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Agenda Item: AH21
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To: TSG RAN WG1
Title: Burst type of 1.28Mcps TDD
Document for: Decision

1. Summary

Due to the different chiprate and the different frame structure, the burst type of the 1.28Mcps TDD has some difference with that of 3.84Mcps TDD. In 3.84Mcps TDD, two types of bursts are defined for dedicated physical channels, which have different midamble lengths. While in 1.28Mcps TDD, only one type of burst type is defined for the dedicated physical channels

2. Introduction and comparison with 3.84Mcps TDD

In 3.84Mcps TDD, two types of bursts for dedicated physical channels are defined: The burst type 1 and the burst type 2. Both consist of two data symbol fields, a midamble and a guard period. The bursts type 1 has a longer midamble of 512 chips than the burst type 2 with a midamble of 256 chips. Because of the longer midamble, the burst type 1 is suited for the uplink, where up to 16 different channel impulse responses can be estimated. The burst type 2 can be used for the downlink and, if the bursts within a time slot are allocated to less than four users, also for the uplink.

In 1.28Mcps TDD, only one type of burst for dedicated physical channels is defined. The burst type consists of two data symbol fields, a midamble of 144 chips and a guard period. There is a dedicated uplink synchronisation time slot in each sub-frame of the 1.28Mcps and there is also a uplink synchronisation adjust command in each sub-frame. As a result, the uplink dedicated physical channels are always synchronised. So the type of burst can be used for both uplink and downlink.

3. Proposal

We propose to modify the following paragraphs in the Working CR for TS25.221 as the description of the burst types of the 1.28Mcps TDD.

