interworking
Date:	⌘	21.01.02
Category:	⌘	**F**
Release:	⌘	R99

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)

Reason for change:	⌘	According to the standard, the *Mobile Station States* IE should be included in the MS Information Response message, irrespective of the information requested. The current version of TS 29.018 specifies only values for the GMM states IDLE, STANDBY, SUSPENDED and READY, but not for the PMM states PMM-DETACHED, PMM-CONNECTED and PMM-IDLE; therefore, it is unclear, what to encode in the information element, if the MS is served by a UTRAN. Furthermore, subclause 14.3 is incorrectly referring to a "MS status" IE.
Summary of change:	⌘	From the SGSN's point of view, it is not possible to discriminate between IDLE and PMM-DETACHED. Furthermore, if a routing area contains both GSM and UMTS cells, it is not possible to discriminate between STANDBY and PMM-IDLE; therefore, it is proposed to redefine the existing codepoints: IDLE -> IDLE or PMM-DETACHED STANDBY -> STANDBY or PMM-IDLE READY -> READY or PMM-CONNECTED.
Consequences if not approved:	⌘	Functionality which should be part of R99 is missing.

Clauses affected:	⌘	14.3, 18.4.19
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ 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/3G_Specs/CRs.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.

14.3 Procedures in the SGSN

The SGSN shall examine the type of information that is requested and if it is stored in its database shall use this information in its response to the VLR. The BSSAP+-MS-INFORMATION-RESPONSE message contains the information parameters as requested by the VLR. In A/Gb mode, the Mobile location information indicates a request for Cell Global Identity and Location information age. In Iu mode, the Mobile location information indicates a request for Service Area Identification and Location information age. In this case, the SGSN shall use the Location Report Control procedure (see 3GPP TS 25.413) in order to retrieve the SA.

If the SGSN receives an Information requested information element containing a 'not supported' value, then the value part of the Mobile station state information element in the BSSAP+-MS-INFORMATION-RESPONSE message shall be set to 'Information requested not supported'.

If the information is not locally available and it is a request for mobile identity information, the SGSN forwards the IDENTITY REQUEST message to the MS indicated in the message unless the GPRS activities of the MS are suspended. Upon receipt of the IDENTITY RESPONSE message from the MS, the SGSN shall send a BSSAP+-MS-INFORMATION-RESPONSE message. The BSSAP+-MS-INFORMATION-RESPONSE message contains the information parameters as requested by the VLR. If the GPRS activities of the MS are suspended the SGSN shall return a BSSAP+-MS-INFORMATION-RESPONSE message indicating in the Mobile station ~~MS~~ state IE 'SUSPENDED'. If the requested information is not available or obtainable at the SGSN, the SGSN shall return a BSSAP+-MS-INFORMATION-RESPONSE message to the VLR without the requested information. The SGSN should include the Mobile station state ~~MS status~~ IE in all BSSAP+-MS-INFORMATION-RESPONSE messages.

If the IMSI is not known at the SGSN, the SGSN shall return a BSSAP+-MS-INFORMATION-RESPONSE message indicating in the Mobile station ~~MS~~ state IE 'IMSI unknown'.

******************* NEXT MODIFIED SECTION ********************

18.4.19 Mobile station state

The Mobile station state IE is a TLV IE that indicates to the VLR the GMM and GSM states of the MS in the SGSN. The coding of the V field is as follows.

	8	7	6	5	4	3	2	1
Octet 1	IEI							
Octet 2	Length indicator							
Octet 3	Mobile station state value							

Figure 18.4.19/3GPP TS 29.018: Mobile station state IE

Table 18.4.19/3GPP TS 29.018: Mobile station state IE value part

Mobile station state value (octet 3) Bits 8 7 6 5 4 3 2 1	
0 0 0 0 0 0 0 0	IDLE or PMM-DETACHED
0 0 0 0 0 0 0 1	STANDBY or PMM-IDLE, 0 PDP contexts active
0 0 0 0 0 0 1 0	STANDBY or PMM-IDLE, 1 or more PDP contexts active
0 0 0 0 0 0 1 1	SUSPENDED, 0 PDP contexts active
0 0 0 0 0 1 0 0	SUSPENDED, 1 or more PDP contexts active
0 0 0 0 0 1 0 1	READY or PMM-CONNECTED, 0 PDP contexts active
0 0 0 0 0 1 1 0	READY or PMM-CONNECTED, 1 or more PDP contexts active
0 0 0 0 0 1 1 1	IMSI unknown
0 0 0 0 1 0 0 0	Information requested not supported
0 0 0 0 1 0 0 1 to 1 1 1 1 1 1 1 1	Shall not be sent in this version of the protocol. If received, shall be treated as '00001000'.

3GPP TSG-CN1 Meeting #22 ***Tdoc N1-020201***
Sophia Antipolis, France, 28. January - 1. February 2002

CR-Form-v5

CHANGE REQUEST

⌘ **29.018** **CR** **028** ⌘ **rev** **-** ⌘ Current version: **5.0.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Addition of Mobile Station States for UMTS
Source:	⌘	Siemens AG
Work item code:	⌘	GSM/UMTS interworking
Date:	⌘	21.01.02
Category:	⌘	**A**
Release:	⌘	REL-5

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)*
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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)

Reason for change:	⌘	According to the standard, the *Mobile Station States* IE should be included in the MS Information Response message, irrespective of the information requested. The current version of TS 29.018 specifies only values for the GMM states IDLE, STANDBY, SUSPENDED and READY, but not for the PMM states PMM-DETACHED, PMM-CONNECTED and PMM-IDLE; therefore, it is unclear, what to encode in the information element, if the MS is served by a UTRAN. Furthermore, subclause 14.3 is incorrectly referring to a "MS status" IE.
Summary of change:	⌘	From the SGSN's point of view, it is not possible to discriminate between IDLE and PMM-DETACHED. Furthermore, if a routing area contains both GSM and UMTS cells, it is not possible to discriminate between STANDBY and PMM-IDLE; therefore, it is proposed to redefine the existing codepoints: IDLE -> IDLE or PMM-DETACHED STANDBY -> STANDBY or PMM-IDLE READY -> READY or PMM-CONNECTED.
Consequences if not approved:	⌘	Functionality which should be part of R99 is missing.

Clauses affected:	⌘	14.3, 18.4.19
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

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14.3 Procedures in the SGSN

The SGSN shall examine the type of information that is requested and if it is stored in its database shall use this information in its response to the VLR. The BSSAP+-MS-INFORMATION-RESPONSE message contains the information parameters as requested by the VLR. In A/Gb mode, the Mobile location information indicates a request for Cell Global Identity and Location information age. In Iu mode, the Mobile location information indicates a request for Service Area Identification and Location information age. In this case, the SGSN shall use the Location Report Control procedure (see 3GPP TS 25.413) in order to retrieve the SA.

If the SGSN receives an Information requested information element containing a 'not supported' value, then the value part of the Mobile station state information element in the BSSAP+-MS-INFORMATION-RESPONSE message shall be set to 'Information requested not supported'.

If the information is not locally available and it is a request for mobile identity information, the SGSN forwards the IDENTITY REQUEST message to the MS indicated in the message unless the GPRS activities of the MS are suspended. Upon receipt of the IDENTITY RESPONSE message from the MS, the SGSN shall send a BSSAP+-MS-INFORMATION-RESPONSE message. The BSSAP+-MS-INFORMATION-RESPONSE message contains the information parameters as requested by the VLR. If the GPRS activities of the MS are suspended the SGSN shall return a BSSAP+-MS-INFORMATION-RESPONSE message indicating in the Mobile station~~MS~~ state IE 'SUSPENDED'. If the requested information is not available or obtainable at the SGSN, the SGSN shall return a BSSAP+-MS-INFORMATION-RESPONSE message to the VLR without the requested information. The SGSN should include the Mobile station state~~MS status~~ IE in all BSSAP+-MS-INFORMATION-RESPONSE messages.

If the IMSI is not known at the SGSN, the SGSN shall return a BSSAP+-MS-INFORMATION-RESPONSE message indicating in the Mobile station~~MS~~ state IE 'IMSI unknown'.

******************* NEXT MODIFIED SECTION ********************

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0 0 0 0 0 0 0 1	STANDBY or PMM-IDLE, 0 PDP contexts active
0 0 0 0 0 0 1 0	STANDBY or PMM-IDLE, 1 or more PDP contexts active
0 0 0 0 0 0 1 1	SUSPENDED, 0 PDP contexts active
0 0 0 0 0 1 0 0	SUSPENDED, 1 or more PDP contexts active
0 0 0 0 0 1 0 1	READY or PMM-CONNECTED, 0 PDP contexts active
0 0 0 0 0 1 1 0	READY or PMM-CONNECTED, 1 or more PDP contexts active
0 0 0 0 0 1 1 1	IMSI unknown
0 0 0 0 1 0 0 0	Information requested not supported
0 0 0 0 1 0 0 1 to 1 1 1 1 1 1 1 1	Shall not be sent in this version of the protocol. If received, shall be treated as '00001000'.

3GPP TSG-CN1 Meeting #22 ***Tdoc N1-020200***
Sophia Antipolis, France, 28. January - 1. February 2002

CR-Form-v5

CHANGE REQUEST

⌘ **29.018** **CR** **027** ⌘ **rev** **-** ⌘ Current version: **4.2.0** ⌘

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Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network ☐ Core Network **X**

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Source:	⌘	Siemens AG
Work item code:	⌘	GSM/UMTS interworking
Date:	⌘	21.01.02
Category:	⌘	**A**
Release:	⌘	REL-4

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Clauses affected:	⌘	14.3, 18.4.19
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

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0 0 0 0 0 1 0 0	SUSPENDED, 1 or more PDP contexts active
0 0 0 0 0 1 0 1	READY or PMM-CONNECTED, 0 PDP contexts active
0 0 0 0 0 1 1 0	READY or PMM-CONNECTED, 1 or more PDP contexts active
0 0 0 0 0 1 1 1	IMSI unknown
0 0 0 0 1 0 0 0	Information requested not supported
0 0 0 0 1 0 0 1 to 1 1 1 1 1 1 1 1	Shall not be sent in this version of the protocol. If received, shall be treated as '00001000'.