Technical Specification Group Radio Access Network
Marco Island, USA 4 - 7 June 2002

RP#16(02) 0404

TSG_Doc_Num	Specification	CR_Num	Revision_Num	3G_Release	CR_Subject	CR_Category	Cur_Ver_Num	New_Ver_Num	Tdoc_Num	WorkItem
RP-020404	25.419	095	2	R99	Criticality Information Decoding Failure Handling	F	3.8.0	3.9.0	R3-021181	TEI
RP-020404	25.419	096	2	Rel-4	Criticality Information Decoding Failure Handling	A	4.4.0	4.5.0	R3-021180	TEI
RP-020404	25.419	097		Rel-5	Criticality Information Decoding Failure Handling	A	5.0.0	5.1.0	R3-021179	TEI
RP-020404	25.419	098	1	R99	Clarification for the usage of the cause value	F	3.8.0	3.9.0	R3-021499	TEI
RP-020404	25.419	099	1	Rel-4	Clarification for the usage of the cause value	A	4.4.0	4.5.0	R3-021500	TEI
RP-020404	25.419	100	1	Rel-5	Clarification for the usage of the cause value	A	5.0.0	5.1.0	R3-021501	TEI
RP-020404	25.419	101		R99	Write-Replace Procedure Clarification	F	3.8.0	3.9.0	R3-021476	TEI
RP-020404	25.419	102		Rel-4	Write-Replace Procedure Clarification	A	4.4.0	4.5.0	R3-021477	TEI
RP-020404	25.419	103		Rel-5	Write-Replace Procedure Clarification	A	5.0.0	5.1.0	R3-021478	TEI

3GPP TSG-RAN3 Meeting #29
Gyeongju, Korea, 13th – 17th May 2002

Tdoc R3-021181

CR-Form-v5

CHANGE REQUEST

⌘ **25.419** **CR** **095** ⌘ **rev** **2** ⌘ Current version: **3.8.0** ⌘

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

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

Title:	⌘	Criticality Information Decoding Failure Handling
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	May, 2002
Category:	⌘	**F**
Release:	⌘	R99

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

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

Reason for change:	⌘	Section 10.3.2 specifies that "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". As all decoding errors result in an Error Indication procedure being sent with a cause value of Transfer Syntax error as specified in section 10.2, this specification statement is not required and causes confusion.
Summary of change:	⌘	The above-mentioned specification statement in section 10.3.2 is removed. Impact analysis Impact assessment towards the previous version of the specification (same release): The CR has isolated impact with the previous version of the specification (same release). The impact can be considered isolated because the change affects one (or more) system function(s), namely the error handling function and has the possibility to affect existing implementations even though the change is functional and protocol compatible.
Consequences if not approved:	⌘	The specification statement seems to indicate that when the criticality information cannot be decoded, it needs to be handled in a different way from handling Transfer Syntax protocol error. If not approved, this ambiguity will persist.

Clauses affected:	⌘	10.3.2		
Other specs affected:	⌘	**X** Other core specifications	⌘	25.413 R99 CR 412, 25.413 R4 CR 413, 25.413 R5 CR 437, 25.419 R4 CR 096, 25.419 R5 CR 097, 25.423 R99 CR 590, 25.423 R4 CR 591, 25.423 R5 CR 599, 25.433 R99 CR 630, 25.433 R4 CR 631, 25.433 R5 CR 633, 25.453 R5 CR 017
		☐ Test specifications		None.

	☐ 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 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) result 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.

10.3.2 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, 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 SABP-PROTOCOL-IES, SABP-PROTOCOL-IES-PAIR, SABP-PROTOCOL-EXTENSION or 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.

10.3.4 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

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CHANGE REQUEST

⌘ **25.419** **CR** **096** ⌘ **rev** **2** ⌘ Current version: **4.4.0** ⌘

*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:	⌘	Criticality Information Decoding Failure Handling
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	May, 2002
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
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2 (GSM Phase 2)
R96 (Release 1996)
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R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	Section 10.3.2 specifies that "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". As all decoding errors result in an Error Indication procedure being sent with a cause value of Transfer Syntax error as specified in section 10.2, this specification statement is not required and causes confusion.
Summary of change:	⌘	The above-mentioned specification statement in section 10.3.2 is removed. Impact analysis Impact assessment towards the previous version of the specification (same release): The CR has isolated impact with the previous version of the specification (same release). The impact can be considered isolated because the change affects one (or more) system function(s), namely the error handling function and has the possibility to affect existing implementations even though the change is functional and protocol compatible.
Consequences if not approved:	⌘	The specification statement seems to indicate that when the criticality information cannot be decoded, it needs to be handled in a different way from handling Transfer Syntax protocol error. If not approved, this ambiguity will persist.

Clauses affected:	⌘	10.3.2		
Other specs affected:	⌘	**X** Other core specifications	⌘	25.413 R99 CR 412, 25.413 R4 CR 413, 25.413 R5 CR 437, 25.419 R99 CR 095, 25.419 R5 CR 097, 25.423 R99 CR 590, 25.423 R4 CR 591, 25.423 R5 CR 599, 25.433 R99 CR 630, 25.433 R4 CR 631, 25.433 R5 CR 633, 25.453 R5 CR 017
		☐ Test specifications		None.

	☐ O&M Specifications	
Other comments:	⌘	

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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) result 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.

10.3.2 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.

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

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~~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, 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 SABP-PROTOCOL-IES, SABP-PROTOCOL-IES-PAIR, SABP-PROTOCOL-EXTENSION or 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.

10.3.4 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

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Tdoc R3-021179

CR-Form-v5

CHANGE REQUEST

⌘ **25.419** **CR** **097** ⌘ **rev** **-** ⌘ Current version: **5.0.0** ⌘

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

Title:	⌘	Criticality Information Decoding Failure Handling
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	May, 2002
Category:	⌘	**A**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
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Consequences if not approved:	⌘	The specification statement seems to indicate that when the criticality information cannot be decoded, it needs to be handled in a different way from handling Transfer Syntax protocol error. If not approved, this ambiguity will persist.

Clauses affected:	⌘			10.3.2
Other specs affected:	⌘	**X**	Other core specifications	⌘ 25.413 R99 CR 412, 25.413 R4 CR 413, 25.413 R5 CR 437, 25.419 R99 CR 095, 25.419 R4 CR 096, 25.423 R99 CR 590, 25.423 R4 CR 591, 25.423 R5 CR 599, 25.433 R99 CR 630, 25.433 R4 CR 631, 25.433 R5 CR 633, 25.453 R5 CR 017
		☐	Test specifications	None.

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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) result in rejecting the procedure.

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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.

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- Reject IE;

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For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, 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 SABP-PROTOCOL-IES, SABP-PROTOCOL-IES-PAIR, SABP-PROTOCOL-EXTENSION or SABP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

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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

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10.3.4.2 IEs other than the Procedure Code and Type of Message

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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

⌘	25.419	CR	098	⌘ rev	1	⌘	Current version:	3.8.0	⌘

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

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

Title:	⌘	Clarification for the usage of the cause value
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	2002-May
Category:	⌘	F
Release:	⌘	R99

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

Use one of the following releases:

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

Reason for change: ⌘ The cause value, “Abstract Syntax Error (Ignore and Notify)”, should not be set to the *Cause* IE. Please see R3-020971.

In case of abstract syntax error occurs in the IE which has the criticality of Ignore and Notify, the procedure shall be continue as if that error IE is not present and report in the response message(for class 1), or in Errir Indication (for class 2) that the error IE has been ignored.

However, in the above case, if the receiver further detect an error e.g. sementic error which should terminate the procedure, it is not clear what cause value(either Abstract Syntax Error (Ignore and Notify) or Sementic Error) shall be set in the failure messsage(for class 1) or Error ndication (for class 2).

Summary of change: ⌘ Rev.1

Impact Analysis statement was corrected.

Rev.0

It was clarified that if an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality “ignore and notify” have earlier occurred within the same procedure.

Consequences if not approved: ⌘ If this CR is not approved, unsuitable cause value might be set to the *Cause* IE.

Impact Analysis:

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

		CR099 on TS25.419v4.4.0 CR100 on TS25.419v5.0.0 CR654 on TS25.423v3.9.0 CR655 on TS25.423v4.4.0 CR656 on TS25.423v5.0.0 CR684 on TS25.433v3.9.0 CR685 on TS25.433v4.4.0 CR686 on TS25.433v5.0.0 CR018 on TS25.453v5.3.0
affected:	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:

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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.

10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other subclauses of clause 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.

- 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.

- If an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality "ignore and notify" have earlier occurred within the same procedure.

⌘	25.419	CR	099	⌘ rev	1	⌘	Current version:	4.4.0	⌘

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

Title:	⌘	Clarification for the usage of the cause value
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	2002-May
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
- ***F*** *(correction)*
- ***A*** *(corresponds to a correction in an earlier release)*
- ***B*** *(addition of feature),*
- ***C*** *(functional modification of feature)*
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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: ⌘ The cause value, “Abstract Syntax Error (Ignore and Notify)”, should not be set to the *Cause* IE. Please see R3-020971.

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Summary of change: ⌘ Rev.1

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Rev.0

It was clarified that if an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality “ignore and notify” have earlier occurred within the same procedure.

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Impact Analysis:

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

		CR098 on TS25.419v3.8.0 CR100 on TS25.419v5.0.0 CR654 on TS25.423v3.9.0 CR655 on TS25.423v4.4.0 CR656 on TS25.423v5.0.0 CR684 on TS25.433v3.9.0 CR685 on TS25.433v4.4.0 CR686 on TS25.433v5.0.0 CR018 on TS25.453v5.3.0
affected:	Test specifications O&M Specifications	
Other comments: ⌘		

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⌘	25.419	CR	100	⌘ rev	1	⌘	Current version:	5.0.0	⌘

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

Title:	⌘	Clarification for the usage of the cause value
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	2002-May
Category:	⌘	**A**
Release:	⌘	REL-5

Use one of the following categories:
- ***F*** *(correction)*
- ***A*** *(corresponds to a correction in an earlier release)*
- ***B*** *(addition of feature),*
- ***C*** *(functional modification of feature)*
- ***D*** *(editorial modification)*

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

Use one of the following releases:

2	*(GSM Phase 2)*
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R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change: ⌘ The cause value, “Abstract Syntax Error (Ignore and Notify)”, should not be set to the *Cause* IE. Please see R3-020971.

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Summary of change: ⌘ Rev.1

Impact Analysis statement was corrected.

Rev.0

It was clarified that if an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality “ignore and notify” have earlier occurred within the same procedure.

Consequences if not approved: ⌘ If this CR is not approved, unsuitable cause value might be set to the *Cause* IE.

Impact Analysis:

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

		CR098 on TS25.419v3.8.0 CR099 on TS25.419v4.4.0 CR654 on TS25.423v3.9.0 CR655 on TS25.423v4.4.0 CR656 on TS25.423v5.0.0 CR684 on TS25.433v3.9.0 CR685 on TS25.433v4.4.0 CR686 on TS25.433v5.0.0 CR018 on TS25.453v5.3.0
affected:	Test specifications O&M Specifications	
Other comments: ⌘		

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3GPP TSG-RAN WG3 Meeting #29 ***Tdoc R3-021476***
Gyeongju, South Korea, 13th – 17th May 2002

CR-Form-v5

CHANGE REQUEST

⌘ **25.419** **CR** **101** ⌘ **rev** **-** ⌘ Current version: **3.8.0** ⌘

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

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

Title:	⌘	SABP: WRITE-REPLACE Procedure Clarification
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	9th May 2002
Category:	⌘	**F**
Release:	⌘	R99

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

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

Reason for change:	⌘	The current definition of how an RNC may uniquely identify a CBS message does not align with the description in TS23.041.
Summary of change:	⌘	A rearrangement in the wording on how the RNC *uniquely* identifies a CBS message, within the Write-Replace procedure. Impact assessment towards the previous version of the specification (same release): This CR has some impact because the changes now ensure that CBC messages can be uniquely identified by which Service Area a CBS message has been sent to, and not only due to the list of SAs a CBS message has been sent.
Consequences if not approved:	⌘	It will be confusing to all readers how the RNC can uniquely identify a SABP which semantically are the same, whilst also having different message attributes.

Clauses affected:	⌘	8.2.1		
Other specs affected:	⌘	**X** Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.419 V4.4.0 CR102 25.419 V5.0.0 CR103
Other comments:	⌘			

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

8.2 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

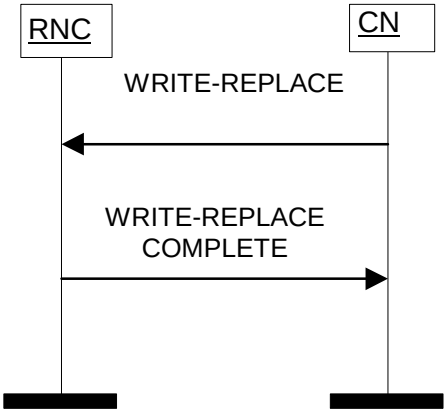

Figure 1: Write-Replace Procedure: Successful Operation

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 Area~~s~~ Identifier~~List~~* IE.

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

- The *Category* IE, if given in the WRITE-REPLACE message, shall be treated as follows:

  1. If the value of *Category* IE is indicated as "High Priority", the RNC shall perform the broadcast immediately;

  2. If the value of *Category* IE is indicated as "Background", the RNC shall perform the broadcast when no other broadcast message indicated as "High Priority" or "Normal";

  3. If the value of *Category* IE is indicated as "Normal", the RNC shall perform the broadcast according to the *Repetition Period* IE.

- If the *Category* IE is not given in the WRITE-REPLACE message, the RNC shall perform the broadcast as the same category indicated as "Normal".

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

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

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

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

If the WRITE-REPLACE message sent from the CN:

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

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in the *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.

8.2.3 Unsuccessful Operation

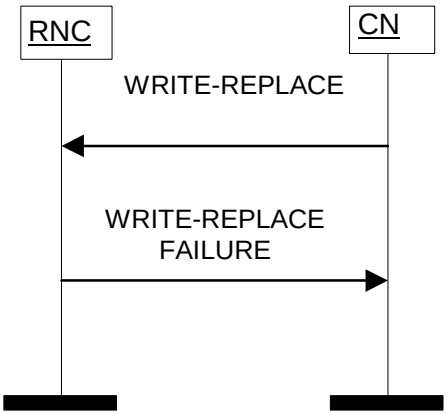

Figure 2: Write-Replace Procedure: Un-Successful Operation

If the RNC cannot allocate all the resources requested for the Service Area(s) specified in the WRITE-REPLACE message, then the RNC shall return a WRITE-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 WRITE-REPLACE message sent from the CN:

- contained a *New Serial Number* IE but not an *Old Serial Number* IE, the *Number of Broadcasts* IE within the *Number of Broadcasts Completed List* IE is set to ‘0’ for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in the *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, but if the *Old Serial Number* IE is unknown to RNC (i.e. it can not execute the kill request), it shall terminate the Write Replace procedure and return a WRITE-REPLACE-FAILURE message with appropriate cause value.

8.2.4 Abnormal Conditions

3GPP TSG-RAN WG3 Meeting #29
Gyeongju, South Korea, 13th – 17th May 2002

Tdoc R3-021477

CR-Form-v5

CHANGE REQUEST

⌘ **25.419** **CR** **102** ⌘ **rev** **-** ⌘ Current version: **4.4.0** ⌘

*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: WRITE-REPLACE Procedure Clarification
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	9th May 2002
Category:	⌘	**F**
Release:	⌘	R4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
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Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	The current definition of how an RNC may uniquely identify a CBS message does not align with the description in TS23.041.
Summary of change:	⌘	A rearrangement in the wording on how the RNC *uniquely* identifies a CBS message, within the Write-Replace procedure. Impact assessment towards the previous version of the specification (same release): This CR has some impact because the changes now ensure that CBC messages can be uniquely identified by which Service Area a CBS message has been sent to, and not only due to the list of SAs a CBS message has been sent.
Consequences if not approved:	⌘	It will be confusing to all readers how the RNC can uniquely identify a SABP which semantically are the same, whilst also having different message attributes.

Clauses affected:	⌘	8.2.1		
Other specs affected:	⌘	**X** Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.419 V3.8.0 CR101 25.419 V5.0.0 CR103
Other comments:	⌘			

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8.2 Write-Replace

8.2.1 General

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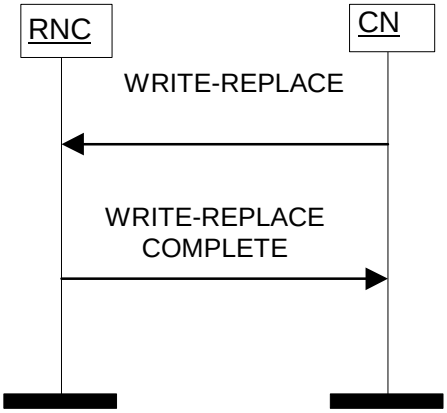
8.2.2 Successful Operation



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- 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.

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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.

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If the WRITE-REPLACE message sent from the CN:

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8.2.3 Unsuccessful Operation

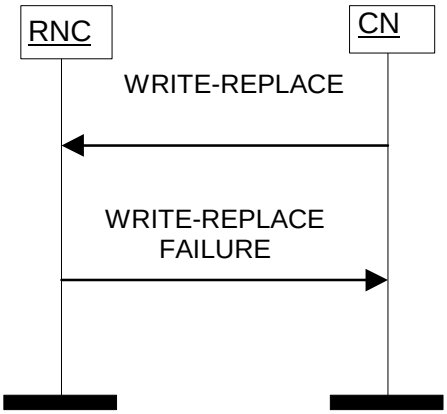

Figure 2: Write-Replace Procedure: Un-Successful Operation

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

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

If the WRITE-REPLACE message sent from the CN:

- contained a *New Serial Number* IE but not an *Old Serial Number* IE, the *Number of Broadcasts* IE within the *Number of Broadcasts Completed List* IE is set to ‘0’ for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE FAILURE message.

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, but if the *Old Serial Number* IE is unknown to RNC (i.e. it can not execute the kill request), it shall terminate the Write Replace procedure and return a WRITE-REPLACE-FAILURE message with appropriate cause value.

8.2.4 Abnormal Conditions

3GPP TSG-RAN WG3 Meeting #29
Gyeongju, South Korea, 13th – 17th May 2002

Tdoc R3-021478

CR-Form-v5

CHANGE REQUEST

⌘ **25.419** **CR** **103** ⌘ **rev** **-** ⌘ Current version: **5.0.0** ⌘

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

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

Title:	⌘	SABP: WRITE-REPLACE Procedure Clarification
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	9th May 2002
Category:	⌘	**F**
Release:	⌘	R5

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

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

Reason for change:	⌘	The current definition of how an RNC may uniquely identify a CBS message does not align with the description in TS23.041.
Summary of change:	⌘	A rearrangement in the wording on how the RNC *uniquely* identifies a CBS message, within the Write-Replace procedure. Impact assessment towards the previous version of the specification (same release): This CR has some impact because the changes now ensure that CBC messages can be uniquely identified by which Service Area a CBS message has been sent to, and not only due to the list of SAs a CBS message has been sent.
Consequences if not approved:	⌘	It will be confusing to all readers how the RNC can uniquely identify a SABP which semantically are the same, whilst also having different message attributes.

Clauses affected:	⌘	8.2.1		
Other specs affected:	⌘	**X** Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.419 V3.8.0 CR101 25.419 V4.4.0 CR102
Other comments:	⌘			

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

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

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

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

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

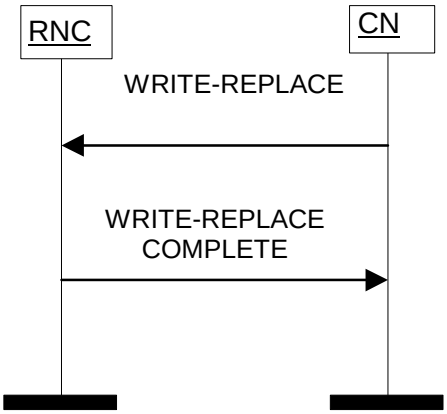

Figure 1: Write-Replace Procedure: Successful Operation

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 Area~~s~~ Identifier~~List~~* IE.

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

- The *Category* IE, if given in the WRITE-REPLACE message, shall be treated as follows:

  1. If the value of *Category* IE is indicated as "High Priority", the RNC shall perform the broadcast immediately;

  2. If the value of *Category* IE is indicated as "Background", the RNC shall perform the broadcast when no other broadcast message indicated as "High Priority" or "Normal";

  3. If the value of *Category* IE is indicated as "Normal", the RNC shall perform the broadcast according to the *Repetition Period* IE.

- If the *Category* IE is not given in the WRITE-REPLACE message, the RNC shall perform the broadcast as the same category indicated as "Normal".

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

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

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

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

If the WRITE-REPLACE message sent from the CN:

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

- contained both the *New Serial Number* IE and the *Old Serial Number* IE, an entry is made in the *Number of Broadcasts* IE in the *Number of Broadcasts Completed List* IE for each included Service Area in the corresponding WRITE-REPLACE COMPLETE message.

8.2.3 Unsuccessful Operation

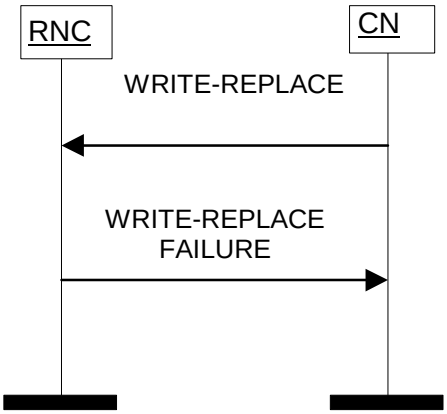

Figure 2: Write-Replace Procedure: Un-Successful Operation

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

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- contained both the *New Serial Number* IE and the *Old Serial Number* IE, but if the *Old Serial Number* IE is unknown to RNC (i.e. it can not execute the kill request), it shall terminate the Write Replace procedure and return a WRITE-REPLACE-FAILURE message with appropriate cause value.

8.2.4 Abnormal Conditions