TSG-RAN Meeting #17 ***RP-020537***
Biarritz, France, 3 - 6 September 2002

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	A	4.5.0
R2-022347	agreed	25.302	131		Rel-5	Correction of transport to physical channel mapping for TDD	A	5.1.0

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

R2-022345

CR-Form-v7

CHANGE REQUEST

⌘ **25.302** **CR** **129** ⌘ **rev** **-** ⌘ Current version: **3.13.0** ⌘

*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:	⌘	Correction of transport to physical channel mapping for TDD
Source:	⌘	TSG RAN WG2
Work item code:	⌘	TEI
Date:	⌘	13/08/2002
Category:	⌘	**F**
Release:	⌘	R99

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)*
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Reason for change:	⌘	The diagram shown in section 6.2 indicates that for TDD it is only possible to map FACH/PCH transport channels onto a single physical channel. However CCTrCh carrying FACH/PCH can be multiplexed over a number of physical channels if required in TDD.
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Consequences if not approved:	⌘	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 issue in TDD mode.

Clauses affected:	⌘	6.2			
Other specs affected:	⌘	**Y**	**N**		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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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.

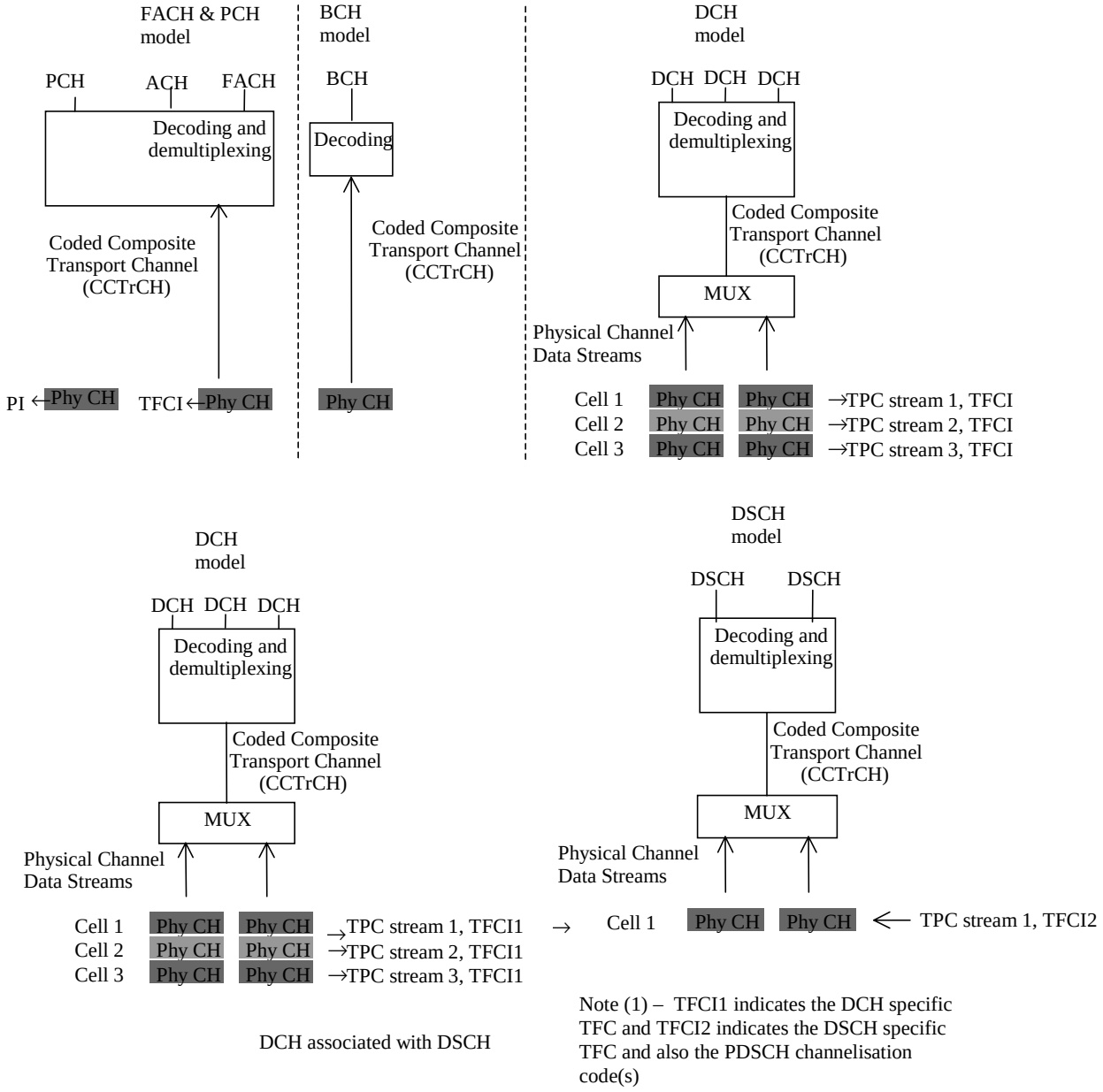
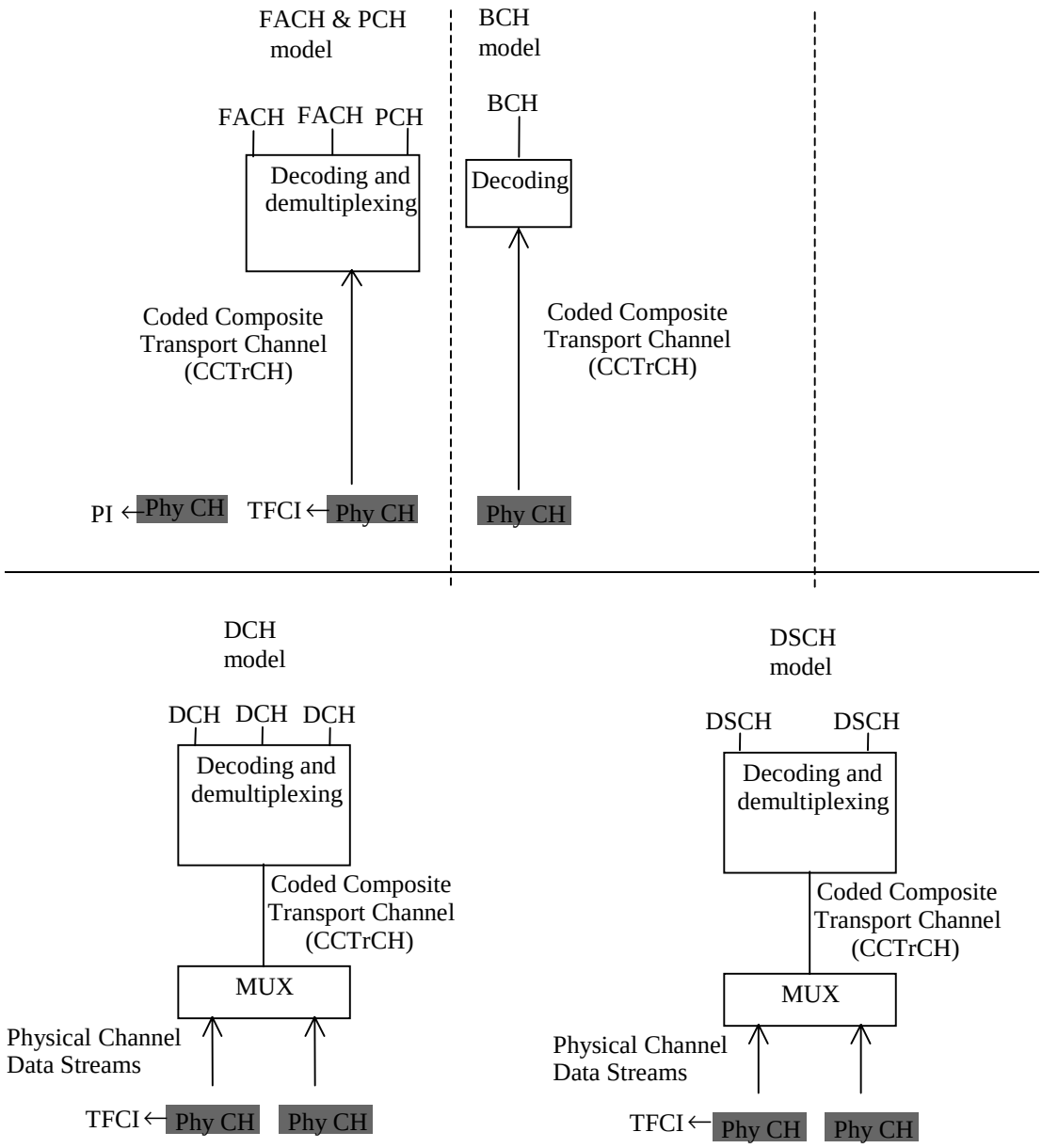


Figure 3: Model of the UE's physical layer - downlink FDD mode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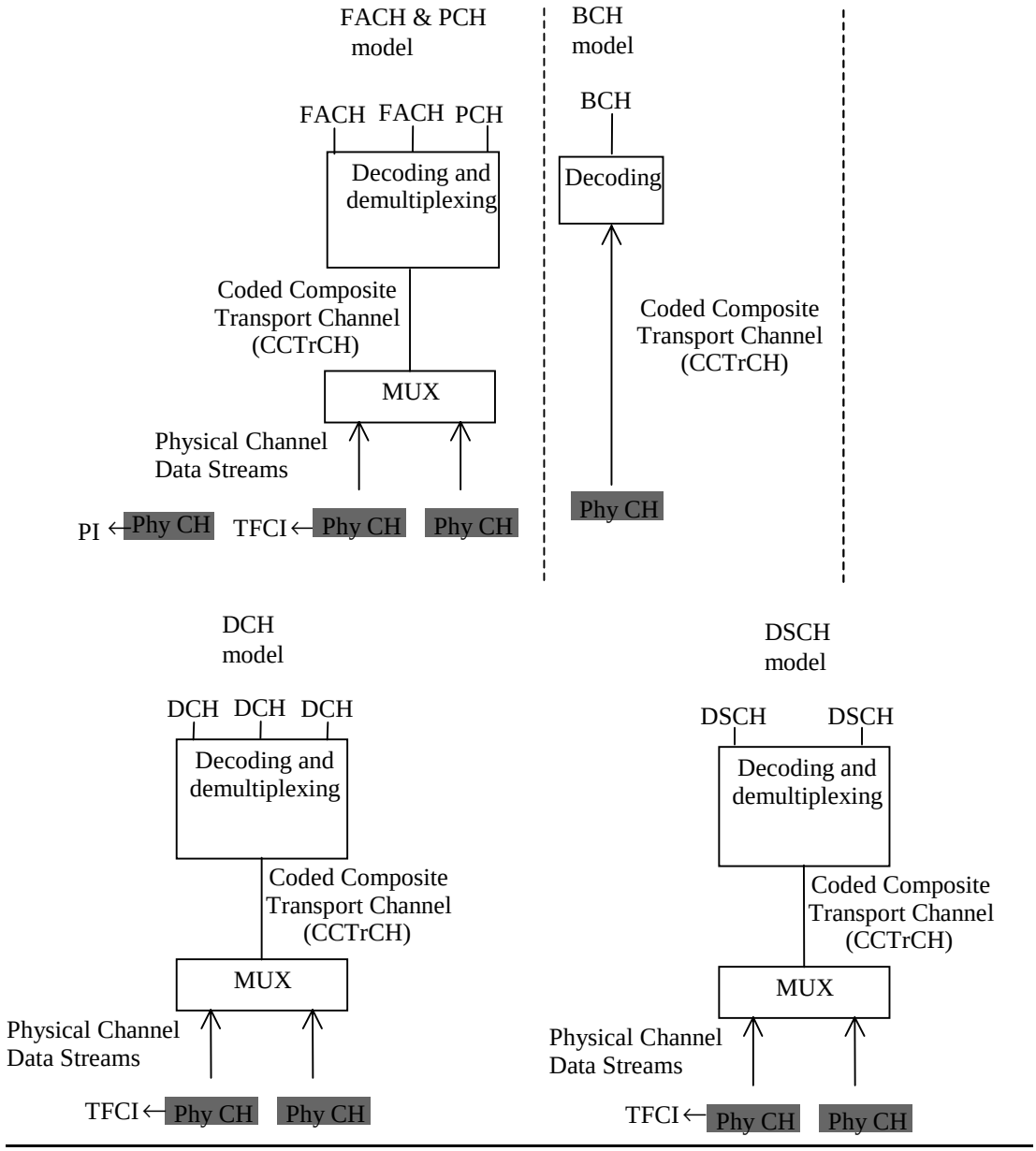

Figure 4: Model of the UE's physical layer – downlink TDD mode

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.

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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

R2-022346

CR-Form-v7

CHANGE REQUEST

⌘ **25.302** **CR** **130** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

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

Title:	⌘	Correction of transport to physical channel mapping for TDD
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	13/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
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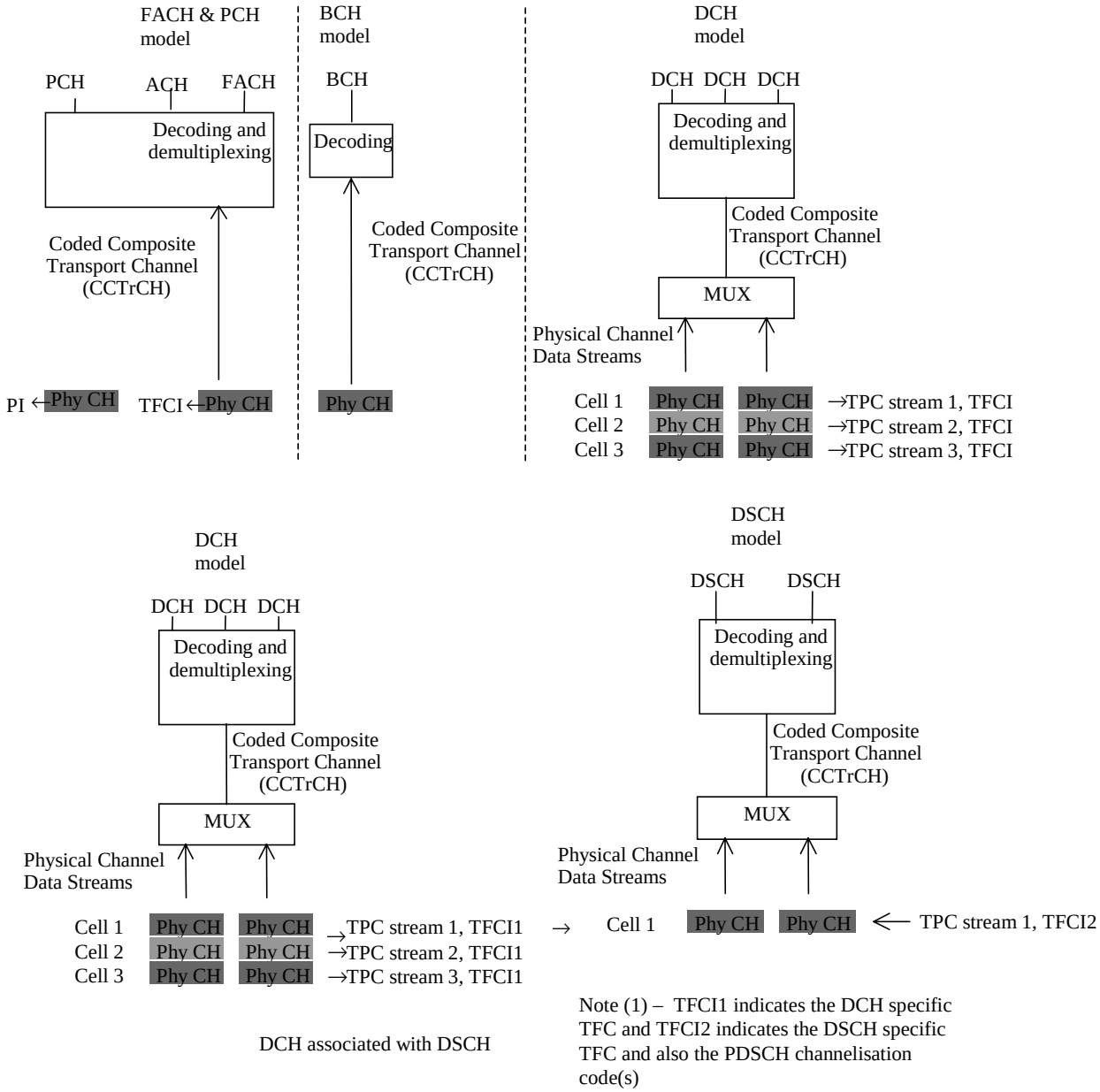

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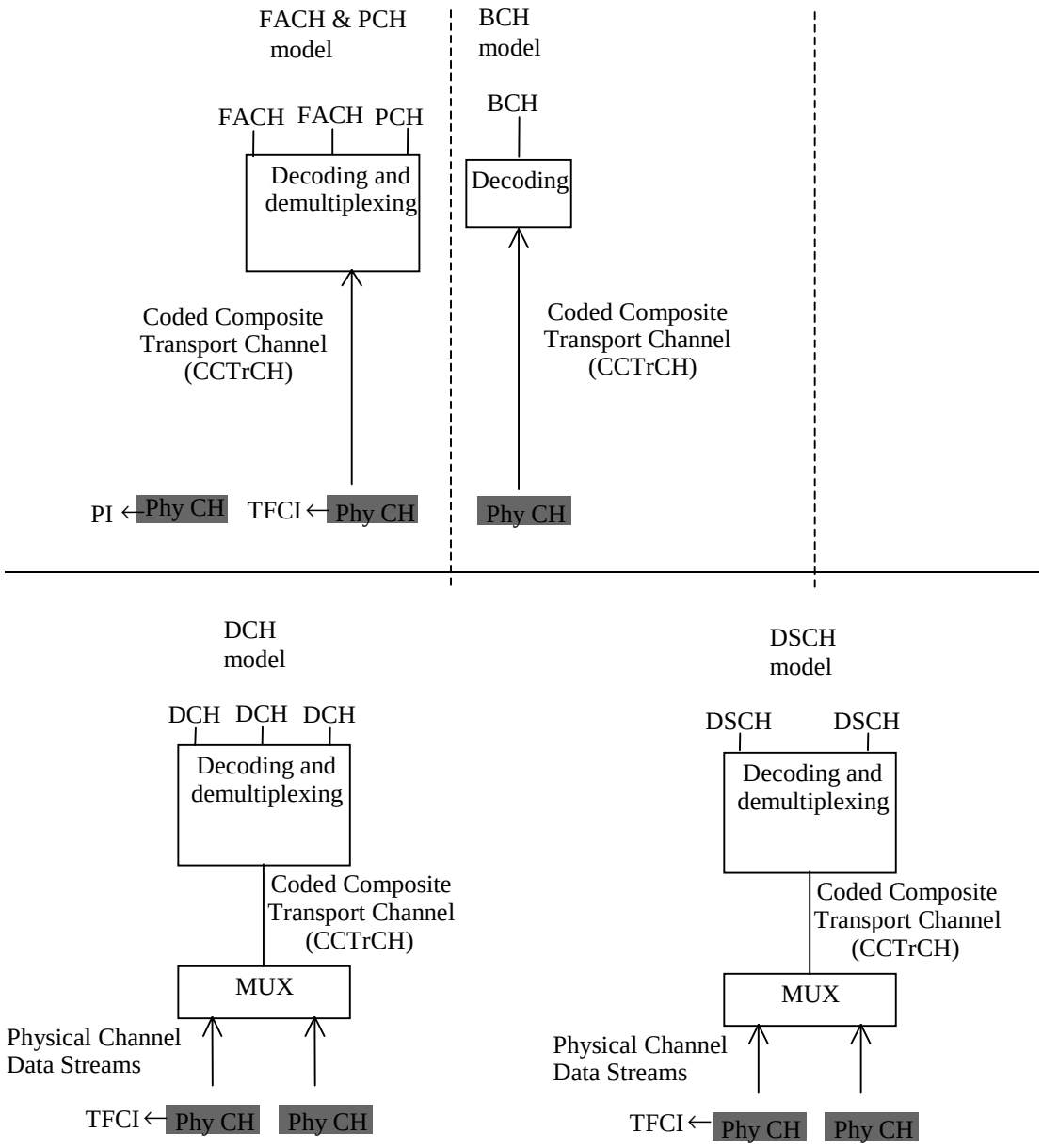
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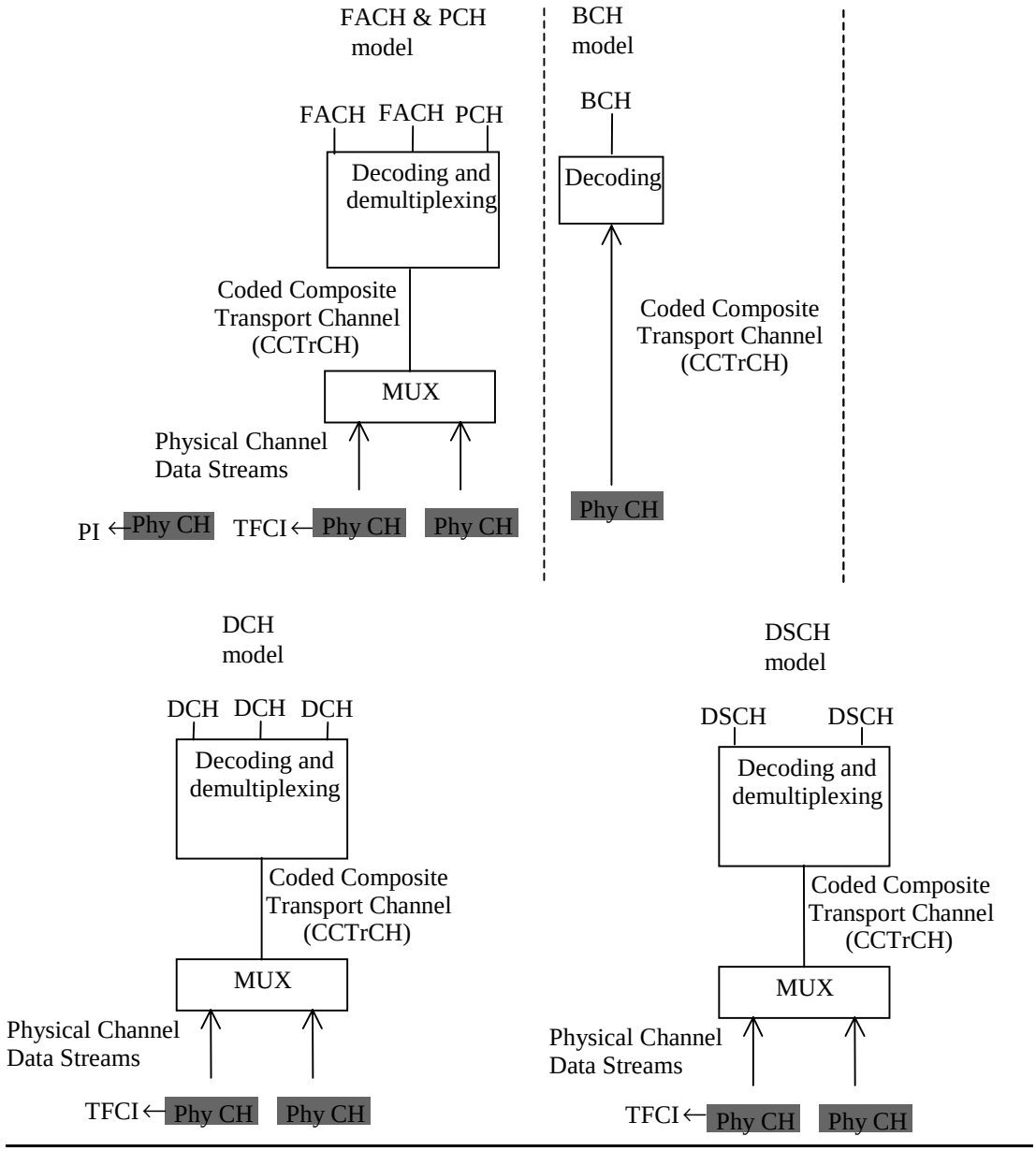

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3GPP TSG-RAN WG2 Meeting #31
Stockhom, Sweden, 19-23 August 2002

R2-022347

CR-Form-v7

CHANGE REQUEST

⌘ **25.302** **CR** **131** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

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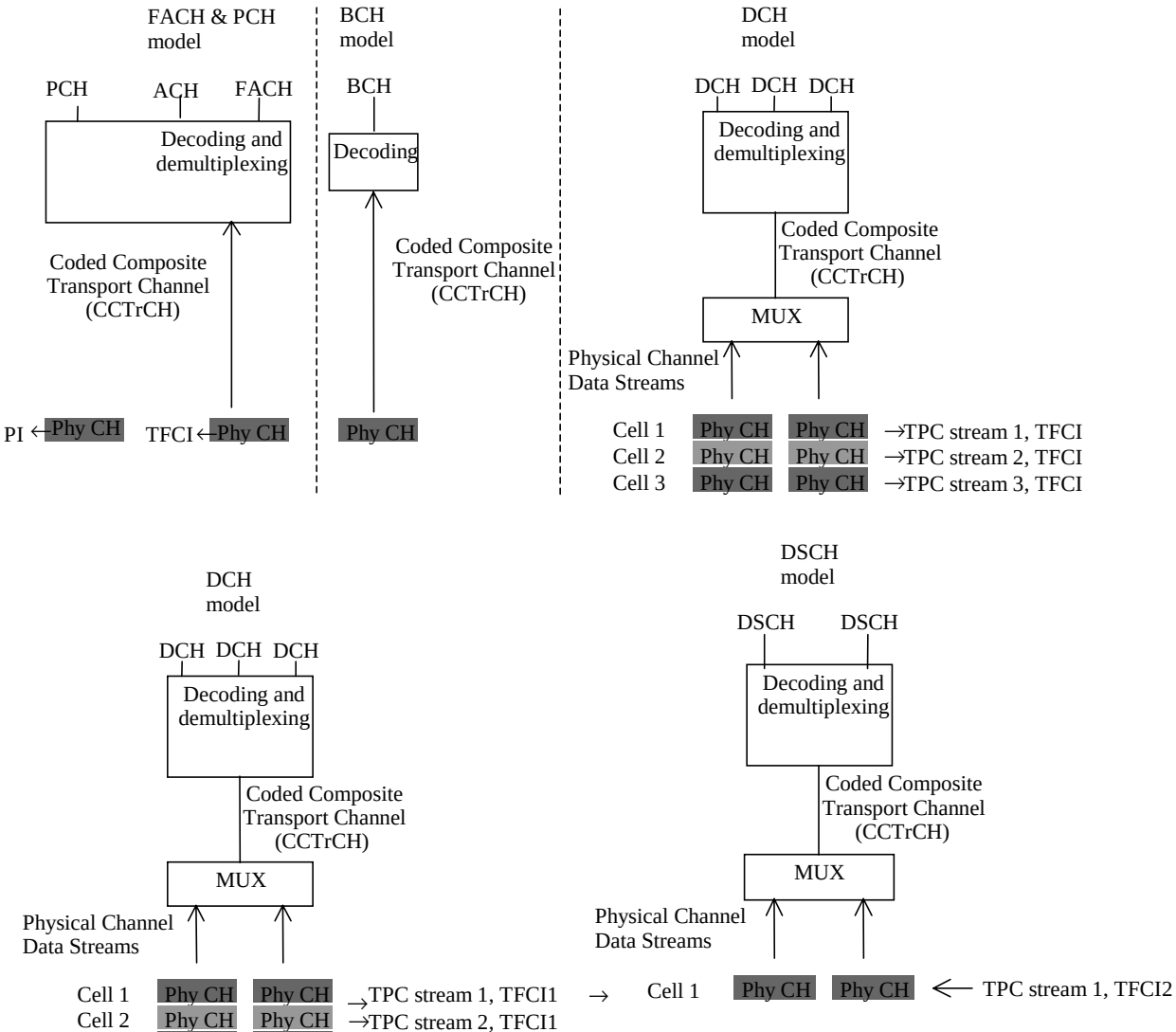
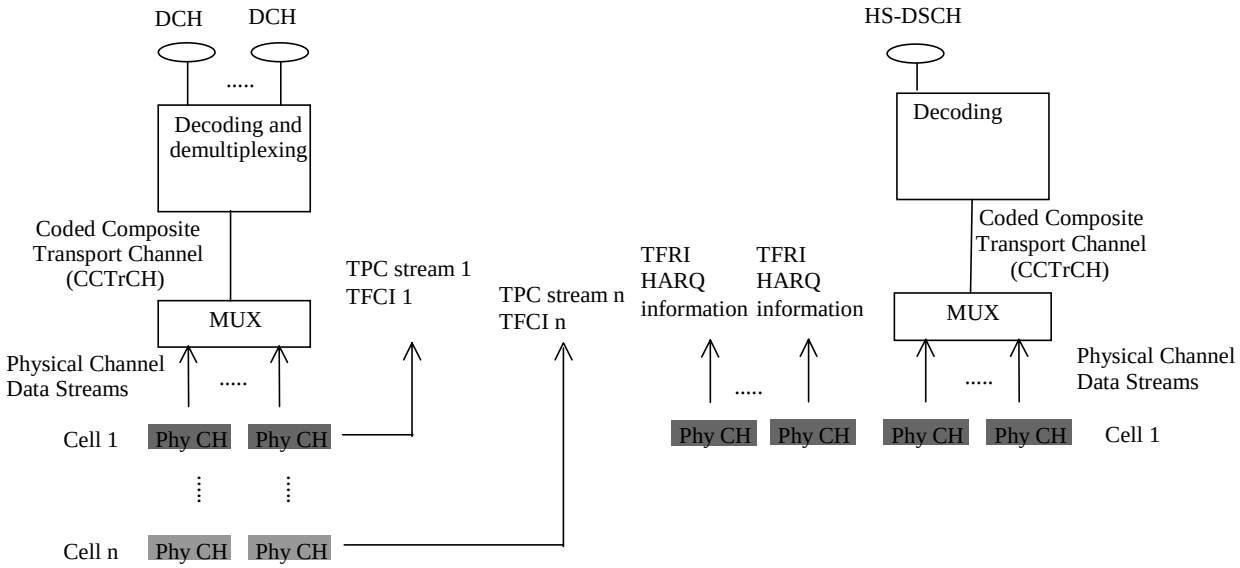


Note (1) – TFCI1 indicates the DCH specific TFC and TFCI2 indicates the DSCH specific TFC and also the PDSCH channelisation code(s)

DCH model with HS-DSCH(s)



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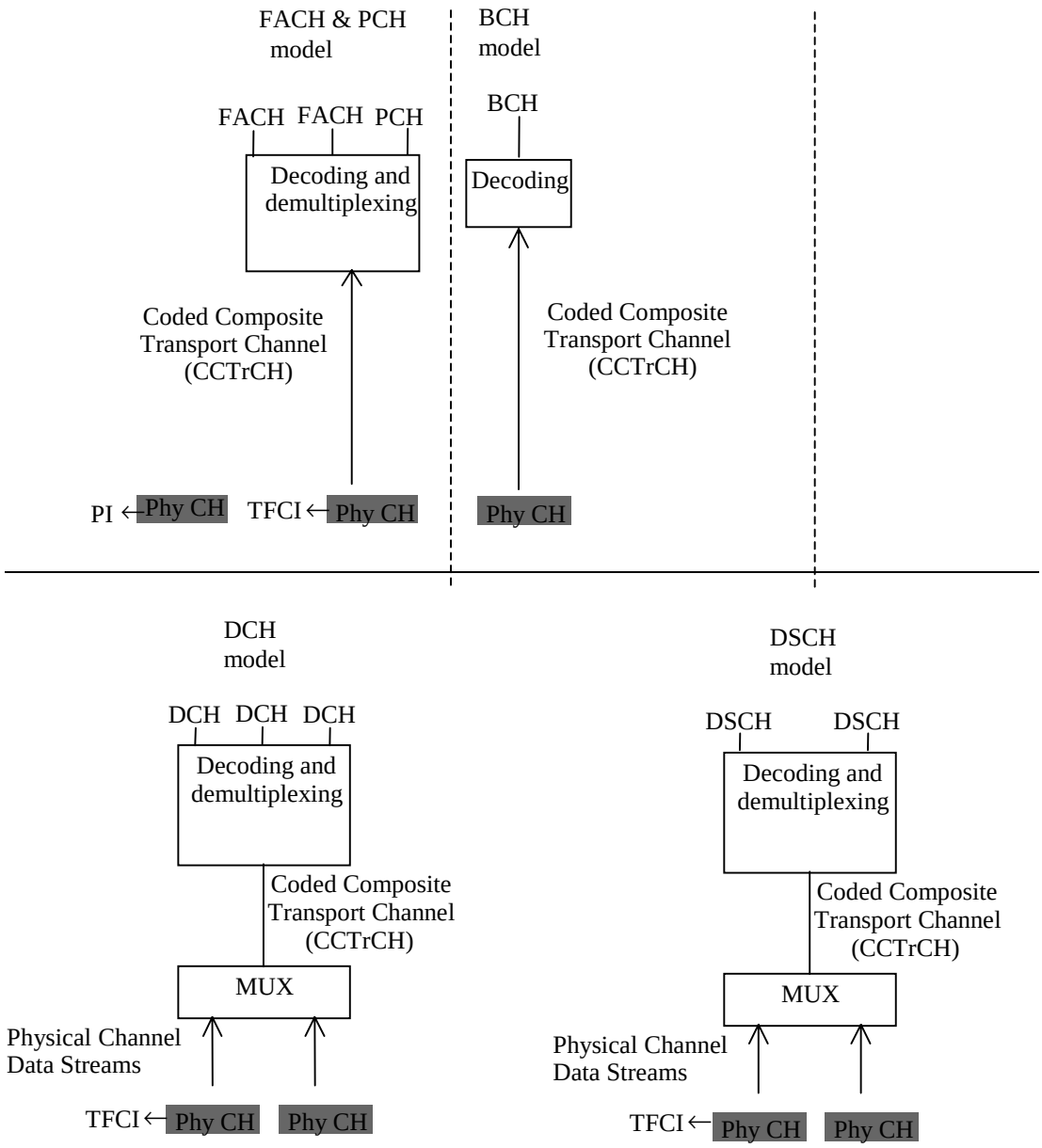
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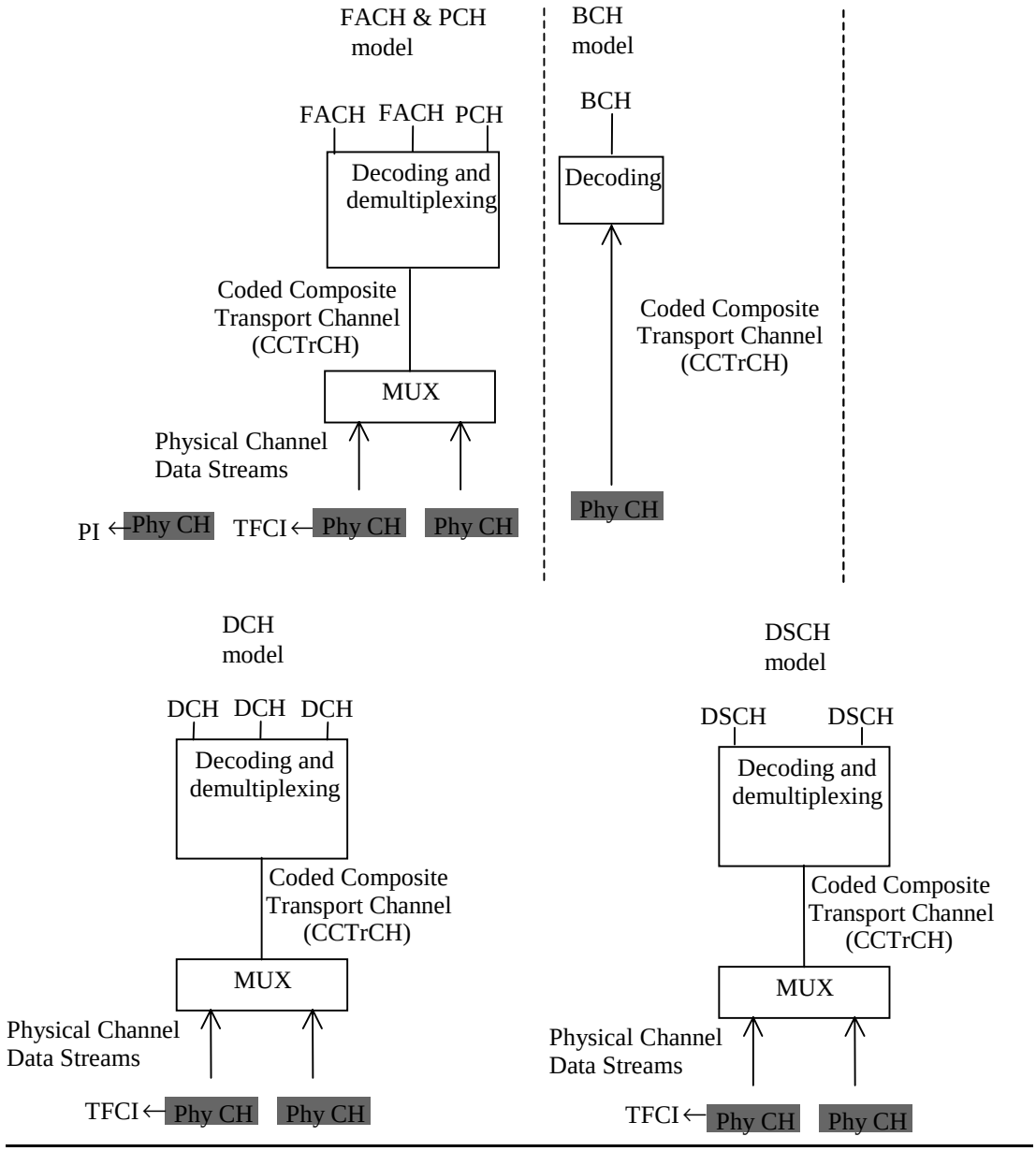
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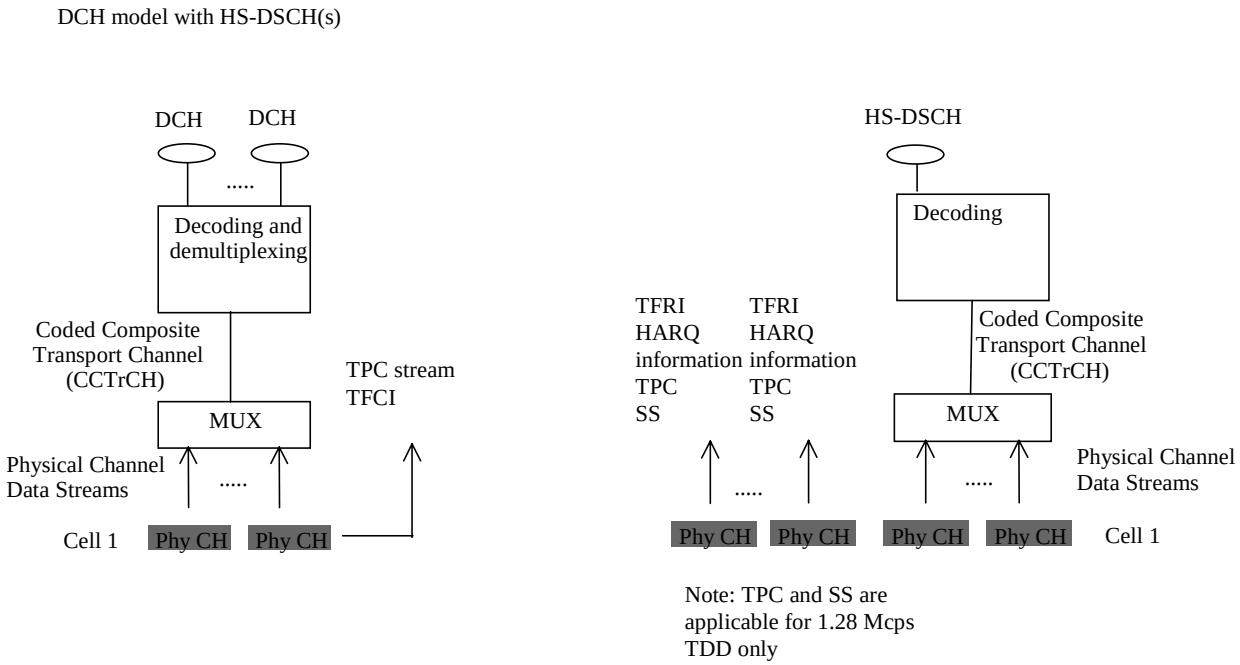

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For each HS-DSCH TTI, each HS-SCCH carries HS-DSCH-related downlink signalling for one UE. The following information is carried on the HS-SCCH:

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