# TSG-RAN Meeting #13
# Beijing, China, 18 - 21, September, 2001

*TSGRP#13(01) 0582*

**Title:** **Agreed CRs to TS 25.419**

**Source:** **TSG-RAN WG3**

**Agenda item:** **8.3.3/8.3.4/9.4.3**

| RP Tdoc | R3 Tdoc | Spec | CR_Num | Rev | Release | CR_Subject | Cat | Cur_Ver | New_Ver | Workitem |
|---|---|---|---|---|---|---|---|---|---|---|
| RP-010582 | R3-012508 | 25.419 | 051 | 1 | Rel-4 | SABP criticality | A | 4.1.0 | 4.2.0 | TEI |
| RP-010582 | R3-012505 | 25.419 | 052 | 1 | Rel-4 | Correction to the Error handling of the ERROR INDICATION message | A | 3.5.0 | 3.6.0 | TEI |
| RP-010582 | R3-012507 | 25.419 | 053 | 1 | R99 | SABP criticality | F | 3.5.0 | 3.6.0 | TEI |
| RP-010582 | R3-012504 | 25.419 | 054 | 1 | R99 | Correction to the Error handling of the ERROR INDICATION message | F | 3.5.0 | 3.6.0 | TEI |
| RP-010582 | R3-012517 | 25.419 | 055 | 1 | R99 | Error handling of the Erroneously Present Conditional Ies | F | 3.5.0 | 3.6.0 | TEI |
| RP-010582 | R3-012518 | 25.419 | 056 | 1 | Rel-4 | Error handling of the Erroneously Present Conditional Ies | A | 4.1.0 | 4.2.0 | TEI |
| RP-010582 | R3-012649 | 25.419 | 057 | 1 | R99 | Clarification of chapter 10 | F | 3.5.0 | 3.6.0 | TEI |
| RP-010582 | R3-012650 | 25.419 | 058 | 1 | Rel-4 | Clarification of chapter 10 | A | 4.1.0 | 4.2.0 | TEI |
| RP-010582 | R3-012633 | 25.419 | 059 | 1 | R99 | SABP General Corrections | F | 3.5.0 | 3.6.0 | TEI |
| RP-010582 | R3-012634 | 25.419 | 060 | 1 | Rel-4 | SABP General Corrections | A | 4.1.0 | 4.2.0 | TEI |
| RP-010582 | R3-012696 | 25.419 | 061 | 2 | R99 | Clarification of the usage of the Number of Broadcasts Requested IE | F | 3.5.0 | 3.6.0 | TEI |
| RP-010582 | R3-012697 | 25.419 | 062 | 2 | Rel-4 | Clarification of the usage of the Number of Broadcasts Requested IE | A | 4.1.0 | 4.2.0 | TEI |
| RP-010582 | R3-012480 | 25.419 | 063 | | R99 | Clarification of the usage of the SABP Reset Procedure | F | 3.5.0 | 3.6.0 | TEI |
| RP-010582 | R3-012637 | 25.419 | 064 | 1 | Rel-4 | Clarification of the usage of the SABP Reset Procedure | A | 4.1.0 | 4.2.0 | TEI |
| RP-010582 | R3-012698 | 25.419 | 065 | 2 | R99 | Clarification of the usage of the Service Areas List IE within the Reset Procedure | F | 3.5.0 | 3.6.0 | TEI |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| RP-010582 | R3-012699 | 25.419 | 066 | 2 | Rel-4 | Clarification of the usage of the Service Areas List IE within the Reset Procedure | A | 4.1.0 | 4.2.0 | TEI |

**3GPP TSG-RAN WG3 Meeting #23**
**Helsinki, Finland, 27th – 31th August 2001**

***Tdoc R3-012508***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **051** ⌘ rev **1** ⌘ Current version: **4.1.0** ⌘

*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 ☒

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Sabp criticality |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 15-08-2001 |
| ***Category:*** | ⌘ | **A** |
| ***Release:*** | ⌘ | REL-4 |

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

*Use one of the following releases:*

| | |
|---|---|
| *2* | *(GSM Phase 2)* |
| *R96* | *(Release 1996)* |
| *R97* | *(Release 1997)* |
| *R98* | *(Release 1998)* |
| *R99* | *(Release 1999)* |
| *REL-4* | *(Release 4)* |
| *REL-5* | *(Release 5)* |

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | The behaviour of a receiving node needs to be defined in two cases:<br>- it cannot decode the type of message,<br>- it cannot decode at least the criticality of a not comprehended/missing IE |
| ***Summary of change:*** | ⌘ | Error Indication procedure is used in these two cases. |
| ***Consequences if not approved:*** | ⌘ | Some nodes could behave as ignoring the procedure.<br>This CR is backwards compatible. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 10.3.2,10.3.4 | | |
| ***Other specs affected:*** | ⌘ | ☒ Other core specifications<br>☐ Test specifications<br>☐ O&M Specifications | ⌘ | 25.419 CR053 R99 |
| ***Other comments:*** | ⌘ | | | |

### 10.3.2 Criticality Information

In the SABP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in subclause 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE;
- Ignore IE and Notify Sender;
- Ignore IE.

The following rules restrict when a receiving entity may consider an IE, an IE group or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by the receiving entity (some may still remain unsupported).

   Note that this restriction is applicable to a sending entity for constructing messages.

2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

When the criticality information cannot even be decoded in a not comprehended IE or IE group, the Error Indication procedure shall be initiated with an appropriate cause value.

### 10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, RANAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class RANAP-PROTOCOL-IES, RANAP-PROTOCOL-IES-PAIR, RANAP-PROTOCOL-EXTENSION or RANAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

### 10.3.4 Not comprehended IE/IE group

#### 10.3.4.1 Procedure Code

The receiving node shall treat the different types of received criticality information of the *Procedure Code* according to the following:

Reject IE:

- If a message is received with a *Procedure Code* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

Ignore IE and Notify Sender:

- If a message is received with a *Procedure Code* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

Ignore IE:

- If a message is received with a *Procedure Code* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure Code* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

#### 10.3.4.1A Type of Message

When the receiving node cannot decode the *Type of Message* IE, the Error Indication procedure shall be initiated with an appropriate cause value.

### 10.3.4.2 IEs other than the Procedure Code and Type of Message

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure Code* according to the following:

**Reject IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- If a *response* message is received containing one or more IEs marked with "*Reject IE*" which the receiving node does no comprehend, the receiving node shall initiate local error handling.

**Ignore IE and Notify Sender:**

- If a message *initiating* a procedure is received containing one or more Ies/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and report in the response message of the procedure that one or more IEs/IE groups have been ignored. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IE/IE groups and initiate the Error Indication procedure.

**Ignore IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using only the understood IEs/IE groups.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure Code* IE, the *Triggering Message* IE, *Procedure Criticality* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

**3GPP TSG-RAN3 #23 Meeting**
**Helsinki, Finland, August 27th – 31st 2001**

***Tdoc R3-012505***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **052** ⌘ rev **1** ⌘ Current version: **4.1.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Correction to the Error handling of the ERROR INDICATION message |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | August 2001 |
| ***Category:*** | ⌘ | **A** |
| ***Release:*** | ⌘ | REL-4 |

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

*Use one of the following releases:*

| | |
|---|---|
| *2* | *(GSM Phase 2)* |
| *R96* | *(Release 1996)* |
| *R97* | *(Release 1997)* |
| *R98* | *(Release 1998)* |
| *R99* | *(Release 1999)* |
| *REL-4* | *(Release 4)* |
| *REL-5* | *(Release 5)* |

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | In RAN3 #22, it was agreed to introduce a specific Error Handling on the ERROR INDICATION so as to avoid ping-ponging of ERROR INDICATION messages that is found undesirable. This CR corrects this behaviour. |
| ***Summary of change:*** | ⌘ | R1: Addition of a new Exception sub-clause.<br><br>R0: It is specified as an exception that the Error Handling for the ERROR INDICATION message for Abstract Syntax Errors and Logical Errors shall always be Local Error Handling.<br><br>This CR is not backward compatible with the previous version of the specification for the handling of errors in ERROR INDICATION message.<br>This CR has limited impact on the Error Handling on the ERROR INDICATION message. |
| ***Consequences if not approved:*** | ⌘ | Exchanges of ERROR INDICATION messages may occur between two network entities leading to degraded performances. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 10.x | | |
| ***Other specs affected:*** | ⌘ | **X** Other core specifications | ⌘ | TS 25.419 v3.5.0 CR054<br>TS 25.433 v3.6.0 CR495<br>TS 25.433 v4.1.0 CR485<br>TS 25.423 v3.6.0 CR424<br>TS 25.423 v4.1.0 CR425<br>TS 25.413 v3.6.0 CR325<br>TS 25.413 v4.1.0 CR324<br>TS 25.453 v5.0.0 CR002 |
| | | ☐ Test specifications | | |

| | | |
|---|---|---|
| | ☐ O&M Specifications | |
| ***Other comments:*** | ⌘ | |

**How to create CRs using this form:**
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

# 10.x Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other sub-sections of chapter 10.

- If any type of error (Transfer Syntax Error, Abstract Syntax Error or Logical Error) is detected in the ERROR INDICATION message, it shall not trigger the Error Indication procedure in the receiving Node but local error handling.

**3GPP TSG-RAN WG3 Meeting #23**
**Helsinki, Finland, 27th – 31th August 2001**

***Tdoc R3-012507***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **053** ⌘ rev **1** ⌘ Current version: **3.5.0** ⌘

*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 ☒

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Sabp criticality |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 15-08-2001 |
| ***Category:*** | ⌘ | **F** |
| ***Release:*** | ⌘ | R99 |

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

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

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | The behaviour of a receiving node needs to be defined in two cases:<br>- it cannot decode the type of message,<br>- it cannot decode at least the criticality of a not comprehended/missing IE |
| ***Summary of change:*** | ⌘ | Error Indication procedure is used in these two cases. |
| ***Consequences if not approved:*** | ⌘ | Some nodes could behave as ignoring the procedure.<br>This CR is backwards compatible. |

| | | |
|---|---|---|
| ***Clauses affected:*** | ⌘ | 10.3.2,10.3.4 |
| ***Other specs affected:*** | ⌘ | ☒ Other core specifications ⌘ 25.419 CR051 REL-4<br>☐ Test specifications<br>☐ O&M Specifications |
| ***Other comments:*** | ⌘ | |

## 10.3.2 Criticality Information

In the SABP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in subclause 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE;
- Ignore IE and Notify Sender;
- Ignore IE.

The following rules restrict when a receiving entity may consider an IE, an IE group or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by the receiving entity (some may still remain unsupported).

   Note that this restriction is applicable to a sending entity for constructing messages.

2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

When the criticality information cannot even be decoded in a not comprehended IE or IE group, the Error Indication procedure shall be initiated with an appropriate cause value.

## 10.3.4 Not comprehended IE/IE group

### 10.3.4.1 Procedure Code

The receiving node shall treat the different types of received criticality information of the *Procedure Code* according to the following:

Reject IE:

- If a message is received with a *Procedure Code* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

Ignore IE and Notify Sender:

- If a message is received with a *Procedure Code* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

Ignore IE:

- If a message is received with a *Procedure Code* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure Code* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

#### 10.3.4.1A Type of Message

When the receiving node cannot decode the *Type of Message* IE, the Error Indication procedure shall be initiated with an appropriate cause value.

### 10.3.4.2 IEs other than the Procedure Code and Type of Message

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure Code* according to the following:

**Reject IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- If a *response* message is received containing one or more IEs marked with "*Reject IE*" which the receiving node does no comprehend, the receiving node shall initiate local error handling.

**Ignore IE and Notify Sender:**

- If a message *initiating* a procedure is received containing one or more Ies/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and report in the response message of the procedure that one or more IEs/IE groups have been ignored. In case the information received in the

initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IE/IE groups and initiate the Error Indication procedure.

**Ignore IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using only the understood IEs/IE groups.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure Code* IE, the *Triggering Message* IE, *Procedure Criticality* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

**3GPP TSG-RAN3 #23 Meeting**
**Helsinki, Finland, August 27th – 31st 2001**

***Tdoc R3-012504***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **054** ⌘ rev **1** ⌘ Current version: **3.5.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Correction to the Error handling of the ERROR INDICATION message |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | August 2001 |
| ***Category:*** | ⌘ | **F** |
| ***Release:*** | ⌘ | R99 |

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

*Use one of the following releases:*
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*R97* *(Release 1997)*
*R98* *(Release 1998)*
*R99* *(Release 1999)*
*REL-4* *(Release 4)*
*REL-5* *(Release 5)*

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | In RAN3 #22, it was agreed to introduce a specific Error Handling on the ERROR INDICATION so as to avoid ping-ponging of ERROR INDICATION messages. that is found undesirable. This CR corrects this behaviour. |
| ***Summary of change:*** | ⌘ | R1: Addition of a new Exception sub-clause.<br><br>R0: It is specified as an exception that the Error Handling for the ERROR INDICATION message for Abstract Syntax Errors and Logical Errors shall always be Local Error Handling.<br><br>This CR is not backward compatible with the previous version of the specification for the handling of errors in ERROR INDICATION message.<br>This CR has limited impact on the Error Handling on the ERROR INDICATION message. |
| ***Consequences if not approved:*** | ⌘ | Exchanges of ERROR INDICATION messages may occur between two network entities leading to degraded performances. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 10.x | | |
| ***Other specs affected:*** | ⌘ | **X** Other core specifications | ⌘ | TS 25.419 v4.1.0 CR052<br>TS 25.433 v3.6.0 CR495<br>TS 25.433 v4.1.0 CR485<br>TS 25.423 v3.6.0 CR424<br>TS 25.423 v4.1.0 CR425<br>TS 25.413 v3.6.0 CR325<br>TS 25.413 v4.1.0 CR324<br>TS 25.453 v5.0.0 CR002 |
| | | ☐ Test specifications | | |

| | | |
|---|---|---|
| | ☐ O&M Specifications | |
| ***Other comments:*** | ⌘ | |

**How to create CRs using this form:**
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

# 10.x Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other sub-sections of chapter 10.

- If any type of error (Transfer Syntax Error, Abstract Syntax Error or Logical Error) is detected in the ERROR INDICATION message, it shall not trigger the Error Indication procedure in the receiving Node but local error handling.

**3GPP TSG-RAN3 #23 Meeting**
**Helsinki, Finland, August 27th – 31st 2001**

***Tdoc R3-012517***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **055** ⌘ rev **1** ⌘ Current version: **3.5.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Error handling of the Erroneously Present Conditional IEs |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | August 2001 |
| ***Category:*** | ⌘ | **F** |
| ***Release:*** | ⌘ | R99 |

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

*Use one of the following releases:*

| | |
|---|---|
| *2* | *(GSM Phase 2)* |
| *R96* | *(Release 1996)* |
| *R97* | *(Release 1997)* |
| *R98* | *(Release 1998)* |
| *R99* | *(Release 1999)* |
| *REL-4* | *(Release 4)* |
| *REL-5* | *(Release 5)* |

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | In RAN3 #22, it was agreed to introduce an Error Handling for the case of Erroneously Present Conditional IEs (i.e. Conditional IEs that are present whent the condition is not met) as this error case is not covered by the specification for the time being. |
| ***Summary of change:*** | ⌘ | R1: Editorial corrections.<br><br>R0: The newly identified error case is added and the handling of this new error case is similar to the error handling for "IEs or IE groups received in wrong order or with too many occurrences" as this is considered a severe error (furthermore, the Cause used is appropriate: 'Message Falsely Constructed')<br><br>This CR is backward compatible with the intention of the specification (as it can be considered as a sub-case of the "IEs with too many occurrences" error case). This CR does not have limited impact as it concerns the error handling for all the procedures that have a message containing a Conditional IE. |
| ***Consequences if not approved:*** | ⌘ | The error handling corresponding to this newly identified error case will remain unspecified. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 10.3.1, 10.3.3, 10.3.6 | | |
| ***Other specs*** | ⌘ | **X** Other core specifications | ⌘ | TS 25.419 v4.1.0 CR056<br>TS 25.433 v3.6.0 CR503<br>TS 25.433 v4.1.0 CR504<br>TS 25.423 v3.6.0 CR443<br>TS 25.423 v4.1.0 CR444<br>TS 25.413 v3.6.0 CR338<br>TS 25.413 v4.1.0 CR339 |

| | | |
|---|---|---|
| ***affected:*** | ☐ | TS 25.453 v5.0.0 CR005 |
| | ☐ Test specifications | |
| | ☐ O&M Specifications | |
| ***Other comments:*** ⌘ | | |

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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.

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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

# 10.3 Abstract Syntax Error

## 10.3.1 General

An Abstract Syntax Error occurs when the receiving functional SABP entity:

1. receives IEs or IE groups that cannot be understood (unknown IE id);
2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);
3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message.
4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group;
5. receives IEs or IE groups but according to the conditional presence of the concerning object and the specified condition, the IEs or IE groups should not have been present in the received message.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) and Case 5 (erroneously present conditional IEs or IE groups) results in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of cases 4 and 5 is specified in subclause 10.3.6.

## 10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, ~~RANAP~~ SABP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class ~~RANAP~~SABP-PROTOCOL-IES, ~~RANAP~~SABP-PROTOCOL-IES-PAIR, ~~RANAP~~SABP-PROTOCOL-EXTENSION or ~~RANAP~~SABP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

### 10.3.6 IEs or IE groups received in wrong order or with too many occurrences or erroneously present

If a message with IEs or IE groups in wrong order or with too many occurrences is received or if IEs or IE groups with a conditional presence are present when the condition is not met (i.e. erroneously present), the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".

- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

**3GPP TSG-RAN3 #23 Meeting**
**Helsinki, Finland, August 27th – 31st 2001**

***Tdoc R3-012518***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **056** ⌘ rev **1** ⌘ Current version: **4.1.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Error handling of the Erroneously Present Conditional IEs |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | August 2001 |
| ***Category:*** | ⌘ | **A** |
| ***Release:*** | ⌘ | REL-4 |

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

*Use one of the following releases:*

| | |
|---|---|
| *2* | *(GSM Phase 2)* |
| *R96* | *(Release 1996)* |
| *R97* | *(Release 1997)* |
| *R98* | *(Release 1998)* |
| *R99* | *(Release 1999)* |
| *REL-4* | *(Release 4)* |
| *REL-5* | *(Release 5)* |

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | In RAN3 #22, it was agreed to introduce an Error Handling for the case of Erroneously Present Conditional IEs (i.e. Conditional IEs that are present whent the condition is not met) as this error case is not covered by the specification for the time being. |
| ***Summary of change:*** | ⌘ | R1: Editorial corrections.<br><br>R0: The newly identified error case is added and the handling of this new error case is similar to the error handling for "IEs or IE groups received in wrong order or with too many occurrences" as this is considered a severe error (furthermore, the Cause used is appropriate: 'Message Falsely Constructed')<br><br>This CR is backward compatible with the intention of the specification (as it can be considered as a sub-case of the "IEs with too many occurrences" error case). This CR does not have limited impact as it concerns the error handling for all the procedures that have a message containing a Conditional IE. |
| ***Consequences if not approved:*** | ⌘ | The error handling corresponding to this newly identified error case will remain unspecified. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 10.3.1, 10.3.3, 10.3.6 | | |
| ***Other specs*** | ⌘ | **X** Other core specifications | ⌘ | TS 25.419 v3.6.0 CR055<br>TS 25.433 v3.6.0 CR503<br>TS 25.433 v4.1.0 CR504<br>TS 25.423 v3.6.0 CR443<br>TS 25.423 v4.1.0 CR444<br>TS 25.413 v3.5.0 CR338<br>TS 25.413 v4.1.0 CR339 |

| | | |
|---|---|---|
| ***affected:*** | ☐ | TS 25.453 v5.0.0 CR005 |
| | ☐ Test specifications | |
| | ☐ O&M Specifications | |
| ***Other comments:*** ⌘ | | |

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

# 10.3 Abstract Syntax Error

## 10.3.1 General

An Abstract Syntax Error occurs when the receiving functional SABP entity:

1. receives IEs or IE groups that cannot be understood (unknown IE id);
2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);
3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message.
4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group;
5. receives IEs or IE groups but according to the conditional presence of the concerning object and the specified condition, the IEs or IE groups should not have been present in the received message.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) and Case 5 (erroneously present conditional IEs or IE groups) results in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of cases 4 and 5 is specified in subclause 10.3.6.

## 10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, ~~RANAP~~ SABP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class ~~RANAP~~SABP-PROTOCOL-IES, ~~RANAP~~SABP-PROTOCOL-IES-PAIR, ~~RANAP~~SABP-PROTOCOL-EXTENSION or ~~RANAP~~SABP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

### 10.3.6 IEs or IE groups received in wrong order or with too many occurrences or erroneously present

If a message with IEs or IE groups in wrong order or with too many occurrences is received or if IEs or IE groups with a conditional presence are present when the condition is not met (i.e. erroneously present), the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".

- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

**3GPP TSG-RAN3 Meeting #23**
**Helsinki, Finland, 27th – 31st August, 2001**

***Tdoc R3-012649***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **057** ⌘ rev **1** ⌘ Current version: **3.5.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Clarification of chapter 10 |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 2001-08-29 |
| ***Category:*** | ⌘ | **F** |
| ***Release:*** | ⌘ | R99 |

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

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

***Reason for change:*** ⌘ Several unclarities w.r.t. error handling were detected.

***Summary of change:*** ⌘ This CR makes the following updates:

- 10.3.4 - 10.4: ~~Redundant information regarding "ignore the content of the not comprehended IEs/IEgroups" and "ignore that those IEs/IEgroups are missing" has been deleted, and s~~S~~everal clarifications have been added.
- 10.3.4.2, 10.3.5: The inclusion of IEs is aligned with annex A.
- 10.5 (new): A new sentence is added in an Exception~~general~~ section concerning the case when the information to indentify the initiator of the procedure is not available in case the peer node has to return a message in reponse (e.g. corrupted RNC-id).

***Consequences if not approved:*** ⌘ This CR is backward compatible with the intended behaviour of the specifications.

***Clauses affected:*** ⌘ 10.3.4, 10.3.5, 10.3.6, 10.4, 10.5(new)

| | | | | |
|---|---|---|---|---|
| ***Other specs affected:*** | ⌘ | **X** Other core specifications | ⌘ | 25.413 v3.6.0 CR358<br>25.413 v4.1.0 CR359<br>25.419 v4.1.0 CR058<br>25.423 v3.6.0 CR469<br>25.423 v4.1.0 CR470<br>25.433 v3.6.0 CR523<br>25.433 v4.1.0 CR524<br>25.453 v5.0.0 CR006 |
| | | ☐ 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.

## 10.3.4 Not comprehended IE/IE group

### 10.3.4.1 Procedure Code

The receiving node shall treat the different types of received criticality information of the *Procedure Code* according to the following:

Reject IE:

- If a message is received with a *Procedure Code* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

Ignore IE and Notify Sender:

- If a message is received with a *Procedure Code* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

Ignore IE:

- If a message is received with a *Procedure Code* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure Code* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

### 10.3.4.2 IEs other than the Procedure Code

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure Code* according to the following:

**Reject IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- If a *response* message is received containing one or more IEs marked with "*Reject IE*" which the receiving node does no comprehend, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

**Ignore IE and Notify Sender:**

- If a message *initiating* a procedure is received containing one or more Ies/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and report in the response message of the procedure that one or more IEs/IE groups have been ignored. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups,

continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IE/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and initiate the Error Indication procedure.

**Ignore IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using only the understood IEs/IE groups.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. ~~The *Repetition Number* IE shall be included i~~In the *Information Element Criticality Diagnostics* IE ~~if the reported IE/IE group was part of a "SEQUENCE OF" definition~~the *Repetition Number* IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the *Message Structure* IE shall be included.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure Code* IE, the *Triggering Message* IE, *Procedure Criticality* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. ~~The *Repetition Number* IE shall be included i~~In the *Information Element Criticality Diagnostics* IE ~~if the reported IE/IE group was part of a "SEQUENCE OF" definition~~the *Repetition Number* IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the *Message Structure* IE shall be included.

## 10.3.5 Missing IE or IE group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

**Reject IE:**

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- if a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

**Ignore IE and Notify Sender:**

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE

groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- if a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

**Ignore IE:**

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing and continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the *Message Structure* IE shall be included.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure Code* IE, the *Triggering Message* IE, *Procedure Criticality* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the *Message Structure* IE shall be included.

### 10.3.6 IEs or IE groups received in wrong order or with too many occurrences

If a message with IEs or IE groups in wrong order or with too many occurrences is received, the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".

- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

## 10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality information of the IE's/IE groups containing the erroneous values.

**Class 1:**

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value. Typical cause values are:

- Semantic Error;
- Message not compatible with receiver state.

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the procedure shall be terminated and the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure Code* IE and the *Triggering Message* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

Where the logical error exists in a response message of a class 1 procedure, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

**Class 2:**

Where the logical error occurs in a message of a class 2 procedure, the procedure shall be terminated and the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure Code* IE and the *Triggering Message* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

## 10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other sub-sections of chapter 10.

- In case a response message, failure message or Error Indication message needs to be returned, but the information necessary to determine the receiver of that message is missing, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

**3GPP TSG-RAN3 Meeting #23**
**Helsinki, Finland, 27th – 31st August, 2001**

***Tdoc R3-012650***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **058** ⌘ rev **1** ⌘ Current version: **4.1.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Clarification of chapter 10 |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 2001-08-30 |
| ***Category:*** | ⌘ | **A** |
| ***Release:*** | ⌘ | REL-4 |

*Use one of the following categories:*
- ***F*** *(essential correction)*
- ***A*** *(corresponds to a correction in an earlier release)*
- ***B*** *(Addition of feature),*
- ***C*** *(Functional modification of feature)*
- ***D*** *(Editorial modification)*

Detailed explanations of the above categories can be found in 3GPP TR 21.900.

*Use one of the following releases:*

| | |
|---|---|
| *2* | *(GSM Phase 2)* |
| *R96* | *(Release 1996)* |
| *R97* | *(Release 1997)* |
| *R98* | *(Release 1998)* |
| *R99* | *(Release 1999)* |
| *REL-4* | *(Release 4)* |
| *REL-5* | *(Release 5)* |

***Reason for change:*** ⌘ Several unclarities w.r.t. error handling were detected.

***Summary of change:*** ⌘ This CR makes the following updates:

- 10.3.4 - 10.4: ~~Redundant information regarding "ignore the content of the not comprehended IEs/IEgroups" and "ignore that those IEs/IEgroups are missing" has been deleted, and s~~S everal clarifications have been added.
- 10.3.4.2, 10.3.5: The inclusion of IEs is aligned with annex A.
- 10.5 (new): A new sentence is added in an Exception~~general~~ section concerning the case when the information to indentify the initiator of the procedure is not available in case the peer node has to return a message in reponse (e.g. corrupted RNC-id).

***Consequences if not approved:*** ⌘ This CR is backward compatible with the intended behaviour of the specifications.

***Clauses affected:*** ⌘ 10.3.4, 10.3.5, 10.3.6, 10.4, 10.5(new)

| | | | | |
|---|---|---|---|---|
| ***Other specs affected:*** | ⌘ | **X** | Other core specifications | ⌘ 25.413 v3.6.0 CR358<br>25.413 v4.1.0 CR359<br>25.419 v3.5.0 CR057<br>25.423 v3.6.0 CR469<br>25.423 v4.1.0 CR470<br>25.433 v3.6.0 CR523<br>25.433 v4.1.0 CR524<br>25.453 v5.0.0 CR006 |
| | | ☐ | Test specifications | |
| | | ☐ | O&M Specifications | |

***Other comments:*** ⌘

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

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

## 10.3.4 Not comprehended IE/IE group

### 10.3.4.1 Procedure Code

The receiving node shall treat the different types of received criticality information of the *Procedure Code* according to the following:

Reject IE:

- If a message is received with a *Procedure Code* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

Ignore IE and Notify Sender:

- If a message is received with a *Procedure Code* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

Ignore IE:

- If a message is received with a *Procedure Code* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure Code* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

### 10.3.4.2 IEs other than the Procedure Code

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure Code* according to the following:

**Reject IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- If a *response* message is received containing one or more IEs marked with "*Reject IE*" which the receiving node does no comprehend, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

**Ignore IE and Notify Sender:**

- If a message *initiating* a procedure is received containing one or more Ies/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and report in the response message of the procedure that one or more IEs/IE groups have been ignored. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups,

continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IE/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and initiate the Error Indication procedure.

**Ignore IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using only the understood IEs/IE groups.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. ~~The *Repetition Number* IE shall be included i~~In the *Information Element Criticality Diagnostics* IE ~~if the reported IE/IE group was part of a "SEQUENCE OF" definition~~the *Repetition Number* IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the *Message Structure* IE shall be included.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure Code* IE, the *Triggering Message* IE, *Procedure Criticality* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. ~~The *Repetition Number* IE shall be included i~~In the *Information Element Criticality Diagnostics* IE ~~if the reported IE/IE group was part of a "SEQUENCE OF" definition~~the *Repetition Number* IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the *Message Structure* IE shall be included.

## 10.3.5 Missing IE or IE group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

**Reject IE:**

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- if a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

**Ignore IE and Notify Sender:**

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE

groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- if a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

**Ignore IE:**

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing and continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the *Message Structure* IE shall be included.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure Code* IE, the *Triggering Message* IE, *Procedure Criticality* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex A) also the *Message Structure* IE shall be included.

### 10.3.6 IEs or IE groups received in wrong order or with too many occurrences

If a message with IEs or IE groups in wrong order or with too many occurrences is received, the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".

- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

## 10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality information of the IE's/IE groups containing the erroneous values.

**Class 1:**

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value. Typical cause values are:

- Semantic Error;
- Message not compatible with receiver state.

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the procedure shall be terminated and the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure Code* IE and the *Triggering Message* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

Where the logical error exists in a response message of a class 1 procedure, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

**Class 2:**

Where the logical error occurs in a message of a class 2 procedure, the procedure shall be terminated and the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure Code* IE and the *Triggering Message* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

## 10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other sub-sections of chapter 10.

- In case a response message, failure message or Error Indication message needs to be returned, but the information necessary to determine the receiver of that message is missing, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

**3GPP TSG-RAN WG3 Meeting #23**
**Helsinki, Finland, August 27-31, 2001**

***Tdoc R3-012633***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **059** ⌘ rev **1** ⌘ Current version: **3.5.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | SABP General Corrections |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | August 30, 2001 |
| ***Category:*** | ⌘ | F |
| ***Release:*** | ⌘ | R99 |

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

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

***Reason for change:*** ⌘

There exist some misalignments between procedure names in the Table1 and other chapters.
In the Table 1, there are “Status Load Enquiry” and “Status Message Query”. But in the other chapters use “Load Status Enquiry” and “Message Status Query” respectively. So for the consistent usage of procedure names, the procedure names in the Table 1 are proposed to be changed as “Load Status Enquiry” and “Message Status Query”.

The “*Procedure Code*” in *Message Type* IE contains message names not procedure names. So it should be changed into procedure names.

Corresponding ASN.1 should be changed.

***Summary of change:*** ⌘

Change “Status Load Enquiry” and “Status Message Query” in Table 1 into “Load Status Enquiry” and “Message Status Query” respectively.

Change the message names in “*Procedure Code*” into procedure names.
Change the corresponding ASN.1 part.

There is an editorial correction in 9.1.3.

***Consequences if not approved:*** ⌘

In case this CR is not approved, inconsistent usage of procedure names shall continue.

Backward compatibility: The proposed changes are backward compatible.

| | | | | | |
|---|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 8.1, 9.1.3, 9.2.1, 9.3.2, 9.3.6 | | | |
| ***Other specs affected:*** | ⌘ | X | Other core specifications | ⌘ | 25.419 v 4.1.0 CR 060 |
| | | | Test specifications | | |
| | | | O&M Specifications | | |
| ***Other comments:*** | ⌘ | | | | |

**How to create CRs using this form:**
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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 SABP Procedures

## 8.1 Elementary Procedures

In the following tables, all EPs are divided into Class 1, and Class 2 Procedures:

**Table 1: Class 1**

| Elementary Procedure | Initiating Message | Successful Outcome | Unsuccessful Outcome |
|---|---|---|---|
| | | Response message | Response message |
| Write-Replace | WRITE-REPLACE | WRITE-REPLACE COMPLETE | WRITE-REPLACE FAILURE |
| Kill | KILL | KILL COMPLETE | KILL FAILURE |
| ~~Status~~ Load Status Enquiry | LOAD QUERY | LOAD QUERY COMPLETE | LOAD QUERY FAILURE |
| ~~Status~~ Message Status Query | MESSAGE QUERY | MESSAGE QUERY COMPLETE | MESSAGE QUERY FAILURE |
| Reset | RESET | RESET COMPLETE | RESET FAILURE |

**Table 2: Class 2**

| Elementary Procedure | Message |
|---|---|
| Restart Indication | RESTART |
| Failure Indication | FAILURE |
| Error Indication | ERROR INDICATION |

## 9.1.3 WRITE-REPLACE

This message is sent by the CN to the RNC.

Direction: CN → RNC

| PARAMETER | PRESENCE | RANGE | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Type | M | | 9.2.1 | | yes | reject |
| Message Identifier | M | | 9.2.19 | | yes | reject |
| New Serial Number | M | | 9.2.5 | | yes | reject |
| Old Serial Number | O | | 9.2.4 | | yes | ignore |
| Service Areas List | M | | 9.2.6 | | ~~y~~yes | reject |
| Category | O | | 9.2.7 | | yes | ignore |
| Repetition Period | M | | 9.2.8 | | yes | reject |
| Number of Broadcasts Requested | M | | 9.2.9 | | yes | reject |
| Data Coding Scheme | M | | 9.2.15 | | yes | reject |
| Broadcast Message Content | M | | 9.2.2 | | yes | reject |

# 9.2 Information Element Definitions

## 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 |
|---|---|---|---|---|
| **Message Type** | | | | |
| >Procedure Code | M | | ENUMERATED (Write-Replace,<br>Kill,<br>Load Status Enquiry~~Load Query~~,<br>Message Status Query,<br>Reset,<br>Restart Indication,<br>Failure Indication,<br>Error Indication<br>,…) | |
| >Type of Message | M | | ENUMERATED<br>(Initiating Message,<br>Successful Outcome,<br>Unsuccessful Outcome,<br>Outcome) | |

## 9.3.2 Elementary Procedure Definitions

```
-- **************************************************************
--
-- Elementary Procedure definitions
--
-- **************************************************************

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- **************************************************************
--
-- IE parameter types from other modules.
--
-- **************************************************************

IMPORTS
    Criticality,
    ProcedureCode
FROM SABP-CommonDataTypes

    Error-Indication,
    Failure,
    Kill,
    Kill-Complete,
    Kill-Failure,
    Load-Query,
    Load-Query-Complete,
    Load-Query-Failure,
    Reset,
    Reset-Complete,
    Reset-Failure,
    Restart,
    Message-Status-Query,
    Message-Status-Query-Complete,
    Message-Status-Query-Failure,
    Write-Replace,
    Write-Replace-Complete,
    Write-Replace-Failure
FROM SABP-PDU-Contents

    id-Error-Indication,
    id-Failure-Indication,
    id-Kill,
    id-Reset,
    id-Restart-Indication,
    id-~~Status~~-Load-Status-Enquiry,
    id-~~Status~~-Message-Status-Query,
    id-Write-Replace
FROM SABP-Constants;

-- **************************************************************
--
-- Interface Elementary Procedure Class
--
-- **************************************************************

SABP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage              ,
    &SuccessfulOutcome              OPTIONAL,
    &UnsuccessfulOutcome                OPTIONAL,
    &procedureCode          ProcedureCode   UNIQUE,
    &criticality            Criticality     DEFAULT ignore
}
WITH SYNTAX {
    INITIATING MESSAGE      &InitiatingMessage
    [SUCCESSFUL OUTCOME

&SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME       &UnsuccessfulOutcome]
```

```
    PROCEDURE CODE          &procedureCode
    [CRITICALITY            &criticality]
}

-- **************************************************************
--
-- Interface PDU Definition
--
-- **************************************************************

SABP-PDU ::= CHOICE {
    initiatingMessage   InitiatingMessage,
    successfulOutcome   SuccessfulOutcome,
    unsuccessfulOutcome UnsuccessfulOutcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureCode   SABP-ELEMENTARY-PROCEDURE.&procedureCode    ({SABP-ELEMENTARY-PROCEDURES}),
    criticality SABP-ELEMENTARY-PROCEDURE.&criticality      ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode}),
    value       SABP-ELEMENTARY-PROCEDURE.&InitiatingMessage    ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode})
}

SuccessfulOutcome ::= SEQUENCE {
    procedureCode   SABP-ELEMENTARY-PROCEDURE.&procedureCode    ({SABP-ELEMENTARY-PROCEDURES}),
    criticality SABP-ELEMENTARY-PROCEDURE.&criticality      ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode}),
    value       SABP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome    ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode})
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureCode   SABP-ELEMENTARY-PROCEDURE.&procedureCode    ({SABP-ELEMENTARY-PROCEDURES}),
    criticality SABP-ELEMENTARY-PROCEDURE.&criticality      ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode}),
    value       SABP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome  ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode})
}

-- **************************************************************
--
-- Interface Elementary Procedure List
--
-- **************************************************************

SABP-ELEMENTARY-PROCEDURES SABP-ELEMENTARY-PROCEDURE ::= {
    SABP-ELEMENTARY-PROCEDURES-CLASS-1  |
    SABP-ELEMENTARY-PROCEDURES-CLASS-2  ,
    ...
}

SABP-ELEMENTARY-PROCEDURES-CLASS-1 SABP-ELEMENTARY-PROCEDURE ::= {
    write-Replace       |
    kill            |
    status-Lload-Status-Enquiry |
    status-Mmessage-Status-Query    |
    reset           ,
    ...
}

SABP-ELEMENTARY-PROCEDURES-CLASS-2 SABP-ELEMENTARY-PROCEDURE ::= {
    restart-Indication  |
    failure-Indication  |
    error-Indication    ,
    ...
}

write-Replace SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Write-Replace
    SUCCESSFUL OUTCOME  Write-Replace-Complete
    UNSUCCESSFUL OUTCOME    Write-Replace-Failure
    PROCEDURE CODE      id-Write-Replace
}

kill SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Kill
```

```
    SUCCESSFUL OUTCOME  Kill-Complete
    UNSUCCESSFUL OUTCOME    Kill-Failure
    PROCEDURE CODE          id-Kill
}

status-Load-Enquiry SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Load-Query
    SUCCESSFUL OUTCOME  Load-Query-Complete
    UNSUCCESSFUL OUTCOME    Load-Query-Failure
    PROCEDURE CODE          id-Status-Load-Status-Enquiry
}

status-Message-Query SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Message-Status-Query
    SUCCESSFUL OUTCOME  Message-Status-Query-Complete
    UNSUCCESSFUL OUTCOME    Message-Status-Query-Failure
    PROCEDURE CODE          id-Status-Message-Status-Query
}

reset SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Reset
    SUCCESSFUL OUTCOME  Reset-Complete
    UNSUCCESSFUL OUTCOME    Reset-Failure
    PROCEDURE CODE          id-Reset
}

restart-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Restart
    PROCEDURE CODE          id-Restart-Indication
}

failure-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Failure
    PROCEDURE CODE          id-Failure-Indication
}

error-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Error-Indication
    PROCEDURE CODE          id-Error-Indication
}

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-Status-Load-Status-Enquiry           INTEGER ::= 2
id-Status-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-List           INTEGER ::= 65535

maxProtocolExtensions           INTEGER ::= 65535
maxProtocolIEs              INTEGER ::= 65535
```

```
maxNrOfLevels                       INTEGER ::= 256

END
```

**3GPP TSG-RAN WG3 Meeting #23**
**Helsinki, Finland, August 27-31, 2001**

***Tdoc R3-012634***

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **060** ⌘ rev **1** ⌘ Current version: **4.1.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | SABP General Corrections |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | August 30, 2001 |
| ***Category:*** | ⌘ | A |
| ***Release:*** | ⌘ | REL-4 |

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

*Use one of the following releases:*

| | |
|---|---|
| *2* | *(GSM Phase 2)* |
| *R96* | *(Release 1996)* |
| *R97* | *(Release 1997)* |
| *R98* | *(Release 1998)* |
| *R99* | *(Release 1999)* |
| *REL-4* | *(Release 4)* |
| *REL-5* | *(Release 5)* |

***Reason for change:*** ⌘

There exist some misalignments between procedure names in the Table1 and other chapters.
In the Table 1, there are “Status Load Enquiry” and “Status Message Query”. But in the other chapters use “Load Status Enquiry” and “Message Status Query” respectively. So for the consistent usage of procedure names, the procedure names in the Table 1 are proposed to be changed as “Load Status Enquiry” and “Message Status Query”.

The “*Procedure Code*” in *Message Type* IE contains message names not procedure names. So it should be changed into procedure names.

Corresponding ASN.1 should be changed.

***Summary of change:*** ⌘

Change “Status Load Enquiry” and “Status Message Query” in Table 1 into “Load Status Enquiry” and “Message Status Query” respectively.

Change the message names in “*Procedure Code*” into procedure names.
Change the corresponding ASN.1 part.

There is an editorial correction in 9.1.3.

***Consequences if not approved:*** ⌘

In case this CR is not approved, inconsistent usage of procedure names shall continue.

Backward compatibility: The proposed changes are backward compatible.

| | | | | | |
|---|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 8.1, 9.1.3, 9.2.1, 9.3.2, 9.3.6 | | | |
| ***Other specs affected:*** | ⌘ | X | Other core specifications | ⌘ | 25.419 v 3.5.0 CR 059 |
| | | | Test specifications | | |
| | | | O&M Specifications | | |
| ***Other comments:*** | ⌘ | | | | |

**How to create CRs using this form:**
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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 SABP Procedures

## 8.1 Elementary Procedures

In the following tables, all EPs are divided into Class 1, and Class 2 Procedures:

**Table 1: Class 1**

| Elementary Procedure | Initiating Message | Successful Outcome | Unsuccessful Outcome |
|---|---|---|---|
| | | Response message | Response message |
| Write-Replace | WRITE-REPLACE | WRITE-REPLACE COMPLETE | WRITE-REPLACE FAILURE |
| Kill | KILL | KILL COMPLETE | KILL FAILURE |
| ~~Status~~ Load Status Enquiry | LOAD QUERY | LOAD QUERY COMPLETE | LOAD QUERY FAILURE |
| ~~Status~~ Message Status Query | MESSAGE QUERY | MESSAGE QUERY COMPLETE | MESSAGE QUERY FAILURE |
| Reset | RESET | RESET COMPLETE | RESET FAILURE |

**Table 2: Class 2**

| Elementary Procedure | Message |
|---|---|
| Restart Indication | RESTART |
| Failure Indication | FAILURE |
| Error Indication | ERROR INDICATION |

## 9.1.3 WRITE-REPLACE

This message is sent by the CN to the RNC.

Direction: CN → RNC

| PARAMETER | PRESENCE | RANGE | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Type | M | | 9.2.1 | | yes | reject |
| Message Identifier | M | | 9.2.19 | | yes | reject |
| New Serial Number | M | | 9.2.5 | | yes | reject |
| Old Serial Number | O | | 9.2.4 | | yes | ignore |
| Service Areas List | M | | 9.2.6 | | ~~y~~yes | reject |
| Category | O | | 9.2.7 | | yes | ignore |
| Repetition Period | M | | 9.2.8 | | yes | reject |
| Number of Broadcasts Requested | M | | 9.2.9 | | yes | reject |
| Data Coding Scheme | M | | 9.2.15 | | yes | reject |
| Broadcast Message Content | M | | 9.2.2 | | yes | reject |

# 9.2 Information Element Definitions

## 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 |
|---|---|---|---|---|
| **Message Type** | | | | |
| >Procedure Code | M | | ENUMERATED (Write-Replace,<br>Kill,<br>Load Status Enquiry~~Load Query~~,<br>Message Status Query,<br>Reset,<br>Restart Indication,<br>Failure Indication,<br>Error Indication<br>,…) | |
| >Type of Message | M | | ENUMERATED<br>(Initiating Message,<br>Successful Outcome,<br>Unsuccessful Outcome,<br>Outcome) | |

## 9.3.2 Elementary Procedure Definitions

```
-- **************************************************************
--
-- Elementary Procedure definitions
--
-- **************************************************************

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- **************************************************************
--
-- IE parameter types from other modules.
--
-- **************************************************************

IMPORTS
    Criticality,
    ProcedureCode
FROM SABP-CommonDataTypes

    Error-Indication,
    Failure,
    Kill,
    Kill-Complete,
    Kill-Failure,
    Load-Query,
    Load-Query-Complete,
    Load-Query-Failure,
    Reset,
    Reset-Complete,
    Reset-Failure,
    Restart,
    Message-Status-Query,
    Message-Status-Query-Complete,
    Message-Status-Query-Failure,
    Write-Replace,
    Write-Replace-Complete,
    Write-Replace-Failure
FROM SABP-PDU-Contents

    id-Error-Indication,
    id-Failure-Indication,
    id-Kill,
    id-Reset,
    id-Restart-Indication,
    id-~~Status~~-Load-Status-Enquiry,
    id-~~Status~~-Message-Status-Query,
    id-Write-Replace
FROM SABP-Constants;

-- **************************************************************
--
-- Interface Elementary Procedure Class
--
-- **************************************************************

SABP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage              ,
    &SuccessfulOutcome              OPTIONAL,
    &UnsuccessfulOutcome                OPTIONAL,
    &procedureCode          ProcedureCode   UNIQUE,
    &criticality            Criticality     DEFAULT ignore
}
WITH SYNTAX {
    INITIATING MESSAGE      &InitiatingMessage
    [SUCCESSFUL OUTCOME

&SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME       &UnsuccessfulOutcome]
```

```
    PROCEDURE CODE          &procedureCode
    [CRITICALITY            &criticality]
}

-- **************************************************************
--
-- Interface PDU Definition
--
-- **************************************************************

SABP-PDU ::= CHOICE {
    initiatingMessage   InitiatingMessage,
    successfulOutcome   SuccessfulOutcome,
    unsuccessfulOutcome UnsuccessfulOutcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureCode   SABP-ELEMENTARY-PROCEDURE.&procedureCode    ({SABP-ELEMENTARY-PROCEDURES}),
    criticality SABP-ELEMENTARY-PROCEDURE.&criticality      ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode}),
    value       SABP-ELEMENTARY-PROCEDURE.&InitiatingMessage    ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode})
}

SuccessfulOutcome ::= SEQUENCE {
    procedureCode   SABP-ELEMENTARY-PROCEDURE.&procedureCode    ({SABP-ELEMENTARY-PROCEDURES}),
    criticality SABP-ELEMENTARY-PROCEDURE.&criticality      ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode}),
    value       SABP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome    ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode})
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureCode   SABP-ELEMENTARY-PROCEDURE.&procedureCode    ({SABP-ELEMENTARY-PROCEDURES}),
    criticality SABP-ELEMENTARY-PROCEDURE.&criticality      ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode}),
    value       SABP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome  ({SABP-ELEMENTARY-
PROCEDURES}{@procedureCode})
}

-- **************************************************************
--
-- Interface Elementary Procedure List
--
-- **************************************************************

SABP-ELEMENTARY-PROCEDURES SABP-ELEMENTARY-PROCEDURE ::= {
    SABP-ELEMENTARY-PROCEDURES-CLASS-1  |
    SABP-ELEMENTARY-PROCEDURES-CLASS-2  ,
    ...
}

SABP-ELEMENTARY-PROCEDURES-CLASS-1 SABP-ELEMENTARY-PROCEDURE ::= {
    write-Replace       |
    kill            |
    status-Lload-Status-Enquiry |
    status-Mmessage-Status-Query    |
    reset           ,
    ...
}

SABP-ELEMENTARY-PROCEDURES-CLASS-2 SABP-ELEMENTARY-PROCEDURE ::= {
    restart-Indication  |
    failure-Indication  |
    error-Indication    ,
    ...
}

write-Replace SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Write-Replace
    SUCCESSFUL OUTCOME  Write-Replace-Complete
    UNSUCCESSFUL OUTCOME    Write-Replace-Failure
    PROCEDURE CODE      id-Write-Replace
}

kill SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Kill
```

```
    SUCCESSFUL OUTCOME  Kill-Complete
    UNSUCCESSFUL OUTCOME    Kill-Failure
    PROCEDURE CODE          id-Kill
}

status-Load-Enquiry SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Load-Query
    SUCCESSFUL OUTCOME  Load-Query-Complete
    UNSUCCESSFUL OUTCOME    Load-Query-Failure
    PROCEDURE CODE          id-Status-Load-Status-Enquiry
}

status-Message-Query SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Message-Status-Query
    SUCCESSFUL OUTCOME  Message-Status-Query-Complete
    UNSUCCESSFUL OUTCOME    Message-Status-Query-Failure
    PROCEDURE CODE          id-Status-Message-Status-Query
}

reset SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Reset
    SUCCESSFUL OUTCOME  Reset-Complete
    UNSUCCESSFUL OUTCOME    Reset-Failure
    PROCEDURE CODE          id-Reset
}

restart-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Restart
    PROCEDURE CODE          id-Restart-Indication
}

failure-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Failure
    PROCEDURE CODE          id-Failure-Indication
}

error-Indication SABP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  Error-Indication
    PROCEDURE CODE          id-Error-Indication
}

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-Status-Load-Status-Enquiry           INTEGER ::= 2
id-Status-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-List           INTEGER ::= 65535

maxProtocolExtensions           INTEGER ::= 65535
maxProtocolIEs              INTEGER ::= 65535
```

```
maxNrOfLevels                       INTEGER ::= 256

END
```

**3GPP TSG-RAN WG3 Meeting #23** ***R3-012696***
**Helsinki, Finland, 27th – 31st August, 2001**

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **61** ⌘ rev **2** ⌘ Current version: **3.5.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Clarification of the usage of the *Number of Broadcasts Requested* IE |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 2001-08-31 |
| ***Category:*** | ⌘ | **F** |
| ***Release:*** | ⌘ | REL-99 |

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

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

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | Within the WRITE-REPLACE message, there exists the *Number of Broadcasts Requested* IE, which indicates to the RNC how frequently a message should be broadcasted. If set to '0', this means that the message shall be broadcast indefinetly until instructed otherwise – however – it was not clear if the RNC should return a WRITE-REPLACE COMPLETE to the CBC upon broadcasting each message. Repeated WRITE-REPLACE COMPLETE messages informing the CBC of the progress of this message to be broadcasted (indefinetly) is not the required, instead the Message Query procedure should be utilised. |
| ***Summary of change:*** | ⌘ | Additional text is added to the Procedural description to describe the WRITE-REPLACE procedure. |
| ***Consequences if not approved:*** | ⌘ | If this is not approved, confusion may result as it is not clear if the RNC should respond each time to the CN where the *Number of Broadcasts Requested* IE is set to '0'.<br><br>Backwards Compatibity: There is no impact upon the ASN.1 transfer syntact.<br><br>Isolated Impact: This CR has only limited impact upon the Write-Replace procedure – it was intended that the RNC would respond eact time after a message is broadcast. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 8.2.2 | | |
| ***Other specs affected:*** | ⌘ | **X** Other core specifications<br>☐ Test specifications<br>☐ O&M Specifications | ⌘ | 25.419 v4.1.0 (Rel 4) CR62 |
| ***Other comments:*** | ⌘ | | | |

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

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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

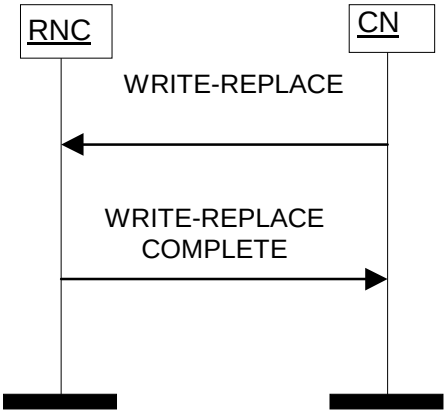


**Figure 1: Write-Replace Procedure: Successful Operation**

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 Broadcast Complete List* IE contains each Service Area which successfully performed the requested operation and for each of these Service Area(s), the number of times the broadcast message has been sent to the particular Service Area(s) for broadcast.

If the *Number of Broadcasts Requested* IE was set to "0" the RNC shall send the WRITE-REPLACE COMPLETE message only once and that is after it has successfully attempted the first broadcast of the message in all the requested Service Area(s).

## 8.2.3 Unsuccessful Operation

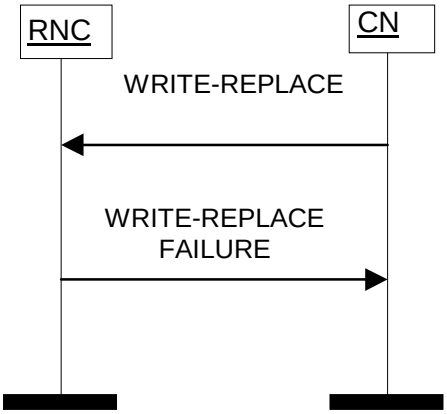


**Figure 2: Write-Replace Procedure: Un-Successful Operation**

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-REPACE 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 *Number of Broadcasts Requested*~~t~~ IE was set to "0" and the RNC was not able to send the message at least once to a subset of the requested Service Area(s) indicated in the *Service Areas List* IE, the RNC shall send the WRITE-REPLACE FAILURE message only once and that is after it has successfully attempted the first broadcast of the message in all the Service Area(s) where it was able to allocate resources.

## 8.2.4 Abnormal Conditions

**3GPP TSG-RAN WG3 Meeting #23** ***R3-012697***
**Helsinki, Finland, 27th – 31st August, 2001**

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **62** ⌘ rev **2** ⌘ Current version: **4.1.0** ⌘

*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 ☒

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Clarification of the usage of the *Number of Broadcasts Requested* IE |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 2001-08-31 |
| ***Category:*** | ⌘ | **A** |
| ***Release:*** | ⌘ | REL-4 |

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

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

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | Within the WRITE-REPLACE message, there exists the *Number of Broadcasts Requested* IE, which indicates to the RNC how frequently a message should be broadcasted. If set to '0', this means that the message shall be broadcast indefinetly until instructed otherwise – however – it was not clear if the RNC should return a WRITE-REPLACE COMPLETE to the CBC upon broadcasting each message. Repeated WRITE-REPLACE COMPLETE messages informing the CBC of the progress of this message to be broadcasted (indefinetly) is not the required, instead the Message Query procedure should be utilised. |
| ***Summary of change:*** | ⌘ | Additional text is added to the Procedural description to describe the WRITE-REPLACE procedure. |
| ***Consequences if not approved:*** | ⌘ | If this is not approved, confusion may result as it is not clear if the RNC should respond each time to the CN where the *Number of Broadcasts Requested* IE is set to '0'.<br><br>Backwards Compatibity: There is no impact upon the ASN.1 transfer syntact.<br><br>Isolated Impact: This CR has only limited impact upon the Write-Replace procedure – it was intended that the RNC would respond eact time after a message is broadcast. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 8.2.2 | | |
| ***Other specs affected:*** | ⌘ | ☒ Other core specifications<br>☐ Test specifications<br>☐ O&M Specifications | ⌘ | 25.419 v3.6.0 CR 61 |
| ***Other comments:*** | ⌘ | | | |

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

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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.

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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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

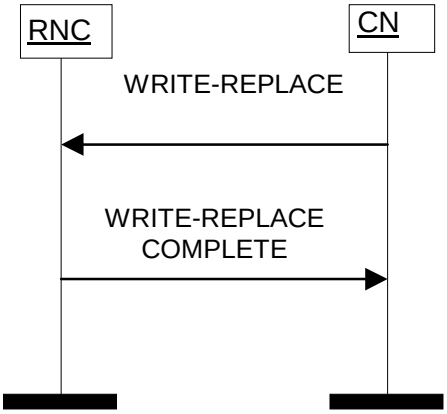


**Figure 1: Write-Replace Procedure: Successful Operation**

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 Broadcast Complete List* IE contains each Service Area which successfully performed the requested operation and for each of these Service Area(s), the number of times the broadcast message has been sent to the particular Service Area(s) for broadcast.

If the *Number of Broadcasts Requested* IE was set to "0" the RNC shall send the WRITE-REPLACE COMPLETE message only once and that is after it has successfully attempted the first broadcast of the message in all the requested Service Area(s).

### 8.2.3 Unsuccessful Operation

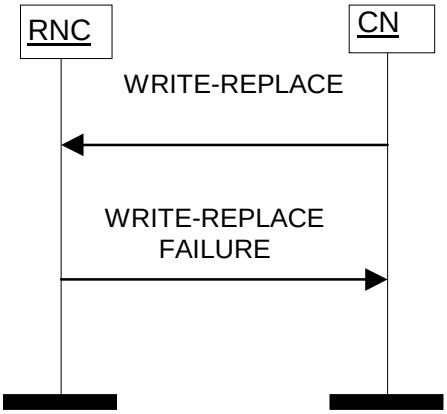


**Figure 2: Write-Replace Procedure: Un-Successful Operation**

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-REPACE 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 *Number of Broadcasts Requested* IE was set to "0" and the RNC was not able to send the message at least once to a subset of the requested Service Area(s) indicated in the *Service Areas List* IE, the RNC shall send the WRITE-REPLACE FAILURE message only once and that is after it has successfully attempted the first broadcast of the message in all the Service Area(s) where it was able to allocate resources.

### 8.2.4 Abnormal Conditions

**3GPP TSG-RAN WG3 Meeting #23** ***R3-012480***
**Helsinki, Finland, 27th – 31st August, 2001**

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **63** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Clarification of the usage of the SABP Reset Procedure |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 2001-08-24 |
| ***Category:*** | ⌘ | **F** |
| ***Release:*** | ⌘ | REL-99 |

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

*Use one of the following releases:*

| | |
|---|---|
| *2* | *(GSM Phase 2)* |
| *R96* | *(Release 1996)* |
| *R97* | *(Release 1997)* |
| *R98* | *(Release 1998)* |
| *R99* | *(Release 1999)* |
| *REL-4* | *(Release 4)* |
| *REL-5* | *(Release 5)* |

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | Within the Reset Procedure there exists some text, which has attempted to describe the function of the RESET message. The text is misleading in that the SABP protocol is incapable of inquiring about the 'operational state' of a Service Area(s). |
| ***Summary of change:*** | ⌘ | Some text is removed which may lead the reader to believe that the Reset Procedure is capable of more than it can actually do. |
| ***Consequences if not approved:*** | ⌘ | This Change Request is backwards compatible. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 8.6.2 | | |
| ***Other specs affected:*** | ⌘ | **X** Other core specifications<br>☐ Test specifications<br>☐ O&M Specifications | ⌘ | 25.419 v4.1.0 (Rel-4) CR64 |
| ***Other comments:*** | ⌘ | | | |

**How to create CRs using this form:**
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

# 8.6 Reset

## 8.6.1 General

The purpose of the Reset procedure is to end broadcasting in one or more Service Areas in the RNC.

## 8.6.2 Successful Operation

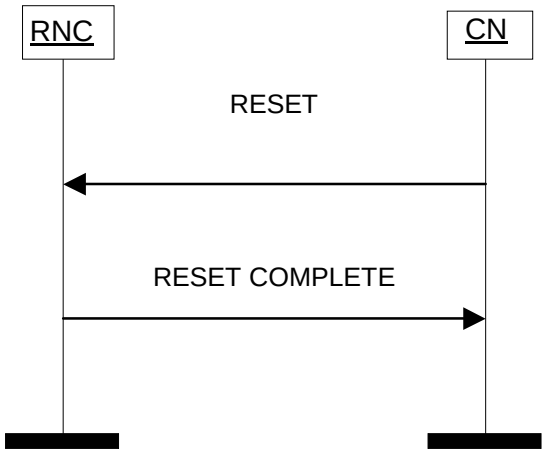


**Figure 9: Reset Procedure: Successful Operation**

The CN shall initiate the procedure by sending a RESET message to the RNC, in order to end broadcasting in one or more Service Areas of the RNC.

~~It may also be used by the CN to inquire about the Service Area broadcasting operational state of Service Area(s) who had earlier indicated as having failed.~~

Upon receipt of this message the RNC shall end broadcasting in the indicated Service Area(s) and shall respond using a RESET COMPLETE message.

## 8.6.3 Unsuccessful Operation

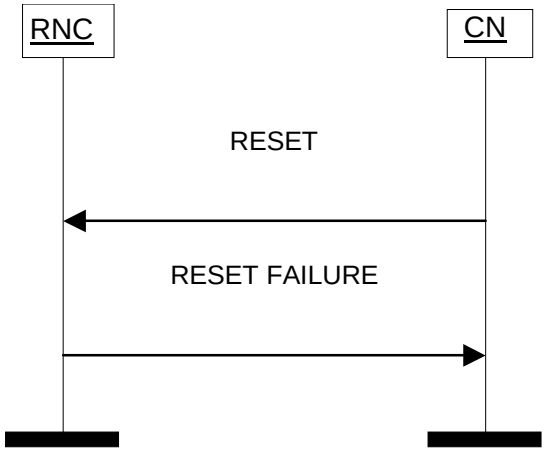


**Figure 10: Reset Procedure: Un-Successful Operation**

If upon receipt of this message the RNC can not end broadcasting in the indicated Service Area(s), it shall respond using a RESET FAILURE message containing the *Failure List* IE indicating the relevant Service Area(s) and the appropriate cause value.

The RESET FAILURE message may – if applicable - also include those Service Area(s) for which the RESET message was successful.

### 8.6.4 Abnormal Conditions

END OF CHANGES

**3GPP TSG-RAN WG3 Meeting #23** ***R3-012637***
**Helsinki, Finland, 27th – 31st August, 2001**

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **64** ⌘ rev **1** ⌘ Current version: **4.1.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Clarification of the usage of the SABP Reset Procedure |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 2001-08-30 |
| ***Category:*** | ⌘ | **A** |
| ***Release:*** | ⌘ | REL-4 |

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

*Use one of the following releases:*

| | |
|---|---|
| *2* | *(GSM Phase 2)* |
| *R96* | *(Release 1996)* |
| *R97* | *(Release 1997)* |
| *R98* | *(Release 1998)* |
| *R99* | *(Release 1999)* |
| *REL-4* | *(Release 4)* |
| *REL-5* | *(Release 5)* |

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | Within the Reset Procedure there exists some text, which has attempted to describe the function of the RESET message. The text is misleading in that the SABP protocol is incapable of inquiring about the 'operational state' of a Service Area(s). |
| ***Summary of change:*** | ⌘ | Some text is removed which may lead the reader to believe that the Reset Procedure is capable of more than it can actually do. |
| ***Consequences if not approved:*** | ⌘ | This Change Request is backwards compatible. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 8.6.2 | | |
| ***Other specs affected:*** | ⌘ | **X** Other core specifications<br>☐ Test specifications<br>☐ O&M Specifications | ⌘ | 25.419 v3.6.0 CR63 |
| ***Other comments:*** | ⌘ | | | |

**How to create CRs using this form:**
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

## 8.6 Reset

### 8.6.1 General

The purpose of the Reset procedure is to end broadcasting in one or more Service Areas in the RNC.

### 8.6.2 Successful Operation

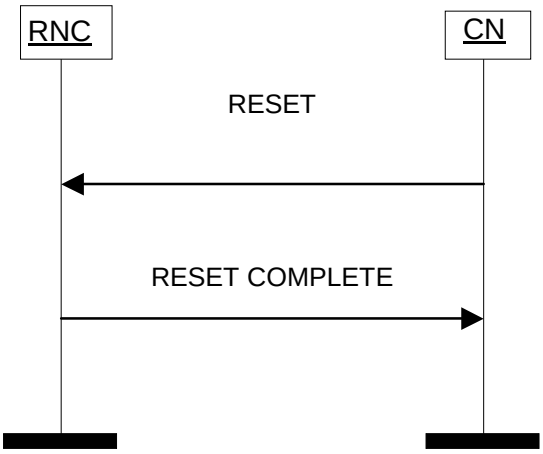


**Figure 9: Reset Procedure: Successful Operation**

The CN shall initiate the procedure by sending a RESET message to the RNC, in order to end broadcasting in one or more Service Areas of the RNC.

~~It may also be used by the CN to inquire about the Service Area broadcasting operational state of Service Area(s) who had earlier indicated as having failed.~~

Upon receipt of this message the RNC shall end broadcasting in the indicated Service Area(s) and shall respond using a RESET COMPLETE message.

### 8.6.3 Unsuccessful Operation

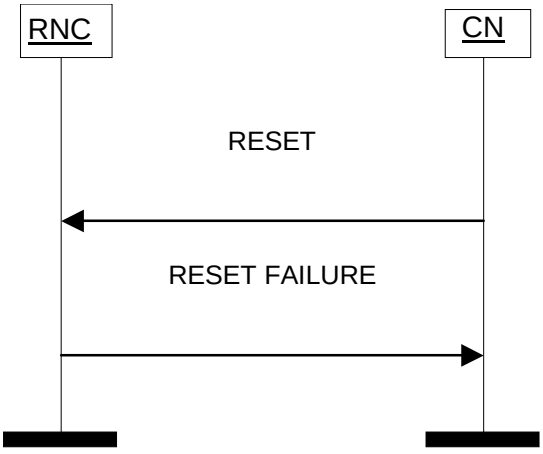


**Figure 10: Reset Procedure: Un-Successful Operation**

If upon receipt of this message the RNC can not end broadcasting in the indicated Service Area(s), it shall respond using a RESET FAILURE message containing the *Failure List* IE indicating the relevant Service Area(s) and the appropriate cause value.

The RESET FAILURE message may – if applicable - also include those Service Area(s) for which the RESET message was successful.

### 8.6.4 Abnormal Conditions

END OF CHANGES

**3GPP TSG-RAN WG3 Meeting #23** **R3-012698**
**Helsinki, Finland, 27th – 31st August, 2001**

CR-Form-v3

# CHANGE REQUEST

⌘ **25.419** **CR** **65** ⌘ rev **2** ⌘ Current version: **3.5.0** ⌘

*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 ☒

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Clarification of the usage of the *Service Areas List* IE within the Reset Procedure |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 2001-08-31 |
| ***Category:*** | ⌘ | **F** |
| ***Release:*** | ⌘ | REL-99 |

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

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

| | | |
|---|---|---|
| ***Reason for change:*** | ⌘ | The definition of the *Service Areas List* IE is misleading, as is the description of it's usage within the Reset Procedure. |
| ***Summary of change:*** | ⌘ | The definition of the *Service Areas List* IE is clarified. Also it is clarified that within the Reset Procedure the *Service Areas List* IE is used within the RESET FAILURE message need not be exactly the same sequence of Service Areas as listed in the initiating RESET message. Since the RESET FAILURE message describes both the list of SAs which have been successfully reset (*Service Areas List* IE), *and* the list of SAs~~S~~ which have not (*Failure List* IE) - it is logical that the returned *Service Areas List* IE can not be the same sequence as used in the initial RESET message. This latter usage of the *Service Areas List* IE has caused confusion in the understanding of this procedure. |
| ***Consequences if not approved:*** | ⌘ | If this is not approved, the CN may misunderstand the *Service Areas List* IE included in the RESET FAILURE, as being the same sequence that was defined in the inititating RESET message.<br><br>Backwards Compatibility:<br><br>There is no impact upon the ASN.1 transfer syntax.<br><br>Isolated Impact:<br><br>It may only have an impact upon the Reset Procedure, in that some interpretations of early releases of this specification may interpret that this *Service Areas List* IE is the same sequence as in the RESET message. |

| | | | | |
|---|---|---|---|---|
| ***Clauses affected:*** | ⌘ | 9.2.6 | | |
| ***Other specs affected:*** | ⌘ | ☒ Other core specifications<br>☐ Test specifications<br>☐ O&M Specifications | ⌘ | 25.419 v4.1.0 (Rel4) CR66 |

***Other comments:*** ⌘

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

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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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

# 8.6 Reset

## 8.6.1 General

The purpose of the Reset procedure is to end broadcasting in one or more Service Areas in the RNC.

## 8.6.2 Successful Operation

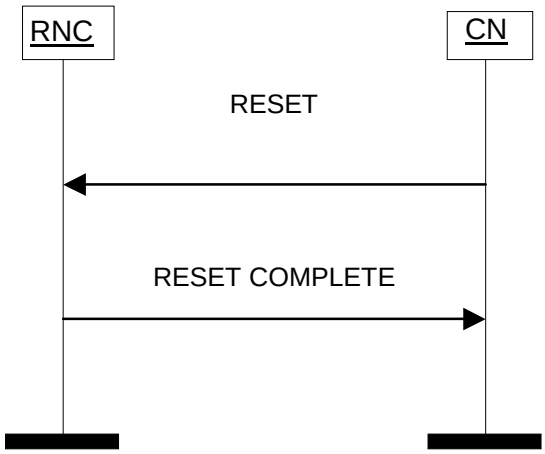


**Figure 9: Reset Procedure: Successful Operation**

The CN shall initiate the procedure by sending a RESET message to the RNC, in order to end broadcasting in one or more Service Areas of the RNC.

It may also be used by the CN to inquire about the Service Area broadcasting operational state of Service Area(s) who had earlier indicated as having failed.

Upon receipt of this message the RNC shall end broadcasting in the indicated Service Area(s) and shall respond using a RESET COMPLETE message.

### 8.6.3 Unsuccessful Operation

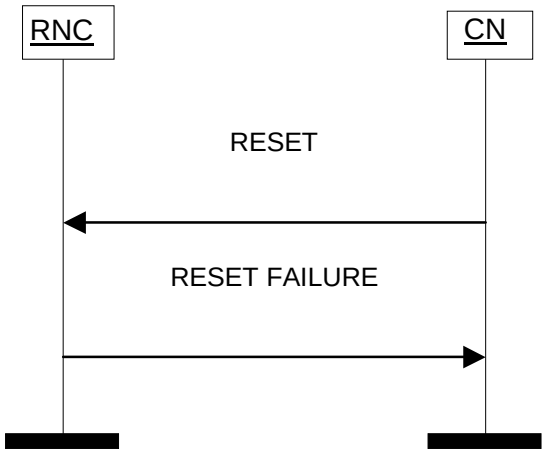


**Figure 10: Reset Procedure: Un-Successful Operation**

If upon receipt of this message the RNC can not end broadcasting in the indicated Service Area(s), it shall respond using a RESET FAILURE message. The RESET FAILURE message may contain~~ing~~ the *Service Areas List* IE and shall contain the ~~the~~ *Failure List* IE indicating the relevant Service Area(s) in which the RESET message was successful and unsuccessful respectively, along with ~~and~~ the appropriate cause value.

The sum of the Service Area(s) included in the *Service Areas List* and *Failure List* IEs shall be the same as indicated in the *Service Areas List* IE of the initiating RESET message.

~~The RESET FAILURE message may - if applicable - also include those Service Area(s) for which the RESET message was successful.~~

### 8.6.4 Abnormal Conditions

NEXT OF CHANGE

## 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.~~is sent from the CN to the RNC. It indicates the group of Service Area(s) that the message will be broadcast to.~~ The *Service Areas List* IE must include at least one Service Area.

| IE/GROUP NAME | PRESENCE | RANGE | IE Type and | Semantics Description |
|---|---|---|---|---|
| **Service Areas List** | | 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 |

END OF CHANGES

**3GPP TSG-RAN WG3 Meeting #23** ***R3-012699***
**Helsinki, Finland, 27th – 31st August, 2001**

*CR-Form-v3*

# CHANGE REQUEST

⌘ **25.419** **CR** **66** ⌘ rev **2** ⌘ Current version: **4.1.0** ⌘

*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 **X** Core Network **X**

| | | |
|---|---|---|
| ***Title:*** | ⌘ | Clarification of the usage of the *Service Areas List* IE within the Reset Procedure |
| ***Source:*** | ⌘ | R-WG3 |
| ***Work item code:*** | ⌘ | TEI |
| ***Date:*** | ⌘ | 2001-08-31 |
| ***Category:*** | ⌘ | **A** |
| ***Release:*** | ⌘ | REL-4 |

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

*Use one of the following releases:*

| | |
|---|---|
| *2* | *(GSM Phase 2)* |
| *R96* | *(Release 1996)* |
| *R97* | *(Release 1997)* |
| *R98* | *(Release 1998)* |
| *R99* | *(Release 1999)* |
| *REL-4* | *(Release 4)* |
| *REL-5* | *(Release 5)* |

***Reason for change:*** ⌘ The definition of the *Service Areas List* IE is misleading, as is the description of it's usage within the Reset Procedure.

***Summary of change:*** ⌘ The definition of the *Service Areas List* IE is clarified. Also it is clarified that within the Reset Procedure the *Service Areas List* IE is used within the RESET FAILURE message need not be exactly the same sequence of Service Areas as listed in the initiating RESET message. Since the RESET FAILURE message describes both the list of SAs which have been successfully reset (*Service Areas List* IE), *and* the list of ~~SAS~~ SAs which have not (*Failure List* IE) - it is logical that the returned *Service Areas List* IE can not be the same sequence as used in the initial RESET message. This latter usage of the *Service Areas List* IE has caused confusion in the understanding of this procedure.

***Consequences if not approved:*** ⌘ If this is not approved, the CN may misunderstand the *Service Areas List* IE included in the RESET FAILURE, as being the same sequence that was defined in the inititating RESET message.

Backwards Compatibility:

There is no impact upon the ASN.1 transfer syntax.

Isolated Impact:

It may only have an impact upon the Reset Procedure, in that some interpretations of early releases of this specification may interpret that this *Service Areas List* IE is the same sequence as in the RESET message.

***Clauses affected:*** ⌘ 9.2.6

***Other specs affected:*** ⌘

| | | |
|---|---|---|
| **X** | Other core specifications | 25.419 v3.6.0 CR65 |
| ☐ | Test specifications | |
| ☐ | O&M Specifications | |

***Other comments:*** ⌘

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

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

# 8.6 Reset

## 8.6.1 General

The purpose of the Reset procedure is to end broadcasting in one or more Service Areas in the RNC.

## 8.6.2 Successful Operation

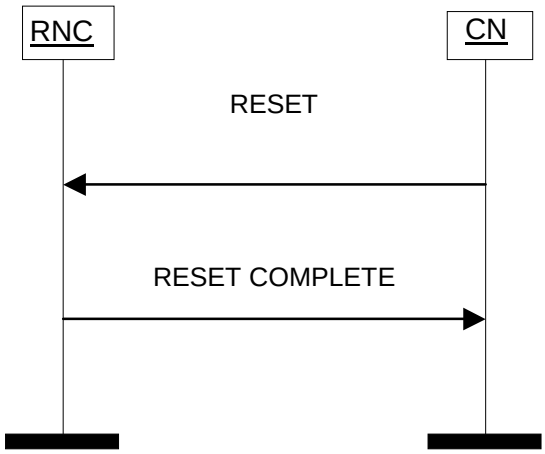


**Figure 9: Reset Procedure: Successful Operation**

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It may also be used by the CN to inquire about the Service Area broadcasting operational state of Service Area(s) who had earlier indicated as having failed.

Upon receipt of this message the RNC shall end broadcasting in the indicated Service Area(s) and shall respond using a RESET COMPLETE message.

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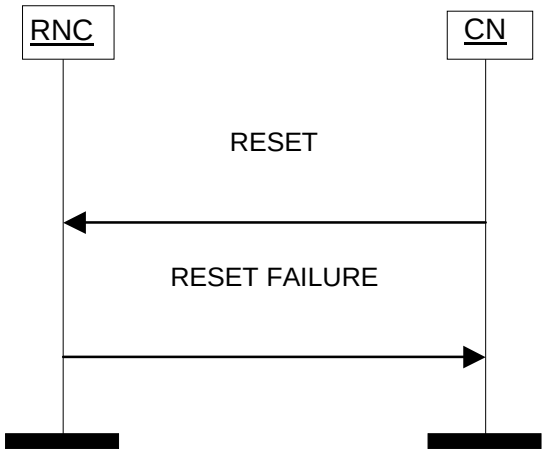


**Figure 10: Reset Procedure: Un-Successful Operation**

If upon receipt of this message the RNC can not end broadcasting in the indicated Service Area(s), it shall respond using a RESET FAILURE message. The RESET FAILURE message may contain~~ing~~ the *Service Areas List* IE and shall contain the ~~the~~ *Failure List* IE indicating the relevant Service Area(s) in which the RESET message was successful and unsuccessful respectively, along with ~~and~~ the appropriate cause value.

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### 8.6.4 Abnormal Conditions

NEXT OF CHANGE

## 9.2.6 Service Areas List

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END OF CHANGES