

TSG-RAN Working Group 1 Meeting #20  
Busan, Korea  
May 21<sup>st</sup>-25<sup>th</sup>, 2001

***TSGR1#20(01)0460***

**Agenda item:** CRs for Rel -99/4  
**Source:** Nokia  
**Title:** Removal of out-of-date reference to FACH beamforming  
**Document for:** Decision

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In TSG-RAN #11 meeting a CR [1] for removing S-CPICH as a phase reference for S-CCPCH was approved. Since S-CCPCH is thus effectively not beamformed, a reference to this feature is removed in TS25.211.

**References:**

[1] RP-01-0255, "Phase reference for secondary CCPCH carrying FACH"

CR-Form-v4	
<b>CHANGE REQUEST</b>	
⌘ <b>25.211 CR 99</b> ⌘ ev <b>-</b> ⌘ Current version: <b>3.6.0</b> ⌘	

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

**Proposed change affects:** ⌘ (U)SIM  ME/UE  Radio Access Network  Core Network

<b>Title:</b>	⌘ Removal of out-of-date reference to FACH beamforming		
<b>Source:</b>	⌘ Nokia		
<b>Work item code:</b>	⌘	<b>Date:</b>	⌘ 15.05.2001
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ R99
	<i>Use <u>one</u> of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="http://www.3gpp.org/ftp/Specs/3GPP/25.211">TR 21.900</a> .		<i>Use <u>one</u> of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>REL-4</b> (Release 4) <b>REL-5</b> (Release 5)

<b>Reason for change:</b>	⌘ In TSG-RAN #11 meeting a CR for removing S-CPICH as a phase reference for S-CCPCH was approved. Since S-CCPCH is thus effectively not beamformed, a reference to this feature is removed in TS25.211
<b>Summary of change:</b>	⌘ The statement that S-CCPCH may be transmitted in a narrow lobe is removed.
<b>Consequences if not approved:</b>	⌘ Inconsistency whether S-CCPCH applies beamforming or not

<b>Clauses affected:</b>	⌘ 5.3.3.4		
<b>Other specs affected:</b>	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
<b>Other comments:</b>	⌘		

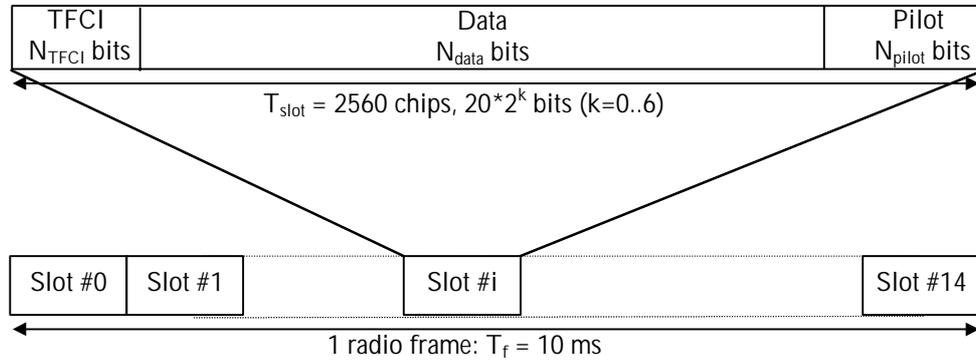
### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: [http://www.3gpp.org/3G\\_Specs/CRs.htm](http://www.3gpp.org/3G_Specs/CRs.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.
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- 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.

### 5.3.3.4 Secondary Common Control Physical Channel (S-CCPCH)

The Secondary CCPCH is used to carry the FACH and PCH. There are two types of Secondary CCPCH: those that include TFCI and those that do not include TFCI. It is the UTRAN that determines if a TFCI should be transmitted, hence making it mandatory for all UEs to support the use of TFCI. The set of possible rates for the Secondary CCPCH is the same as for the downlink DPCH, see subclause 5.3.2. The frame structure of the Secondary CCPCH is shown in figure 17.



**Figure 17: Frame structure for Secondary Common Control Physical Channel**

The parameter  $k$  in figure 17 determines the total number of bits per downlink Secondary CCPCH slot. It is related to the spreading factor  $SF$  of the physical channel as  $SF = 256/2^k$ . The spreading factor range is from 256 down to 4.

The values for the number of bits per field are given in table 17. The channel bit and symbol rates given in table 17 are the rates immediately before spreading. The pilot patterns are given in table 18.

The FACH and PCH can be mapped to the same or to separate Secondary CCPCHs. If FACH and PCH are mapped to the same Secondary CCPCH, they can be mapped to the same frame. The main difference between a CCPCH and a downlink dedicated physical channel is that a CCPCH is not inner-loop power controlled. The main difference between the Primary and Secondary CCPCH is that the transport channel mapped to the Primary CCPCH (BCH) can only have a fixed predefined transport format combination, while the Secondary CCPCH support multiple transport format combinations using TFCI. ~~Furthermore, a Primary CCPCH is transmitted over the entire cell while a Secondary CCPCH may be transmitted in a narrow lobe in the same way as a dedicated physical channel (only valid for a Secondary CCPCH carrying the FACH).~~

Table 17: Secondary CCPCH fields

Slot Format #i	Channel Bit Rate (kbps)	Channel Symbol Rate (ksps)	SF	Bits/ Frame	Bits/ Slot	N <sub>data</sub>	N <sub>pilot</sub>	N <sub>TFCI</sub>
0	30	15	256	300	20	20	0	0
1	30	15	256	300	20	12	8	0
2	30	15	256	300	20	18	0	2
3	30	15	256	300	20	10	8	2
4	60	30	128	600	40	40	0	0
5	60	30	128	600	40	32	8	0
6	60	30	128	600	40	38	0	2
7	60	30	128	600	40	30	8	2
8	120	60	64	1200	80	72	0	8*
9	120	60	64	1200	80	64	8	8*
10	240	120	32	2400	160	152	0	8*
11	240	120	32	2400	160	144	8	8*
12	480	240	16	4800	320	312	0	8*
13	480	240	16	4800	320	296	16	8*
14	960	480	8	9600	640	632	0	8*
15	960	480	8	9600	640	616	16	8*
16	1920	960	4	19200	1280	1272	0	8*
17	1920	960	4	19200	1280	1256	16	8*

\* If TFCI bits are not used, then DTX shall be used in TFCI field.

The pilot symbol pattern is described in table 18. The shadowed part can be used as frame synchronization words. (The symbol pattern of pilot symbols other than the frame synchronization word shall be "11"). In table 18, the transmission order is from left to right. (Each two-bit pair represents an I/Q pair of QPSK modulation.)

CR-Form-v4	
<b>CHANGE REQUEST</b>	
⌘ <b>25.211 CR 100</b> ⌘ ev <b>-</b> ⌘ Current version: <b>4.0.0</b> ⌘	

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<b>Other comments:</b>	⌘		

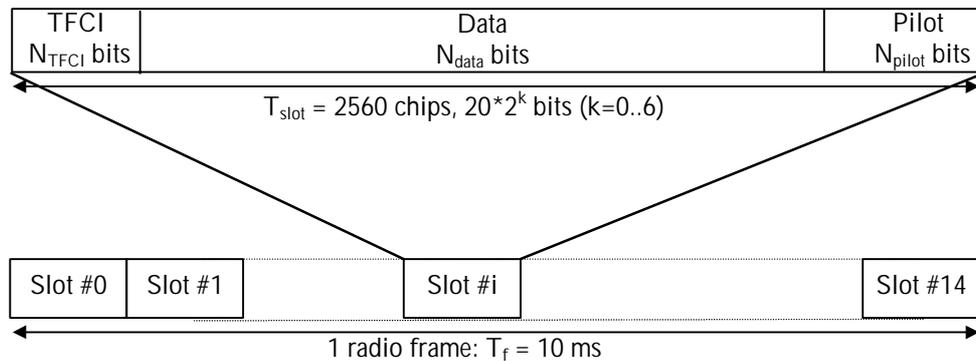
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