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CHANGE REQUEST												
ж	25.	211	CR	134		жrev	-	ж	Current ver	sion:	3.8.0	ж
For <u>HELP</u> on u	ising t	his for	m, see	bottom	of this	page or	look	at the	e pop-up tex	t over	the X syr	nbols.
Proposed change	affect	ts: #	(U)S	SIM	ME/	UE <mark>X</mark>	Rad	lio Ac	cess Netwo	rk <mark>X</mark>	Core Ne	etwork
Title: ដ	Res	strictio	<mark>n to sin</mark>	nultanec	<mark>ous use</mark>	of SSD	T and	d clos	sed loop moo	de TX	diversity	
Source: #	Nol	kia										
Work item code: ೫									Date: ଖ	8 <mark>11</mark> .	12.2001	
Category: अ	F Use Detai be fo	one of F (con A (cor B (add C (fun D (edi iled ex und in	the follo rection) respond dition of ctional r torial mo blanation 3GPP <u>1</u>	wing cate ds to a co feature), modification odification ns of the TR 21.900	egories: prrection ion of fe n) above o <u>0</u> .	in an ea ature) categorie	<i>rlier re</i> s can	elease	Release: # Use <u>one</u> o 2 (*) R96 R97 R98 R99 REL-4 REL-5	f the fo (GSN (Rele (Rele (Rele (Rele (Rele (Rele	9 M Phase 2) pase 1996) pase 1997) pase 1998) pase 1999) pase 4) pase 5)	eases:
Reason for change	э: Ж	Due prop	to inter osed th	operabil nat featu	lity prol res in c	plems of question	f SSE are i	T an not co	d closed loo ombined toge	p moc ether.	le TX dive	rsity it is
Summary of chang	уе: Ж	SSD	T and o	closed lo	oop mo	<mark>de TX d</mark>	ivers	ity are	e not used to	gethe	er	
Consequences if not approved:	Ħ	Inter	operab	ility prob	olems v	vith SSE	T an	d clo	sed loop mo	de TX	diversity	
Clauses affected:	ж	5.2.1										
Other specs affected:	ж	0 Te 0	ther co est spe &M Spe	re speci cificatior ecificatio	fication ns ons	s ¥	8					
Other comments:	ж	This imple imple	CR is c ementa ementa	consider itions be itions su	ed to h having pportin	ave isol like ind g the co	ated icated orrect	impa d in th ed fui	ct. This woul the CR, but w nctionality.	d not ould a	affect affect	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G_Specs/CRs.htm</u>. 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

The uplink DPCCH is used to carry control information generated at Layer 1. The Layer 1 control information consists of known pilot bits to support channel estimation for coherent detection, transmit power-control (TPC) commands, feedback information (FBI), and an optional transport-format combination indicator (TFCI). The transport-format combination indicator informs the receiver about the instantaneous transport format combination of the transport channels mapped to the simultaneously transmitted uplink DPDCH radio frame. There is one and only one uplink DPCCH on each radio link.

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Figure 1 shows the frame structure of the uplink dedicated physical channels. Each radio frame of length 10 ms is split into 15 slots, each of length $T_{slot} = 2560$ chips, corresponding to one power-control period.



Figure 1: Frame structure for uplink DPDCH/DPCCH

The parameter k in figure 1 determines the number of bits per uplink DPDCH slot. It is related to the spreading factor SF of the DPDCH as $SF = 256/2^{k}$. The DPDCH spreading factor may range from 256 down to 4. The spreading factor of the uplink DPCCH is always equal to 256, i.e. there are 10 bits per uplink DPCCH slot.

The exact number of bits of the uplink DPDCH and the different uplink DPCCH fields (N_{pilot} , N_{TFCI} , N_{FBI} , and N_{TPC}) is given by table 1 and table 2. What slot format to use is configured by higher layers and can also be reconfigured by higher layers.

The channel bit and symbol rates given in table 1 and table 2 are the rates immediately before spreading. The pilot patterns are given in table 3 and table 4, the TPC bit pattern is given in table 5.

The FBI bits are used to support techniques requiring feedback from the UE to the UTRAN Access Point, including closed loop mode transmit diversity and site selection diversity transmission (SSDT). The structure of the FBI field is shown in figure 2 and described below.



Figure 2: Details of FBI field

The S field is used for SSDT signalling, while the D field is used for closed loop mode transmit diversity signalling. The S field consists of 0, 1 or 2 bits. The D field consists of 0 or 1 bit. The total FBI field size N_{FBI} is given by table 2. If total FBI field is not filled with S field or D field, FBI field shall be filled with "1". When N_{FBI} is 2bits, S field is 0bit and D field is 1 bit, left side field shall be filled with "1" and right side field shall be D field. Simultaneous use of SSDT power control and closed loop mode transmit diversity requires that the S field consists of 1 bit. The use of the FBI fields is described in detail in [5].

3GPP TSG-RAN Meeting#14 Kyoto, Japan, 11-14 December 2001

RP-01-0932

CHANGE REQUEST											
ж	25.21	1 CR	135	жre	ev	- *	Curren	t vers	sion:	<mark>4.2.0</mark>	ж
For HELP on using this form, see bottom of this page or look at the pop-up text over the X symbols.											
Proposed change affects: # (U)SIM ME/UE X Radio Access Network X Core Network											
Title: ೫	Restric	tion to sir	nultaneo	us use of S	SSDT	and clo	osed loop	mod	e TX o	diversity	
Source: #	Nokia										
Work item code: ೫							Da	<i>te:</i> Ж	11.1	2.2001	
Category: Ж	Yory:%ARelease: %REL-4Use one of the following categories:Use one of the following releaseF (correction)2(GSM Phase 2)A (corresponds to a correction in an earlier release)R96(Release 1996)B (addition of feature),R97(Release 1997)C (functional modification of feature)R98(Release 1998)D (editorial modification)R99(Release 1999)Detailed explanations of the above categories canREL-4(Release 4)be found in 3GPP TR 21.900.REL-5(Release 5)								eases:))		
Reason for change	<i>change:</i> # Due to interoperability problems of SSDT and closed loop mode TX diversity it is proposed that features in question are not combined together.										
Summary of change: # SSDT and closed loop mode TX diversity are not used together											
Consequences if not approved:	쁆 <mark>In</mark> t	# Interoperability problems with SSDT and closed loop mode TX diversity									
Clauses affected:	ж <mark>5.</mark> 2	2.1									
Other specs affected:	¥	Other co Test spe O&M Sp	re specif cification ecificatio	ications s ns	Ħ						
Other comments:	ដ Th im im	* This CR is considered to have isolated impact. This would not affect implementations behaving like indicated in the CR, but would affect implementations supporting the corrected functionality.									

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