

TSG-RAN Meeting #21
Frankfurt, Germany, 16-19 September 2003

RP-030501

Title: CRs (R'99 and linked Rel-4/Rel-5) to TS 25.321

Source: TSG-RAN WG2

Agenda item: 7.3.3

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level	Workitem
25.321	176	-	R99	TFCS selection guidelines for TFC Subset	F	3.15.0	3.16.0	R2-032001	TEI
25.321	177	-	Rel-4	TFCS selection guidelines for TFC Subset	A	4.8.0	4.9.0	R2-032002	TEI
25.321	178	-	Rel-5	TFCS selection guidelines for TFC Subset	A	5.5.0	5.6.0	R2-032003	TEI

CR-Form-v7

CHANGE REQUEST

25.321 CR 176 # rev - # Current version: 3.f.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: UICC apps ME Radio Access Network Core Network

Title:	# TFCS selection guidelines for TFC Subset		
Source:	# RAN WG2		
Work item code:	# TEI	Date:	# 15/08/2003
Category:	# F	Release:	# R99
	Use <u>one</u> 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 earlier 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 can be found in 3GPP TR 21.900 .	Rel-4	(Release 4)
		Rel-5	(Release 5)
		Rel-6	(Release 6)

Reason for change:	# The current specification is not clear about whether the TFCS selection guidelines apply to TFC subsets.
Summary of change:	# It was clarified that the TFCS selection guidelines do apply to TFC subsets and that if these are not followed (even in the case of a TFC subset), the UE behavior is not specified.
Consequences if not approved:	# Network manufacturers may remain unclear about the types of TFC subsets that can be configured reliably.
	Impact Analysis: <ul style="list-style-type: none"> • Impact is isolated to the TFCS selection aspect of RRM (UTRAN) • UE implementation is not relevant as 25.321 is clear on what it shall do

Clauses affected:	# 11.4				
Other specs affected:	#				
	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N				
<input type="checkbox"/>	<input checked="" type="checkbox"/>				
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Y	N				
<input type="checkbox"/>	<input checked="" type="checkbox"/>				
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.

11.4 Transport format combination selection in UE

RRC can control the scheduling of uplink data by giving each logical channel a priority between 1 and 8, where 1 is the highest priority and 8 the lowest. TFC selection in the UE shall be done in accordance with the priorities indicated by RRC. Logical channels have absolute priority, i.e. the UE shall maximise the transmission of higher priority data.

If the uplink TFCS or TFC Subset configured by UTRAN follows the guidelines described in [7] the UE shall perform the TFC selection according to the rules specified below. If these guidelines are not followed then the UE behaviour is not specified.

A given TFC can be in any of the following states:

- Supported state;
- Excess-power state;
- Blocked state.

TDD mode UEs in CELL_FACH state using the USCH transport channel and UEs in CELL_DCH state shall continuously monitor the state of each TFC based on its required transmit power versus the maximum UE transmit power (see [7]). The state transition criteria and the associated requirements are described in [12, 14]. The UE shall consider that the Blocking criterion is never met for TFCs included in the minimum set of TFCs (see [7]).

The following diagram illustrates the state transitions for the state of a given TFC:

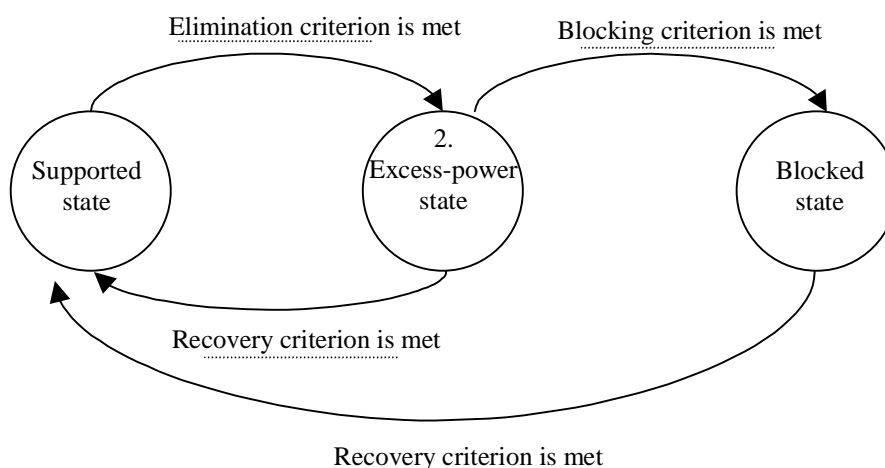


Figure 11.4.1: State transitions for the state of a given TFC

FDD Mode UEs in CELL_FACH state may estimate the channel path loss and set to excess power state all the TFCs requiring more power than the Maximum UE transmitter power (see [7]). All other TFCs shall be set to Supported state.

Every time the set of supported TFCs changes, the available bitrate shall be indicated to upper layers for each logical channel in order to facilitate the adaptation of codec data rates when codecs supporting variable-rate operation are used. The details of the computation of the available bitrate and the interaction with the application layer are not further specified.

Before selecting a TFC, i.e. at every boundary of the shortest TTI, or prior to each transmission on PRACH the set of valid TFCs shall be established. All TFCs in the set of valid TFCs shall:

1. belong to the TFCS.
 - 1a. not be restricted by higher layer signalling (e.g. TFC Control, see [7]).
2. not be in the Blocked state.
3. be compatible with the RLC configuration.
4. not require RLC to produce padding PDUs (see [6] for definition).

5. not carry more bits than can be transmitted in a TTI (e.g. when compressed mode by higher layer scheduling is used and the presence of compressed frames reduces the number of bits that can be transmitted in a TTI using the Minimum SF configured).

The UE may remove from the set of valid TFCs, TFCs in Excess-power state in order to maintain the quality of service for sensitive applications (e.g. speech). However, this shall not apply to TFCs included in the minimum set of TFCs (see [7]). Additionally, if compressed frames are present within the longest configured TTI to which the next transmission belongs, the UE may remove TFCs from the set of valid TFCs in order to account for the higher power requirements.

The chosen TFC shall be selected from within the set of valid TFCs and shall satisfy the following criteria in the order in which they are listed below:

1. No other TFC shall allow the transmission of more highest priority data than the chosen TFC.
2. No other TFC shall allow the transmission of more data from the next lower priority logical channels. Apply this criterion recursively for the remaining priority levels.
3. No other TFC shall have a lower bit rate than the chosen TFC.

In FDD mode the above rules for TFC selection in the UE shall apply to DCH, and the same rules shall apply for TF selection on RACH and CPCH.

In TDD mode the above rules for TFC selection in the UE shall apply to DCH and USCH.

CR-Form-v7

CHANGE REQUEST

25.321 CR 177 # rev - # Current version: 4.8.0

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

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# TFCS selection guidelines for TFC Subset		
Source:	# RAN WG2		
Work item code:	# TEI	Date:	# 15/08/2003
Category:	# A	Release:	# Rel-4
	Use <u>one</u> 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 earlier release)	R96	(Release 1996)
	B (addition of feature),	R97	(Release 1997)
	C (functional modification of feature)	R98	(Release 1998)
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		Rel-5	(Release 5)
		Rel-6	(Release 6)

Reason for change:	# The current specification is not clear about whether the TFCS selection guidelines apply to TFC subsets.
Summary of change:	# It was clarified that the TFCS selection guidelines do apply to TFC subsets and that if these are not followed (even in the case of a TFC subset), the UE behavior is not specified.
Consequences if not approved:	# Network manufacturers may remain unclear about the types of TFC subsets that can be configured reliably.

Clauses affected:	# 11.4								
Other specs affected:	#								
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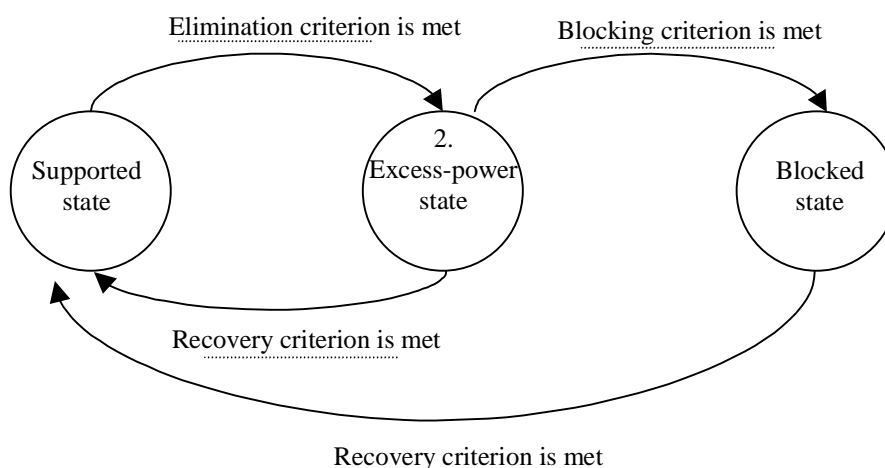


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CHANGE REQUEST

25.321 CR 178 # rev - # Current version: 5.5.0

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Title:	# TFCS selection guidelines for TFC Subset		
Source:	# RAN WG2		
Work item code:	# TEI	Date:	# 15/08/2003
Category:	# A	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
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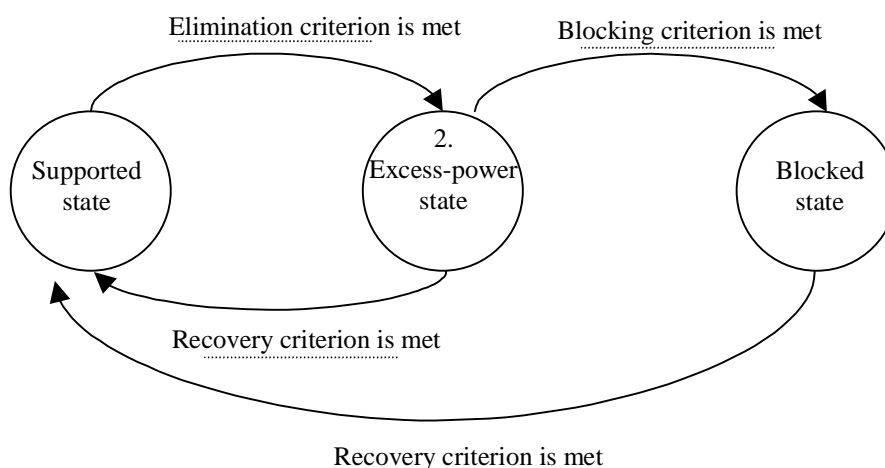


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