

**3GPP TSG Working Group 1#11  
San Diego, CA USA  
February 29 – March 3, 2000**

**TSGR1#11 (00)0203**

<b>Agenda</b>	<b>6</b>
<b>Source:</b>	<b>GBT</b>
<b>Subject:</b>	<b>CR032 25.211 Some clarifications to 7.4 PCPCH/AICH timing relation</b>
<b>Document for</b>	<b>Approval</b>

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## CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

**25.211 CR 032**

Current Version: **3.1.1**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **RAN#7**

list expected approval meeting # here

↑

for approval  
for information

<b>X</b>

strategic  
non-strategic


(for SMG  
use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:**

(at least one should be marked with an X)

(U)SIM

ME

UTRAN / Radio

Core Network

**Source:**

GBT

**Date:**

Feb 24, 2000

**Subject:**

**Some clarifications to 7.4 PCPCH/AICH timing relation**

**Work item:**

**Category:**

(only one category  
shall be marked  
with an X)

- F Correction
- A Corresponds to a correction in an earlier release
- B Addition of feature
- C Functional modification of feature
- D Editorial modification

<b>X</b>
<b>X</b>

**Release:**

- Phase 2
- Release 96
- Release 97
- Release 98
- Release 99
- Release 00

<b>X</b>

**Reason for change:**

**Clauses affected:**

7.4

**Other specs affected:**

- Other 3G core specifications
- Other GSM core specifications
- MS test specifications
- BSS test specifications
- O&M specifications


- List of CRs:
- List of CRs:
- List of CRs:
- List of CRs:
- List of CRs:


**Other comments:**

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## 7.4 PCPCH/AICH timing relation

Transmission of random access bursts on the PCPCH is aligned with access slot times. The timing of the access slots is derived from the received Primary CCPCH timing. The transmit timing of access slot  $n$  starts  $n \times 20/15$  ms after the frame boundary of the received Primary CCPCH, where  $n = 0, 1, \dots, 14$ . In addition, transmission of access preambles in PCPCH is limited to the allocated access slot subchannel group which is assigned by higher layer signalling to each CPCH set. Twelve access slot subchannels are defined and PCPCH may be allocated all subchannel slots or any subset of the twelve subchannel slots. The access slot subchannel identification is identical to that for the RACH and is described in table 6 of section 6.1 of [5].

Everything in the previous section [PRACH/AICH] applies to this section as well. The timing relationship between preambles, AICH, and the message is the same as PRACH/AICH. Note that the collision resolution preambles follow the access preambles in PCPCH/AICH. However, the timing relationships between CD-Preamble and CD-AICH is identical to RACH Preamble and AICH. The timing relationship between CD-AICH and the Power Control Preamble in CPCH is identical to AICH to message in RACH. The  $T_{cpch}$  timing parameter is identical to the PRACH/AICH transmission timing parameter. When  $T_{cpch}$  is set to zero or one, the following PCPCH/AICH timing values apply. Note that the following apply when the RACH and CPCH preamble resources are not shared:

Note that a1 corresponds to AP-AICH and a2 corresponds to CD-AICH.

$\tau_{p-p}$  = Time to next available access slot, between Access Preambles.

Minimum time = 15360 chips + 5120 chips X  $T_{cpch}$

Maximum time = 5120 chips X 12 = 61440 chips

Actual time is time to next slot (which meets minimum time criterion) in allocated access slot subchannel group.

$\tau_{p-a1}$  = Time between Access Preamble and AP-AICH has two alternative values: 7680 chips or 12800 chips, depending on  $T_{cpch}$

$\tau_{a1-cdp}$  = Time between receipt of AP-AICH and transmission of the CD Preamble has one value: 7680 chips.

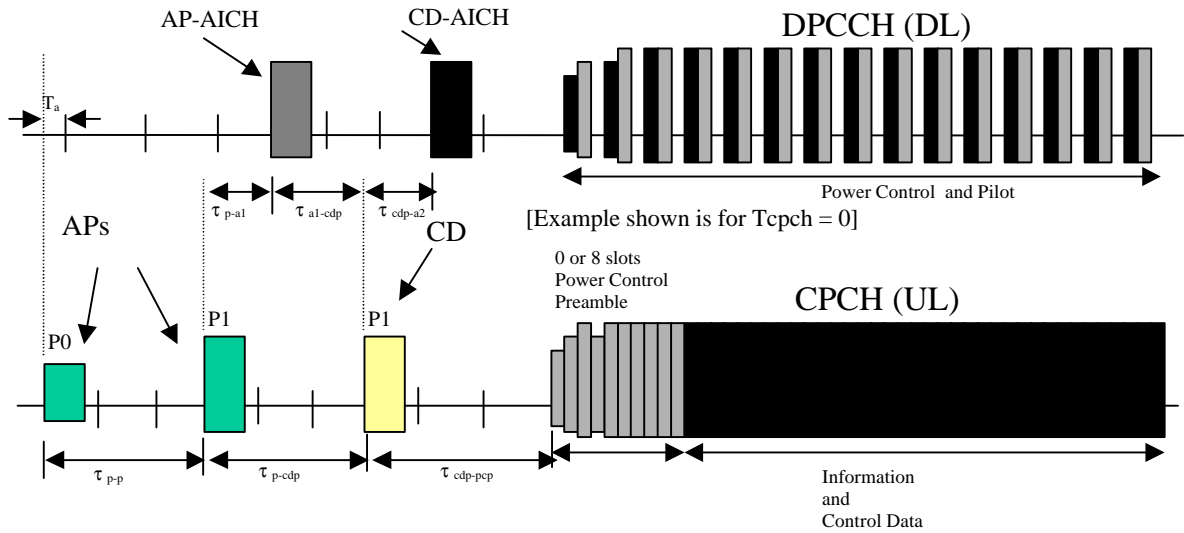
$\tau_{p-cdp}$  = Time between the last AP and CD Preamble. is either 3 or 4 access slots, depending on  $T_{cpch}$

$\tau_{cdp-a2}$  = Time between the CD Preamble and the CD-AICH has two alternative values: 7680 chips or 12800 chips, depending on  $T_{cpch}$

$\tau_{cdp-pcp}$  = Time between CD Preamble and the start of the Power Control Preamble is either 3 or 4 access slots, depending on  $T_{cpch}$ .

The message transmission shall start 0 or 8 slots after the start of the power control preamble depending on the length of the power control preamble.

Figure 25 illustrates the PCPCH/AICH timing relationship when  $T_{cpch}$  is set to 0 and all access slot subchannels are available for PCPCH.



**Figure 25: Timing of PCPCH and AICH transmission as seen by the UE, with  $T_{cpch} = 0$**