TSGR1#19(01)0252

TSG-RAN Working Group 1 meeting #19 Las Vegas, NE, USA

February 27 – March 2, 2001

Agenda item: **R99**

InterDigital Comm. Corp.

Source: Title: Known TFCI for the TDD Special Burst

Document for: Decision

1 Introduction

In TDD Special Bursts are required for periodic DTX transmissions and establishment of dedicated physical channels. The Special Burst is recognized by a "known" TFCI. This TFCI is currently specified as the TFCI that corresponds to "no transport blocks" as defined in 25.331. In order to define this TFCI in the UE and Node-B it is necessary to signal TF's for all TrCH's within the particular CCTrCH that indicate no TB's, and the corresponding TFC in the TFCS. This additional signalling can be avoided with a hard coded TFCI as is used in FDD for similar purposes (UL DPDCH establishment).

2. Specific changes

This CR proposes to fill TFCI with all "0" in alignment with FDD.

3GPP TSG-RAN1 Meeting #19 Las Vegas, Nevada, February 27 - March 2, 2001

	CHANGE REQUEST	ormv3
£	25.2241 CR 053	
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the z symbols.		
Prop osed change affects: ∠ (U)SIM ME/UE X Radio Access Network Core Network		
Title: ∠	Known TFCI for the TDD Special Burst	
Source:	InterDigital Comm. Corp.	
Work item code: ≤	Date: ✓ February 20, 200	1
Category:	F Release: Release: Release: Release: Release: Releas	
Reason for change	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) P (Editorial modification) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. In TDD Special Bursts are required for periodic DTX transmissions and establishment of dedicated physical channels. The Special Burst is recognise by a "known" TFCI. This TFCI is currently specified as the TFCI that correspondence of the following releases (GSM Phase 2) 2 (GSM Phase 2) Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	ed
	to "no transport blocks" as defined in 25.331. In order to define this TFCI in the UE and Node-B it is necessary to signal TF's for all TrCH's within the particul CCTrCH that indicate no TB's, and the corresponding TFC in the TFCS. This additional signalling can be avoided with a hard coded TFCI as is used in FD for similar purposes (UL DPDCH establishment).	ne Iar
Summary of chang	Special Burst TFCI is specified to be filled with "0" bits.	
Consequences if not approved:	Unnecessary signalling overhead is required for all dedicated channel configurations including handover cases.ecification	
Clauses affected:	∠ 4.5	
Other specs affected:	Other core specifications Test specifications O&M Specifications	
Other comments:	e/	

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:

- 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.

4.5 Discontinuous transmission (DTX) of Radio Frames

Discontinuous transmission (DTX) is applied in up- and downlink individually for each CCTrCH in case the total bit rate after transport channel multiplexing differs from the total channel bit rate of the dedicated physical channels allocated to a CCTrCH.

Rate matching is used in order to fill resource units completely, that are only partially filled with data. In the case that after rate matching and multiplexing no data at all is to be transmitted in a resource unit the complete resource unit is discarded from transmission. This applies also to the case where only one resource unit is allocated and no data has to be transmitted.

4.5.1 Use of Special Bursts fo DTX

In case there are no transport blocks provided for transmission by higher layers for any given CCTrCH after link establishment, then a Special Burst shall be transmitted in the first allocated frame of the transmission pause. If there is a consecutive period of ? N_OUTSYNC_IND/2-1? frames without transport blocks provided by higher layers, then another special burst shall be generated and transmitted at the next possible frame. This pattern shall be continued until transport blocks are provided for the CCTrCH by the higher layers. This special burst shall have the same slot format as the burst used for data provided by higher layers. The special burst is filled with an arbitrary bit pattern, contains a TFCI and TPC bits if inner loop PC is applied and is transmitted for each CCTrCH individually on the physical channel which is defined to carry the TFCI. The TFCI of the special burst if filled with "0" bits. shall indicate that there were no transport blocks provided for transmission by higher layers as defined in [15]. The transmission power of the special burst shall be the same as that of the substituted physical channel of the CCTrCH carrying the TFCI.

4.5.2 Use of Special Bursts for Initial Establishment

Upon initial establishment and either 160 ms following detection of in-sync, or until the first transport block is received from higher layers, both the UE and the Node B shall transmit the special burst for each CCTrCH for each assigned resource which was scheduled to include a TFCI.