

**TSG-RAN Meeting #15  
Cheju, Korea, 5 - 8 March 2002**

**TSGRP#15(02) 0167**

**Title: Agreed CRs to TS 25.419**

**Source: TSG-RAN WG3**

**Agenda item: 7.3.3/7.3.4**

RP_Num	Tdoc_Num	Specificatio n	CR_Num	Revision _Num	3G_Release	CR_Subject	CR_Category	Cur_Ver_Num	Workitem
RP-020167	R3-020372	25.419	081		R99	Correction of the value Default in Category IE	F	3.7.0	TEI
RP-020167	R3-020373	25.419	082		Rel-4	Correction of the value Default in Category IE	A	4.3.0	TEI
RP-020167	R3-020622	25.419	083	1	R99	Correction of the wording of maximum value	F	3.7.0	TEI
RP-020167	R3-020623	25.419	084	1	Rel-4	Correction of the wording of maximum value	A	4.3.0	TEI
RP-020167	R3-020376	25.419	085		R99	Service expected from the transport layer	F	3.7.0	TEI
RP-020167	R3-020377	25.419	086		Rel-4	Service expected from the transport layer	A	4.3.0	TEI
RP-020167	R3-020624	25.419	087	1	R99	ASN.1 take precedence if contradiction between ASN.1 and tabular	F	3.7.0	TEI
RP-020167	R3-020625	25.419	088	1	Rel-4	ASN.1 take precedence if contradiction between ASN.1 and tabular	A	4.3.0	TEI
RP-020167	R3-020626	25.419	089	1	R99	Mismatch the type of some IE between 24.419 and 25.324	F	3.7.0	TEI
RP-020167	R3-020627	25.419	090	1	Rel-4	Mismatch the type of some IE between 24.419 and 25.324	A	4.3.0	TEI
RP-020167	R3-020492	25.419	091		R99	Correction of the usage of Write-Replace Failure message	F	3.7.0	TEI
RP-020167	R3-020493	25.419	092		Rel-4	Correction of the usage of Write-Replace Failure message	A	4.3.0	TEI
RP-020167	R3-020494	25.419	093		R99	Error Indication correction	F	3.7.0	TEI
RP-020167	R3-020495	25.419	094		Rel-4	Error Indication correction	A	4.3.0	TEI

## CHANGE REQUEST

⌘ **25.419 CR 81** ⌘ rev **-** ⌘ Current version: **3.7.0** ⌘

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

<b>Title:</b>	⌘ Correction of the value "Default" in Category IE		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ The current 25.419 has many unclarity which shall have correction in order to make the specification unambiguity. The use of the values of <i>Category</i> IE is specified in Write Replace procedure text (subclause 8.2.2). However, the usage of the its value "default" in subclause 9.2.7 is unclear. It has been described in Write Replace procedure that when the <i>Category</i> IE is not present, the RNC shall perform the broadcast as the same category as "Normal", therefore it is thought that the value "Default" is useless in any case
<b>Summary of change:</b>	⌘ The "default" in Category IE is made clear that it shall not be used
<b>Consequences if not approved:</b>	⌘ If this is not approved, the 25.419 is not clear and therefore it might lead to misunderstanding when implementation. Impact Analysis: Impact assessment towards the previous version of the specification (same release): This CR has [ isolated impact] with the previous version of the specification (same release) because current specification is not clear enough to have implementation. ONLY if there is impact: This CR has an impact under [protocol] point of view. The impact [can] be considered isolated because the change affects [one] [system function] namely the category of the broadcast message.

<b>Clauses affected:</b>	⌘ 9.2.7	
<b>Other specs affected:</b>	⌘ <input checked="" type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications ⌘ <input type="checkbox"/> O&M Specifications	⌘ 25.419 CR82 Rel4

**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](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

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- 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.

## 9.2.5 New Serial Number

*New Serial Number* IE enables identification of a new message for broadcast to be identified, and is altered every time the message is changes. The format of this IE is defined in subclause 9.2.3.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
New Serial Number	O		9.2.3	

## 9.2.6 Service Areas List

The *Service Areas List* IE identifies a sequence of one or more Service Areas to which the message(s) apply. The *Service Areas List* IE must include at least one Service Area.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
<b>Service Areas List</b>		1 to <maxno of SAI>		
>Service Area Identifier	M		9.2.11	

Range bound	Explanation
MaxnoofSAI	Maximum no. of SAI in Service Areas List. Value is 65535

## 9.2.7 Category

*Category* IE is sent from the CN to the RNC, and is used to indicate the priority of the message.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Category	O		Enumerated (High Priority, Background, Normal, Default)	This IE contains the broadcast priority of the message. <u>The value "Default" shall not be used.</u>

## 9.2.8 Repetition Period

*Repetition Period* IE is sent from the CN to the RNC and indicates the periodicity of message broadcasts.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Repetition Period	M		INTEGER (1..4096)	Range is 1 to 4096 where each unit will represent a repetition of one second to a maximum of once per ~1 hour

## CHANGE REQUEST

⌘ **25.419 CR 94** ⌘ ev ⌘ Current version: **4.3.0** ⌘

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

<b>Title:</b>	⌘ Error Indication correction.		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ February 2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ REL-4
	<p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>REL-4 (Release 4)</p> <p>REL-5 (Release 5)</p>

<b>Reason for change:</b>	⌘ The procedure text of Error Indication is not align with the error handling principle specified in chapter 10.
	The presence of <i>Message Identifier</i> IE in Error Indication message is incorrect, which generates conflict when Error Indication message is used to report transfer syntax error and the <i>Message Identifier</i> IE can not be included.
<b>Summary of change:</b>	⌘ The Error Indication procedure text is corrected to match the same principles of error handling as described in chapter 10.
	The presence of <i>Message Identifier</i> IE has been changed from mandatory to optional.
	<u>Impact Analysis:</u> Impact assessment towards the previous version of the specification (same release):
	This CR has [isolated impact] with the previous version of the specification (same release) because the presence of one IE is changed in a message (ASN.1 change). This CR has an impact under protocol and functional point of view. The impact can be considered isolated because the change affects only the error handling function.
<b>Consequences if not approved:</b>	⌘ If this CR is not approved, the misalignment of the text of Error Indication procedure and chapter 10 remains and the incorrect presence of <i>Message Identifier</i> IE generates conflict in the case when Error Indication message is used to report transfer syntax error.

<b>Clauses affected:</b>	⌘ 8.9.1, 8.9.2, 9.1.20	
<b>Other specs affected:</b>	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ TS 25.419 v3.7.0 R99 CR93
	<input type="checkbox"/> Test specifications	

O&M Specifications

**Other comments:** ☞

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- 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

## 8.9 Error Indication

### 8.9.1 General

The Error Indication procedure is ~~initiated~~ used by the RNC to ~~report detected errors in one incoming message, indicate to the CN that a message is not understood, provided they~~ report detected errors in one incoming message, indicate to the CN that a message is not understood, provided they cannot be reported by an appropriate failure message.

### 8.9.2 Successful Operation

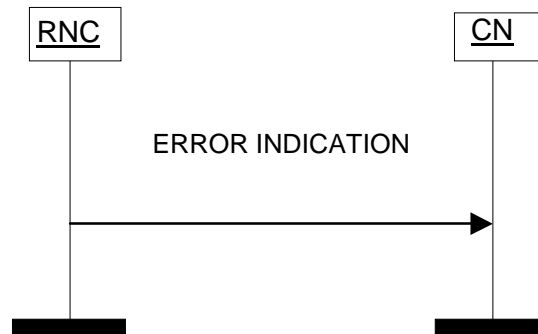


Figure 13: Error Indication Procedure: Successful Operation

When the conditions defined in chapter 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node.

The ERROR INDICATION message shall contain at least either the *Cause IE* or the *Criticality Diagnostics IE*.

Examples for possible cause values for protocol error indications are:

- "Transfer Syntax Error".
- "Abstract Syntax Error (reject)".

The RNC shall initiate the procedure by sending an ERROR INDICATION message to the CN in response to any message that is not understood e.g. invalid parameter or parameter value. This message shall contain information necessary for the CN to be able to identify which initial message this is in response to by the *Message Identifier IE* and may also contain *Serial Number IE*. The appropriate cause value — if applicable — may be indicated in the *Cause IE*.

### 8.9.3 Abnormal Conditions

## 9.1.20 ERROR INDICATION

This message is sent by the RNC to CN and is used to indicate that some errors have been detected in the node to the CN in response to any message which is not understood (e.g. invalid parameter or parameter value).

Direction: RNC → CN

PARAMETER	PRESENCE	RANGE	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1		yes	ignore
Message Identifier	<del>O</del> M		9.2.19		yes	ignore
Serial Number	O		9.2.3		yes	ignore
Cause	O		9.2.14		yes	ignore
Criticality Diagnostics	O		9.2.17		yes	ignore



### 9.3.3 PDU Definitions

```
-- *****
--
-- PDU definitions for SABP.
--
-- *****
```

Lots of unaffected ASN1 in 9.3.3 not shown
--

```
-- *****
--
-- Error-Indication
--
-- *****
```

```
Error-Indication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{Error-Indication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{Error-Indication-Extensions}} OPTIONAL,
    ...
}
```

```
Error-Indication-IEs SABP-PROTOCOL-IES ::= {
    { ID id-Message-Identifier CRITICALITY ignore TYPE Message-Identifier PRESENCE
optionalmandatory } |
    { ID id-Serial-Number      CRITICALITY ignore TYPE Serial-Number      PRESENCE optional } |
    { ID id-Cause              CRITICALITY ignore TYPE Cause              PRESENCE optional } |
    { ID id-Criticality-Diagnostics
CRITICALITY ignore TYPE Criticality-Diagnostics PRESENCE optional },
    ...
}
```

```
Error-Indication-Extensions SABP-PROTOCOL-EXTENSION ::= {
    ...
}
```

END

## CHANGE REQUEST

⌘ **25.419 CR 93** ⌘ ev ⌘ Current version: **3.7.0** ⌘

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

<b>Title:</b>	⌘ Error Indication correction.		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ February 2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ The procedure text of Error Indication is not align with the error handling principle specified in chapter 10.  The presence of <i>Message Identifier</i> IE in Error Indication message is incorrect, which generates conflict when Error Indication message is used to report transfer syntax error and the <i>Message Identifier</i> IE can not be included.
<b>Summary of change:</b>	⌘ The Error Indication procedure text is corrected to match the same principles of error handling as described in chapter 10.  The presence of <i>Message Identifier</i> IE has been changed from mandatory to optional.  <u>Impact Analysis:</u> Impact assessment towards the previous version of the specification (same release):  This CR has [isolated impact] with the previous version of the specification (same release) because the presence of one IE is changed in a message (ASN.1 change). This CR has an impact under protocol and functional point of view. The impact can be considered isolated because the change affects only the error handling function.
<b>Consequences if not approved:</b>	⌘ If this CR is not approved, the misalignment of the text of Error Indication procedure and chapter 10 remains and the incorrect presence of <i>Message Identifier</i> IE generates conflict in the case when Error Indication message is used to report transfer syntax error.

<b>Clauses affected:</b>	⌘ 8.9.1, 8.9.2, 9.1.20	
<b>Other specs affected:</b>	⌘ <input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications	⌘ TS 25.419 v4.3.0 Rel4 CR94

O&M Specifications

**Other comments:** ☞

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### 8.9.2 Successful Operation

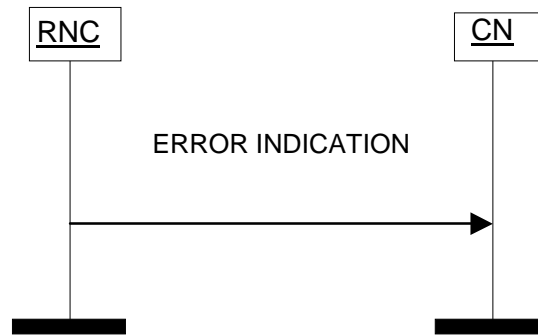


Figure 13: Error Indication Procedure: Successful Operation

When the conditions defined in chapter 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node.

The ERROR INDICATION message shall contain at least either the *Cause IE* or the *Criticality Diagnostics IE*.

Examples for possible cause values for protocol error indications are:

- "Transfer Syntax Error".
- "Abstract Syntax Error (reject)".

The RNC shall initiate the procedure by sending an ERROR INDICATION message to the CN in response to any message that is not understood e.g. invalid parameter or parameter value. This message shall contain information necessary for the CN to be able to identify which initial message this is in response to by the *Message Identifier IE* and may also contain *Serial Number IE*. The appropriate cause value — if applicable — may be indicated in the *Cause IE*.

### 8.9.3 Abnormal Conditions

## 9.1.20 ERROR INDICATION

This message is sent by the RNC to CN and is used to indicate that some errors have been detected in the node to the CN in response to any message which is not understood (e.g. invalid parameter or parameter value).

Direction: RNC → CN

PARAMETER	PRESENCE	RANGE	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1		yes	ignore
Message Identifier	<del>O</del> M		9.2.19		yes	ignore
Serial Number	O		9.2.3		yes	ignore
Cause	O		9.2.14		yes	ignore
Criticality Diagnostics	O		9.2.17		yes	ignore

### 9.3.3 PDU Definitions

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-- *****
--
-- PDU definitions for SABP.
--
-- *****
```

Lots of unaffected ASN1 in 9.3.3 not shown
--

```
-- *****
--
-- Error-Indication
--
-- *****
```

```
Error-Indication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{Error-Indication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{Error-Indication-Extensions}} OPTIONAL,
    ...
}
```

```
Error-Indication-IEs SABP-PROTOCOL-IES ::= {
    { ID id-Message-Identifier CRITICALITY ignore TYPE Message-Identifier PRESENCE
optionalmandatory } |
    { ID id-Serial-Number      CRITICALITY ignore TYPE Serial-Number      PRESENCE optional } |
    { ID id-Cause              CRITICALITY ignore TYPE Cause              PRESENCE optional } |
    { ID id-Criticality-Diagnostics
CRITICALITY ignore TYPE Criticality-Diagnostics PRESENCE optional },
    ...
}
```

```
Error-Indication-Extensions SABP-PROTOCOL-EXTENSION ::= {
    ...
}
```

END

## CHANGE REQUEST

⌘ **25.419 CR 92** ⌘ ev ⌘ Current version: **4.3.0** ⌘

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

<b>Title:</b>	⌘ Correction of the usage of Write-Replace Failure message		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ February 2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ REL-4
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ The current text of TS 25.419 is not defining the behavior of RNC in the case when unknown <i>Old Serial Number IE</i> is received by RNC in WRITE-REPLACE message as specified in stage 2 (TS 25.041).
<b>Summary of change:</b>	⌘ The behavior of RNC in the case when unknown <i>Old Serial Number IE</i> is received form CBC is clarified so that it clearly incates that Write Repalce procedure shall be terminated and WRITE-REPLACE-FAILURE message with appropriate cause value shall be returned to CBC.
	<p><u>Impact Analysis:</u> Impact assessment towards the previous version of the specification (same release):</p> <p>This CR has [isolated impact] with the previous version of the specification (same release) because the behavior of one procedure in one particular case is changed. This CR has an impact under protocol and functional point of view. The impact can be considered isolated because the change affects only the error handling function.</p> <p>If this CR is not approved, the behavior in the case when the unknown <i>Old Serial Number IE</i> received by RNC is not clear and it may lead to imcompatible implementations.</p>

<b>Clauses affected:</b>	⌘ 8.2.3		
<b>Other specs affected:</b>	⌘ <input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	TS 25.419 v3.7.0 R99 CR91
<b>Other comments:</b>	⌘		

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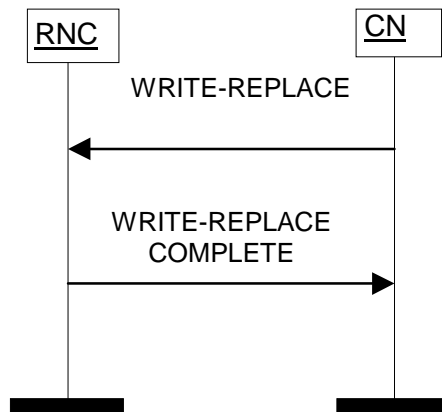


## 8.2 Write-Replace

### 8.2.1 General

The purpose of this Write-Replace procedure is to broadcast new information or replace a message already broadcast to a chosen Service Area(s).

### 8.2.2 Successful Operation



**Figure 1: Write-Replace Procedure: Successful Operation**

The CN shall initiate the procedure by sending a WRITE-REPLACE message to the RNC.

The presence of a *New Serial Number* IE will indicate that this is a new broadcast. The presence of both the *Old Serial Number* IE and a *New Serial Number* IE will indicate that this message is a replacement of an existing broadcast.

The RNC will initiate broadcasting of a new message or replace a message already broadcast as requested to the service areas as indicated in the *Service Areas List* IE.

The RNC shall uniquely identify the CBS message by the *Message Identifier* IE together with the serial number in the *New Serial Number* IE and the *Service Areas List* IE.

The RNC shall perform the broadcast according to the value of the *Category* IE as follows:

- The *Category* IE, if given in the WRITE-REPLACE message, shall be treated as follows:
  1. If the value of *Category* IE is indicated as "High Priority", the RNC shall perform the broadcast immediately;
  2. If the value of *Category* IE is indicated as "Background", the RNC shall perform the broadcast when no other broadcast message indicated as "High Priority" or "Normal";
  3. If the value of *Category* IE is indicated as "Normal", the RNC shall perform the broadcast according to the *Repetition Period* IE.
- If the *Category* IE is not given in the WRITE-REPLACE message, the RNC shall perform the broadcast as the same category indicated as "Normal".

The RNC shall pass the *Data Coding Scheme* IE transparently to the radio interface protocol.

The RNC shall pass the *Broadcast Message Content* IE transparently to the radio interface protocol.

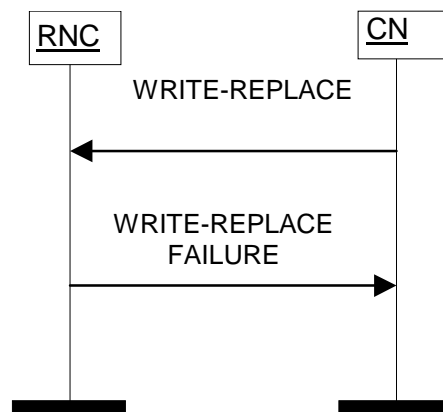
The RNC shall broadcast the message frequently according to the value of the *Number of Broadcasts Requested* IE. If the value is set to "0", the RNC shall broadcast the message until the CN requests otherwise.

Upon receipt of the WRITE-REPLACE message the RNC shall respond using the WRITE-REPLACE COMPLETE message containing a *New Serial Number IE* indicating that resources are available as requested for the Service Area(s) specified and a *Number of Broadcasts Completed List IE* to indicate the number of times the old broadcast message has been successfully broadcast to the particular Service Area(s).

If the WRITE-REPLACE message sent from the CN:

- contained a *New Serial Number IE* but not an *Old Serial Number IE*, the *Number of Broadcasts IE* within the *Number of Broadcasts Completed List IE* is set to "0" for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.
- contained both the *New Serial Number IE* and the *Old Serial Number IE*, an entry is made in the *Number of Broadcasts IE* in the *Number of Broadcasts Completed List IE* for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.

### 8.2.3 Unsuccessful Operation



**Figure 2: Write-Replace Procedure: Un-Successful Operation**

If the RNC cannot allocate all the resources requested for the Service Area(s) specified in the WRITE-REPLACE message, then the RNC shall return a WRITE-REPLACE FAILURE message to the CN. A list of Service Area(s) where the requested resources are unavailable and appropriate cause value shall be provided in this WRITE-REPLACE FAILURE message in the *Failure List IE*.

This WRITE-REPLACE FAILURE message may also include those Service Area(s) where the requested resources were available and shall indicate in the *Number of Broadcasts Completed List IE* those Service Area(s) which completed the request.

If the WRITE-REPLACE message sent from the CN:

- contained a *New Serial Number IE* but not an *Old Serial Number IE*, the *Number of Broadcasts IE* within the *Number of Broadcasts Completed List IE* is set to '0' for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.
- contained both the *New Serial Number IE* and the *Old Serial Number IE*, an entry is made in the *Number of Broadcasts IE* in the *Number of Broadcasts Completed List IE* for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.
- contained both the *New Serial Number IE* and the *Old Serial Number IE*, but if the *Old Serial Number IE* is unknown to RNC (i.e. it can not execute the kill request), it shall terminate the Write Replace procedure and return a WRITE-REPLACE-FAILURE message with appropriate cause value.

## CHANGE REQUEST

⌘ **25.419 CR 91** ⌘ ev ⌘ Current version: **3.7.0** ⌘

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

<b>Title:</b>	⌘ Correction of the usage of Write-Replace Failure message		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ February 2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ The current text of TS 25.419 is not defining the behavior of RNC in the case when unknown <i>Old Serial Number</i> IE is received by RNC in WRITE-REPLACE message as specified in stage 2 (TS 25.041).
<b>Summary of change:</b>	⌘ The behavior of RNC in the case when unknown <i>Old Serial Number</i> IE is received form CBC is clarified so that it clearly incates that Write Repalce procedure shall be terminated and WRITE-REPLACE-FAILURE message with appropriate cause value shall be returned to CBC.
	<p><u>Impact Analysis:</u> Impact assessment towards the previous version of the specification (same release):</p> <p>This CR has [isolated impact] with the previous version of the specification (same release) because the behavior of one procedure in one particular case is changed. This CR has an impact under protocol and functional point of view. The impact can be considered isolated because the change affects only the error handling function.</p> <p>If this CR is not approved, the behavior in the case when the unknown <i>Old Serial Number</i> IE received by RNC is not clear and it may lead to imcompatible implementations.</p>

<b>Clauses affected:</b>	⌘ 8.2.3		
<b>Other specs affected:</b>	⌘ <input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ TS 25.419 v4.3.0 REL-4 CR92	
<b>Other comments:</b>	⌘		

**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](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

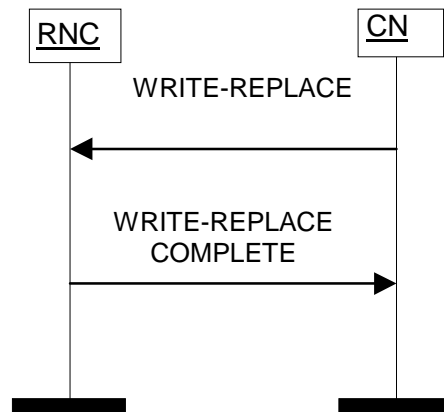
- 1) Fill out the above form. The symbols above marked ☹ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") 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

## 8.2 Write-Replace

### 8.2.1 General

The purpose of this Write-Replace procedure is to broadcast new information or replace a message already broadcast to a chosen Service Area(s).

### 8.2.2 Successful Operation



**Figure 1: Write-Replace Procedure: Successful Operation**

The CN shall initiate the procedure by sending a WRITE-REPLACE message to the RNC.

The presence of a *New Serial Number* IE will indicate that this is a new broadcast. The presence of both the *Old Serial Number* IE and a *New Serial Number* IE will indicate that this message is a replacement of an existing broadcast.

The RNC will initiate broadcasting of a new message or replace a message already broadcast as requested to the service areas as indicated in the *Service Areas List* IE.

The RNC shall uniquely identify the CBS message by the *Message Identifier* IE together with the serial number in the *New Serial Number* IE and the *Service Areas List* IE.

The RNC shall perform the broadcast according to the value of the *Category* IE as follows:

- The *Category* IE, if given in the WRITE-REPLACE message, shall be treated as follows:
  1. If the value of *Category* IE is indicated as "High Priority", the RNC shall perform the broadcast immediately;
  2. If the value of *Category* IE is indicated as "Background", the RNC shall perform the broadcast when no other broadcast message indicated as "High Priority" or "Normal";
  3. If the value of *Category* IE is indicated as "Normal", the RNC shall perform the broadcast according to the *Repetition Period* IE.
- If the *Category* IE is not given in the WRITE-REPLACE message, the RNC shall perform the broadcast as the same category indicated as "Normal".

The RNC shall pass the *Data Coding Scheme* IE transparently to the radio interface protocol.

The RNC shall pass the *Broadcast Message Content* IE transparently to the radio interface protocol.

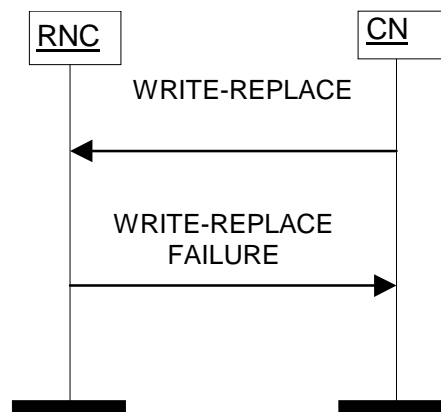
The RNC shall broadcast the message frequently according to the value of the *Number of Broadcasts Requested* IE. If the value is set to "0", the RNC shall broadcast the message until the CN requests otherwise.

Upon receipt of the WRITE-REPLACE message the RNC shall respond using the WRITE-REPLACE COMPLETE message containing a *New Serial Number IE* indicating that resources are available as requested for the Service Area(s) specified and a *Number of Broadcasts Completed List IE* to indicate the number of times the old broadcast message has been successfully broadcast to the particular Service Area(s).

If the WRITE-REPLACE message sent from the CN:

- contained a *New Serial Number IE* but not an *Old Serial Number IE*, the *Number of Broadcasts IE* within the *Number of Broadcasts Completed List IE* is set to "0" for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.
- contained both the *New Serial Number IE* and the *Old Serial Number IE*, an entry is made in the *Number of Broadcasts IE* in the *Number of Broadcasts Completed List IE* for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.

### 8.2.3 Unsuccessful Operation



**Figure 2: Write-Replace Procedure: Un-Successful Operation**

If the RNC cannot allocate all the resources requested for the Service Area(s) specified in the WRITE-REPLACE message, then the RNC shall return a WRITE-REPLACE FAILURE message to the CN. A list of Service Area(s) where the requested resources are unavailable and appropriate cause value shall be provided in this WRITE-REPLACE FAILURE message in the *Failure List IE*.

This WRITE-REPLACE FAILURE message may also include those Service Area(s) where the requested resources were available and shall indicate in the *Number of Broadcasts Completed List IE* those Service Area(s) which completed the request.

If the WRITE-REPLACE message sent from the CN:

- contained a *New Serial Number IE* but not an *Old Serial Number IE*, the *Number of Broadcasts IE* within the *Number of Broadcasts Completed List IE* is set to '0' for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.
- contained both the *New Serial Number IE* and the *Old Serial Number IE*, an entry is made in the *Number of Broadcasts IE* in the *Number of Broadcasts Completed List IE* for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.
- contained both the *New Serial Number IE* and the *Old Serial Number IE*, but if the *Old Serial Number IE* is unknown to RNC (i.e. it can not execute the kill request), it shall terminate the Write Replace procedure and return a WRITE-REPLACE-FAILURE message with appropriate cause value.

## CHANGE REQUEST

⌘ **25.419 CR 90** ⌘ rev **1** ⌘ Current version: **4.3.0** ⌘

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

<b>Title:</b>	⌘ Mismatch the type of some IE between 25.419 and 25.324		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel4
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> 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:** ⌘ Some IEs between 25.419 and 25.324 are mismatch and therefore should be aligned. For example, the Data Coding Scheme IE is to identify the alphabet or coding employed for the message characters and it is transparent to the RNC. However, the current 25.419 specifies it as INTEGER(0..255) as if the RNC shall interpret the meaning of the value. Therefore this type of Data Coding Scheme IE in 25.419 shall be corrected to align the one in 25.324, i.e. BIT STRING (size(8)). The correction is also applied to Serial Number IE. There are also other two IEs i.e. Message Identifier IE and Broadcast Message Content IE are specified as OCTET STRING while they are specified as BIT STRING in 25.324.

**Summary of change:** ⌘ Change the type of Data Coding Scheme IE, Serial Number IE, Message Identifier IE, Broadcast Message Content IE to BIT STRING to align the 25.324.

**Consequences if not approved:** ⌘ If this is not approved, it would require the RNC to interpret value of some IEs which should be transparently transfer from the CN to the UE.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):

This CR has [ isolated impact] with the previous version of the specification (same release) because it changes the encoding of the broadcast message content IE,(Note that for the other IEs, although data type was changed, will result in the same PER coding).type of the data.

Only if it has impact:

This CR has an impact under [protocol] point of view.  
The impact [can] be considered isolated because the change affects [one] [system function] namely the transparent transfer function.

<b>Clauses affected:</b>	⌘	9.2.2, 9.2.3, 9.2.15, 9.2.19, 9.3.4
<b>Other specs affected:</b>	⌘	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
<b>Other comments:</b>	⌘	

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



## 9.2.1 MessageType

*Message Type* IE uniquely identifies the message being sent. It is mandatory for all messages.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
<b>Message Type</b>				
>Procedure Code	M		ENUMERATED (Write-Replace, Kill, Load Status Enquiry, Message Status Query, Reset, Restart Indication, Failure Indication, Error Indication, ...)	
>Type of Message	M		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

## 9.2.2 Broadcast Message Content

*Broadcast Message Content* IE is sent from the CN to the RNC containing user information i.e. the message, and will be broadcast over the radio interface.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Broadcast Message Content	M		<del>OCTET STRING</del> BIT STRING (1..9968)	

NO IMPACT SUBCLAUSE ARE NOT SHOWN

## 9.2.3 Serial Number

*Serial Number* IE is a 16-bit integer which identifies a particular message from the source and type indicated by the Message Identifier and is altered every time the message with a given Message Identifier is changed.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Serial Number	O		<del>INTEGER (16)</del> BIT STRING(16)	

NO IMPACT SUBCLAUSE ARE NOT SHOWN

## 9.2.15 Data Coding Scheme

*Data Coding Scheme* IE is sent from the RNC to the CN and identifies the alphabet or coding employed for the message characters and message handling at the UE (it is passed transparently from the CN to the UE).

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Data Coding Scheme	M		<del>INTEGER (0..255)</del> <u>BIT STRING(8)</u>	

## 9.2.19 Message Identifier

*Message Identifier* IE is set by the CN, transfer to the UE by the RNC.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and Reference	Semantics Description
Message Identifier	M		<del>OCTET STRING (SIZE(2))</del> <u>BIT STRING(16)</u>	This IE is set by the CN, transfer to the UE by the RNC, the RNC needs not to understand what is the meaning of the value but shall treat it as a identifier of a message. The Message Identifier is defined in [11]

NO IMPACT SUBCLAUSE ARE NOT SHOWN

### 9.3.4 Information Element Definitions

```
-- *****
--
-- Information Element Definitions
--
-- *****

SABP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
ums-Access (20) modules (3) sabp (3) version1 (1) sabp-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxRadio-Resource-Loading-List,
    maxFailure-List,
    maxNumber-of-Broadcasts-Completed-List,
    maxNrOfErrors,
    maxService-Areas-List,
    maxNrOfLevels,

    id-MessageStructure,
    id-TypeOfError

FROM SABP-Constants

    Criticality,
    ProcedureCode,
    TriggeringMessage,
    ProtocolIE-ID
FROM SABP-CommonDataTypes

    ProtocolExtensionContainer{ },

    SABP-PROTOCOL-EXTENSION
FROM SABP-Containers;

-- A

Available-Bandwidth ::= INTEGER (0..20480)
-- bits/sec

-- B
```

```

Broadcast-Message-Content ::= OCTET STRING (SIZE (1..1246)) BIT STRING (SIZE (1..9968))
-- This IE is sent from the CN to the RNC containing user information i.e.
-- the message.

-- C

Category ::= ENUMERATED {
    high-priority,
    background-priority,
    normal-priority,
    default-priority,
    ...
}

Cause ::= INTEGER {
    parameter-not-recognised (0),
    parameter-value-invalid (1),
    valid-CN-message-not-identified (2),
    service-area-identity-not-valid (3),
    unrecognised-message (4),
    missing-mandatory-element (5),
    rNC-capacity-exceeded (6),
    rNC-memory-exceeded (7),
    service-area-broadcast-not-supported (8),
    service-area-broadcast-not-operational (9),
    message-reference-already-used (10),
    unspecified-error (11),
    transfer-syntax-error (12),
    semantic-error (13),
    message-not-compatible-with-receiver-state (14),
    abstract-syntax-error-reject (15),
    abstract-syntax-error-ignore-and-notify (16),
    abstract-syntax-error-falsely-constructed-message (17)
} (0..255)

Criticality-Diagnostics ::= SEQUENCE {
    procedureCode ProcedureCode OPTIONAL,
    triggeringMessage TriggeringMessage OPTIONAL,
    procedureCriticality Criticality OPTIONAL,
    iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
SEQUENCE {
    iECriticality Criticality,
    iE-ID ProtocolIE-ID,

```

```

        repetitionNumber      RepetitionNumber0      OPTIONAL,
        iE-Extensions         ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }

```

```

CriticalityDiagnostics-IE-List-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    { ID id-MessageStructure      CRITICALITY ignore      EXTENSION MessageStructure      PRESENCE optional }|
    { ID id-TypeOfError          CRITICALITY ignore      EXTENSION TypeOfError          PRESENCE mandatory },
    ...
}

```

```

MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
    SEQUENCE {
        iE-ID                    ProtocolIE-ID,
        repetitionNumber         RepetitionNumber1      OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
        ...
    }

```

```

MessageStructure-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

```

-- D

```

Data-Coding-Scheme ::= INTEGER (0..255) BIT STRING (SIZE (8))

```

-- E

-- F

```

Failure-List ::= SEQUENCE (SIZE (1..maxFailure-List)) OF Failure-List-Item

```

```

Failure-List-Item ::= SEQUENCE {
    service-area-identifier      Service-Area-Identifier,
    cause                        Cause,
    iE-Extensions               ProtocolExtensionContainer { {FailureListItemIE-ExtIEs} } OPTIONAL,
    ...
}

```

```

FailureListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

```

-- G

-- H

-- I

```

-- J
-- K
-- L
-- M
| Message-Identifier ::= OCTET STRING (SIZE (2))BIT STRING (SIZE (16))
-- N
New-Serial-Number          ::= Serial-Number
Number-of-Broadcasts-Completed-List ::= SEQUENCE (SIZE (1..maxNumber-of-Broadcasts-Completed-List)) OF
    Number-of-Broadcasts-Completed-List-Item
Number-of-Broadcasts-Completed-List-Item ::= SEQUENCE {
    service-area-identifier      Service-Area-Identifier,
    number-of-broadcasts-compl    INTEGER (0..65535),
    number-of-broadcasts-compl-info Number-Of-Broadcasts-Completed-Info      OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {NoOfBroadcastsCompletedListItemIE-ExtIEs} } OPTIONAL,
    ...
}
NoOfBroadcastsCompletedListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}
Number-Of-Broadcasts-Completed-Info      ::= ENUMERATED {
    overflow,
    unknown,
    ...
}
Number-of-Broadcasts-Requested          ::= INTEGER {
    broadcast-indefinitely (0)
} (0..65535)
-- O
Old-Serial-Number          ::= Serial-Number
-- P
-- Q
-- R
Radio-Resource-Loading-List ::= SEQUENCE (SIZE (1..maxRadio-Resource-Loading-List)) OF
    Radio-Resource-Loading-List-Item
Radio-Resource-Loading-List-Item ::= SEQUENCE {

```

```

    service-area-identifier      Service-Area-Identifier,
    available-bandwidth         Available-Bandwidth,
    iE-Extensions               ProtocolExtensionContainer { {RadioResourceLoadingListItemIE-ExtIEs} } OPTIONAL,
    ...
}

```

```

RadioResourceLoadingListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
...
}

```

```

Recovery-Indication ::= ENUMERATED {
    data-lost,
    data-available
}

```

```

RepetitionNumber0          ::= INTEGER(0..255)
RepetitionNumber1          ::= INTEGER(1..256)

```

```

Repetition-Period          ::= INTEGER (1..4096)
-- Each unit represents a repetition of one second to a maximum of
-- once per 4096 seconds (~1 hour).

```

```
-- S
```

```

Serial-Number               ::= INTEGER (0..65535) BIT STRING (SIZE (16))

```

```

Service-Area-Identifier ::= SEQUENCE {
    pLMNidentity             OCTET STRING (SIZE (3))
        -- Digits 0 to 9, two digits per octet.      --
        -- Each octet encoded 0000 to 1001.          --
        -- 1111 used as filler                        --
        -- Bit 4 to 1 of octet n encoding digit 2n-1. --
        -- Bit 8 to 5 of octet n encoding digit 2n.   --
        -- The PLMNidentity consists of 3 digits from MCC --
        -- followed by either a filler plus 2 digits  --
        -- from MNC (in case of 2 digit MNC) or 3 digits --
        -- from MNC (in case of 3 digit MNC).        -- ,
    lac                     OCTET STRING (SIZE (2))
        -- 0000 and FFFE not allowed                  -- ,
    sac                     OCTET STRING (SIZE (2))
}

```

```

-- **TODO** The IE type for these parameters is not known as yet
Service-Areas-List ::= SEQUENCE (SIZE (1..maxService-Areas-List)) OF Service-Area-Identifier

```

```
-- T
```

```

TypeOfError ::= ENUMERATED {
    not-understood,
}

```

```
    missing,  
    ...  
}
```

-- U

-- V

-- W

-- X

-- Y

END



## CHANGE REQUEST

⌘ **25.419 CR 89** ⌘ rev **1** ⌘ Current version: **3.7.0** ⌘

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

<b>Title:</b>	⌘ Mismatch the type of some IE between 25.419 and 25.324		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> 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)

<b>Reason for change:</b>	⌘ Some IEs between 25.419 and 25.324 are mismatch and therefore should be aligned. For example, the Data Coding Scheme IE is to identify the alphabet or coding employed for the message characters and it is transparent to the RNC. However, the current 25.419 specifies it as INTEGER(0..255) as if the RNC shall interpret the meaning of the value. Therefore this type of Data Coding Scheme IE in 25.419 shall be corrected to align the one in 25.324, i.e. BIT STRING (size(8)). The correction is also applied to Serial Number IE. There are also other two IEs i.e. Message Identifier IE and Broadcast Message Content IE are specified as OCTET STRING while they are specified as BIT STRING <u>in 25.324</u> .
<b>Summary of change:</b>	⌘ Change the type of Data Coding Scheme IE, Serial Number IE, Message Identifier IE, Broadcast Message Content IE to BIT STRING to align the 25.324.
<b>Consequences if not approved:</b>	⌘ If this is not approved, it would require the RNC to interpret value of some IEs which should be transparently transfer from the CN to the UE.  Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  This CR has [ isolated impact] with the previous version of the specification (same release) because it changes <u>the encoding of the broadcast message content IE,(Note that for the other IEs, although data type was changed, will result in the same PER coding).type of the data.</u>  Only if it has impact:  This CR has an impact under [protocol] point of view. The impact [can] be considered isolated because the change affects [one] [system function] namely the transparent transfer function.

<b>Clauses affected:</b>	⌘	9.2.2, 9.2.3, 9.2.15, 9.2.19, 9.3.4	
<b>Other specs affected:</b>	⌘	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ 25.419 CR90 Rel4
<b>Other comments:</b>	⌘		

**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](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.

## 9.2.1 MessageType

*Message Type* IE uniquely identifies the message being sent. It is mandatory for all messages.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
<b>Message Type</b>				
>Procedure Code	M		ENUMERATED (Write-Replace, Kill, Load Status Enquiry, Message Status Query, Reset, Restart Indication, Failure Indication, Error Indication, ...)	
>Type of Message	M		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

## 9.2.2 Broadcast Message Content

*Broadcast Message Content* IE is sent from the CN to the RNC containing user information i.e. the message, and will be broadcast over the radio interface.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Broadcast Message Content	M		OCTET STRING (1..1246)BIT STRING (1..9968)	

NO IMPACT SUBCLAUSE ARE NOT SHOWN

## 9.2.3 Serial Number

*Serial Number* IE is a 16-bit integer which identifies a particular message from the source and type indicated by the Message Identifier and is altered every time the message with a given Message Identifier is changed.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Serial Number	O		INTEGER (16)BIT STRING(16)	

NO IMPACT SUBCLAUSE ARE NOT SHOWN

## 9.2.15 Data Coding Scheme

*Data Coding Scheme* IE is sent from the RNC to the CN and identifies the alphabet or coding employed for the message characters and message handling at the UE (it is passed transparently from the CN to the UE).

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Data Coding Scheme	M		<del>INTEGER (0..255)</del> BIT STRING(8)	

## 9.2.19 Message Identifier

*Message Identifier* IE is set by the CN, transfer to the UE by the RNC.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and Reference	Semantics Description
Message Identifier	M		<del>OCTET STRING</del> ( <del>SIZE(2)</del> )BIT STRING(16)	This IE is set by the CN, transfer to the UE by the RNC, the RNC needs not to understand what is the meaning of the value but shall treat it as a identifier of a message. The Message Identifier is defined in [11]

NO IMPACT SUBCLAUSE ARE NOT SHOWN

### 9.3.4 Information Element Definitions

```
-- *****
--
-- Information Element Definitions
--
-- *****

SABP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
ums-Access (20) modules (3) sabp (3) version1 (1) sabp-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxRadio-Resource-Loading-List,
    maxFailure-List,
    maxNumber-of-Broadcasts-Completed-List,
    maxNrOfErrors,
    maxService-Areas-List,
    maxNrOfLevels,

    id-MessageStructure,
    id-TypeOfError

FROM SABP-Constants

    Criticality,
    ProcedureCode,
    TriggeringMessage,
    ProtocolIE-ID
FROM SABP-CommonDataTypes

    ProtocolExtensionContainer{ },

    SABP-PROTOCOL-EXTENSION
FROM SABP-Containers;

-- A

Available-Bandwidth      ::= INTEGER (0..20480)
-- bits/sec

-- B
```

```

Broadcast-Message-Content ::= OCTET STRING (SIZE (1..1246)) BIT STRING (SIZE (1..9968))
-- This IE is sent from the CN to the RNC containing user information i.e.
-- the message.

-- C

Category ::= ENUMERATED {
    high-priority,
    background-priority,
    normal-priority,
    default-priority,
    ...
}

Cause ::= INTEGER {
    parameter-not-recognised (0),
    parameter-value-invalid (1),
    valid-CN-message-not-identified (2),
    service-area-identity-not-valid (3),
    unrecognised-message (4),
    missing-mandatory-element (5),
    rNC-capacity-exceeded (6),
    rNC-memory-exceeded (7),
    service-area-broadcast-not-supported (8),
    service-area-broadcast-not-operational (9),
    message-reference-already-used (10),
    unspecified-error (11),
    transfer-syntax-error (12),
    semantic-error (13),
    message-not-compatible-with-receiver-state (14),
    abstract-syntax-error-reject (15),
    abstract-syntax-error-ignore-and-notify (16),
    abstract-syntax-error-falsely-constructed-message (17)
} (0..255)

Criticality-Diagnostics ::= SEQUENCE {
    procedureCode ProcedureCode OPTIONAL,
    triggeringMessage TriggeringMessage OPTIONAL,
    procedureCriticality Criticality OPTIONAL,
    iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
SEQUENCE {
    iECriticality Criticality,
    iE-ID ProtocolIE-ID,

```

```

    repetitionNumber      RepetitionNumber0      OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
    ...
}

```

```

CriticalityDiagnostics-IE-List-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
  { ID id-MessageStructure      CRITICALITY ignore      EXTENSION MessageStructure      PRESENCE optional }|
  { ID id-TypeOfError          CRITICALITY ignore      EXTENSION TypeOfError          PRESENCE mandatory },
  ...
}

```

```

MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
  SEQUENCE {
    iE-ID                ProtocolIE-ID,
    repetitionNumber     RepetitionNumber1      OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
    ...
  }

```

```

MessageStructure-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
  ...
}

```

-- D

```

Data-Coding-Scheme      ::= INTEGER (0..255) BIT STRING (SIZE (8))

```

-- E

-- F

```

Failure-List ::= SEQUENCE (SIZE (1..maxFailure-List)) OF Failure-List-Item

```

```

Failure-List-Item ::= SEQUENCE {
  service-area-identifier Service-Area-Identifier,
  cause                  Cause,
  iE-Extensions          ProtocolExtensionContainer { {FailureListItemIE-ExtIEs} } OPTIONAL,
  ...
}

```

```

FailureListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
  ...
}

```

-- G

-- H

-- I

```

-- J
-- K
-- L
-- M
| Message-Identifier ::= OCTET STRING (SIZE (2))BIT STRING (SIZE (16))
-- N
New-Serial-Number          ::= Serial-Number
Number-of-Broadcasts-Completed-List ::= SEQUENCE (SIZE (1..maxNumber-of-Broadcasts-Completed-List)) OF
    Number-of-Broadcasts-Completed-List-Item
Number-of-Broadcasts-Completed-List-Item ::= SEQUENCE {
    service-area-identifier      Service-Area-Identifier,
    number-of-broadcasts-compl   INTEGER (0..65535),
    number-of-broadcasts-compl-info Number-Of-Broadcasts-Completed-Info      OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { {NoOfBroadcastsCompletedListItemIE-ExtIEs} } OPTIONAL,
    ...
}
NoOfBroadcastsCompletedListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}
Number-Of-Broadcasts-Completed-Info ::= ENUMERATED {
    overflow,
    unknown,
    ...
}
Number-of-Broadcasts-Requested ::= INTEGER {
    broadcast-indefinitely (0)
} (0..65535)
-- O
Old-Serial-Number          ::= Serial-Number
-- P
-- Q
-- R
Radio-Resource-Loading-List ::= SEQUENCE (SIZE (1..maxRadio-Resource-Loading-List)) OF
    Radio-Resource-Loading-List-Item
Radio-Resource-Loading-List-Item ::= SEQUENCE {

```



```

    service-area-identifier      Service-Area-Identifier,
    available-bandwidth         Available-Bandwidth,
    iE-Extensions               ProtocolExtensionContainer { {RadioResourceLoadingListItemIE-ExtIEs} } OPTIONAL,
    ...
}

```

```

RadioResourceLoadingListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
...
}

```

```

Recovery-Indication ::= ENUMERATED {
    data-lost,
    data-available
}

```

```

RepetitionNumber0          ::= INTEGER(0..255)
RepetitionNumber1          ::= INTEGER(1..256)

```

```

Repetition-Period          ::= INTEGER (1..4096)
-- Each unit represents a repetition of one second to a maximum of
-- once per 4096 seconds (~1 hour).

```

```
-- S
```

```

Serial-Number              ::= INTEGER (0..65535) BIT STRING (SIZE (16))

```

```

Service-Area-Identifier ::= SEQUENCE {
    plmnIdentity            OCTET STRING (SIZE (3))
                            -- Digits 0 to 9, two digits per octet.      --
                            -- Each octet encoded 0000 to 1001.          --
                            -- 1111 used as filler                        --
                            -- Bit 4 to 1 of octet n encoding digit 2n-1. --
                            -- Bit 8 to 5 of octet n encoding digit 2n.  --
                            -- The PLMNidentity consists of 3 digits from MCC --
                            -- followed by either a filler plus 2 digits   --
                            -- from MNC (in case of 2 digit MNC) or 3 digits --
                            -- from MNC (in case of 3 digit MNC).         -- ,
    lac                    OCTET STRING (SIZE (2))
                            -- 0000 and FFFE not allowed                -- ,
    sac                    OCTET STRING (SIZE (2))
}

```

```

-- **TODO** The IE type for these parameters is not known as yet
Service-Areas-List ::= SEQUENCE (SIZE (1..maxService-Areas-List)) OF Service-Area-Identifier

```

```
-- T
```

```

TypeOfError ::= ENUMERATED {
    not-understood,
}

```

```
    missing,  
    ...  
}
```

-- U

-- V

-- W

-- X

-- Y

END

## CHANGE REQUEST

⌘ **25.419 CR 88** ⌘ rev **1** ⌘ Current version: **4.3.0** ⌘

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

<b>Title:</b>	⌘ ASN.1 take precedence if contradiction between ASN.1 and tabular		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		2 (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		R96 (Release 1996)
	<b>B</b> (addition of feature),		R97 (Release 1997)
	<b>C</b> (functional modification of feature)		R98 (Release 1998)
	<b>D</b> (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		REL-4 (Release 4)
			REL-5 (Release 5)

**Reason for change:** ⌘ The current 25.419 the Recovery Indication IE has the values in the order of ENUMERATED(Available, Lost), however it is ENUMERATED{Lost, Available} in ASN.1. The contradiction shall be corrected.  
Moreover, There is no description to specify that if there is contradiction between ASN.1 and tabular, the ASN.1 shall take precedence, this would different from other protocols such as RANAP, RNSAP. To align SABP with RANAP, RNSAP and NBAP, the same rule needs to be added in subclause 9.1.1. As protocols for Lu, Lur and Lub shall mostly have the same rule, the same description shall be added.

**Summary of change:** ⌘ Section 9.1 presents the contents of SABP messages in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional IEs, where the tabular format shall take precedence.  
  
Change the order of the value in Recovery Indication IE of tabular to ENUMERATED(Lost, Available) to align the ASN.1.

**Consequences if not approved:** ⌘ If this is not approved, the 25.419 is not clear and therefore it might lead to misunderstanding ~~when~~during implementation.  
Impact Analysis:  
Impact assessment towards the previous version of the specification (same release):  
From the formal point of view ¶this CR has [non isolated impact] with the previous version of the specification (same release) because it specifies a new rule. However, as mentioned in the Reason For Change, the CR follows the general RAN-WG3 Specification rules.

Only if it has impact:

This CR has an impact under [protocol] point of view.

The impact [can not] be considered isolated because the change affects [more than one] [system function].

**Clauses affected:** ⌘ 9.1.1, 9.2.16

**Other specs affected:** ⌘  Other core specifications ⌘ 25.419 CR87 R99  
 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](http://www.3gpp.org/3G_Specs/CRs.htm). Below is a brief summary:

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- 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.

## 9 Elements for SABP Communication

### 9.1 Message Functional Definition and Content

#### 9.1.1 General

Section 9.1 presents the contents of SABP messages in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional IEs, where the tabular format shall take precedence.

NOTE: The messages have been defined in accordance to the guidelines specified in [10].

For each message there is, a table listing the signalling elements in their order of appearance in the transmitted message.

#### 9.1.2 Message Contents

##### 9.1.2.1 Presence

All information elements in the message descriptions below are marked mandatory, optional or conditional according to table 3.

**Table 3: Meaning of abbreviations used in SABP messages**

Abbreviation	Meaning
M	IE's marked as Mandatory (M) will always be included in the message.
O	IE's marked as Optional (O) may or may not be included in the message.
C	IE's marked as Conditional (C) will be included in a message only if the condition is satisfied. Otherwise the IE is not included.

##### 9.1.2.2 Criticality

Each Information Element or Group of Information Elements may have a criticality information applied to it. Following cases are possible.

**Table 4: Meaning of content within "Criticality" column**

Abbreviation	Meaning
–	No criticality information is applied explicitly.
YES	Criticality information is applied. This is usable only for non-repeatable IEs
GLOBAL	The IE and all its repetitions together have one common criticality information. This is usable only for repeatable IEs.
EACH	Each repetition of the IE has its own criticality information. It is not allowed to assign different criticality values to the repetitions. This is usable only for repeatable IEs.

##### 9.1.2.3 Range

The Range column indicates the allowed number of copies of repetitive IEs/IE groups.

## 9.2.15 Data Coding Scheme

*Data Coding Scheme* IE is sent from the RNC to the CN and identifies the alphabet or coding employed for the message characters and message handling at the UE (it is passed transparently from the CN to the UE).

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Data Coding Scheme	M		INTEGER (0..255)	

## 9.2.16 Recovery Indication

*Recovery Indication* IE is used to indicate whether the CN related data was lost or is still available.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Recovery Indication	O		ENUMERATED ( <del>Lost</del> , Available, <del>Lost</del> )	

## 9.2.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by the RNC or the CN when parts of a received message have not been comprehended or were missing, or if the message contained logical errors. When applicable, it contains information about which IEs that were not comprehended or were missing.

For further details on how to use the *Criticality Diagnostics* IE, see annex A.

**NOT AFFECTED PART ARE NOT SHOWN**

## CHANGE REQUEST

⌘ **25.419 CR 87** ⌘ rev **1** ⌘ Current version: **3.7.0** ⌘

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

<b>Title:</b>	⌘ ASN.1 take precedence if contradiction between ASN.1 and tabular		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

**Reason for change:** ⌘ The current 25.419 the Recovery Indication IE has the values in the order of ENUMERATED(Available, Lost), however it is ENUMERATED{Lost, Available} in ASN.1. The contradiction shall be corrected.  
 Moreover, There is no description to specify that if there is contradiction between ASN.1 and tabular, the ASN.1 shall take precedence, this would different from other protocols such as RANAP, RNSAP. To align SABP with RANAP, RNSAP and NBAP, the same rule needs to be added in subclause 9.1.1. ~~As protocols for lu, lur and lub shall have the same rule, the same description shall be added.~~

**Summary of change:** ⌘ Section 9.1 presents the contents of SABP messages in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional ies, where the tabular format shall take precedence. Change the order of the value in Recovery Indication IE of tabular to ENUMERATED(Lost, Available) to align the ASN.1.

**Consequences if not approved:** ⌘ If this is not approved, the 25.419 is not clear and therefore it might lead to misunderstanding ~~when~~during implementation.  
 Impact Analysis:  
 Impact assessment towards the previous version of the specification (same release):  
From the formal point of view ¶this CR has [non isolated impact] with the previous version of the specification (same release) because it specifies a new rule. However, as mentioned in the Reason For Change, the CR follows the general RAN-WG3 Specification rules.  
 Only if it has impact:  
 This CR has an impact under [protocol] point of view.

The impact [can not] be considered isolated because the change affects [more than one] [system function].

**Clauses affected:** ⌘ 9.1.1, 9.2.16

**Other specs affected:** ⌘  Other core specifications ⌘ 25.419 CR88 Rel4  
 Test specifications  
 O&M Specifications

**Other comments:** ⌘

### How to create CRs using this form:

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## 9 Elements for SABP Communication

### 9.1 Message Functional Definition and Content

#### 9.1.1 General

Section 9.1 presents the contents of SABP messages in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional IEs, where the tabular format shall take precedence.

NOTE: The messages have been defined in accordance to the guidelines specified in [10].

For each message there is, a table listing the signalling elements in their order of appearance in the transmitted message.

#### 9.1.2 Message Contents

##### 9.1.2.1 Presence

All information elements in the message descriptions below are marked mandatory, optional or conditional according to table 3.

**Table 3: Meaning of abbreviations used in SABP messages**

Abbreviation	Meaning
M	IE's marked as Mandatory (M) will always be included in the message.
O	IE's marked as Optional (O) may or may not be included in the message.
C	IE's marked as Conditional (C) will be included in a message only if the condition is satisfied. Otherwise the IE is not included.

##### 9.1.2.2 Criticality

Each Information Element or Group of Information Elements may have a criticality information applied to it. Following cases are possible.

**Table 4: Meaning of content within "Criticality" column**

Abbreviation	Meaning
–	No criticality information is applied explicitly.
YES	Criticality information is applied. This is usable only for non-repeatable IEs
GLOBAL	The IE and all its repetitions together have one common criticality information. This is usable only for repeatable IEs.
EACH	Each repetition of the IE has its own criticality information. It is not allowed to assign different criticality values to the repetitions. This is usable only for repeatable IEs.

##### 9.1.2.3 Range

The Range column indicates the allowed number of copies of repetitive IEs/IE groups.

## 9.2.15 Data Coding Scheme

*Data Coding Scheme* IE is sent from the RNC to the CN and identifies the alphabet or coding employed for the message characters and message handling at the UE (it is passed transparently from the CN to the UE).

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Data Coding Scheme	M		INTEGER (0..255)	

## 9.2.16 Recovery Indication

*Recovery Indication* IE is used to indicate whether the CN related data was lost or is still available.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Recovery Indication	O		ENUMERATED ( <del>Lost</del> , Available, <del>Lost</del> )	

## 9.2.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by the RNC or the CN when parts of a received message have not been comprehended or were missing, or if the message contained logical errors. When applicable, it contains information about which IEs that were not comprehended or were missing.

For further details on how to use the *Criticality Diagnostics* IE, see annex A.

**NOT AFFECTED PART ARE NOT SHOWN**

CR-Form-v5

## CHANGE REQUEST

⌘ **25.419 CR 86** ⌘ rev **-** ⌘ Current version: **4.3.0** ⌘

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

<b>Title:</b>	⌘ Service expected from the transport layer		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)	<b>R96</b>	<b>2</b> (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)	<b>R97</b>	(Release 1996)
	<b>B</b> (addition of feature),	<b>R98</b>	(Release 1997)
	<b>C</b> (functional modification of feature)	<b>R99</b>	(Release 1998)
	<b>D</b> (editorial modification)	<b>REL-4</b>	(Release 1999)
	Detailed explanations of the above categories can	<b>REL-4</b>	(Release 4)
	be found in 3GPP TR 21.900.	<b>REL-5</b>	(Release 5)

<b>Reason for change:</b>	⌘ In the current 25.419, it is describing in sequence delivery of FP PDU is expected from the service of transport layer. Since the lu for broadcast domain does not have FP(Frame Protocol), the current description is not true.
<b>Summary of change:</b>	⌘ The service expected from transport is changed from "in sequence delivery of FP PDU " to "in sequence delivery of Signalling data "
<b>Consequences if not approved:</b>	⌘ If this is not approved, the 25.419 is not clear and therefore it might lead to misunderstanding when implementation.  Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  This CR has [isolated impact] with the previous version of the specification (same release) because it change the target object of the service expected from the transport layer.  Only if it has impact:  This CR has an impact under [protocol] point of view. The impact [can] be considered isolated because the change affects [one] [system function] namely the object of the in sequence delivery.

<b>Clauses affected:</b>	⌘ 6		
<b>Other specs affected:</b>	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ 25.419 CR85 R99	
	<input type="checkbox"/> Test specifications		
	<input type="checkbox"/> O&M Specifications		
<b>Other comments:</b>	⌘		

**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](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.

---

## 5 Services provided by SABP

- During normal operation the CN (CBC) initiates all message transfer and query operations. The RNC responds to the message transfer and query operations initiated by the CBC.
- The RNC will open the connection only in case an error (Failure Indication Procedure) or recovery (Restart Indication Procedure) is to be reported.
- The initiator of a connection is responsible for the termination of the connection.

---

## 6 Services expected from the Transport layer

Following service is expected from the transport layer:

- in sequence delivery of ~~FP-PDU~~ Signalling data[6].

---

## 7 Functions of SABP

The SABP has the following functions:

- Message Handling. This function is responsible for the broadcast of new messages, amend existing broadcasted messages and to stop the broadcasting of specific messages.
- Load Handling. This function is responsible for determining the loading of the broadcast channels at any particular point in time.
- Reset. This function permits the CBC to end broadcasting in one or more Service Areas.
- Error Handling. This function allows the reporting of general error situations, for which function specific error messages have not been defined.

These functions are implemented by one or several SABP elementary procedures described in the following clauses.

## CHANGE REQUEST

⌘ **25.419 CR 85** ⌘ rev **-** ⌘ Current version: **3.7.0** ⌘

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

<b>Title:</b>	⌘ Service expected from the transport layer		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ In the current 25.419, it is describing in sequence delivery of FP PDU is expected from the service of transport layer. Since the lu for broadcast domain does not have FP(Frame Protocol), the current description is not true.
<b>Summary of change:</b>	⌘ The service expected from transport is changed from “in sequence delivery of FP PDU “ to “in sequence delivery of Signalling data “
<b>Consequences if not approved:</b>	⌘ If this is not approved, the 25.419 is not clear and therefore it might lead to misunderstanding when implementation.  Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  This CR has [isolated impact] with the previous version of the specification (same release) because it change the target object of the service expected from the transport layer.  Only if it has impact:  This CR has an impact under [protocol] point of view. The impact [can] be considered isolated because the change affects [one] [system function] namely the object of the in sequence delivery.

<b>Clauses affected:</b>	⌘ 6		
<b>Other specs affected:</b>	⌘ <input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	25.419 CR86 Rel4
<b>Other comments:</b>	⌘		

**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](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.

---

## 5 Services provided by SABP

- During normal operation the CN (CBC) initiates all message transfer and query operations. The RNC responds to the message transfer and query operations initiated by the CBC.
- The RNC will open the connection only in case an error (Failure Indication Procedure) or recovery (Restart Indication Procedure) is to be reported.
- The initiator of a connection is responsible for the termination of the connection.

---

## 6 Services expected from the Transport layer

Following service is expected from the transport layer:

- in sequence delivery of ~~FP-PDU~~ Signalling data[6].

---

## 7 Functions of SABP

The SABP has the following functions:

- Message Handling. This function is responsible for the broadcast of new messages, amend existing broadcasted messages and to stop the broadcasting of specific messages.
- Load Handling. This function is responsible for determining the loading of the broadcast channels at any particular point in time.
- Reset. This function permits the CBC to end broadcasting in one or more Service Areas.
- Error Handling. This function allows the reporting of general error situations, for which function specific error messages have not been defined.

These functions are implemented by one or several SABP elementary procedures described in the following clauses.



## CHANGE REQUEST

⌘ **25.419 CR 84** ⌘ rev **1** ⌘ Current version: **4.3.0** ⌘

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

<b>Title:</b>	⌘ Correction of the wording of maximum value		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		2 (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)	R96 (Release 1996)	
	<b>B</b> (addition of feature),	R97 (Release 1997)	
	<b>C</b> (functional modification of feature)	R98 (Release 1998)	
	<b>D</b> (editorial modification)	R99 (Release 1999)	
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.	REL-4 (Release 4)	
		REL-5 (Release 5)	

<b>Reason for change:</b>	⌘ The current 25.419 has many unclarity which shall have correction in order to make the specification unambiguity. In tabular the range is 1 to <maxnoofSAI> for <i>Service Areas List</i> IE (Subclause 9.2.6), <i>Number of Broadcasts Completed List</i> IE (subclause 9.2.10), <i>Failure List</i> IE (subclause 9.2.12) and <i>Radio Resource Loading List</i> IE (Subclause 9.2.13). However, in ASN.1 those all have different wording.
<b>Summary of change:</b>	⌘ The wording of the maximum value of the range in ASN.1 are change as shown below:  1. <i>Service Areas List</i> IE is change from maxService-Areas-List to maxnoofSAI 2. <i>Number of Broadcasts Completed List</i> IE is change from maxNumber-of-Broadcasts-Completed-List to maxnoofSAI 3. <i>Failure List</i> IE is change from maxFailure-List to maxnoofSAI 4. <i>Radio Resource Loading List</i> IE is change from maxRadio-Resource-Loading-Lis to maxnoofSAI
<b>Consequences if not approved:</b>	⌘ If this is not approved, the different wording may lead to misunderstanding <del>when</del> during implementation.  Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  This CR has [ <del>no isolated</del> impact] with the previous version of the specification (same release) because <u>it changes only the wording of maximum value and does not change its value in ASN.1. therefore the meaning of the maximum value in ASN.1</u>  <del>Only if it has impact:</del>  <del>This CR has an impact under [functional] point of view.</del>

The impact [can] be considered isolated because the change affects [one] [system function] namely the meaning of maximum value in ASN.1.

**Clauses affected:** ⌘ 9.3.4, 9.3.5

**Other specs affected:** ⌘  Other core specifications ⌘ 25.419 CR83 R99  
 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](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.
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- 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.

## 9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

SABP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) sabp (3) version1 (1) sabp-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
maxRadio-Resource-Loading-List,
maxFailure-List,
maxNumber-of-Broadcasts-Completed-List,
maxNrOfErrors,
maxService-Areas-ListmaxnoofSAI,
maxNrOfLevels,

id-MessageStructure,
id-TypeOfError

FROM SABP-Constants

Criticality,
ProcedureCode,
TriggeringMessage,
ProtocolIE-ID
FROM SABP-CommonDataTypes

ProtocolExtensionContainer{ },

SABP-PROTOCOL-EXTENSION
FROM SABP-Containers;

-- A

Available-Bandwidth ::= INTEGER (0..20480)
-- bits/sec

-- B

Broadcast-Message-Content ::= OCTET STRING (SIZE (1..1246))
-- This IE is sent from the CN to the RNC containing user information i.e.
-- the message.

-- C

Category ::= ENUMERATED {
high-priority,
background-priority,
normal-priority,
default-priority,
...
}

Cause ::= INTEGER {
parameter-not-recognised (0),
parameter-value-invalid (1),
valid-CN-message-not-identified (2),
service-area-identity-not-valid (3),
unrecognised-message (4),
missing-mandatory-element (5),
rNC-capacity-exceeded (6),
rNC-memory-exceeded (7),
service-area-broadcast-not-supported (8),
service-area-broadcast-not-operational (9),
message-reference-already-used (10),

```

```

    unspecified-error (11),
    transfer-syntax-error (12),
    semantic-error (13),
    message-not-compatible-with-receiver-state (14),
    abstract-syntax-error-reject (15),
    abstract-syntax-error-ignore-and-notify (16),
    abstract-syntax-error-falsely-constructed-message (17)
} (0..255)

Criticality-Diagnostics ::= SEQUENCE {
    procedureCode ProcedureCode OPTIONAL,
    triggeringMessage TriggeringMessage OPTIONAL,
    procedureCriticality Criticality OPTIONAL,
    iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        iECriticality Criticality,
        iE-ID ProtocolIE-ID,
        repetitionNumber RepetitionNumber0 OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }

CriticalityDiagnostics-IE-List-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    { ID id-MessageStructure CRITICALITY ignore EXTENSION MessageStructure PRESENCE
optional }|
    { ID id-TypeError CRITICALITY ignore EXTENSION TypeError PRESENCE
mandatory },
    ...
}

MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
    SEQUENCE {
        iE-ID ProtocolIE-ID,
        repetitionNumber RepetitionNumber1 OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
        ...
    }

MessageStructure-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

-- D

Data-Coding-Scheme ::= INTEGER (0..255)

-- E

-- F

Failure-List ::= SEQUENCE (SIZE (1..maxFailure-ListmaxnoofSAI)) OF Failure-List-Item

Failure-List-Item ::= SEQUENCE {
    service-area-identifier Service-Area-Identifier,
    cause Cause,
    iE-Extensions ProtocolExtensionContainer { {FailureListItemIE-ExtIEs} } OPTIONAL,
    ...
}

FailureListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

-- G

```

```

-- H
-- I
-- J
-- K
-- L
-- M
Message-Identifier ::= OCTET STRING (SIZE (2))
-- N
New-Serial-Number          ::= Serial-Number

Number-of-Broadcasts-Completed-List ::= SEQUENCE (SIZE (1..maxnoofSAImaxNumber-of-Broadcasts-Completed-List)) OF
    Number-of-Broadcasts-Completed-List-Item

Number-of-Broadcasts-Completed-List-Item ::= SEQUENCE {
    service-area-identifier      Service-Area-Identifier,
    number-of-broadcasts-completed      INTEGER (0..65535),
    number-of-broadcasts-completed-info Number-Of-Broadcasts-Completed-Info      OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {NoOfBroadcastsCompletedListItemIE-ExtIEs} }
OPTIONAL,
    ...
}

NoOfBroadcastsCompletedListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
...
}

Number-Of-Broadcasts-Completed-Info      ::= ENUMERATED {
    overflow,
    unknown,
    ...
}

Number-of-Broadcasts-Requested          ::= INTEGER {
    broadcast-indefinitely (0)
} (0..65535)
-- O
Old-Serial-Number          ::= Serial-Number
-- P
-- Q
-- R
Radio-Resource-Loading-List ::= SEQUENCE (SIZE (1..maxRadio-Resource-Loading-ListmaxnoofSAI)) OF
    Radio-Resource-Loading-List-Item

Radio-Resource-Loading-List-Item ::= SEQUENCE {
    service-area-identifier      Service-Area-Identifier,
    available-bandwidth          Available-Bandwidth,
    iE-Extensions                ProtocolExtensionContainer { {RadioResourceLoadingListItemIE-ExtIEs} }
OPTIONAL,
    ...
}

RadioResourceLoadingListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
...
}

Recovery-Indication ::= ENUMERATED {
    data-lost,
    data-available
}

RepetitionNumber0          ::= INTEGER(0..255)
RepetitionNumber1          ::= INTEGER(1..256)

```

```

Repetition-Period ::= INTEGER (1..4096)
-- Each unit represents a repetition of one second to a maximum of
-- once per 4096 seconds (~1 hour).

-- S

Serial-Number ::= INTEGER (0..65535)

Service-Area-Identifier ::= SEQUENCE {
    PLMNidentity OCTET STRING (SIZE (3))
        -- Digits 0 to 9, two digits per octet. --
        -- Each octet encoded 0000 to 1001. --
        -- 1111 used as filler --
        -- Bit 4 to 1 of octet n encoding digit 2n-1. --
        -- Bit 8 to 5 of octet n encoding digit 2n. --
        -- The PLMN identity consists of 3 digits from MCC --
        -- followed by either a filler plus 2 digits --
        -- from MNC (in case of 2 digit MNC) or 3 digits --
        -- from MNC (in case of 3 digit MNC). -- ,
    lac OCTET STRING (SIZE (2))
        -- 0000 and FFFE not allowed -- ,
    sac OCTET STRING (SIZE (2))
}

-- **TODO** The IE type for these parameters is not known as yet
Service-Areas-List ::= SEQUENCE (SIZE (1..maxService-Areas-ListmaxnoofSAI)) OF Service-Area-
Identifier

-- T

TypeOfError ::= ENUMERATED {
    not-understood,
    missing,
    ...
}

-- U

-- V

-- W

-- X

-- Y

END

```

### 9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

SABP-CommonDataTypes {
    itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
    umts-Access (20) modules (3) sabp (3) version1 (1) sabp-CommonDataTypes (3) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality ::= ENUMERATED { reject, ignore, notify }

Presence ::= ENUMERATED { optional, conditional, mandatory }

ProcedureCode ::= INTEGER (0..255)

ProtocolExtensionID ::= INTEGER (0..65535)

ProtocolIE-ID ::= INTEGER (0..65535)

```

```
TriggeringMessage ::= ENUMERATED {initiating-message, successful-outcome, unsuccessful-
outcome, outcome}
```

```
END
```

## 9.3.6 Constant Definitions

```
-- *****
--
-- Constant definitions
--
-- *****

SABP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) sabp (3) version1 (1) sabp-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Elementary Procedures
--
-- *****

id-Write-Replace          INTEGER ::= 0
id-Kill                   INTEGER ::= 1
id-Load-Status-Enquiry   INTEGER ::= 2
id-Message-Status-Query  INTEGER ::= 3
id-Restart-Indication     INTEGER ::= 4
id-Reset                  INTEGER ::= 5
id-Failure-Indication    INTEGER ::= 6
id-Error-Indication      INTEGER ::= 7

-- *****
--
-- IEs
--
-- *****

id-Broadcast-Message-Content  INTEGER ::= 0
id-Category                   INTEGER ::= 1
id-Cause                      INTEGER ::= 2
id-Criticality-Diagnostics    INTEGER ::= 3
id-Data-Coding-Scheme        INTEGER ::= 4
id-Failure-List               INTEGER ::= 5
id-Message-Identifier         INTEGER ::= 6
id-New-Serial-Number          INTEGER ::= 7
id-Number-of-Broadcasts-Completed-List  INTEGER ::= 8
id-Number-of-Broadcasts-Requested  INTEGER ::= 9
id-Old-Serial-Number          INTEGER ::= 10
id-Radio-Resource-Loading-List  INTEGER ::= 11
id-Recovery-Indication        INTEGER ::= 12
id-Repetition-Period          INTEGER ::= 13
id-Serial-Number              INTEGER ::= 14
id-Service-Areas-List         INTEGER ::= 15
id-MessageStructure           INTEGER ::= 16
id-TypeOfError                INTEGER ::= 17

-- *****
--
-- Extension constants
--
-- *****

-- *****
--
-- Lists
--
-- *****

maxRadio-Resource-Loading-List  INTEGER ::= 65535
maxFailure-List                 INTEGER ::= 65535
```

```
| maxNumber-of-Broadcasts-Completed-List INTEGER ::= 65535  
maxNrOfErrors INTEGER ::= 256  
| maxService-Areas-ListmaxnoofSAI INTEGER ::= 65535  
  
maxProtocolExtensions INTEGER ::= 65535  
maxProtocolIEs INTEGER ::= 65535  
maxNrOfLevels INTEGER ::= 256  
  
END
```



## CHANGE REQUEST

⌘ **25.419 CR 83** ⌘ rev **1** ⌘ Current version: **3.7.0** ⌘

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

<b>Title:</b>	⌘ Correction of the wording of maximum value		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	<p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (correction)  <b>A</b> (corresponds to a correction in an earlier release)  <b>B</b> (addition of feature),  <b>C</b> (functional modification of feature)  <b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)  R96 (Release 1996)  R97 (Release 1997)  R98 (Release 1998)  R99 (Release 1999)  REL-4 (Release 4)  REL-5 (Release 5)</p>

<b>Reason for change:</b>	⌘ The current 25.419 has many unclarity which shall have correction in order to make the specification unambiguity. In tabular the range is 1 to <maxnoofSAI> for <i>Service Areas List</i> IE (Subclause 9.2.6), <i>Number of Broadcasts Completed List</i> IE (subclause 9.2.10), <i>Failure List</i> IE (subclause 9.2.12) and <i>Radio Resource Loading List</i> IE (Subclause 9.2.13). However, in ASN.1 those all have different wording.
<b>Summary of change:</b>	⌘ The wording of the maximum value of the range in ASN.1 are change as shown below:  1. <i>Service Areas List</i> IE is change from maxService-Areas-List to maxnoofSAI 2. <i>Number of Broadcasts Completed List</i> IE is change from maxNumber-of-Broadcasts-Completed-List to maxnoofSAI 3. <i>Failure List</i> IE is change from maxFailure-List to maxnoofSAI 4. <i>Radio Resource Loading List</i> IE is change from maxRadio-Resource-Loading-Lis to maxnoofSAI
<b>Consequences if not approved:</b>	⌘ If this is not approved, the different wording may lead to misunderstanding <del>when</del> during implementation.  Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  This CR has [no isolated impact] with the previous version of the specification (same release) because <u>it changes only the wording of maximum value and does not change its value in ASN.1. therefore the meaning of the maximum value in ASN.1</u>  Only if it has impact:  This CR has an impact under [functional] point of view.

The impact [can] be considered isolated because the change affects [one] [system function] namely the meaning of maximum value in ASN.1.

**Clauses affected:** ⌘ 9.3.4, 9.3.5

**Other specs affected:** ⌘  Other core specifications ⌘ 25.419 CR84 Rel4  
 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](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.

## 9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

SABP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) sabp (3) version1 (1) sabp-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
maxRadio-Resource-Loading-List,
maxFailure-List,
maxNumber-of-Broadcasts-Completed-List,
maxNrOfErrors,
maxService-Areas-ListmaxnoofSAI,
maxNrOfLevels,

id-MessageStructure,
id-TypeOfError

FROM SABP-Constants

Criticality,
ProcedureCode,
TriggeringMessage,
ProtocolIE-ID
FROM SABP-CommonDataTypes

ProtocolExtensionContainer{ },

SABP-PROTOCOL-EXTENSION
FROM SABP-Containers;

-- A

Available-Bandwidth ::= INTEGER (0..20480)
-- bits/sec

-- B

Broadcast-Message-Content ::= OCTET STRING (SIZE (1..1246))
-- This IE is sent from the CN to the RNC containing user information i.e.
-- the message.

-- C

Category ::= ENUMERATED {
high-priority,
background-priority,
normal-priority,
default-priority,
...
}

Cause ::= INTEGER {
parameter-not-recognised (0),
parameter-value-invalid (1),
valid-CN-message-not-identified (2),
service-area-identity-not-valid (3),
unrecognised-message (4),
missing-mandatory-element (5),
rNC-capacity-exceeded (6),
rNC-memory-exceeded (7),
service-area-broadcast-not-supported (8),
service-area-broadcast-not-operational (9),
message-reference-already-used (10),

```

```

    unspecified-error (11),
    transfer-syntax-error (12),
    semantic-error (13),
    message-not-compatible-with-receiver-state (14),
    abstract-syntax-error-reject (15),
    abstract-syntax-error-ignore-and-notify (16),
    abstract-syntax-error-falsely-constructed-message (17)
} (0..255)

Criticality-Diagnostics ::= SEQUENCE {
    procedureCode ProcedureCode OPTIONAL,
    triggeringMessage TriggeringMessage OPTIONAL,
    procedureCriticality Criticality OPTIONAL,
    iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        iECriticality Criticality,
        iE-ID ProtocolIE-ID,
        repetitionNumber RepetitionNumber0 OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }

CriticalityDiagnostics-IE-List-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    { ID id-MessageStructure CRITICALITY ignore EXTENSION MessageStructure PRESENCE
optional }|
    { ID id-TypeError CRITICALITY ignore EXTENSION TypeError PRESENCE
mandatory },
    ...
}

MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
    SEQUENCE {
        iE-ID ProtocolIE-ID,
        repetitionNumber RepetitionNumber1 OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
        ...
    }

MessageStructure-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

-- D

Data-Coding-Scheme ::= INTEGER (0..255)

-- E

-- F

Failure-List ::= SEQUENCE (SIZE (1..maxFailure-ListmaxnoofSAI)) OF Failure-List-Item

Failure-List-Item ::= SEQUENCE {
    service-area-identifier Service-Area-Identifier,
    cause Cause,
    iE-Extensions ProtocolExtensionContainer { {FailureListItemIE-ExtIEs} } OPTIONAL,
    ...
}

FailureListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
    ...
}

-- G

```

```

-- H
-- I
-- J
-- K
-- L
-- M
Message-Identifier ::= OCTET STRING (SIZE (2))
-- N
New-Serial-Number          ::= Serial-Number

Number-of-Broadcasts-Completed-List ::= SEQUENCE (SIZE (1..maxnoofSAImaxNumber-of-Broadcasts-Completed-List)) OF
    Number-of-Broadcasts-Completed-List-Item

Number-of-Broadcasts-Completed-List-Item ::= SEQUENCE {
    service-area-identifier      Service-Area-Identifier,
    number-of-broadcasts-completed      INTEGER (0..65535),
    number-of-broadcasts-completed-info Number-Of-Broadcasts-Completed-Info      OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {NoOfBroadcastsCompletedListItemIE-ExtIEs} }
OPTIONAL,
    ...
}

NoOfBroadcastsCompletedListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
...
}

Number-Of-Broadcasts-Completed-Info      ::= ENUMERATED {
    overflow,
    unknown,
    ...
}

Number-of-Broadcasts-Requested          ::= INTEGER {
    broadcast-indefinitely (0)
} (0..65535)
-- O
Old-Serial-Number          ::= Serial-Number
-- P
-- Q
-- R
Radio-Resource-Loading-List ::= SEQUENCE (SIZE (1..maxRadio-Resource-Loading-ListmaxnoofSAI)) OF
    Radio-Resource-Loading-List-Item

Radio-Resource-Loading-List-Item ::= SEQUENCE {
    service-area-identifier      Service-Area-Identifier,
    available-bandwidth          Available-Bandwidth,
    iE-Extensions                ProtocolExtensionContainer { {RadioResourceLoadingListItemIE-ExtIEs} }
OPTIONAL,
    ...
}

RadioResourceLoadingListItemIE-ExtIEs SABP-PROTOCOL-EXTENSION ::= {
...
}

Recovery-Indication ::= ENUMERATED {
    data-lost,
    data-available
}

RepetitionNumber0          ::= INTEGER(0..255)
RepetitionNumber1          ::= INTEGER(1..256)

```

```

Repetition-Period ::= INTEGER (1..4096)
-- Each unit represents a repetition of one second to a maximum of
-- once per 4096 seconds (~1 hour).

-- S

Serial-Number ::= INTEGER (0..65535)

Service-Area-Identifier ::= SEQUENCE {
    PLMNidentity OCTET STRING (SIZE (3))
        -- Digits 0 to 9, two digits per octet. --
        -- Each octet encoded 0000 to 1001. --
        -- 1111 used as filler --
        -- Bit 4 to 1 of octet n encoding digit 2n-1. --
        -- Bit 8 to 5 of octet n encoding digit 2n. --
        -- The PLMN identity consists of 3 digits from MCC --
        -- followed by either a filler plus 2 digits --
        -- from MNC (in case of 2 digit MNC) or 3 digits --
        -- from MNC (in case of 3 digit MNC). -- ,
    lac OCTET STRING (SIZE (2))
        -- 0000 and FFFE not allowed -- ,
    sac OCTET STRING (SIZE (2))
}

-- **TODO** The IE type for these parameters is not known as yet
Service-Areas-List ::= SEQUENCE (SIZE (1..maxService-Areas-ListmaxnoofSAI)) OF Service-Area-
Identifier

-- T

TypeOfError ::= ENUMERATED {
    not-understood,
    missing,
    ...
}

-- U

-- V

-- W

-- X

-- Y

END

```

### 9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

SABP-CommonDataTypes {
    itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
    umts-Access (20) modules (3) sabp (3) version1 (1) sabp-CommonDataTypes (3) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality ::= ENUMERATED { reject, ignore, notify }

Presence ::= ENUMERATED { optional, conditional, mandatory }

ProcedureCode ::= INTEGER (0..255)

ProtocolExtensionID ::= INTEGER (0..65535)

ProtocolIE-ID ::= INTEGER (0..65535)

```

```
TriggeringMessage ::= ENUMERATED {initiating-message, successful-outcome, unsuccessful-
outcome, outcome}
```

```
END
```

## 9.3.6 Constant Definitions

```
-- *****
--
-- Constant definitions
--
-- *****

SABP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) sabp (3) version1 (1) sabp-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Elementary Procedures
--
-- *****

id-Write-Replace          INTEGER ::= 0
id-Kill                   INTEGER ::= 1
id-Load-Status-Enquiry   INTEGER ::= 2
id-Message-Status-Query  INTEGER ::= 3
id-Restart-Indication     INTEGER ::= 4
id-Reset                  INTEGER ::= 5
id-Failure-Indication    INTEGER ::= 6
id-Error-Indication      INTEGER ::= 7

-- *****
--
-- IEs
--
-- *****

id-Broadcast-Message-Content  INTEGER ::= 0
id-Category                   INTEGER ::= 1
id-Cause                      INTEGER ::= 2
id-Criticality-Diagnostics    INTEGER ::= 3
id-Data-Coding-Scheme         INTEGER ::= 4
id-Failure-List               INTEGER ::= 5
id-Message-Identifier         INTEGER ::= 6
id-New-Serial-Number          INTEGER ::= 7
id-Number-of-Broadcasts-Completed-List  INTEGER ::= 8
id-Number-of-Broadcasts-Requested  INTEGER ::= 9
id-Old-Serial-Number          INTEGER ::= 10
id-Radio-Resource-Loading-List  INTEGER ::= 11
id-Recovery-Indication        INTEGER ::= 12
id-Repetition-Period          INTEGER ::= 13
id-Serial-Number              INTEGER ::= 14
id-Service-Areas-List         INTEGER ::= 15
id-MessageStructure           INTEGER ::= 16
id-TypeOfError                INTEGER ::= 17

-- *****
--
-- Extension constants
--
-- *****

-- *****
--
-- Lists
--
-- *****

maxRadio-Resource-Loading-List  INTEGER ::= 65535
maxFailure-List                INTEGER ::= 65535
```

```
| maxNumber-of-Broadcasts-Completed-List INTEGER ::= 65535  
maxNrOfErrors INTEGER ::= 256  
| maxService-Areas-ListmaxnoofSAI INTEGER ::= 65535  
  
maxProtocolExtensions INTEGER ::= 65535  
maxProtocolIEs INTEGER ::= 65535  
maxNrOfLevels INTEGER ::= 256  
  
END
```



## CHANGE REQUEST

⌘ **25.419 CR 82** ⌘ rev **-** ⌘ Current version: **4.3.0** ⌘

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

<b>Title:</b>	⌘ Correction of the value "Default" in category IE		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ Feb-2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel4
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)	

**Reason for change:** ⌘ The current 25.419 has many unclarity which shall have correction in order to make the specification unambiguity.  
The use of the values of *Category IE* is specified in Write Replace procedure text (subclause 8.2.2). However, the usage of the its value "default" in subclause 9.2.7 is unclear.

It has been described in Write Replace procedure that when the *Category IE* is not present, the RNC shall perform the broadcast as the same category as "Normal", therefore it is thought that the value "Default" is useless in any case

**Summary of change:** ⌘ The "default" in Category IE is made clear that it shall not be used

**Consequences if not approved:** ⌘ If this is not approved, the 25.419 is not clear and therefore it might lead to misunderstanding when implementation.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):

This CR has [ isolated impact] with the previous version of the specification (same release) because current specification is not clear enough to have implementation.

ONLY if there is impact:

This CR has an impact under [protocol] point of view.  
The impact [can] be considered isolated because the change affects [one] [system function] namely the Category of the broadcast message.

**Clauses affected:** ⌘ 9.2.7

**Other specs affected:** ⌘  Other core specifications ⌘ 25.419 CR81 R99  
 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](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.

## 9.2.5 New Serial Number

*New Serial Number* IE enables identification of a new message for broadcast to be identified, and is altered every time the message is changes. The format of this IE is defined in subclause 9.2.3.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
New Serial Number	O		9.2.3	

## 9.2.6 Service Areas List

The *Service Areas List* IE identifies a sequence of one or more Service Areas to which the message(s) apply. The *Service Areas List* IE must include at least one Service Area.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
<b>Service Areas List</b>		1 to <maxno of SAI>		
>Service Area Identifier	M		9.2.11	

Range bound	Explanation
MaxnoofSAI	Maximum no. of SAI in Service Areas List. Value is 65535

## 9.2.7 Category

*Category* IE is sent from the CN to the RNC, and is used to indicate the priority of the message.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Category	O		Enumerated (High Priority, Background, Normal, Default)	This IE contains the broadcast priority of the message. <u>The value "Default" shall not be used.</u>

## 9.2.8 Repetition Period

*Repetition Period* IE is sent from the CN to the RNC and indicates the periodicity of message broadcasts.

IE/GROUP NAME	PRESENCE	RANGE	IE Type and	Semantics Description
Repetition Period	M		INTEGER (1..4096)	Range is 1 to 4096 where each unit will represent a repetition of one second to a maximum of once per ~1 hour