TSG-RAN Working Group 1 meeting #7bis
Kyongju, South Korea
October 4 – October 5, 1999

TSGR1#7bis(99)f01

Agenda item:

Source: Ericsson

Title: Power reference for AICH and PICH

Document for: Decision

---

1 Introduction

The AICH is an on/off signal. To detect the AICH, some power reference is needed. We propose that the network should inform the UE about the power offset between the AICH and the Primary CPICH. The information should be provided by higher-layer signaling

The PICH is a ±1 signal, i.e. no power reference is needed for detection of the PICH. However, in the absence of a power reference, the threshold for PICH detection must be set to zero, i.e. Prob{Miss} = Prob{False Alarm}. This is not necessarily the optimal setting. To allow for a flexibility in the PICH detection, a power reference should be available. We propose that the network should inform the UE about the power offset between the PICH and the Primary CPICH. The information should be provided by higher-layer signaling.

The paper includes a text proposal for 25.214 and a text proposal for a Liason to WG2.

It should be noted that this proposal is based on an assumption that both the AICH and the PICH are transmitted in the same antenna lobe as the Primary CPICH, i.e. broadcast over the entire cell. We believe that this is a reasonable assumption.

2 Text proposal for TS 25.214

Two new sections should be added after Section 5.2.2 in 25.214

--- Start of text proposal ---

5.2.3 AICH

The AICH transmit power is set by the network. The UE is informed about the power offset between the AICH and the Primary CPICH by higher-layer signaling.

5.2.4 PICH

The PICH transmit power is set by the network. The UE is informed about the power offset between the PICH and the Primary CPICH by higher-layer signaling.

--- End of text proposals ---

3 Proposal for Liason to WG3

WG1 has identified the need for the UE to know the power offset between the AICH and the Primary CPICH as well as the power offset between the PICH and the Primary CPICH. This information needs to be available to the UE by means of higher layer signaling. We kindly ask WG2 to include support for this in the RRC signaling.