

CHANGE REQUEST

✂ 25.926 CR 015 ✂ rev 2 ✂ Current version: 3.2.0 ✂

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

Proposed change affects: ✂ (U)SIM ME/UE Radio Access Network Core Network

Title:	✂ Correction on parameter "Maximum total number of transport blocks..."		
Source:	✂ Mitsubishi Electric (Trium-RD)		
Work item code:	✂ Release 99 issues	Date:	✂ 23 rd November 2000
Category:	✂ F	Release:	✂ R99
	Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		

Reason for change:	✂ ?? With the current wording, one possible interpretation could be that it is possible for the UTRAN to transiently exceed the parameter value in DL in the case of non-aligned TTIs.
Summary of change:	✂ ?? The definition of "Maximum total number of transport block received within 10ms interval" was extended to explicitly cover the case of several simultaneous CCTrCHs. ?? The CR also clarifies the definition of convolutionally/turbo coded transport blocks.
Consequences if not approved:	✂ ?? Potentially, some UTRAN may transiently send more transport blocks than the UE can support, as different interpretations are possible.

Clauses affected:	✂ 4.5.1, 4.5.2.		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	✂	
Other comments:	✂ There were revision marks in figure 4.1. in the original document. These revision marks were forgotten to be accepted. We have accepted them when editing the CR to avoid confusion.		

How to create CRs using this form:

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

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

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.5 PHY parameters

4.5.1 Transport channel parameters in downlink

Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant

NOTE: "Being received" refers to all bits in the active TFC within the TFCS over all simultaneous transport channels received by the UE. "Arbitrary time instant" means that the time instant corresponding to the highest sum of number of bits is relevant. This note also applies to similar parameter definitions below

This parameter is defined as:

$$? \quad ?_i(N_i)$$

where N_i is defined as the number of bits in transport block # i , and the sum is over all transport blocks being received at an arbitrary time instant. All transport blocks that are to be simultaneously received by the UE on DCH, FACH, PCH and DSCH transport channels are included in the parameter.

A UE does not need to support a TFC within the TFCS for which the sum of *Number of Transport Blocks * Transport Block size* over all simultaneous transport channels is larger than what the UE capability indicates.

Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant.

This parameter is defined similar to the parameter above, but the sum includes only ~~convolutionally coded~~ transport blocks that are to be convolutionally coded.

Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant.

This parameter is defined similar to the parameter above, but the sum includes only ~~turbo coded~~ transport blocks that are to be turbo coded.

Maximum number of simultaneous transport channels

This is defined as the maximum number of Transport Channels that should be possible to process simultaneously, not taking into account the rate of each Transport Channel.

The number of simultaneous transport channels affects how the total memory space and processing capacity can be shared among the transport channels.

A UE does not need to support more simultaneous transport channels than the UE capability allows for.

Maximum number of simultaneous CCTrCH

CCTrCH should be interpreted as CCTrCH of any type, i.e. consisting of DCH, FACH or DSCH.

Maximum total number of transport blocks received within TTIs that end within the same 10 ms interval

All transport blocks that are to be simultaneously received by the UE on DCH, FACH, PCH and DSCH transport channels are included in the parameter.

Relates to processing requirements for CRC in downlink.

A UE does not need to support a TFC within the TFCS for which the sum of *Number of Transport Blocks* is larger than what the UE capability indicates. In the case of several CCTrCH's, the combination of the TFCs within the respective TFCSs for simultaneous TTIs at an arbitrary time instant shall not exceed this parameter.

Maximum number of TFC in the TFCS

The maximum number of TFC in a TFCS sets the size of the TFCI to TFCS mapping table to be handled by the UE.

Maximum number of TF

The maximum total number of downlink transport formats the UE can store.

Support for turbo decoding

Defines whether turbo decoding is supported or not.

The UTRAN configuration parameter is *Type of channel coding* which is part of the Transport format set (TFS) of each transport channel.

4.5.2 Transport channel parameters in uplink

Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant

NOTE: "Being transmitted" refers to all bits in the active TFC within the TFCS over all simultaneous transport channels transmitted by the UE. "Arbitrary time instant" means that the time instant corresponding to the highest sum of number of bits is relevant. This note also applies to similar parameter definitions below.

This parameter is defined as:

$$? \quad ?_i(N_i)$$

where N_i is defined as the number of bits in transport block # i , and the sum is over all transport blocks being transmitted at an arbitrary time instant.

This parameter is related to memory requirements for uplink data received from MAC before it can be transmitted over the radio interface. As shown in Figure 4.1 the worst case occurs for the maximum TTI.

A UE does not need to support a TFC within the TFCS for which the sum of *Number of Transport Blocks * Transport Block size* over all simultaneous transport channels is larger than what the UE capability indicates.

Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant

This parameter is defined similar to the parameter above, but the sum includes only ~~convolutionally coded~~ transport blocks that are to be convolutionally coded.

Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant

This parameter is defined similar to the parameter above, but the sum includes only ~~turbo coded~~ transport blocks that are to be turbo coded.

Maximum number of simultaneous transport channels

The number of simultaneous transport channels affects how the total memory space and processing capacity can be shared among the transport channels.

UTRAN shall not set up more simultaneous transport channels than the UE capability allows for.

Maximum number of simultaneous CCTrCH

TDD only. For FDD there is always only one CCTrCH at a time.

Maximum total number of transport blocks transmitted within TTIs that start at the same time

Relates to processing requirements for CRC in uplink.

A UE does not need to support the TFC within the TFCS for which the sum of *Number of Transport Blocks* is larger than what the UE capability allows for.

Maximum number of TFC in the TFCS

The maximum number of TFC in a TFCS sets the size of the TFCI to TFCS mapping table to be handled by the UE.

Maximum number of TF

The maximum total number of uplink transport formats the UE can store.

Support for turbo encoding

Defines whether turbo encoding is supported or not.

The UTRAN configuration parameter is *Type of channel coding* which is part of the Transport format set (TFS) of each transport channel.

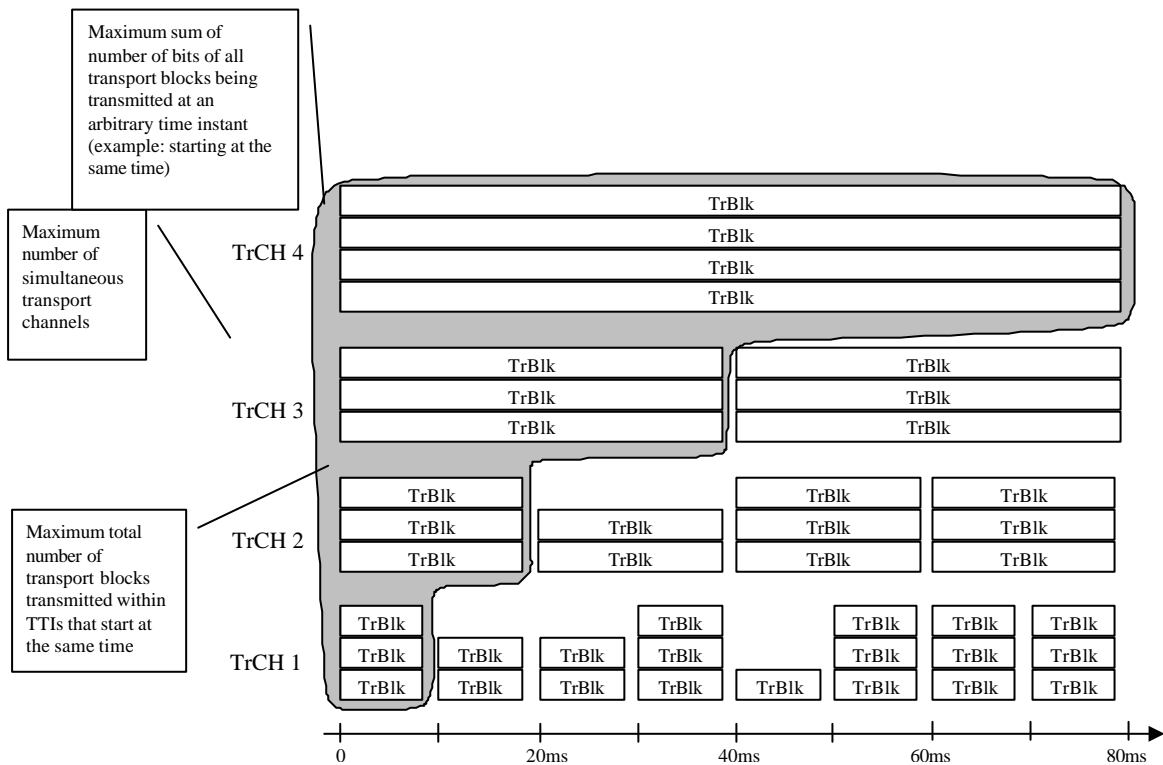


Figure 4.1: UE transport channel processing limitations in uplink

NOTE: When CPCH is supported, then simultaneous DPCCH & SCCPCH reception is needed.