

Agenda Item : 5

Source: Golden Bridge Technology, Inc.

Title: Modified Ad Hoc S Proposal for Primary Common Control Physical Channel

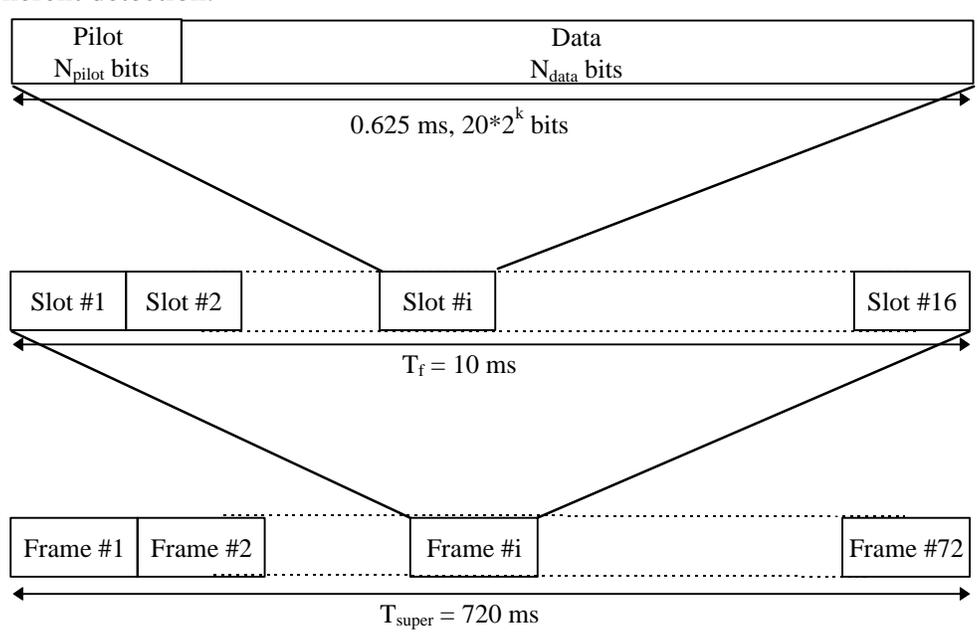
Document for: Proposed draft text to incorporate the modified Ad Hoc S concept into the Common Physical Channel Section

1. Common physical channels

1.1. Primary and Secondary Common Control Physical Channel (CCPCH)

The WP-CDMA (Primary) and Secondary Common Control Physical Channels are fixed rate downlink physical channels used to carry the BCCH/SCH and FACH/PCH respectively.

Figure 1 shows the principle frame structure of the CCPCH. The frame structure differs from the downlink dedicated physical channel in that no TPC commands or rate information is transmitted. The only layer 1 control information is the pilot bits needed for coherent detection.



Source: Excerpts from harmonized WP-CDMA RTT as submitted on 8 January 1999 by WP-CDMA Committee (TR46.1/TIPL.5) to the ITU.

Figure 1 Frame structure for downlink Common Control Physical Channels

The WP-CDMA (Primary) CCPCH is based upon the Ad-Hoc S parameterized Perch channel with the following modifications:

1. The primary SCH and secondary SCH are multiplexed onto the I and Q channel respectively.
2. The power of the primary SCH is controlled by parameter P3. This is the unmodulated primary sync code as described in section 3.5.2.3 of referenced WP-CDMA RTT as submitted to the ITU on 8 January 1999.
3. The power of the secondary SCH is controlled by parameter P4. This is the secondary sync code scheme as specified in section 3.5.2.3 of referenced WP-CDMA RTT as submitted to the ITU on 8 January 1999.

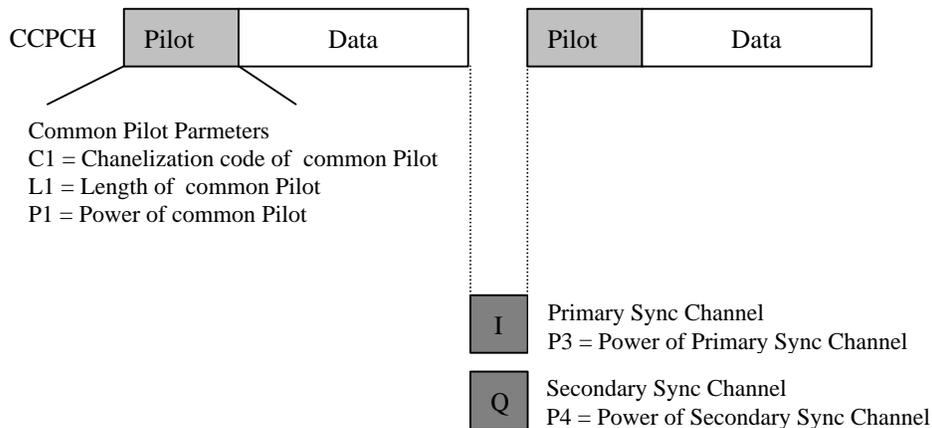


Figure 2 Structure of the WP-CDMA Common Control Physical Channel

In the case of the Secondary CCPCH, the FACH and PCH are time multiplexed on a frame-by-frame basis within the super-frame structure. The set of frames allocated to FACH and PCH respectively is broadcasted on the BCCH.

The main difference between a CCPCH and a downlink dedicated physical channel is that a CCPCH is not power controlled and is of constant rate. The main difference between the Primary and Secondary CCPCH is that the Primary CCPCH has a fixed predefined rate (32 kbps) while the Secondary CCPCH has a constant rate that may be different for different cells, depending on the capacity needed for FACH and PCH. Furthermore, a Primary CCPCH is continuously transmitted over the entire cell while a Secondary CCPCH is only transmitted when there is data available and may be transmitted in a narrow lobe in the same way as a dedicated physical channel (only valid for FACH frames).

Source: Excerpts from harmonized WP-CDMA RTT as submitted on 8 January 1999 by WP-CDMA Committee (TR46.1/TIPL.5) to the ITU.

There were no changes to the structure of the dedicated channels.