3GPP TSG RAN Meeting #17 ***RP-020577***
Biarritz, France, 3 – 6, September 2002

Title: **Agreed CRs (Rel-4 and Rel-5 Category A) to TS 25.224**

Source: **TSG-RAN WG1**

Agenda item: **7.1.4**

No.	Spec	CR	Rev	R1 T-doc	Subject	Phase	Cat	Workitem	V_old	V_new
1	25.224	096	1	R1-02-1138	Corrections to uplink synchronisation procedure	Rel-4	F	LCRTDD-phys	4.5.0	4.6.0
2	25.224	097	1	R1-02-1138	Corrections to uplink synchronisation procedure	Rel-5	A	LCRTDD-phys	5.1.0	5.2.0
3	25.224	098	-	R1-02-1054	Correction to the PRACH open loop power control procedure for 1.28 Mcps TDD	Rel-4	F	LCRTDD-phys	4.5.0	4.6.0
4	25.224	099	-	R1-02-1054	Correction to the PRACH open loop power control procedure for 1.28 Mcps TDD	Rel-5	A	LCRTDD-phys	5.1.0	5.2.0

3GPP TSG RAN Meeting #17 ***R1-02-1138***
Biarritz, France, 3 – 6, September 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.224** **CR** **096** ⌘ **rev** **1** ⌘ Current version: **4.5.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Corrections to Uplink Synchronisation Procedure
Source:	⌘	TSG RAN WG1
Work item code:	⌘	LCRTDD-Phys
Date:	⌘	12/08/2002
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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The UE behaviour for the timing adjustment with UL synchronisation control is not exactly specified.
Summary of change:	⌘	The description of the parameter “M” which specifies the update frequency for the Uplink Synchronisation procedure is corrected in order to explicitly specify the timing relation between the SS command in the Downlink and a timing update in the uplink, depending on the parameter “M”.
Consequences if not approved:	⌘	Incorrect behaviour of UE might decrease system performance. The performance of the Uplink synchronisation procedure will decrease.

Clauses affected:	⌘	5.2.4

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			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

5.2.4 DPCH and PUSCH

The closed loop uplink synchronisation control uses layer 1 symbols (SS commands) for DPCH and PUSCH. After establishment of the uplink synchronisation, NodeB and UE start to use the closed loop UL synchronisation control procedure. This procedure is continuous during connected mode.

The Node B will continuously measure the timing of the UE and send the necessary synchronisation shift commands in each sub-frame. The UE shall derive a single SS command separately for each controlled uplink timeslot by combining all received SS commands that are related to the controlled time slot (cf. [8]) and that are received within the last up to M sub-frames. The value of the "Uplink synchronisation frequency" M (1..8) is configured by higher layers.

When the combined SS command is judged as 'down', the UE transmit timing for the controlled UL timeslot shall be delayed by one timing adjustment step of k/8 chips. When the command is judged as 'up', the UE transmit timing for the controlled UL timeslot shall be advanced by one timing adjustment step of k/8 chips. When the command is judged as 'do nothing', the timing shall not be changed. The value of the "Uplink synchronisation step size" k (1..8) is configured by higher layers.

The timing adjustment shall take place in each sub-frame satisfying the following equation:

$$SFN' \bmod M = 0$$

where

SFN' is the system frame number counting the sub-frames. The system frame number of the radio frames (SFN) can be derived from SFN' by

SFN=SFN' div 2, where div is the remainder free division operation.

~~On receipt of these synchronisation shift commands the UE shall adjust the timing of its transmissions accordingly, in steps of ±k/8 chips or do nothing, each M sub-frames.~~

~~The default value of M (1-8) and k (1-8) is configured by higher layers.~~

During a 1,28 Mcps TDD to 1,28 Mcps TDD hand-over the UE shall transmit in the new cell with timing advance TA adjusted by the relative timing difference Δt between the new and the old cell if indicated by higher layers:

$TA_{new} = TA_{old} + 2\Delta t$.

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Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Corrections to Uplink Synchronisation Procedure
Source:	⌘	TSG RAN WG1
Work item code:	⌘	LCRTDD-Phys
Date:	⌘	12/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
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Clauses affected:	⌘	5.2.4

Other specs affected: ⌘	Y	N	
		X	Other core specifications
		X	Test specifications
		X	O&M Specifications

⌘

Other comments: ⌘

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During a 1,28 Mcps TDD to 1,28 Mcps TDD hand-over the UE shall transmit in the new cell with timing advance TA adjusted by the relative timing difference Δt between the new and the old cell if indicated by higher layers:

$TA_{new} = TA_{old} + 2\Delta t$.

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CHANGE REQUEST

⌘ **25.224** **CR** **098** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

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Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Correction to the PRACH open loop power control procedure for 1.28 Mcps TDD
Source:	⌘	TSG RAN WG1
Work item code:	⌘	LCRTDD-phys
Date:	⌘	7/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
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R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The description of the open loop power control for the PRACH in TS25.224 is not consistent with the description in TS25.331.
Summary of change:	⌘	The description in TS25.224 is replaced by a reference to TS25.331, as it is done for all other open loop PC procedures for TDD.
Consequences if not approved:	⌘	Inconsistent specifications.

Clauses affected:	⌘	

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	

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5.1.1.2 UpPCH

The transmit power for the UpPCH is set by higher layers based on open loop power control as described in [15].

5.1.1.3 PRACH

The transmit power for the PRACH is set by higher layers based on open loop power control as described in [15].~~In 1.28 Mcps TDD, the FPACH is the response of a node B to the SYNC-UL burst of the UE. The response, a one burst long message, shall bring besides the acknowledgement to the received SYNC-UL burst, the timing and power level indications to prepare the transmission of the PRACH.~~

~~The transmit power level on the PRACH is calculated by the following equation:~~

~~$P_{PRACH} = L_{p\text{-}CCPCH} + PRX_{PRACH,des}$~~

~~Where, P_{PRACH} is the UE transmit power level on the PRACH;~~

~~$PRX_{PRACH,des}$ is the desired receive power level on the PRACH, which is signalled by the higher layer signalling on the FPACH.~~

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R1-02-1054

CR-Form-v7

CHANGE REQUEST

⌘ **25.224** **CR** **099** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

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Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction to the PRACH open loop power control procedure for 1.28 Mcps TDD
Source:	⌘	TSG RAN WG1
Work item code:	⌘	LCRTDD-Phys
Date:	⌘	7/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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Summary of change:	⌘	The description in TS25.224 is replaced by a reference to TS25.331, as it is done for all other open loop PC procedures for TDD.
Consequences if not approved:	⌘	Inconsistent specifications.

Clauses affected:	⌘				
Other specs affected:	⌘	**Y**	**N**		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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~~Where, P_{PRACH} is the UE transmit power level on the PRACH;~~

~~$PRX_{PRACH,des}$ is the desired receive power level on the PRACH, which is signalled by the higher layer signalling on the FPACH.~~