TSG-RAN Meeting #12 *RP-010322*
Stockholm, Sweden, 12 - 15 June 2001

Title: **Agreed CRs (Rel-4) to TS 25.321**

Source: **TSG-RAN WG2**

Agenda item: **8.2.4**

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Version	Versio	Workitem
R2-011153	agreed	25.321	083		Rel-4	Correction to control of RACH Transmissions for 1.28Mcps TDD	F	4.0.0	4.1.0	LCRTDD-L23

3GPP TSG-RAN WG2 Meeting #21 ***R2-011153***
Busan, Korea, 21-25 May 2001

CR-Form-v3

CHANGE REQUEST

⌘ **25.321** **CR** **083** ⌘ rev **-** ⌘ 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 [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction to Control of RACH Transmissions for 1.28 Mcps TDD
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	LCRTDD-L23
Date:	⌘	2001/5/15
Category:	⌘	**F**
Release:	⌘	REL-4

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)

Reason for change:	⌘	Correction to 1.28 Mcps TDD RACH Procedure is introduced in TS 25.321.
Summary of change:	⌘	Text changes are introduced that clarify the procedure. MAC-STATUS-Ind and CMAC-STATUS-Ind primitive use is added.
Consequences if not approved:	⌘	

Clauses affected:	⌘	11.2.3.2		
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.

11.2.3.2 Control of RACH Transmissions for 1.28 Mcps TDD

The RACH transmissions are performed by the UE as shown in figure 11.2.3.2.

NOTE: The figure shall illustrate the operation of the transmission control procedure as specified below. It shall not impose restrictions on implementation.

UE MAC receives the following RACH transmission control parameters from RRC with the CMAC-Config-REQ primitive:

- a set of Access Service Class (ASC) parameters, which includes for each ASC, i=0,…,NumASC an identification of a PRACH partition and a persistence value P_i (transmission probability),
- maximum number of synchronisation attempts Mmax.

When there is data to be transmitted, MAC selects the ASC from the available set of ASCs, which consists of an identifier *i* of a certain PRACH partition and an associated persistence value P_i.

Based on the persistence value P_i, ~~the UE~~ MAC decides whether to start the L1 PRACH procedure in the present transmission time interval or not. If transmission is allowed, the PRACH transmission procedure (starting with the SYNC_UL/FPACH power ramping sequence~~selection and transmission of a SYNC1 burst~~) is initiated by the sending of a PHY-ACCESS-REQ primitive. MAC then waits for access information from L1 via the PHY-ACCESS-CNF primitive. If transmission is not allowed, a new persistency check is performed in the next transmission time interval. The persistency check is repeated until transmission is permitted.

If ~~a~~the synchronisation burst has been acknowledged on its associated~~the~~ FPACH, PHY will inform MAC by a PHY-ACCESS-CNF primitive indicating ~~L1 access information with parameter~~ "ready for RACH data transmission" ~~is indicated to MAC with a PHY-ACCESS-CNF primitive~~. Then MAC requests data transmission ~~is requested~~ with a PHY-DATA-REQ primitive, and the PRACH transmission procedure will~~shall~~ be completed with transmission ~~of the PRACH message~~ on the P-RACH resources associated with the FPACH.

Successful completion of the MAC procedure is indicated to higher layer individually for each logical channel of which data was included in the transport block set of that access attempt. When transparent mode RLC is employed (i.e. for CCCH), transmission status is reported to RRC with CMAC-STATUS-Ind primitive. For logical channels employing acknowledged or unacknowledged mode RLC, transmission status is reported to RLC with MAC-STATUS-Ind primitive.

If no synchronisation burst~~PHY~~ received an ~~no~~ acknowledgement on the FPACH within the maximum number of transmissions permitted in a power ramping cycle, PHY will inform MAC by a PHY-ACCESS-CNF primitive indicating "no response received on FPACH". If~~and~~ the maximum number of synchronisation attempts permitted, Mmax, has not been exceeded, then MAC commences a new persistency test sequence ~~is performed~~ in the next transmission time interval and the PHY-ACCESS-REQ procedure is repeated. If the maximum number of synchronisation attempts is exceeded then MAC abandons the RACH procedure. Failure to complete the MAC procedure is indicated to higher layer by the CMAC-STATUS-Ind or MAC-STATUS-Ind primitives. ~~and the message is discarded.~~ The timer T_2 ensures that two successive persistency tests are separated by at least one transmission time interval.

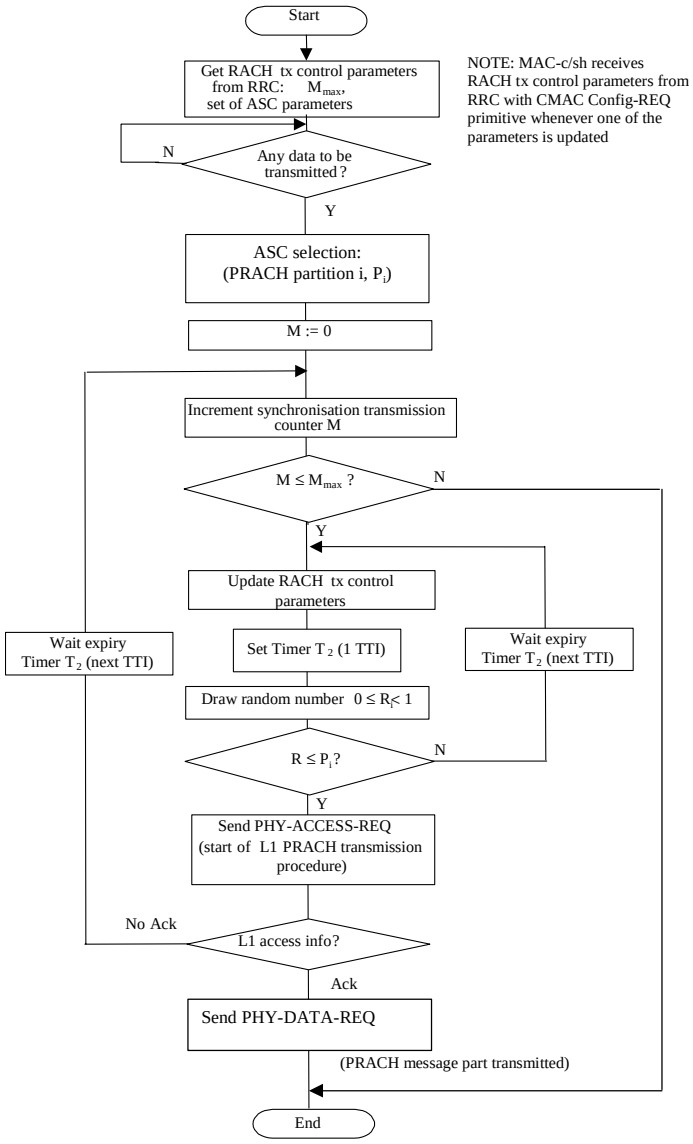

Figure 11.2.3.2: RACH transmission control procedure for 1.28 Mcps TDD

(UE side, informative)