

Agenda item: AH14
Source: Philips
Title: Text proposal and Change Request for CPCH codes
Document for: Decision

Introduction

The channelisation and scrambling codes for the PCPCH power control preamble have not yet been specified.

This text proposal specifies the codes for the PCPCH power control preamble to be the same as those used in the PCPCH message part, and defines the phase of the scrambling code to be aligned to the frame boundary.

CHANGE REQUEST

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

3G25.213 CR 011

Current Version: **3.0.0**

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

↑ CR number as allocated by MCC support team

For submission to: **TSG-RAN #6**
list expected approval meeting # here ↑

for approval
for information

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:

Philips

Date:

1999-11-05

Subject:

CPCH codes in power control preamble

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

Release:

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

Reason for change:

Defines previously-unspecified codes for PCPCH power control preamble.

Clauses affected:

4.3.4

Other specs affected:

Other 3G core specifications → List of CRs:
Other GSM core specifications → List of CRs:
MS test specifications → List of CRs:
BSS test specifications → List of CRs:
O&M specifications → List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

4.3.4.3 CPCH preamble signatures

4.3.4.3.1 Access preamble signature

The access preamble part of the CPCH-access burst carries one of the sixteen different orthogonal complex signatures identical to the ones used by the preamble part of the random-access burst.

4.3.4.2.2 CD preamble signature

The CD-preamble part of the CPCH-access burst carries one of sixteen different orthogonal complex signatures identical to the ones used by the preamble part of the random-access burst.

4.3.4.4 Channelisation codes for the PCPCH power control preamble

The channelisation codes for the PCPCH power control preamble are the same as those used for the PCPCH message part, as described in the following section.

4.3.4.5 Channelization codes for the CPCH message part

The signature in the preamble specifies one of the 16 nodes in the code-tree that corresponds to channelization codes of length 16. The sub-tree below the specified node is used for spreading of the message part. The control part is always spread with a channelization code of spreading factor 256. The code is chosen from the lowest branch of the sub-tree. The data part may use channelization codes from spreading factor 4 to 64. A UE is allowed to increase its spreading factor during the message transmission by choosing any channelization code from the uppermost branch of the sub-tree code. For channelization codes with spreading factors less than 16, the node is located on the same sub-tree as the channelization code of the access preamble.

4.3.4.6 Scrambling code for the PCPCH power control preamble

The scrambling code for the PCPCH power control preamble is the same as for the PCPCH message part, as described in the following section. The phase of the scrambling code shall be such that the end of the code is aligned with the frame boundary at the end of the power control preamble.

4.3.4.7 Scrambling code for the CPCH message part

In addition to spreading, the message part is also subject to scrambling with a 10 ms complex code. The scrambling code is cell-specific and has a one-to-one correspondence to the scrambling code used for the preamble part.

$$S_{c\text{-msg},n} = C_{\text{scramb},n}, \text{ for chip indexes } 8192 \dots 46591 \text{ of } C_{\text{scramb},n}.$$

In the case when the access resources are shared between the RACH and CPCH,

$$S_{c\text{-msg},n} = C_{\text{scramb},n}, \text{ for chip indexes } 4096 \dots 42495 \text{ of } C_{\text{scramb},n}.$$

The generation of these codes is explained in 4.3.2.2. The mapping of these codes to provide a complex scrambling code is also the same as for the dedicated uplink channels and is described in 4.3.2.1.

Note: Use of short scrambling code for CPCH message part is ffs.

4.4 Modulation

4.4.1 Modulating chip rate

The modulating chip rate is 3.84 Mcps.