Title: Agreed CRs (Release '99 and Rel-4/Rel-5 category A) to TS 25.302

Source: TSG-RAN WG2

Agenda item: 7.2.3

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Versio
R2-022345	agreed	25.302	129		R99	Correction of transport to physical channel mapping for TDD	F	3.13.0
R2-022346	agreed	25.302	130		Rel-4	Correction of transport to physical channel mapping for TDD	Α	4.5.0
R2-022347	agreed	25.302	131		Rel-5	Correction of transport to physical channel mapping for TDD	Α	5.1.0

3GPP TSG-RAN WG2 Meeting #31 Stockhom, Sweden, 19-23 August 2002

CHANGE REQUEST												
*	25	.302	CR 12	29	≋ rev	-	¥	Curre	nt vers	sion: 3	.13.0	æ
For <u>HELP</u> on	using	this for	m, see bo	ottom of thi	is page or	look a	at the	е рор-	up text	over tl	he # sy	mbols.
Proposed change	e affec	<i>ts:</i> l	JICC app	s# 🔃	ME	Rad	dio A	ccess	Netwo	rk X	Core No	etwork
Title:	₩ Co	rrection	n of transp	oort to phy	sical char	nel m	appi	ng for	TDD			
Source:	⊭ TS	G RAN	I WG2									
								ח	otor 90	12/0	8/2002	
Work item code:	₩ TE							D	ate: #	13/0	0/2002	
Category:	⊮ F	one of	the followir	ng categorie	·c.				ase: #	R99	owing rel	eases.
	000	F (corr	rection)					2	?	(GSM)	Phase 2))
			responds t dition of fea	o a correction ture)	on in an ea	rlier re	elease		R96 R97		se 1996) se 1997)	
		C (fund	ctional mod	dification of	feature)			F	R98	(Relea	se 1998)	
	Doto		torial modif	<i>iication)</i> of the above	o cotogorio	c can			R99 Rel-4	(Relea	se 1999)	
			3GPP <u>TR 2</u>		e categorie	S Call			Rel-5	(Relea		
								F	Rel-6	(Relea	se 6)	
Reason for chang	ne: Ж	The	diagram s	hown in se	ection 6.2	indica	ates 1	that for	r TDD i	t is onl	v possik	ole to
	,	map	FACH/PC	H transpo	rt channe	ls onto	o a s	ingle p	hysica	ıl chanı	nel. Hov	vever
				ng FACH/		be mu	ultiple	exed o	ver a n	umber	of phys	ical
		chan	neis ii rec	<mark>juired in T</mark> I	טט.							
Summary of char	nge: ૠ			section 6							g FACH	I/PCH
		can b	oe multiple	exed over	several pl	nysica	al cha	annel c	data str	eams.		
		Also	an additio	nal paragi	raph is ad	ded to	o clai	rify tha	t in TD	D is po	ossible t	0
		multi	plex FAC	H/PCH CC	TrCh ove	r seve	eral p	ohysica	al chan	nels.		
Consequences if	ж	Stag	e 2 and st	age 3 are	not aligne	ed lead	dina	to pote	ential m	nisunde	erstandi	na.
not approved:		Ū					Ŭ	·				•
				s is: This C ode. The (
			in TDD in		51(15 101 (namo	atioi	i Oiliy k	out it ot	Jillaiiis	arunuc	arricitai
		0.0										
Clauses affected:	: ¥	6.2										
		YN										
Other specs	ж	X		re specific		¥						
affected:		X		cifications ecification								
			J GRIVI SP	Comeauon	3							
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 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.

6.2 Downlink models

Figure 3 and figure 4 show the model of the UE's physical layer for the downlink in FDD and TDD mode, respectively. Note that there is a different model for each transport channel type.

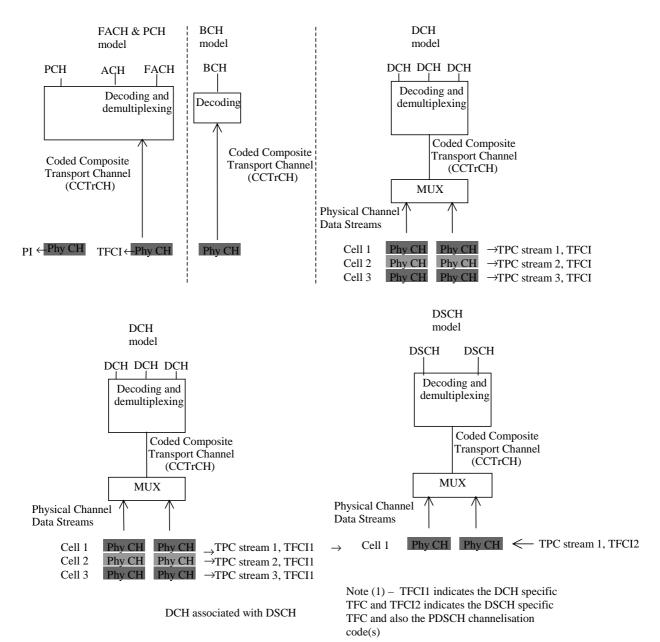
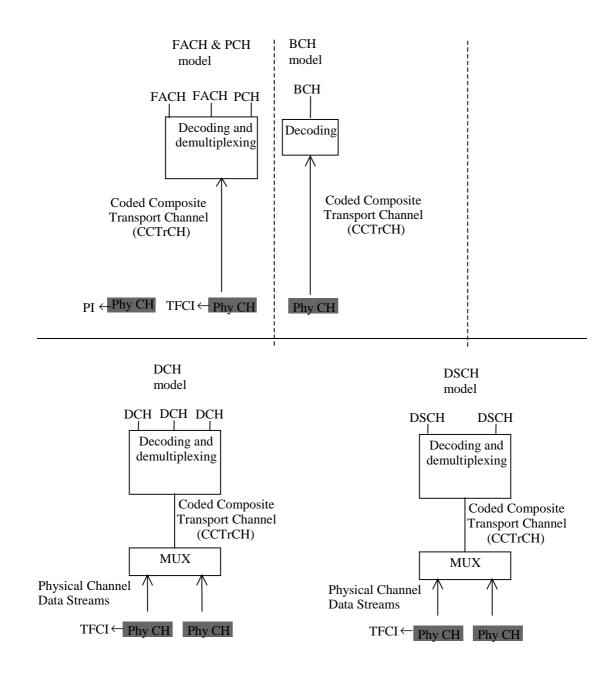


Figure 3: Model of the UE's physical layer - downlink FDD mode



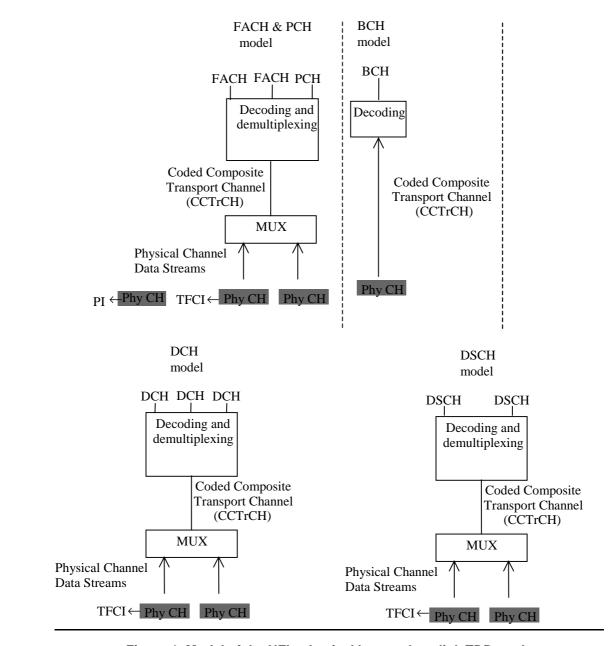


Figure 4: Model of the UE's physical layer - downlink TDD mode

For the DCH case, the mapping between DCHs and physical channel data streams works in the same way as for the uplink. Note however, that the number of DCHs, the coding and multiplexing etc. may be different in uplink and downlink.

In the FDD mode, the differences are mainly due to the soft and softer handover. Further, the pilot, TPC bits and TFCI are time multiplexed onto the same physical channel(s) as the DCHs. Further, the definition of physical channel data stream is somewhat different from the uplink. In TDD mode the TFCI is time multiplexed onto the same physical channel(s) as the DCHs. The exact locations and coding of the TFCI are signalled by higher layers.

Note that it is logically one and the same physical data stream in the active set of cells, even though physically there is one stream for each cell. The same processing and multiplexing is done in each cell. The only difference between the cells is the actual codes, and these codes correspond to the same spreading factor.

The physical channels carrying the same physical channel data stream are combined in the UE receiver, excluding the pilot, and in some cases the TPC bits. TPC bits received on certain physical channels may be combined provided that UTRAN has informed the UE that the TPC information on these channels is identical.

A PCH and one or several FACH can be encoded and multiplexed together forming a CCTrCH. Similarly as in the DCH model there is one TFCI for each CCTrCH for indication of the transport formats used on each PCH and FACH. The PCH is associated with a separate physical channel carrying page indicators (PIs) which are used to trigger UE reception of the physical channel that carries PCH. A FACH or a PCH can also be individually mapped onto a separate physical channel. The BCH is always mapped onto one physical channel without any multiplexing with other transport channels, and there can only be one BCH TrCH and no other TrCH in a BCH CCTrCH.

Note that in the TDD mode a CCTrCh carrying PCH and one or several FACH can be multiplexed onto one or several physical channel data streams.

3GPP TSG-RAN WG2 Meeting #31 Stockhom, Sweden, 19-23 August 2002

CHANGE REQUEST											
*	25	.302	CR 13	80	≋rev	-	ж	Current	version:	4.5.0	¥
For <u>HELP</u> on	using	this for	rm, see bo	ttom of th	nis page o	r look	at th	е рор-ир	text ove	er the ¥ sy	mbols.
Proposed change	e affec	<i>ts:</i>	JICC apps	s# <u> </u>	ME	Rad	dio A	ccess Ne	etwork <mark>)</mark>	Core N	etwork
Title:	€ Co	rrectio	n of transp	ort to phy	/sical cha	nnel m	nappi	ing for TE	DD		
Source:	€ TS	G-RAN	WG2								
Work item code:	€ TE							Date	e: ೫ <mark>1</mark> 3	3/08/2002	
Category:	Deta	F (corr A (corr B (add C (fun D (edit iled exp	the following rection) The sponds to dition of feactional modifications of the second	o a correct ture), lification or ication) of the abov	ion in an ea			2	ne of the (GS) 6 (Re 7 (Re 8 (Re 9 (Re -4 (Re	el-4 following rea SM Phase 2 lease 1996, lease 1998, lease 1999, lease 4) lease 5))))
							,		,	•	
Reason for chang	у е : Ж	map CCT	FACH/PC	H transpong Ng FACH	ort channe /PCH can	els ont	to a s	single phy	sical ch	only possil annel. Hov per of phys	wever
Summary of char	ge:♯	can l	pe multiple	exed over nal parag	several p graph is ac	hysica dded t	al cha o cla	annel dat rify that in	a stream n TDD is	possible t	
Consequences if not approved:	Ж	Stage 2 and stage 3 are not aligned leading to potential misunderstanding. Impact analysis: This CR is considered to have isolated impact since it only affects TDD mode. The CR is for clarification only but it contains a fundamental									
			ts TDD m in TDD n		CR is for	ciaritic	cation	n only but	t it conta	ins a funda	amental
Clauses affected:	ж	6.2									
Other specs affected:	*	Y N X X	Test spe	cifications	3	X					
Other comments:	\mathfrak{X}										

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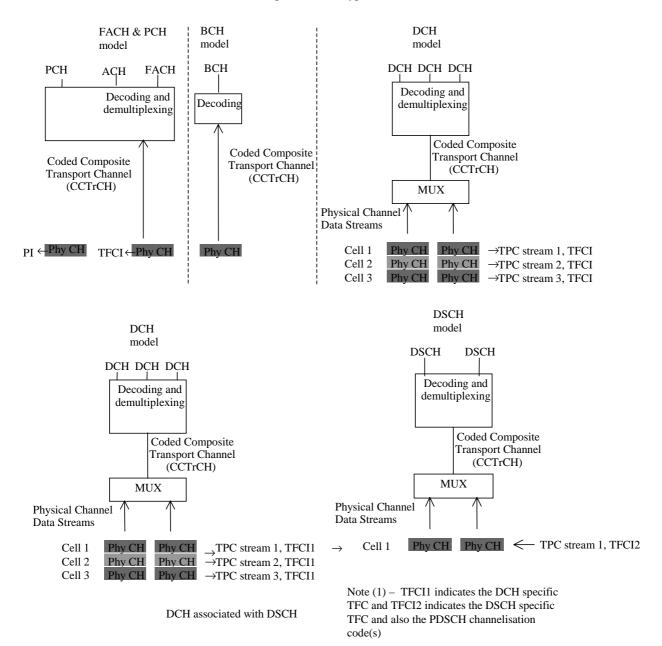
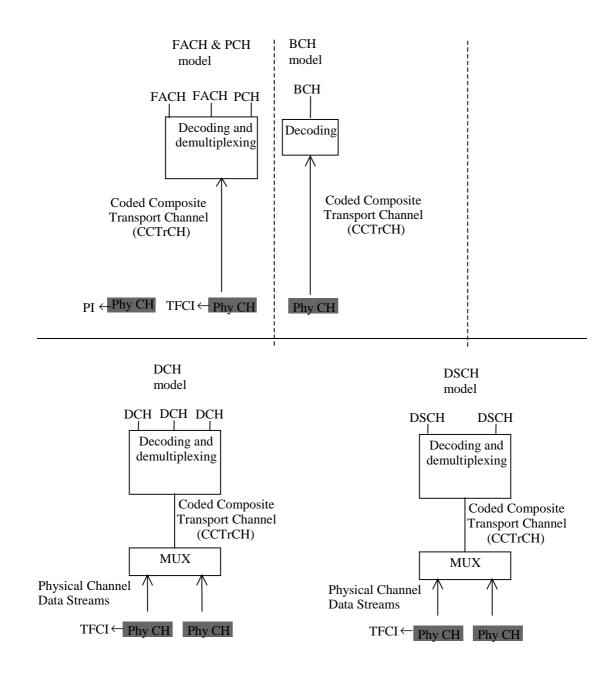


Figure 3: Model of the UE's physical layer - downlink FDD mode



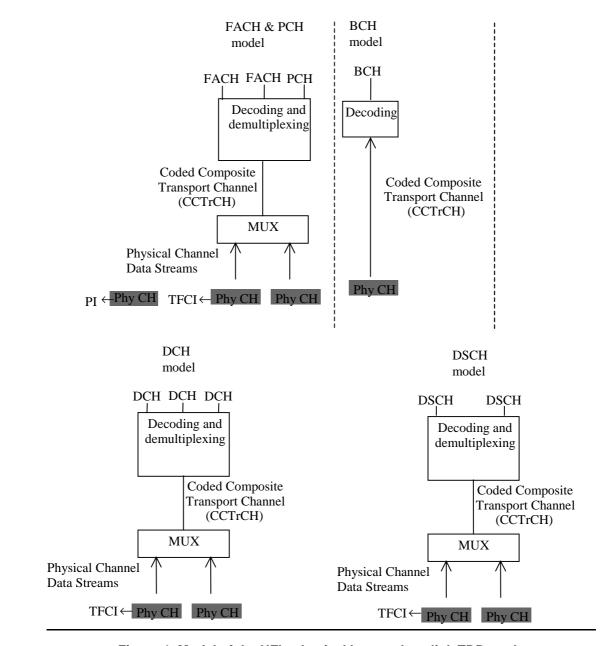


Figure 4: Model of the UE's physical layer – downlink TDD mode

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3GPP TSG-RAN WG2 Meeting #31 Stockhom, Sweden, 19-23 August 2002

CHANGE REQUEST									
*	25.302 CR 131	Current version: 5.1.0 **							
For HELP on usir	ng this form, see bottom of this page or look at the p	pop-up text over the 業 symbols.							
Proposed change aff	fects: UICC apps 兆 ME Radio Acc	cess Network X Core Network							
Title: # (Correction of transport to physical channel mapping	g for TDD							
Source: #	TSG-RAN WG2								
Work item code: ### Toda: ### To	TEI	Date: # 13/08/2002							
D	A Jose 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.	Release: # Rel-5 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)							
Becom for change:	The diagram shows in section 6.2 indicates th	,							
Reason for change:	The diagram shown in section 6.2 indicates the map FACH/PCH transport channels onto a sin CCTrCh carrying FACH/PCH can be multiplex channels if required in TDD.	ngle physical channel. However							
Summary of change:	The diagram in section 6.2 is changed so that a CCTrCh carrying FACH/PCH can be multiplexed over several physical channel data streams. Also an additional paragraph is added to clarify that in TDD is possible to multiplex FACH/PCH CCTrCh over several physical channels.								
Consequences if not approved:	** Stage 2 and stage 3 are not aligned leading to Impact analysis: This CR is considered to ha affects TDD mode. The CR is for clarification of issue in TDD mode.	ve isolated impact since it only							
Clauses affected:	₩ 6.2								
Other specs affected:	Y N X Other core specifications X Test specifications O&M Specifications								
Other comments:	x								

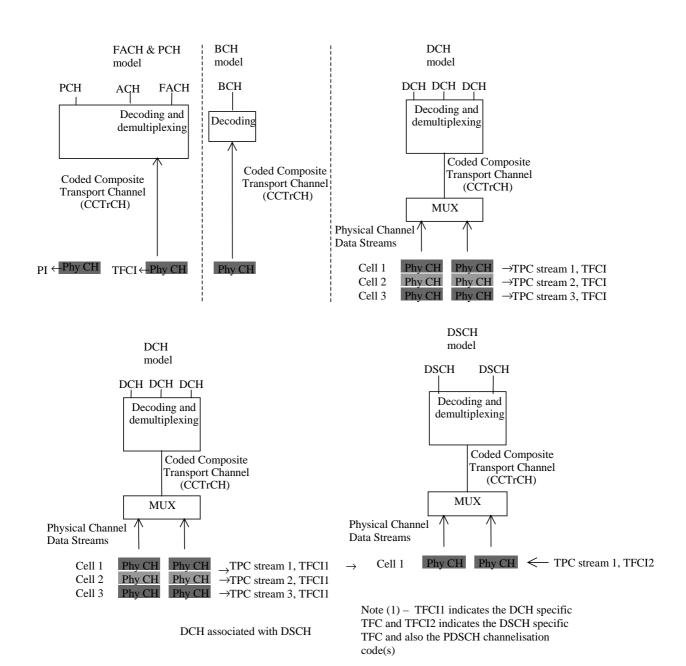
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DCH model with HS-DSCH(s)

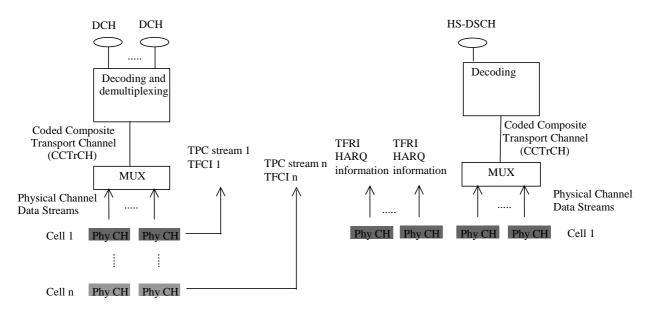
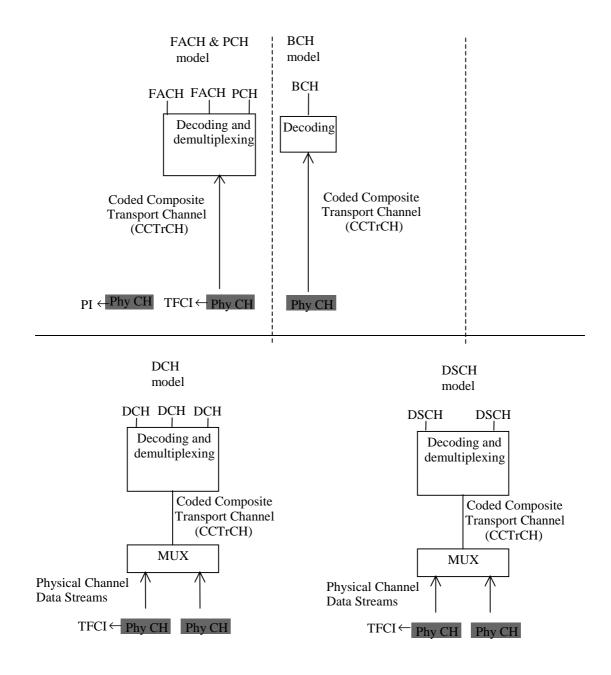
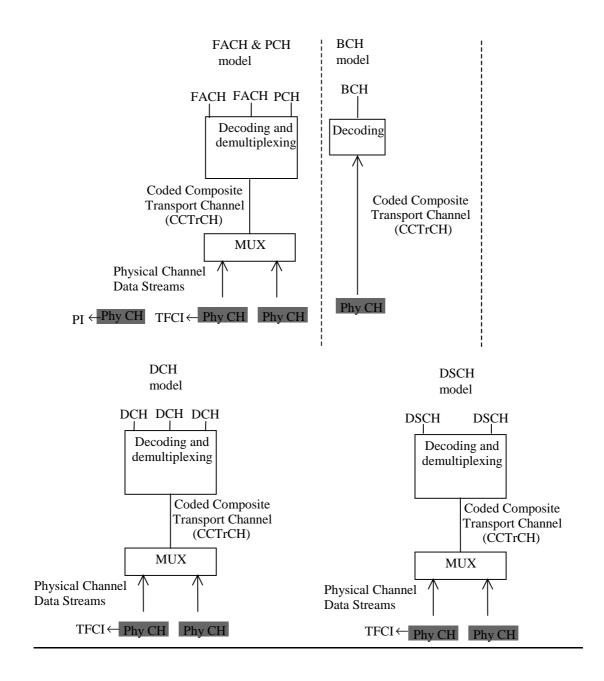


Figure 3: Model of the UE's physical layer - downlink FDD mode





DCH model with HS-DSCH(s)

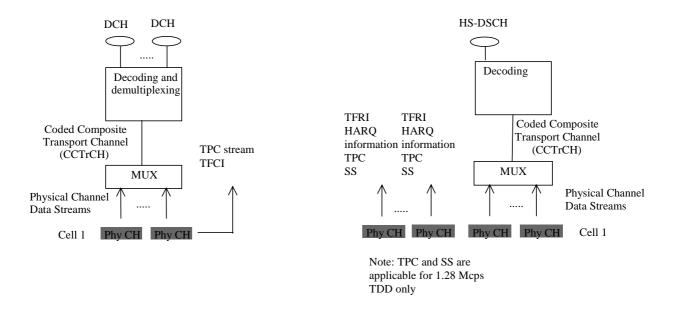


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For each HS-DSCH TTI, each HS-SCCH carries HS-DSCH-related downlink signalling for one UE. The following information is carried on the HS-SCCH:

- Transport Format and Resource Indicator (TFRI);
- Hybrid-ARQ-related Information (HARQ information).