CR-Form-v3

CHANGE REQUEST

| ✎ | **TS 25.214 CR 148** | ✎ | rev | **1** | ✎ | Current version: | **3.5.0** | ✎ |

*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 **X** Radio Access Network **X** Core Network ☐

Title: ✎	Clarification of UE SIR estimation
Source: ✎	Ericsson, Philips
Work item code: ✎	***Date:*** ✎ 2001-02-27
Category: ✎ **F**	***Release:*** ✎ R99

Use one 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)
Detailed explanations of the above categories can
be found in 3GPP TR 21.900.

Use one 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)

Reason for change: ✎	Clarify that UE internal SIR estimation for inner loop power control shall be done excluding the SF, and generally how SIR should be understood. This is necessary to ensure that the signalled SIR offsets for compressed frames are used correctly.
Summary of change: ✎	It is clarified that UE internal SIR estimation for inner loop power control shall be done excluding the SF.
Consequences if not approved: ✎	UE could misinterpret the signalled SIR offsets for compressed frames.

Clauses affected: ✎	B.2
Other specs affected: ✎	☐ Other core specifications ✎ ☐ Test specifications ☐ 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://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.

B.2   Example of implementation in the UE

The downlink inner-loop power control adjusts the network transmit power in order to keep the received downlink SIR at a given SIR target, SIR_{target}. A higher layer outer loop adjusts SIR_{target} independently for each connection.

The UE should estimate the received downlink DPCCH/DPDCH power of the connection to be power controlled. Simultaneously, the UE should estimate the received interference and calculate the signal-to-interference ratio, SIR_{est}. SIR_{est} can be calculated as RSCP/ISCP, where RSCP refers to the received signal code power on one code and ISCP refers to the non-orthogonal interference signal code power of the received signal on one code. Note that due to the specific SIR target offsets described in [5] that can be applied during compressed frames, the spreading factor shall not be considered in the calculation of SIR_{est}.

The obtained SIR estimate SIR_{est} is then used by the UE to generate TPC commands according to the following rule: if $SIR_{est} > SIR_{target}$ then the TPC command to transmit is "0", requesting a transmit power decrease, while if $SIR_{est} < SIR_{target}$ then the TPC command to transmit is "1", requesting a transmit power increase.

When the UE is in soft handover and SSDT is not activated, the UE should estimate SIR_{est} from the downlink signals of all cells in the active set.

When SSDT is activated, the UE should estimate SIR_{est} from the downlink signals of the primary cell. If the state of the cells (primary or non-primary) in the active set is changed and the UE sends the last portion of the coded ID in uplink slot j, the UE should change the basis for the estimation of SIR_{est} at the beginning of downlink slot $(j+1+T_{os})$ mod 15, where T_{os} is defined as a constant of 2 time slots.