3GPP TSG-RAN Meeting #15 Jeju, Korea, 5 – 8, March, 2002

RP-020046

Title: Agreed CRs (R99 and Rel-4 Category A) to TS 25.211

Source: TSG-RAN WG1

Agenda item: 7.1.3

No.	Spec	CR	Rev	R1 T-doc	Subject	Release	Cat	Workitem	V_old	V_new
1	25.211	138	1	R1-02-0424	Clarification of different diversity modes used in the same active	R99	F	TEI	3.9.0	3.10.0
					set					
2	25.211	139	1	R1-02-0424	Clarification of different diversity modes used in the same active	Rel-4	Α	TEI	4.3.0	4.4.0
					set					

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*	25.	.211	CR	138		₩ re	ev 1	æ	Current vers	ion:	3.9.0	ж
For <u>HELP</u> on t	using t	this for	m, see	e bottom	of this	page	or look	at th	e pop-up text	over	the # syl	mbols.
Proposed change	affec	ts: #	(U)	SIM	ME/	UE X	R ac	dio A	ccess Networl	< X	Core Ne	etwork
Title:	€ Cla	rificati	on of [Different	diversi	ty mo	des use	ed in	the same activ	ve se	t	
Source: #	€ TS	G RAN	WG1									
Nork item code: #	€ TEI								Date: ₩	19	Feb 2002	2
Category: #	F Use	one of F (con A (cor B (add C (fun D (edi iled exp und in	rection) respon dition of ctional torial m olanatio	ds to a co f feature), modification ons of the TR 21.90	orrection ion of fe n) above (n in an eature) catego	ories car	1	Release: ₩ Use <u>one</u> of 2 e) R96 R97 R98 R99 REL-4 REL-5	R9 the fo (GSM (Rele (Rele (Rele (Rele (Rele	9 M Phase 2) A Phase 2) Pase 1996) Pase 1997) Pase 1999) Pase 4) Pase 5)	eases:
Reason for chang	e: ¥	UE s agre 1. UI on/of 2. UI signa This	shall operation of the control of th	perate the is to allow all to all the alling. Inguish the sal intension	is Tx down two the rad ne difference differe	iversit possil io link rence larify t	ble implicing the state of on/or this agr	e on a leme div is off of a	clarify the state all radio links". Intations. The son regardless each radio linkent and to avo AN2 joint mee	Currse are of the from	ent RAN1 e e signallir n the higher confusio	ng of er layer n.
Summary of chan	ge: #	Inks imple Isola This the form of the Isola This the form of the Isola This the form of the Isola This Isola T	" is producted in CR coollowing The active active mated. Figure 2.	opposed to ation is a npact ar orrects a ng cases trive set o nk(s) with ye set co ode active	o clearlallowed nalysis misalig contain h no To ntains wated a not imp	y say . gneme s one x dive one o nd on lemer	what is ent betwood or more r more ie or mo	veen e link tivate link(s	ate this Tx dividatory required the layer 3 area (s) with STTE (ed. b) with the sample (s) with no Tale (s) with no Tale (s), a consistent	emen nd lay activ ne giv x div	t and what ver 1 protovated and ven closed versity	at type of ocols for one or d loop Tx
Consequences if not approved:	ж			on about cification			remain	s inc	omplete. RAN	1 spe	ecification	and
Clauses affected:	¥	5.3.	.1									

Other specs affected:	*	Other core specifications Test specifications O&M Specifications	¥	
Other comments:	ж			

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 \$\mathbb{X}\$ 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.

5.3.1 Downlink transmit diversity

Table 10 summarizes the possible application of open and closed loop transmit diversity modes on different downlink physical channel types. Simultaneous use of STTD and closed loop modes on the same physical channel is not allowed. In addition, if Tx diversity is applied on any of the downlink physical channels it shall also be applied on P-CCPCH and SCH. Regarding CPICH transmission in case of transmit diversity, see subclause 5.3.3.1.

With respect to the usage of Tx diversity on different radio links within an active set, the following rules apply:

- Different Tx diversity modes (STTD and closed loop) shall not be used on the radio links within one active set.
- No Tx diversity on one or more radio links shall not prevent UTRAN to use Tx diversity on other radio links within the same active set.
- If STTD is activated on one or several radio links in the active set, the UE shall operate STTD either on only those radio links where STTD has been activated or on all radio links in the active set.
- If closed loop TX diversity is activated on one or several radio links in the active set, the UE shall operate closed loop TX diversity either on only those radio links where closed loop TX diversity has been activated or on all radio links in the active set. However, the UE shall operate this Tx diversity mode on all radio links.

Furthermore, the transmit diversity mode used for a PDSCH frame shall be the same as the transmit diversity mode used for the DPCH associated with this PDSCH frame. The transmit diversity mode on the associated DPCH may not change during a PDSCH frame and within the slot prior to the PDSCH frame. This includes any change between no Tx diversity, open loop, closed loop mode 1 or closed loop mode 2.

Table 10: Application of Tx diversity modes on downlink physical channel types "X" – can be applied, "–" – not applied

Physical channel type	Open lo	Closed loop	
	TSTD	STTD	Mode
P-CCPCH	-	X	_
SCH	X	-	-
S-CCPCH	_	X	-
DPCH	_	X	X
PICH	_	X	-
PDSCH	-	X	X
AICH	_	X	-
CSICH	_	X	-
AP-AICH	-	Х	-
CD/CA-ICH	-	Х	-
DL-DPCCH for CPCH	-	Х	Х

	CHANGE REQUEST	CR-Form-v4							
*	25.211 CR 139 * rev 1 *	Current version: 4.3.0 **							
For <u>HELP</u> on usi	ing this form, see bottom of this page or look at th	ne pop-up text over the X symbols.							
Proposed change af	Proposed change affects: (U)SIM ME/UE X Radio Access Network X Core Network								
Title: 第	Clarification of Different diversity modes used in	the same active set							
Source: #	TSG RAN WG1								
Work item code: 第	TEI	Date: 第 19 Feb 2002							
С	A Jse one of the following categories: F (correction) A (corresponds to a correction in an earlier released 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.	Release: # REL-4 Use one of the following releases: 2 (GSM Phase 2) se) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)							
Reason for change:	Reason for change: The LS from RAN2 (R1-02-0126) asked to clarify the statement "However, UE shall operate this Tx diversity mode on all radio links". Current RAN1 agreement is to allow two possible implementations. These are 1. UE assumes all the radio link is Tx-div is on regardless of the signalling on/off signalling. 2. UE distinguish the difference of on/off of each radio link from the higher signalling. This proposal intend to clarify this agreement and to avoid the confusion. This CR catches the discussion at RAN1-RAN2 joint meeting from 12-0200								
The statement "However, the UE shall operate this Tx diversity mode on all ra links" is proposed to clearly say what is mandatory requirement and what type implementation is allowed. Isolated impact analysis This CR corrects a misalignement between the layer 3 and layer 1 protocols for the following cases: The active set contains one or more link(s) with STTD activated and one of more link(s) with no Tx diversity activated. The active set contains one or more link(s) with the same given closed loop diversity mode activated and one or more link(s) with no Tx diversity activated. For UEs not implementing this CR, a consistent behaviour can not be guaranteed in these cases. Consequences if Specification about Tx-diversity remains incomplete. RAN1 specification and									
Consequences if not approved:	Specification about Tx-diversity remains inc RAN2 specification don't align.	complete. KAN1 specification and							
Clauses affected:	第 5.3.1								

Other specs affected:	*	Other core specifications Test specifications O&M Specifications	¥	
Other comments:	ж			

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PDSCH	-	X	X
AICH	_	X	-
CSICH	_	X	-
AP-AICH	-	Х	-
CD/CA-ICH	-	Х	-
DL-DPCCH for CPCH	-	Х	Х