Agenda Item: AH21
Source: CWTS/CATT
To: TSG RAN WG1
Title: Coding of transport formats combination indicator (TFCI) for QPSK of 1.28Mcps TDD
Document for: Discussion and Approval

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1 Summary

Encoding of TFCI depends on its length and the modulation mode in use. When QPSK modulation is applied in 1.28Mcps TDD, the coding scheme for TFCI is the same as that of 3.84Mcps TDD. The same TFCI length (0,1,2,3~5,6~10) like 3.84Mcps TDD are supported, and the corresponding encoded number of bits is (0,4,8,16,32).

2 Proposal

It's proposed to discuss and include the following text proposal into the clause 4.4.1 Coding of transport format combination indicator (TFCI) for QPSK

4.4.1 Coding of transport format combination indicator (TFCI) for QPSK

~~4.4.1.1   Coding of long TFCI lengths~~

~~4.4.1.2   Coding of short TFCI lengths~~

~~4.4.1.2.1   Coding very short TFCIs by repetition~~

~~4.4.1.2.2   Coding short TFCIs using bi-orthogonal codes~~

The coding of TFCI for 1.28Mcps TDD when QPSK is applied is same as that of 3.84Mcps TDD.Cf.[4.3.1 'Coding of transport format combination indicator'].

4.4.1.1~~3~~   Mapping of TFCI word

Denote the number of bits in the TFCI word by N_{TFCI}, and denote the code word bits by bk, where $k = 0, …, N_{TFCI-1}$.

When the number of bits in the TFCI is 8,16,32, the mapping of the TFCI word to the TFCI bit positions shall be as follows.
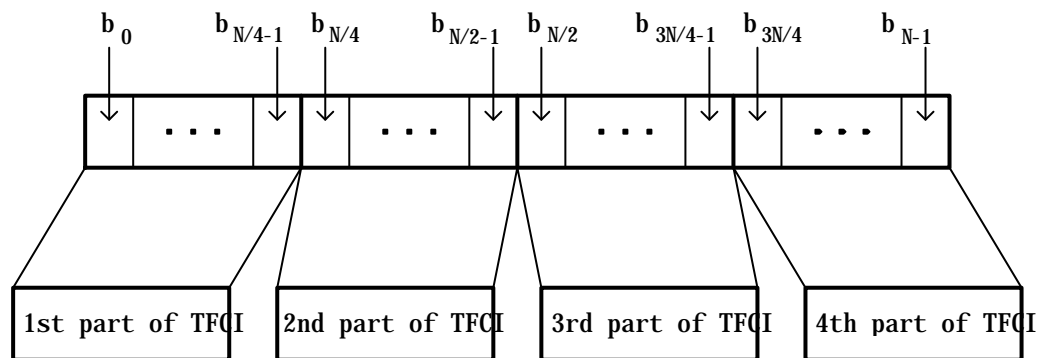

Figure [X1]: Mapping of TFCI word bits to TFCI position in 1.28 Mcps TDD option, where N = N_{TFCI}.

The location of the 1st to 4th parts of TFCI in the timeslot is defined in [7].

When the number of bits in the TFCI is 4 , the mapping of TFCI word to the TFCI bit position is that the TFCI bits are equally divided into two part for the consecutive two subframe and mapped onto the end of the first data field respectively . The 4 bits mapping is show as follows:
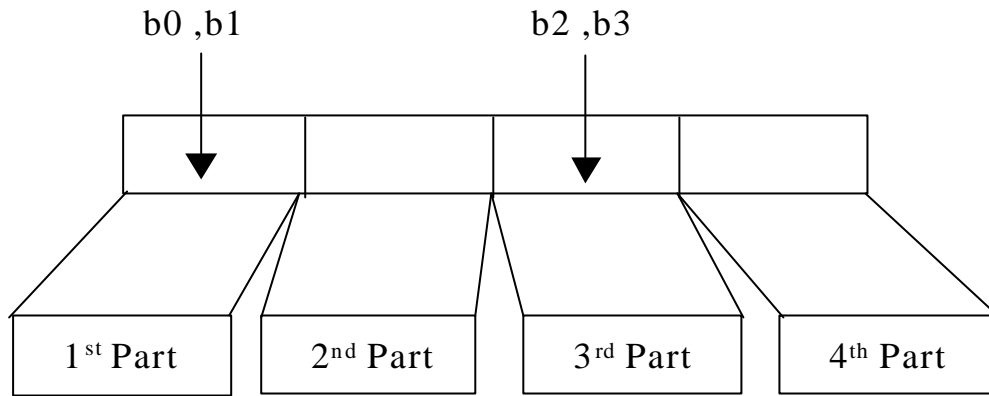
b0 ,b1   b2 ,b3

| 1st Part | 2nd Part | 3rd Part | 4th Part |

Figure [X2]: Mapping of TFCI word bits to TFCI position in 1.28 Mcps TDD option, when $N_{TFCI}=4$

If the shortest transmission time interval of any constituent TrCH is at least 20 ms the successive TFCI words in the frames in the TTI shall be identical. If TFCI is transmitted on multiple timeslots in a frame each timeslot shall have the same TFCI word.

-------------------------------- Changes to working CR of 25.222 end -----------------------------