3GPP TSG-RAN WG2 meeting #6 ***Document R2(99)904***

Sophia Antipolis, France, 16-20 Aug 1999

3G CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.302 **CR** **00** Current Version: 3.0.0

3G specification number ↑ *↑ CR number as allocated by 3G support team*

For submision to TSG RAN #5 *list TSG meeting no. here ↑*

for approval [X]
for information [ ]

(only one box should be marked with an X)

Form: 3G CR cover sheet, version 1.0 *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/3GCRF-xx.rtf*

Proposed change affects: *(at least one should be marked with an X)* USIM [ ] ME [X] UTRAN [X] Core Network [ ]

Source: Nortel Networks **Date:** 1999-08-17

Subject: Editorial changes following LS received from WG1

3G Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	[ ]
A	Corresponds to a correction in a 2G specification	[ ]
B	Addition of feature	[ ]
C	Functional modification of feature	[ ]
D	Editorial modification	[X]

Reason for change: Alignment of S25.302 with comments received in LS from WG1 (Tdoc R299-738)

Clauses affected:

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other 2G core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:


help.doc

<--------- double-click here for help and instructions on how to create a CR

7.3 ~~Slotted~~ Compresed Mode

~~Slotted~~Compressed Mode is defined as the mechanism whereby certain idle periods are created in downlink radio frames so that the UE can perform measurement reports during these periods (more details can be found in [3]). Applicability to uplink is FFS.

~~Slotted~~ Compressed Mode is obtained by layer 2 using transport channels provided by the layer 1 as follows :

- ~~Slotted~~Compressed Mode is controlled by the RRC layer which configures the layer 2 and the physical layer
- The number of occurrences of ~~slotted~~compressed frames is controlled by RRC, and can be modified by RRC signalling
- Layer 2 instructs every Transmission Time Interval the Layer 1 on whether ~~slotted~~compressed mode should be applied for a given Transport Format Combination Set. The instruction may indicate also the type of ~~slotted~~compressed mode (beginning, middle or end of the frame).
- The ~~slotting~~ compression of frames can be either cyclic (typically for circuit services) or a-periodic (typically for NRT services)
- It is under the responsibility of the layer 2 if necessary to either buffer some layer 2 PDUs (typically at the RLC layer for NRT services) or to rate adapt the data flow (similarly to GSM) so that there is no loss of data because of ~~slotted~~compressed mode. This will be service dependant and controlled by the RRC layer.

8.1 Uplink

The table describes the possible combinations of physical channels that can be supported in the uplink by one UE at any one time.

	Physical Channel Combination	Transport Channel Combination	**Baseline Capability or Service dependent**	**Comment**
1	PRACH	RACH	Baseline	The PRACH physical channel includes the preambles and the message.
2	PRACH	FAUSCH	Service dependent	
3	PCPCH consisting of one control and one data part during the message portion	CPCH	Service dependent	The PCPCH physical channel includes the preambles and the message. The maximum channel bit rate is dependant on UE Service Capability
4	PCPCH consisting of one control and more than one data part during the message portion	CPCH	Service dependent	The PCPCH physical channel includes the preambles and the message. The maximum channel bit rate is dependant on UE Service Capability
5	~~DPCH consisting of one~~ DPCCH~~+ and one~~ DPDCH	One or more DCH coded into a single CCTrCH	Service dependent	The maximum number of DCHs and the maximum channel bit rate are dependant on UE Service Capability
6	~~DPCH consisting of one~~ DPCCH~~+ and~~ more than one DPDCH	One or more DCH coded into a single CCTrCH	Service dependent	The maximum number of DCHs and the maximum channel bit rate are dependant on UE Service Capability

9 Measurements provided by the physical layer

One of the key services provided by the physical layer is the measurement of various quantities which are used to trigger or perform a multitude of functions. Both the UE and the UTRAN are required to perform a variety of measurements. The standard will not specify the method to perform these measurements or stipulate that the list of measurements provided in this section must all be performed. While some of the measurements are critical to the functioning of the network and are mandatory for delivering the basic functionality (e.g., handover

measurements, power control measurements), others may be used by the network operators in optimising the network (e.g., radio environment).
Measurements may be made periodically and reported to the upper layers or may be event-triggered (e.g., primary CCPCH becomes better than the previous best primary CCPCH. The measurements are tightly coupled with the service primitives in that the primitives' parameters may constitute some of the measurements.

The list and frequency of measurements which the physical layer reports to higher layers is described in this section.

EDITOR'S NOTE :These measurements are considered equally applicable to FDD and TDD modes., however, the applicabilityof all measurements to the TDD mode needs to be reviewed.

~~*viewed by WG1 for practicality in the UE and WG2 informed of the implications of these measures being mandatory.*~~

The measurement quantities measured by the physical layer shall be such that the following principles are applied:

For handover measurements, the decoding of parameters on the BCCH logical channel of monitored neighbouring cells, should not, in general, be needed for calculating the measurement result. If there is a need to adjust the measurement result with parameters broadcast on the PCCPCH, these parameters shall be provided by the UTRAN in inband measurement control messages. There may be some exceptions to this rule. *For example, it may be necessary to decode the SFN of the measured neighbouring cell for time difference measurements. [Editor's Note: It should be ~~clarified~~ decided whether the SFN is a L3 or L1 parameter.WG1 has approved that SFN is a L1 parameter.In a LS sent to WG2, they also indicate that the SFN is encoded together with the BCH transport blocks, with a joint CRC. However WG2 had questions regarding the advantage of this method, compared to having the SFN as a L3 parameter, and have sent back a LS to WG1.]*

In idle mode or in RRC connected mode using common Transport Channels, the UE shall be able to monitor cells for cell reselection, without being required to frequently decode parameters on the BCCH logical channel of the monitored neighbouring cells. The decoding frequency of these parameters, set by the cell reselection algorithm, should be such that UE standby times are not significantly decreased.

9.1.3 ~~Primary CCPCH~~ CPICH RX E_c/I_0

This measure is mandatory for the UE.

Measurement	~~primary CCPCH~~ CPICHRx Ec/Io
Source	L1(UE)
Destination	RRC (UE, RNC),
Reporting Trigger	Periodic, on demand and event triggered
Definition	$-20\log_{10}(E_c/I_o)$ where E_c is the energy per chip of the CPICH~~Primary CCPCH~~ measured in the searcher and I_o is the received spectral density.
Precision Requirement	1 dB

9.1.4 ~~Primary CCPCH~~ CPICH Rx SIR

Editor's note : WG1 has not yet come to any agreement on the impact on terminal complexity if L1 should support measurement of RX CPICH SIR. Therefore, this measurement is currently not supported by L1. However, it is too early to rule out the possibility that it will eventually be included also in the WG1 specifications.

This measure is mandatory for the UE.

Measurement	~~Primary CCPCH~~CPICH Rx SIR
Source	L1 (UE)
Destination	RRC (UE, RNC)
Reporting Trigger	periodic or event triggered
Definition	***This quantity is a ratio of the ~~Primary CCPCH~~CPICH Received Signal Code Power (RSCP) to the Interference Signal Code Power (ISCP). The RSCP is the measured symbol power of the ~~Primary CCPCH~~CPICH at the demodulator output and the ISCP is the measured interference symbol power.***
Precision Requirement	1 dB

9.1.5 ~~Primary CCPCH~~ CPICH Rx RSCP

This measure is mandatory for the UE.

Measurement	~~Primary CCPCH~~CPICH Rx RSCP
Source	L1(UE)
Destination	RRC (UE, RNC)
Reporting Trigger	periodic or event triggered
Definition	***Received Signal Code Power, is received power on one code after despreading, defined on the pilot symbols.***
Precision Requirement	1 dB

9.1.6 ~~Primary CCPCH~~ CPICH Rx ISCP

Editor's note : WG1 has not yet come to any agreement on the impact on terminal complexity if L1 should support measurement of RX CPICH ISCP. Therefore, this measurement is currently not supported by L1. However, it is too early to rule out the possibility that it will eventually be included also in the WG1 specifications.

This measure is mandatory for the UE.

Measurement	~~Primary CCPCH~~ CPICH Rx ISCP
Source	L1(UE)
Destination	RRC (UE, RNC)
Reporting Trigger	Periodic or event triggered
Definition	***Interference on Signal Code Power, is the interference on the mentioned received signal after despreading. Thereby only the non-orthogonal part of the interference is included.***
Precision Requirement	1 dB

10.3.3.5 PRACH

Editor's note: The PRACH can also be used to map the FAUSCH Transport Channel

- Access Slot
- Preamble spreading code
- Preamble signature
- ~~Message channelisation code(Spreading factor)~~Spreading factor for data part
- Power control info
  - UL target SIR
  - Primary CCPCH DL TX Power

    - UL interference
    - Power offset (Power ramping)
- Access Service Class Selection
    - Preamble signature classification information
- AICH transmission timing parameter
- Persistence value

10.3.3.6 Uplink DPDCH+DPCCH

- UL scrambling code
- ~~DPCCH Channelisation code~~
- ~~DPDCH Channelisation code~~
- DPCCH Gate rate
- DPCCH slot structure (N_{pilot}, N_{TPC}, N_{TFCI}, N_{FBI})
- Transmission Time offset value