

**Agenda item:** 9.3  
**Source:** Ericsson  
**Title:** Text proposal for Common Pilot Channel  
**Document for:** Decision

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## Introduction

This paper includes a text proposal on the Common Pilot Channel for document 25.211. We propose the following:

- There is a Primary Common Pilot always present. It has a pre-defined channelization code and is always scrambled by the primary scrambling code as it needs to be found during initial cell search.
- The Primary Common Pilot is normally only consists of bits  $b_i=1$ . The Primary Common Pilot on the second antenna in case of some TX diversity schemes, is modulated with a pre-defined pattern in a similar way as the pilot pattern of the current P-CCPCH.
- There may also be one or several Secondary Common Pilots. These can be transmitted on arbitrary channelization codes and an arbitrary scrambling code.

### --- Text proposal ---

This text proposal is to be inserted in 25.211, Section 5.3

#### Common Pilot Channel

The Common Pilot Channel is a downlink physical channel with pre-defined modulation, used as a phase reference for other DL physical channels. In normal case, the modulation on the Common Pilot Channel is the all-one sequence  $\{ \dots, 1, 1, \dots \}$ . In case of STTD and FB TX diversity mode 1, a different modulation patterns is used for the Common Pilot Channel on the diversity antenna. *<The exact modulation pattern is F.F.S.>*

There may be two types of Common Pilot Channels in a cell:

- There is always one and only one Primary Common Pilot Channel in each cell. The Primary Common Pilot consists of 300 bits per frame, is spread by a pre-defined channelization code with SF=256 *< what code?>* and is scrambled by the primary scrambling code.
- There may also be one or several Secondary Common Pilot Channels in a cell. A Secondary Common Pilot Channel may be spread by an arbitrary channelization code and is scrambled by the primary or a secondary scrambling code.

*<Maybe the code allocation for the Common Pilot Channel should be described in 2b5.213?>*