3GPP TSG-RAN Meeting #22
Hawaii, USA, December 9th-12th 2003

Tdoc RP-030661

CR-Form-v7

CHANGE REQUEST

25.214	CR	338	rev	-	Current version:	5.6.0

*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:	Remove inconsistency among specifications on signalling support for power control during loss of RL synchronisation
Source:	Samsung, Lucent Technologies
Work item code:	TEI
Date:	25/11/2003
Category:	F
Release:	Rel-5

Use one of the following categories:
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.

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)*
Rel-6	*(Release 6)*

Reason for change:	Signalling support of transfer of Multiple RL Sets Indicator for a UE to the Node B after initial RL setup is added to TS 25.427. Please note: the signalling is introduced in TS 25.427 instead of TS 25.433 ([6]).
Summary of change:	Delete the sentence "[6] does not support transfer of information related to the number of RLS for a UE to the Node B after initial RL setup."
Consequences if not approved:	Inconsistency between TS 25.214 and TS 25.427 since the signalling support is added. *Isolated Impact Analysis:* The modification only removes the inconsistency between specifications, therefore there is no impact on specifications in the same release.

Clauses affected:	Annex B.3

Other specs affected:	Y	N		
	Y		Other core specifications	25.427 CR090r1
		X	Test specifications	
		X	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/specs/CR.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.

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 as described in 5.2.1.4.2. 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 $(j+1+T_{os}) \bmod 15$, where T_{os} is defined as a constant of 2 time slots.

B.3 UL power control when losing UL synchronisation

Each Node B operates the uplink power control independently of the other Node Bs that may be providing RLS to the same UE. In case of multiple RLS the UE derives the decision on power adjustment based on all the commands received according the rules specified in section 5.1.2. In this scenario, transmission of a down command by one or more of the involved Node Bs will likely result in the UE decreasing its transmit power.

Consequently, if and when, after successful initial RL synchronisation, the Node B loses UL synchronisation for a UE and if the current number of RLS configured for that UE is greater than one and if the Node B reverts to a TPC pattern in such situation (i.e. generates DL TPC commands independently of actual RL measurements), the Node B should not use TPC commands “0” in the TPC pattern. ~~[6] does not support transfer of information related to the number of RLS for a UE to the Node B after initial RL setup.~~