

TSG-RAN Meeting #12
Stockholm, Sweden, 12 - 15 June 2001

RP-010321

Title: Agreed CRs (Rel-4) to TS 25.306

Source: TSG-RAN WG2

Agenda item: 8.2.4

| Doc-1st- | Status- | Spec | CR | Rev | Phase | Subject | Cat | Version | Versio | Workitem |
|-----------|---------|--------|-----|-----|-------|---------------------------------|-----|---------|--------|----------|
| R2-011391 | agreed | 25.306 | 009 | 6 | Rel-4 | Modified UE Capability for CPCH | C | 4.0.0 | 4.1.0 | TEI4 |

CHANGE REQUEST

⌘ **25.306** **CR 009** ⌘ ev **r6** ⌘ Current version: **4.0.0** ⌘

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 Core Network

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|------------------------|--|-----------------|--|
| Title: | ⌘ Modified UE Capability for CPCH | | |
| Source: | ⌘ TSG-RAN WG2 | | |
| Work item code: | ⌘ TEI4 | Date: | ⌘ 25 May 2001 |
| Category: | ⌘ C | Release: | ⌘ REL-4 |
| | <i>Use <u>one</u> of the following categories:</i> 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 . | | <i>Use <u>one</u> of the following releases:</i> 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: | ⌘ <ol style="list-style-type: none"> 1. CPCH functional specifications are complete and stable, and certain UE classes should have the capability to support CPCH. 2. CPCH capability saves system resources and decreases interference by providing NRT services more efficiently, especially those services with bursty uplink traffic. 3. System operators and infrastructure manufacturers choosing to exploit CPCH efficiencies require a ready source of supply of conformance tested CPCH-capable UEs. |
| Summary of change: | ⌘ UE capability to support CPCH is added as an option to all UE classes. |
| Consequences if not approved: | ⌘ Operators and infrastructure suppliers for Rel-4 systems will not have any source of supply of conformance tested CPCH-capable UEs. |

| | | |
|------------------------------|---|--|
| Clauses affected: | ⌘ 5.2.2, 5.2.3 | |
| Other specs affected: | ⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications | |
| Other comments: | ⌘ | |

How to create CRs using this form:

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

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

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://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.

5.2.2 Combinations of UE Radio Access Parameters for DL

Table 5.2.2.1: UE radio access capability parameter combinations, DL parameters

| Reference combination of UE Radio Access capability parameters in DL | 32kbps class | 64kbps class | 128kbps class | 384kbps class | 768kbps class | 2048kbps class |
|---|------------------|--------------------|--------------------|----------------|----------------|--------------------------------|
| Transport channel parameters | | | | | | |
| Maximum sum of number of bits of all transport blocks being received at an arbitrary time instant | 640 | 3840 | 3840 | 6400 | 10240 | 20480 |
| Maximum sum of number of bits of all convolutionally coded transport blocks being received at an arbitrary time instant | 640 | 640 | 640 | 640 | 640 | 640 |
| Maximum sum of number of bits of all turbo coded transport blocks being received at an arbitrary time instant | NA | 3840 | 3840 | 6400 | 10240 | 20480(1) 10240(2) NOTE 3 |
| Maximum number of simultaneous transport channels | 8 | 8 | 8 | 8 | 8 | 16 |
| Maximum number of simultaneous CCTrCH (FDD) | 1 | 2/1 NOTE 2 | 2/1 NOTE 2 | 2 | 2 | 2 |
| Maximum number of simultaneous CCTrCH (TDD) | 2 | 3 | 3 | 3 | 4 | 4 |
| Maximum total number of transport blocks received within TTIs that end at the same time | 8 | 8 | 16 | 32 | 64 | 96 |
| Maximum number of TFC in the TFCS | 32 | 48 | 96 | 128 | 256 | 1024 |
| Maximum number of TF | 32 | 64 | 64 | 64 | 128 | 256 |
| Support for turbo decoding | No | Yes | Yes | Yes | Yes | Yes |
| Physical channel parameters (FDD) | | | | | | |
| Maximum number of DPCH/PDSCH codes to be simultaneously received | 1 | 2/1 NOTE 2 | 2/1 NOTE 2 | 3 | 3 | 3 |
| Maximum number of physical channel bits received in any 10 ms interval (DPCH, PDSCH, S-CCPCH). | 1200 | 3600/2400 NOTE2 | 7200/4800 NOTE2 | 19200 | 28800 | 57600 |
| Support for SF 512 for DPCH NOTE 4 | No_ | No_ | No_ | No_ | No_ | No_ |
| Support of PDSCH | No | Yes/No NOTE 1 | Yes/No NOTE 1 | Yes | Yes | Yes |
| Maximum number of simultaneous S-CCPCH radio links | 1 | 1 | 1 | 1 | 1 | 1 |
| Physical channel parameters (TDD 3.84Mcps) | | | | | | |
| Maximum number of timeslots per frame | 1 | 2 | 4 | 5 | 10 | 12 |
| Maximum number of physical channels per frame | 8 | 9 | 14 | 28 | 64 | 136 |
| Minimum SF | 16 | 16 | 16 | 1/16 NOTE 1 | 1/16 NOTE 1 | 1/16 NOTE 1 |
| Support of PDSCH | Yes/No NOTE 1 | Yes | Yes | Yes | Yes | Yes |
| Maximum number of physical channels per timeslot | 8 | 9 | 9 | 9 | 9 | 13 |
| Physical channel parameters (TDD 1.28Mcps) | | | | | | |
| Maximum number of timeslots per subframe | 1 | 2 | 3 | 4 | 6 | 6 |
| Maximum number of physical channels per subframe | 8 | 12 | 18 | 43 | 77 | 77 |
| Minimum SF | 16 | 16 | 16 | 1/16 NOTE 1 | 1/16 NOTE 1 | 1 |
| Support of PDSCH | Yes/no NOTE 1 | Yes | Yes | Yes | Yes | Yes |
| Maximum number of physical channels per timeslot | 8 | 11 | 14 | 14 | 14 | 14 |
| Support of 8PSK | No | No | No | No | No | Yes |

NOTE 1: Options represent different combinations that should be supported with conformance tests.

NOTE 2: Options depend on the support of PDSCH. The highest value is required if PDSCH is supported.

NOTE 3: (1) For FDD and 3.84Mcps TDD (2) For 1.28Mcps TDD.

NOTE 4: This UE capability does not relate to the support of CPCH in the uplink for which SF 512 is needed.
~~Support of SF-512 in DL is required for DPCCH when PCPCH is supported in UL.~~

5.2.3 Combinations of UE Radio Access Parameters for UL

Table 5.2.3.1: UE radio access capability parameter combinations, UL parameters

| Reference combination of UE Radio Access capability parameters in UL | 32kbps class | 64kbps class | 128kbps class | 384kbps class | 768kbps class |
|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Transport channel parameters | | | | | |
| Maximum sum of number of bits of all transport blocks being transmitted at an arbitrary time instant | 640 | 3840 | 3840 | 6400 | 10240 |
| Maximum sum of number of bits of all convolutionally coded transport blocks being transmitted at an arbitrary time instant | 640 | 640 | 640 | 640 | 640 |
| Maximum sum of number of bits of all turbo coded transport blocks being transmitted at an arbitrary time instant | NA | 3840 | 3840 | 6400 | 10240 |
| Maximum number of simultaneous transport channels | 4 | 8 | 8 | 8 | 8 |
| Maximum number of simultaneous CCTrCH(TDD only) | 1 | 2 | 2 | 2 | 2 |
| Maximum total number of transport blocks transmitted within TTIs that start at the same time | 4 | 8 | 8 | 16 | 32 |
| Maximum number of TFC in the TFCS | 16 | 32 | 48 | 64 | 128 |
| Maximum number of TF | 32 | 32 | 32 | 32 | 64 |
| Support for turbo encoding | No | Yes | Yes | Yes | Yes |
| Physical channel parameters (FDD) | | | | | |
| Maximum number of DPDCH bits transmitted per 10 ms | 1200 | 2400 | 4800 | 9600 | 19200 |
| Simultaneous reception of SCCPCH and DPCH NOTE 2 | No | No | Yes/No NOTE 1 | Yes/No NOTE 1 | Yes/No NOTE 1 |
| Simultaneous reception of SCCPCH, DPCH and PDSCH NOTE 2 | No | No | No | No | No |
| Support of PCPCH NOTE 3 | Yes/No NOTE 1 | Yes/No NOTE 1 | Yes/No NOTE 1 | Yes/No NOTE 1 | Yes/No NOTE 1 |
| Physical channel parameters (TDD 3.84Mcps) | | | | | |
| Maximum Number of timeslots per frame | 1 | 2 | 3 | 7 | 9 |
| Maximum number of physical channels per timeslot | 1 | 1 | 1 | 1 | 2 |
| Minimum SF | 8 | 2 | 2 | 2 | 2 |
| Support of PUSCH | Yes/No NOTE 1 | Yes | Yes | Yes | Yes |
| Physical channel parameters (TDD 1.28Mcps) | | | | | |
| Maximum Number of timeslots per subframe | 1 | 2 | 3 | 5 | 5 |
| Maximum number of physical channels per timeslot | 1 | 1 | 1 | 1 | 2 |
| Minimum SF | 4 | 2 | 2 | 2 | 2 |
| Support of PUSCH | Yes/No NOTE 1 | Yes | Yes | Yes | Yes |
| Support of 8PSK | No | No | No | No | No |

NOTE 1: Options represent different combinations that should be supported with conformance tests.

NOTE 2: The downlink parameters 'Simultaneous reception of SCCPCH and DPCH' and 'Simultaneous reception of SCCPCH, DPCH and PDSCH' are included in the combinations for uplink as their requirements relate to the uplink data rate. Simultaneous reception of SCCPCH and DPCH is required for the DRAC procedure that is intended for controlling uplink transmissions. In this release of the specification, this is limited to 1 SCCPCH.

NOTE 3: Support of PCPCH means that the UE supports PCPCH access for both the CA not active case and for the CA active case.