TSG RAN Meeting #17 Biarritz, France, 3 - 6 September, 2002

RP-020603

Title CRs (R99 and Rel-4/Rel-5 Category A) to TS 25.423

Source TSG RAN WG3

Agenda Item 7.3.3

RAN3 Tdoc	Spec	curr.	new Vers.	REL	CR	Rev	Cat	Title	Work item
		Vers.							
R3-022172	25.423	3.10.0	3.11.0	R99	703	2	F	Correction of the Error Indication	TEI
R3-022173	25.423	4.5.0	4.6.0	REL-4	704	2	Α	Correction of the Error Indication	TEI
R3-022174	25.423	5.2.0	5.3.0	REL-5	705	2	Α	Correction of the Error Indication	TEI
R3-022154	25.423	3.10.0	3.11.0	R99	718	1	F	Correction to Compressed Mode in RL Addition Failure	TEI
R3-022155	25.423	4.5.0	4.6.0	REL-4	719	1	Α	Correction to Compressed Mode in RL Addition Failure	TEI
R3-022156	25.423	5.2.0	5.3.0	REL-5	720	1	Α	Correction to Compressed Mode in RL Addition Failure	TEI

Use one of the following releases: (GSM Phase 2)

(Release 1996)

(Release 1997)

(Release 1998)

(Release 1999)

(Release 4)

(Release 5)

(Release 6)

2

R96

R97

R98

R99

Rel-4

Rel-5

Rel-6

3GPP TSG-RAN3 Meeting #31 Stockholm, Sweden, August 19th – 23rd 2002

							00.5	
CHANGE REQUEST								
*	25.4	23 CR 703	жre	v 2	¥	Current versi	on: 3.10.0 **	
For HELP on using this form, see bottom of this page or look at the pop-up text over the x symbols.								
Proposed chang	ge affects:	UICC apps 	ME	Ra	dio A	ccess Networl	⟨ <mark>X</mark> Core Network	ζ
Title:	₩ Correc	ction to the Error Ir	ndication pro	ocedure				
Source:	≋ RAN \	WG3						
Work item code.	:₩ <mark>TEI</mark>					Date: ₩	16/08/2002	
Category:	ж Е					Release: #	R99	

A (corresponds to a correction in an earlier release)

Reason for change: # R2:

The "UE Context" was changed to "UE" in the last sentence of the second paragraph, as the concept "UE Context" is only applicable to DRNC.

R1:

The terms "valid" and "Invalid" RNTIs are removed and instead it is referred to whether the RNTI exists or not.

- Wrong Tdoc number.

Use <u>one</u> of the following categories:

C (functional modification of feature)

Detailed explanations of the above categories can

B (addition of feature),

be found in 3GPP TR 21.900.

D (editorial modification)

F (correction)

R0:

The current text in the Error Indication procedure is ambiguous, as it does not clearly states that only one RNTI shall be included in the Error Indication message which is sent using connectionless mode. More than one RNTI could in fact cause ambiguities which UE context this belongs to and this was never intended when including the RNTI in the Error Indication, please see RNSAP CR408R1 approved at RAN3#21: "The IEs shall be included, the S-RNTI in the SRNC direction and D-RNTI in the DRNC direction". In addition, in the case of invalid RNTI, the right RNTI (i.e. the S-RNTI in direction towards the SRNC and D-RNTI in the direction towards the DRNC) may not be available and therefore the exiting procedure text indicates that invalid RNTI which is received in the message triggering the error shall be included, e.g. if the D-RNTI which was included in the DOWNLINK SIGNALLING TRANSFER REQUEST message is invalid, the ERROR INDICATION message would included the invalid D-RNTI. In other error cases than "invalid RNTI", the DRNC would have included the S-RNTI in the ERROR INDICATION message.

Summary of change: # The ambiguity is removed by making sure that only one RNTI shall be included in the ERROR INDICATION message at a time when using the connectionless mode of the signalling bearer. Consequences if If this CR is not approved, an ambiguity, which can lead to interoperability issues, not approved: persists in the specification. Impact Analysis: Impact assessment towards the previous version of the specification (same release): This CR has no impact on the previous version of the specification (same release) for implementations aligned to the intended behaviour of the specification. For implementations based otherwise on different assumptions, this CR may have isolated/non isolated impact, depending on single implementation choices.

Clauses affected:	ж	8	.5.1			
		Υ	N			
Other specs	Ж	Υ		Other core specifications #	3	RNSAP Rel-4 (CR704), RNSAP Rel-5 (CR705)
affected:			N	Test specifications		
			N	O&M Specifications		
Other comments:	\mathfrak{R}					

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked \(\mathcal{H} \) 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.

8.5.1 Error Indication

8.5.1.1 General

The Error Indication procedure is initiated by a node to report detected errors in a received message, provided they cannot be reported by an appropriate response message.

This procedure shall use the signalling bearer mode specified below.

8.5.1.2 Successful Operation



Figure 30: Error Indication procedure, Successful Operation

When the conditions defined in clause 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node. This message shall use the same mode of the signalling bearer and the same signalling bearer connection (if connection oriented) as the message that triggers the procedure.

When the ERROR INDICATION message is sent from a DRNC to an SRNC using connectionless mode of the signalling bearer, the *S-RNTI* IE shall be included in the message if available_the UE Context addressed by the *D-RNTI* IE which was received in the message triggering the Error Indication procedure was valid exists. When the ERROR INDICATION message is sent from an SRNC to a DRNC using connectionless mode of the signalling bearer, the *D-RNTI* IE shall be included in the message if available_the UE addressed by the *S-RNTI* IE which was received in the message triggering the Error Indication procedure was valid exists.

When a message using connectionless mode of the signalling bearer is received in the DRNC and there is no for a specified UE Context in athe DRNC as indicated by the with an invalid D-RNTI IE, the DRNC shall include the D-RNTI from the received message in the D-RNTI IE in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

When a message using connectionless mode of the signalling bearer is received in the SRNC and there is no for a specified UE in an the SRNC with an invalid as indicated by the SRNTI IE, the SRNC shall include the S-RNTI from the received message in the S-RNTI IE in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

The ERROR INDICATION message shall include either the *Cause* IE, or the *Criticality Diagnostics* IE, or both the *Cause* IE and the *Criticality Diagnostics* IE.

Typical cause values for the ERROR INDICATION message are:

Protocol Causes:

- Transfer Syntax Error
- Abstract Syntax Error (Reject)
- Abstract Syntax Error (Ignore and Notify)
- Message not Compatible with Receiver State
- Unspecified

ME Radio Access Network X Core Network

3GPP TSG-RAN3 Meeting #31 Stockholm, Sweden, August 19th – 23rd 2002

UICC apps₩

				CHAN	GE REQ	UE	ST	-		CR-Form-v7
¥		25.423	CR	704	≋ rev	2	ж	Current version:	4.5.0	ж
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the # symbols.										

Title:	¥	Correction to the Error Indication pro-	cedure		
Source:	\mathfrak{H}	RAN WG3			
Work item code	:#	TEI		Date: ♯	16/08/2002
Cotomorus	40	۸		Dalassa, &	Dol 4
Category:	**	Use one of the following categories: F (correction) A (corresponds to a correction in an B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above catego be found in 3GPP TR 21.900.	earlier release)	2 R96 R97 R98 R99 Rel-4 Rel-5	the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)

Reason for change: # R2:

Proposed change affects:

The "UE Context" was changed to "UE" in the last sentence of the second paragraph, as the concept "UE Context" is only applicable to DRNC.

R1:

The terms "valid" and "Invalid" RNTIs are removed and instead it is referred to whether the RNTI exists or not.

The new cause value also added in Rel-4.

R0:

The current text in the Error Indication procedure is ambiguous, as it does not clearly states that only one RNTI shall be included in the Error Indication message which is sent using connectionless mode. More than one RNTI could in fact cause ambiguities which UE context this belongs to and this was never intended when including the RNTI in the Error Indication, please see RNSAP CR408R1 approved at RAN3#21: "The IEs shall be included, the S-RNTI in the SRNC direction and D-RNTI in the DRNC direction". In addition, in the case of invalid RNTI, the right RNTI (i.e. the S-RNTI in direction towards the SRNC and D-RNTI in the direction towards the DRNC) may not be available and therefore the exiting procedure text indicates that invalid RNTI which is received in the message triggering the error shall be included, e.g. if the D-RNTI which was included in the DOWNLINK SIGNALLING TRANSFER REQUEST message is invalid, the ERROR INDICATION message would included the invalid D-RNTI. In other error cases than "invalid RNTI", the DRNC would have included the S-RNTI in the ERROR INDICATION message.

Summary of change: # The ambiguity is removed by making sure that only one RNTI shall be included in

the ERROR INDICATION message at a time when using the connectionless mode of the signalling bearer.

A new cause value added.

Consequences if not approved:

If this CR is not approved, an ambiguity, which can lead to interoperability issues, persists in the specification.

Impact Analysis:

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

This CR has no impact on the previous version of the specification (same release) for implementations aligned to the intended behaviour of the specification. For implementations based otherwise on different assumptions, this CR may have isolated/non isolated impact, depending on single implementation choices.

Impact assessment towards previous release:

No impact (same CR provided on R99). New cause value was introduced in backward compatible way.

Clauses affected:	Ж	8	.5.1	, 9.2.1.5 and 9.3.4		
		Υ	N			
Other specs	Ж	Υ		Other core specifications #	£	RNSAP R99 (CR703), RNSAP Rel-5 (CR705)
affected:			N N	Test specifications O&M Specifications		(01(703)
Other comments:	ж					

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- Message not Compatible with Receiver State
- Unspecified

9.2.1.5 Cause

The purpose of the cause information element is to indicate the reason for a particular event for the whole protocol.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Cause Group				
>Radio Network Layer				
>Radio Network Layer >>Racio Network Layer Cause	M		ENUMERATED (Unknown C-ID, Cell not Available, Power Level not Supported, UL Scrambling Code Already in Use, DL Radio Resources not Available, UL Radio Resources not Available, Measurement not Supported For The Object, Combining Resources Not Available, Combining not Supported, Reconfiguration not Allowed, Requested Configuration not Supported, Synchronisation Failure, Requested Tx Diversity Mode not Supported, Measurement Temporarily not Available, Unspecified, Invalid CM Settings, Reconfiguration CFN not Elapsed, Number of DL Codes Not Supported, Dedicated Transport Channel Type not Supported, UL Shared Channel Type not Supported, UL Shared Channel Type not Supported, UL Spreading Factor not Supported, DL Spreading Factor not Supported, CM not Supported, Transaction not Supported by Destination Node B, RL Already Activated/Allocated,, Number of UL Codes Not Supported, Cell reserved for operator use, DPC Mode Change not Supported, Information temporarily not available, Information Provision not supported for the object, dummy1, dummy2, dummy3, Unknown RNTI)	
>Transport Layer				
>>Transport Layer Cause	M		ENUMERATED (Transport Resource Unavailable, Unspecified,)	
>Protocol		-		
>>Protocol Cause >Misc	М		ENUMERATED (Transfer Syntax Error, Abstract Syntax Error (Reject), Abstract Syntax Error (Ignore and Notify), Message not Compatible with Receiver State, Semantic Error, Unspecified, Abstract Syntax Error (Falsely Constructed Message),)	
>>Miscellaneous Cause	M		ENUMERATED (Control Processing Overload, Hardware Failure, O&M Intervention, Not enough User Plane Processing Resources, Unspecified,)	

CR page 5

The meaning of the different cause values is described in the following table. In general, "not supported" cause values indicate that the concerned capability is missing. On the other hand, "not available" cause values indicate that the concerned capability is present, but insufficient resources were available to perform the requested action.

Radio Network Layer causeMeaningCell not AvailableThe concerned cell is not availableCell reserved for operator useThe concerned cell is reserved for operator useCombining not SupportedThe DRNS does not support the RL combining for the concerned cell combining Resources NotAvailableThe value of the received Diversity Control Field IE was set to 'Mu but the DRNS cannot perform the requested combiningCM not SupportedThe concerned cell(s) do not support Compressed Mode	.11.
Combining not Supported The DRNS does not support the RL combining for the concerned combining Resources Not Available The value of the received <i>Diversity Control Field</i> IE was set to 'Mu but the DRNS cannot perform the requested combining CM not Supported The concerned cell(s) do not support Compressed Mode	11.
Combining not Supported The DRNS does not support the RL combining for the concerned combining Resources Not Available The value of the received <i>Diversity Control Field</i> IE was set to 'Mu but the DRNS cannot perform the requested combining CM not Supported The concerned cell(s) do not support Compressed Mode	. 11 .
Combining Resources Not Available The value of the received Diversity Control Field IE was set to 'Mu but the DRNS cannot perform the requested combining CM not Supported The concerned cell(s) do not support Compressed Mode	elis
Available but the DRNS cannot perform the requested combining CM not Supported The concerned cell(s) do not support Compressed Mode	
CM not Supported The concerned cell(s) do not support Compressed Mode	
Common Transport Channel Type The concerned cell(s) do not support the RACH and/or FACH and/or	or
not Supported CPCH Common Transport Channel Type	
Dedicated Transport Channel Type The concerned cell(s) do not support the Dedicated Transport Chan	nel
not Supported Type	
DL Radio Resources not Available The DRNS does not have sufficient DL radio resources available	
DL SF not Supported The concerned cell(s) do not support the requested DL SF	
DL Shared Channel Type not The concerned cell(s) do not support the Downlink Shared Channel	Type
Supported	
DPC Mode Change not Supported The concerned cells do not support the DPC mode changes	
Information Provision not The RNS doesn't support provision of the requested information fo	r the
supported for the object concerned object types	
Information temporarily not The RNS can temporarily not provide the requested information	
available	•
Invalid CM Settings The concerned cell(s) consider the requested Compressed Mode set	tings
invalid	
Measurement not Supported For At least one of the concerned cell(s) does not support the requested	
The Object measurement on the concerned object type	1
Measurement Temporarily not The DRNS can temporarily not provide the requested measurement	varue
Available Number of DL Codes not The concerned cell(s) do not support the requested number of DL c	odos
Number of DL Codes not Supported The concerned cell(s) do not support the requested number of DL c	bues
Number of UL Codes not The concerned cell(s) do not support the requested number of UL c	odes
Supported The concerned cents, do not support the requested number of OE c	oues
Power Level not Supported A DL power level was requested which the concerned cell(s) do no	t
support	
Reconfiguration CFN not Elapsed The requested action cannot be performed due to that a COMMIT	
message was received previously, but the concerned CFN has not y	et
elapsed	
Reconfiguration not Allowed The SRNC does currently not allow the requested reconfiguration	
Requested Configuration not The concerned cell(s) do not support the requested configuration i.e.	:.
Supported power levels, Transport Formats, physical channel parameters,	
Requested Tx Diversity mode not The concerned cell(s) do not support the requested transmit diversit	y
Supported mode	
RL Already Activated/ Allocated The DRNS has already allocated an RL with the requested RL ID for	or this
UE Context	
Synchronisation Failure Loss of UL Uu synchronisation	41
Transaction not Supported by The requested action cannot be performed due to lack of support of corresponding action in the dectination Node P.	ıne
Destination Node B corresponding action in the destination Node B	
UL Radio Resources not Available The DRNS does not have sufficient UL radio resources available UL Scrambling Code Already in The concerned UL scrambling code is already in use for another UL	7
UL Scrambling Code Already in Use The concerned UL scrambling code is already in use for another UI Use	ن
UL SF not Supported The concerned cell(s) do not support the requested minimum UL SI	7
UL Shared Channel Type not The concerned cell(s) do not support the requested minimum CE Si The concerned cell(s) do not support the Uplink Shared Channel Type	
Supported The concerned cents, do not support the opinik shared channel Ty	r.
Unknown C-ID The DRNS is not aware of a cell with the provided C-Id	
Unknown RNTI The SRNC or DRNC is not aware of a UE indicated with the provided of the provide	led
RNTI	

Unspecified	Sent when none of the above cause values applies but still the cause is
	Radio Network Layer related

Transport Network Layer cause	Meaning
Transport resource unavailable	The required transport resources are not available
Unspecified	Sent when none of the above cause values applies but still the cause is
	Transport Network Layer related

Protocol cause	Meaning
Abstract Syntax Error (Reject)	The received message included an abstract syntax error and the
	concerned criticality indicated "reject" (see subclause 10.3)
Abstract Syntax Error (Ignore and	The received message included an abstract syntax error and the
Notify)	concerned criticality indicated "ignore and notify" (see subclause 10.3)
Abstract syntax error (falsely	The received message contained IEs or IE groups in wrong order or with
constructed message)	too many occurrences (see subclause 10.3)
Message not Compatible with	The received message was not compatible with the receiver state (see
Receiver State	subclause 10.4)
Semantic Error	The received message included a semantic error (see subclause 10.4)
Transfer Syntax Error	The received message included a transfer syntax error (see subclause
	10.2)
Unspecified	Sent when none of the above cause values applies but still the cause is
	Protocol related

Miscellaneous cause	Meaning
Control Processing Overload	DRNS control processing overload
Hardware Failure	DRNS hardware failure
Not enough User Plane Processing	DRNS has insufficient user plane processing resources available
Resources	
O&M Intervention	Operation and Maintenance intervention related to DRNS equipment
Unspecified	Sent when none of the above cause values applies and the cause is not
	related to any of the categories Radio Network Layer, Transport Network
	Layer or Protocol.

9.3.4 Information Element Definitions

<Not affected part is omitted>

```
-- C
Cause ::= CHOICE {
    radioNetwork
                        CauseRadioNetwork,
    transport
                        CauseTransport,
    protocol
                        CauseProtocol,
                        CauseMisc,
    misc
}
CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
}
{\tt CauseRadioNetwork ::= ENUMERATED } \{
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    combining-not-supported,
    reconfiguration-not-allowed,
    requested-configuration-not-supported,
    synchronisation-failure,
    requested-tx-diversity-mode-not-supported,
    measurement-temporaily-not-available,
    unspecified,
    invalid-CM-settings,
    reconfiguration-CFN-not-elapsed,
    number-of-DL-codes-not-supported,
    dedicated-transport-channel-type-not-supported,
    dl-shared-channel-type-not-supported,
    \verb"ul-shared-channel-type-not-supported",
    common-transport-channel-type-not-supported,
    ul-spreading-factor-not-supported,
    dl-spreading-factor-not-supported,
    cm-not-supported,
    transaction-not-supported-by-destination-node-b,
    rl-already-activated-or-alocated,
    number-of-UL-codes-not-supported,
```

```
cell-reserved-for-operator-use,
   dpc-mode-change-not-supported,
   information-temporarily-not-available,
   information-provision-not-supported-for-the-object,
   dummy1,
   dummy2,
   dummy3,
   unknown-RNTI
}

CauseTransport ::= ENUMERATED {
   transport-resource-unavailable,
   unspecified,
   ...
}
```

ME Radio Access Network X Core Network

3GPP TSG-RAN3 Meeting #31 Stockholm, Sweden, August 19th – 23rd 2002

UICC apps策

CHANGE REQUEST							CR-Form-v7	
*	25.423 C	R <mark>705</mark>	≋ rev	2	ж	Current version:	5.2.0	æ
For <u>HI</u>	For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the \$\mathbb{x} symbols.							

Title:	ж	Correction to the Error Indication procedu	ire		
Source:	ж	RAN WG3			
Work item code	<i>-</i> ₩	TEI		Date: ೫	16/08/2002
Work hem code	. 00	121		Date. 00	10/00/2002
Category:	\mathfrak{R}	A		Release: 眯	Rel-5
		Use one of the following categories:		Use <u>one</u> of	the following releases:
		F (correction)		2	(GSM Phase 2)
		A (corresponds to a correction in an earlie	er release)	R96	(Release 1996)
		B (addition of feature),		R97	(Release 1997)
		C (functional modification of feature)		R98	(Release 1998)
		D (editorial modification)		R99	(Release 1999)
		Detailed explanations of the above categories of	can	Rel-4	(Release 4)
		be found in 3GPP <u>TR 21.900</u> .		Rel-5	(Release 5)
				Rel-6	(Release 6)

Reason for change: # R2:

Proposed change affects:

The "UE Context" was changed to "UE" in the last sentence of the second paragraph, as the concept "UE Context" is only applicable to DRNC.

R1:

The terms "valid" and "Invalid" RNTIs are removed and instead it is referred to whether the RNTI exists or not.

ASN.1 was updated due to addition of the cause value in Rel-4.

R0:

The current text in the Error Indication procedure is ambiguous, as it does not clearly states that only one RNTI shall be included in the Error Indication message which is sent using connectionless mode. More than one RNTI could in fact cause ambiguities which UE context this belongs to and this was never intended when including the RNTI in the Error Indication, please see RNSAP CR408R1 approved at RAN3#21: "The IEs shall be included, the S-RNTI in the SRNC direction and D-RNTI in the DRNC direction". In addition, in the case of invalid RNTI, the right RNTI (i.e. the S-RNTI in direction towards the SRNC and D-RNTI in the direction towards the DRNC) may not be available and therefore the exiting procedure text indicates that invalid RNTI which is received in the message triggering the error shall be included, e.g. if the D-RNTI which was included in the DOWNLINK SIGNALLING TRANSFER REQUEST message is invalid, the ERROR INDICATION message would included the invalid D-RNTI. In other error cases than "invalid RNTI", the DRNC would have included the S-RNTI in the ERROR INDICATION message.

Summary of change: # The ambiguity is removed by making sure that only one RNTI shall be included in

the ERROR INDICATION message at a time when using the connectionless mode of the signalling bearer. New cause value added.

Consequences if not approved:

If this CR is not approved, an ambiguity, which can lead to interoperability issues, persists in the specification.

Impact Analysis:

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

This CR has no impact on the previous version of the specification (same release) for implementations aligned to the intended behaviour of the specification. For implementations based otherwise on different assumptions, this CR may have isolated/non isolated impact, depending on single implementation choices.

Impact assessment towards previous release(s):
No impact (same CR provided on R99 and Rel-4). New cause value was introduced in backward compatible way.

Clauses affected:	第 8.5.1, 9.2.1.5 and 9.3.4						
		Υ	N				
Other specs	Ж	Υ		Other core specifications	ĸ	RNSAP R99 (CR703), RNSAP Rel-4 (CR704)	
affected:			N	Test specifications O&M Specifications		(CR704)	
Other comments:	¥						

How to create CRs using this form:

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8.5.1 Error Indication

8.5.1.1 General

The Error Indication procedure is initiated by a node to report detected errors in a received message, provided they cannot be reported by an appropriate response message.

This procedure shall use the signalling bearer mode specified below.

8.5.1.2 Successful Operation

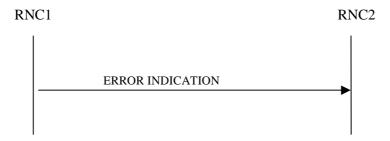


Figure 30: Error Indication procedure, Successful Operation

When the conditions defined in clause 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node. This message shall use the same mode of the signalling bearer and the same signalling bearer connection (if connection oriented) as the message that triggers the procedure.

When the ERROR INDICATION message is sent from a DRNC to an SRNC using connectionless mode of the signalling bearer, the *S-RNTI* IE shall be included in the message if available_the UE Context addressed by the *D-RNTI* IE which was received in the message triggering the Error Indication procedure was valid exists. When the ERROR INDICATION message is sent from an SRNC to a DRNC using connectionless mode of the signalling bearer, the *D-RNTI* IE shall be included in the message if available_the UE addressed by the *S-RNTI* IE which was received in the message triggering the Error Indication procedure was valid exists.

When a message using connectionless mode of the signalling bearer is received in the DRNC and there is no for a specified UE Context in athe DRNC as indicated by the with an invalid D-RNTI IE, the DRNC shall include the D-RNTI from the received message in the D-RNTI IE and set the Cause IE to "Unknown RNTI" in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

When a message using connectionless mode of the signalling bearer is received in the SRNC and there is no for a specified UE in an the SRNC with an invalid as indicated by the S-RNTI IE, the SRNC shall include the S-RNTI from the received message in the S-RNTI IE and set the Cause IE to "Unknown RNTI" in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

The ERROR INDICATION message shall include either the *Cause* IE, or the *Criticality Diagnostics* IE, or both the *Cause* IE and the *Criticality Diagnostics* IE.

Typical cause values for the ERROR INDICATION message are:

Protocol Causes:

- Transfer Syntax Error
- Abstract Syntax Error (Reject)
- Abstract Syntax Error (Ignore and Notify)
- Message not Compatible with Receiver State
- Unspecified

9.2.1.5 Cause

The purpose of the cause information element is to indicate the reason for a particular event for the whole protocol.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Cause Group				
>Radio Network Layer				
>>Radio Network Layer Cause	M		ENUMERATED (Unknown C-ID, Cell not Available, Power Level not Supported, UL Scrambling Code Already in Use, DL Radio Resources not Available, Measurement not Supported For The Object, Combining Resources Not Available, Combining Resources Not Available, Reconfiguration not Allowed, Requested Configuration not Supported, Synchronisation Failure, Requested Tx Diversity Mode not Supported, Measurement Temporarily not Available, Unspecified, Invalid CM Settings, Reconfiguration CFN not Elapsed, Number of DL Codes Not Supported, Dedicated Transport Channel Type not Supported, UL Shared Channel Type not Supported, UL Shared Channel Type not Supported, UL Spreading Factor not Supported, DL Spreading Factor not Supported, CM not Supported, Transaction not Supported by Destination Node B, RL Already Activated/Allocated,, Number of UL Codes Not Supported, Cell reserved for operator use, DPC Mode Change not Supported, Information temporarily not available, Information Provision not supported, Information Provision not supported, Power Balancing status not compatible, Delayed Activation not Supported, RL Timing Adjustment Not Supported, Unknown RNTI)	
>Transport Layer			,	
>>Transport Layer Cause	M		ENUMERATED (Transport Resource Unavailable, Unspecified,)	
>Protocol			ENHIMEDATES	
>>Protocol Cause	M		ENUMERATED (Transfer Syntax Error, Abstract Syntax Error (Reject), Abstract Syntax Error (Ignore and Notify), Message not Compatible with Receiver State, Semantic Error, Unspecified, Abstract Syntax Error (Falsely Constructed Message),)	
	M		ENUMERATED	
>>Miscellaneous Cause	M		(Control Processing Overload, Hardware Failure, O&M Intervention, Not enough User Plane Processing	

CR page 5

	Resources,	
	Unspecified,)	

The meaning of the different cause values is described in the following table. In general, "not supported" cause values indicate that the concerned capability is missing. On the other hand, "not available" cause values indicate that the concerned capability is present, but insufficient resources were available to perform the requested action.

Radio Network Layer cause	Meaning
Cell not Available	The concerned cell is not available
Cell reserved for operator use	The concerned cell is reserved for operator use
Combining not Supported	The DRNS does not support the RL combining for the concerned cells
Combining Resources Not	The value of the received <i>Diversity Control Field</i> IE was set to 'Must',
Available	but the DRNS cannot perform the requested combining
CM not Supported	The concerned cell(s) do not support Compressed Mode
Common Transport Channel Type	The concerned cell(s) do not support the RACH and/or FACH and/or
not Supported	CPCH Common Transport Channel Type
Dedicated Transport Channel Type	The concerned cell(s) do not support the Dedicated Transport Channel
not Supported	Туре
Delayed Activation not Supported	The concerned cell(s) do not support delayed activation of RLs
DL Radio Resources not Available	The DRNS does not have sufficient DL radio resources available
DL SF not Supported	The concerned cell(s) do not support the requested DL SF
DL Shared Channel Type not Supported	The concerned cell(s) do not support the Downlink Shared Channel Type
DPC Mode Change not Supported	The concerned cells do not support the DPC mode changes
Information Provision not	The RNS doesn't support provision of the requested information for the
supported for the object	concerned object types
Information temporarily not	The RNS can temporarily not provide the requested information
available	
Invalid CM Settings	The concerned cell(s) consider the requested Compressed Mode settings
	invalid
Measurement not Supported For	At least one of the concerned cell(s) does not support the requested
The Object	measurement on the concerned object type
Measurement Temporarily not	The DRNS can temporarily not provide the requested measurement value
Available	
Number of DL Codes not	The concerned cell(s) do not support the requested number of DL codes
Supported	
Number of UL Codes not	The concerned cell(s) do not support the requested number of UL codes
Supported	
Power Level not Supported	A DL power level was requested which the concerned cell(s) do not
Dovver Delensing status not	support The power balancing status in the SRNC is not compatible with that of
Power Balancing status not compatible	the DRNC.
RL Timing Adjustment not	The concerned cell(s) do not support adjustments of the RL timing
Supported	The concerned cen(s) do not support adjustments of the RE thining
Reconfiguration CFN not Elapsed	The requested action cannot be performed due to that a COMMIT
Reconfiguration of IV not Enapsed	message was received previously, but the concerned CFN has not yet
	elapsed
Reconfiguration not Allowed	The SRNC does currently not allow the requested reconfiguration
Requested Configuration not	The concerned cell(s) do not support the requested configuration i.e.
Supported	power levels, Transport Formats, physical channel parameters,
Requested Tx Diversity mode not	The concerned cell(s) do not support the requested transmit diversity
Supported	mode
RL Already Activated/ Allocated	The DRNS has already allocated an RL with the requested RL ID for this
-	UE Context
Synchronisation Failure	Loss of UL Uu synchronisation

Transaction not Supported by Destination Node B	The requested action cannot be performed due to lack of support of the corresponding action in the destination Node B
UL Radio Resources not Available	The DRNS does not have sufficient UL radio resources available
UL Scrambling Code Already in	The concerned UL scrambling code is already in use for another UE
Use	
UL SF not Supported	The concerned cell(s) do not support the requested minimum UL SF
UL Shared Channel Type not	The concerned cell(s) do not support the Uplink Shared Channel Type
Supported	
Unknown C-ID	The DRNS is not aware of a cell with the provided C-Id
Unknown RNTI	The SRNC or DRNC is not aware of a UE indicated with the provided
	RNTI
Unspecified	Sent when none of the above cause values applies but still the cause is
	Radio Network Layer related

Transport Network Layer cause	Meaning
Transport resource unavailable	The required transport resources are not available
Unspecified	Sent when none of the above cause values applies but still the cause is
	Transport Network Layer related

Protocol cause	Meaning
Abstract Syntax Error (Reject)	The received message included an abstract syntax error and the
	concerned criticality indicated "reject" (see subclause 10.3)
Abstract Syntax Error (Ignore and	The received message included an abstract syntax error and the
Notify)	concerned criticality indicated "ignore and notify" (see subclause 10.3)
Abstract syntax error (falsely	The received message contained IEs or IE groups in wrong order or with
constructed message)	too many occurrences (see subclause 10.3)
Message not Compatible with	The received message was not compatible with the receiver state (see
Receiver State	subclause 10.4)
Semantic Error	The received message included a semantic error (see subclause 10.4)
Transfer Syntax Error	The received message included a transfer syntax error (see subclause
-	10.2)
Unspecified	Sent when none of the above cause values applies but still the cause is
	Protocol related

Miscellaneous cause	Meaning
Control Processing Overload	DRNS control processing overload
Hardware Failure	DRNS hardware failure
Not enough User Plane Processing	DRNS has insufficient user plane processing resources available
Resources	
O&M Intervention	Operation and Maintenance intervention related to DRNS equipment
Unspecified	Sent when none of the above cause values applies and the cause is not
	related to any of the categories Radio Network Layer, Transport Network
	Layer or Protocol.

9.3.4 Information Element Definitions

<Not affected part is omitted>

```
Cause ::= CHOICE {
    radioNetwork
                        CauseRadioNetwork,
    transport
                       CauseTransport,
                        CauseProtocol,
    protocol
                        CauseMisc,
    misc
CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
}
CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
}
CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    {\tt measurement-not-supported-for-the-object,}
    combining-resources-not-available,
    combining-not-supported,
    reconfiguration-not-allowed,
    requested-configuration-not-supported,
    synchronisation-failure,
    requested-tx-diversity-mode-not-supported,
    measurement-temporaily-not-available,
    unspecified.
    invalid-CM-settings,
    reconfiguration-CFN-not-elapsed,
    number-of-DL-codes-not-supported,
    dedicated-transport-channel-type-not-supported,
    {\tt dl-shared-channel-type-not-supported,}
    \verb"ul-shared-channel-type-not-supported",
    common-transport-channel-type-not-supported,
    ul-spreading-factor-not-supported,
    {\tt dl-spreading-factor-not-supported},
    cm-not-supported,
    transaction-not-supported-by-destination-node-b,
    rl-already-activated-or-alocated,
```

```
number-of-UL-codes-not-supported,
cell-reserved-for-operator-use,
dpc-mode-change-not-supported,
information-temporarily-not-available,
information-provision-not-supported-for-the-object,
power-balancing-status-not-compatible,
delayed-activation-not-supported,
rl-timing-adjustment-not-supported,
unknown-RNTI
}

CauseTransport ::= ENUMERATED {
   transport-resource-unavailable,
   unspecified,
   ...
}
```

ME Radio Access Network X Core Network

3GPP TSG-RAN3 Meeting #31 Stockholm, Sweden, 19th – 23rd August 2002

UICC apps₩

						CR	?-Form-v
CHANGE REQUEST							
*	25.423 CR	718	rev 1	ж	Current version: 3.	10.0 [#]	3
For HELP on using this form, see bottom of this page or look at the pop-up text over the % symbols.							

Title:	ж	Correction to Compressed Mode in RL Addition	Failure	
Source:	\mathfrak{R}	RAN WG3		
Work item code:	: #	TEI	Date: ₩	23/08/2002
Category:	\mathfrak{R}	F	Release: Ж	R99
		Use one of the following categories:		the following releases:
		F (correction)		(GSM Phase 2)
		A (corresponds to a correction in an earlier release	,	(Release 1996)
		B (addition of feature),		(Release 1997)
		C (functional modification of feature)		(Release 1998)
		D (editorial modification)		(Release 1999)
		Detailed explanations of the above categories can		(Release 4)
		be found in 3GPP TR 21.900.		(Release 5)
			Rel-6	(Release 6)

Reason for change:

Proposed change affects:

In the RL Addition Failure message, it states in the Unsuccessful Operation behaviour that "Invalid CM settings" cause value "shall" be returned if the DRNS could not provide the requested compressed mode. This could only be representative of the case where Compressed Mode was not supported in the requested cell. However, the same cause value is also used for abnormal operation, which would cause the SRNC to do domething different than if the cell did not support the feature.

Additionally, there is already a cause value "CM not supported" which could potentially be used for the same failure reason and thus cause IOT issues. Therefore this ambiguity needs to be removed from RNSAP.

Summary of change: ₩

The following paragraph in the Unsuccessful Operation description of the RL Addition Procedure is removed:

"[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE and the DRNS cannot provide the requested compressed mode the DRNS shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]"

Thus enabling it to be clear that the "CM not supported" cause value should be used in the case that the cell does not support compressed mode and removing the error.

Impact Analysis:

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

This CR has *impact* with the previous version of the specification (same release)

because the possibility to signal that CM is not supported with the "Invalid CM Settings" cause is removed.

The impact can be considered *isolated* because the change affects one RNSAP IE, namely the "invalid CM settings" value in the Cause IE.

This CR has an impact under functional point of view.

Consequences if not approved:

If this CR is not approved, there will be ambiguity in that the SRNC would never know that the reason for failure was when Compressed Mode is not supported in a particular cell, and may drop the call when it could have tried to activate compressed mode in another cell.

Clauses affected:	Ж	8.	3.2	.3	
			N		
Other specs	Ж	X		Other core specifications #	TS25.423 v4.5.0 CR719 TS25.423 v5.2.0 CR720
affected:	-		X	Test specifications O&M Specifications	1325.423 V3.2.0 CR720
Other comments:	æ				

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8.3.2.3 Unsuccessful Operation

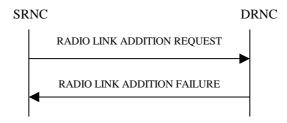


Figure 8: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

If some RL(s) were established successfully, the DRNC shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.

[FDD If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE and the DRNS cannot provide the requested compressed mode the DRNS shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Combining Resources not Available;
- Combining not Supported;
- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- CM not Supported;
- Reconfiguration CFN not Elapsed;
- Number of DL Codes not Supported;
- Number of UL codes not supported;
- Cell reserved for operator use.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

- Control Processing Overload;
- HW Failure;
- Not enough User Plane Processing Resources.

3GPP TSG-RAN3 Meeting #31 Stockholm, Sweden, 19th – 23rd August 2002

Stockholm, Sweden, 19" – 23" August 2002										
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-										
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Propose	d change a	ffects:	JICC a	apps#	ME	Rac	lio A	ccess Network X	Core Ne	twork
-	_					_			_	

Title:	Ж	Correction to Compressed Mode in RL Addition Fa	ilure	
Source:	\mathfrak{R}	RAN WG3		
Work item code:	:	TEI	Date: ₩	23/08/2002
Category:		With 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.	2 R96 R97 R98 R99	Rel-4 the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)

Reason for change: ₩

In the RL Addition Failure message, it states in the Unsuccessful Operation behaviour that "Invalid CM settings" cause value "shall" be returned if the DRNS could not provide the requested compressed mode. This could only be representative of the case where Compressed Mode was not supported in the requested cell. However, the same cause value is also used for abnormal operation, which would cause the SRNC to do domething different than if the cell did not support the feature.

Additionally, there is already a cause value "CM not supported" which could potentially be used for the same failure reason and thus cause IOT issues. Therefore this ambiguity needs to be removed from RNSAP.

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The following paragraph in the Unsuccessful Operation description of the RL Addition Procedure is removed:

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Thus enabling it to be clear that the "CM not supported" cause value should be used in the case that the cell does not support compressed mode and removing the error.

Impact Analysis:

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

This CR has *impact* with the previous version of the specification (same release)

because the possibility to signal that CM is not supported with the "Invalid CM Settings" cause is removed.

The impact can be considered *isolated* because the change affects one RNSAP IE, namely the "invalid CM settings" value in the Cause IE.

This CR has an impact under functional point of view.

Consequences if not approved:

If this CR is not approved, there will be ambiguity in that the SRNC would never know that the reason for failure was when Compressed Mode is not supported in a particular cell, and may drop the call when it could have tried to activate compressed mode in another cell.

Clauses affected:	第 8.3.2.3								
		Y							
Other specs	Ж	Х	Other core specifications #	. 5_5,5 ,					
affected:			Toot on orifications	TS25.423 v5.2.0 CR720					
arrected:)							
	L		_ Cam opcomoations						
Other comments:	\mathfrak{R}								

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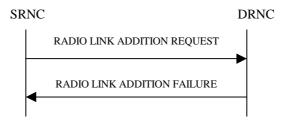


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- UL Radio Resources not Available;
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- Combining not Supported
- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- CM not Supported;
- Reconfiguration CFN not Elapsed;
- Number of DL Codes not Supported;
- Number of UL codes not Supported;
- [FDD DPC mode change not Supported];
- Cell reserved for operator use.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

- Control Processing Overload;
- HW Failure;
- Not enough User Plane Processing Resources.

3GPP TSG-RAN3 Meeting #31 Stockholm, Sweden, 19th – 23rd August 2002

									CR-Form-v7
			CHAN	GE RE	QUE	ST	-		
*	25.42	3 CR	720	жre	/ 1	¥	Current version:	5.2.0	¥
For HELF	on using this	form, see	e bottom o	f this page	or look	at th	ne pop-up text ove	r the ¥ syı	mbols.
Proposed ch	ange affects:	UICC a	apps#	ME	Ra	dio A	Access Network X	Core Ne	etwork

Title:	ж	Correction to Compressed Mode in RL	Addition Failure		
		·			
Source:	\mathfrak{R}	RAN WG3			
Work item code	: #	TEI	Date	e: Ж	23/08/2002
Category:	\mathfrak{R}	A	Release	e: Ж	Rel-5
		Use one of the following categories:	Use <u>on</u>	<u>e</u> of i	the following releases:
		F (correction)	2		(GSM Phase 2)
		A (corresponds to a correction in an ear	lier release) R96	;	(Release 1996)
		B (addition of feature),	R97	•	(Release 1997)
		C (functional modification of feature)	R98	}	(Release 1998)
		D (editorial modification)	R99)	(Release 1999)
		Detailed explanations of the above categories	s can Rel-	4	(Release 4)
		be found in 3GPP <u>TR 21.900</u> .	Rel-	.5	(Release 5)
			Rel-	6	(Release 6)

Reason for change:

In the RL Addition Failure message, it states in the Unsuccessful Operation behaviour that "Invalid CM settings" cause value "shall" be returned if the DRNS could not provide the requested compressed mode. This could only be representative of the case where Compressed Mode was not supported in the requested cell. However, the same cause value is also used for abnormal operation, which would cause the SRNC to do domething different than if the cell did not support the feature.

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Consequences if not approved: If this CR is not approved, there will be ambiguity in that the SRNC may never know when Compressed Mode is not supported in a particular cell, and may drop the call when it could have tried to activate compressed mode in another cell.

Clauses affected:	第 8.3.2.3								
			N						
Other specs	ж	X		Other core specifications	ж	TS25.423 v3.10.0 CR718			
- 65 4 1			V	T		TS25.423 v4.5.0 CR719			
affected:			X	Test specifications					
			X	O&M Specifications					
Other comments:	\mathfrak{R}								

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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://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.

8.3.2.3 Unsuccessful Operation

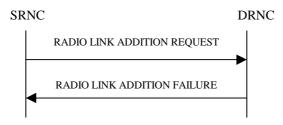


Figure 8: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

If some RL(s) were established successfully, the DRNC shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.

_[FDD _ If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE and the DRNS cannot provide the requested compressed mode the DRNS shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

[FDD - If the accessed cell supports TFCI power control, the DRNC shall include the *TFCI PC Support Indicator* IE in the RADIO LINK ADDITION FAILURE message.]

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Combining Resources not Available;
- Combining not Supported
- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- CM not Supported;
- Reconfiguration CFN not Elapsed;
- Number of DL Codes not Supported;
- Number of UL codes not Supported;
- [FDD DPC mode change not Supported];
- Cell reserved for operator use;
- Delayed Activation not supported.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

- Control Processing Overload;

- HW Failure;
- Not enough User Plane Processing Resources.