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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** |
| Title | **Modification of TDC resource allocation**  |
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| Re: | IEEE 802.16 Working Group Letter Ballot Recirc #38b (IEEE P802.16.1a/D3) |
| Abstract | This contribution proposes change to TDC resource allocation |
| Purpose | To be discussed and adopted by TGn |
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**Modification of TDC resource allocation**

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# Introduction

This contribution proposes change to TDC resource allocation. There are two problems regarding legacy support and DL control as following.

- When the frame structure is supporting the WirelessMAN-OFDMA R1 MS in PUSC zone by FDM manner as Figure 1, UL subchannelization scheme is different from Advanced Air Interface as Figure 2. So TDC frame structure cannot be supported in UL FDM case.

- The DL Subframe which is used for transmitting A-preamble and midamble cannot be used for talk-around direct communication.



Figure 1 TDD frame configuration to support WirelessMAN-OFDMA UL FDM operation



Figure 2 Example of subchannelization for FDM base UL PUSC zone support

# References

[1] IEEE P802.16.1a/D3, WirelessMAN-Advanced Air Interface for Broadband Access Systems – Draft Amendment: Higher Reliability Networks, June. 2012.

# Proposed Text

Note:

The text in **BLACK** color: the existing text in the 802.16.1a AWD

The text in **~~RED~~** color: the removal of existing 802.16.1a AWD

The text in **BLUE** color: the new text added to the 802.16.1a AWD

[-------------------------------------------------Start of Text Proposal---------------------------------------------------]

# *[Remedy1: Modify the following figure and text in section 6.12.2.3.2.1.1 in the IEEE P802.16.1a/D3]*

**6.12.2.3.2.1.1 Resource for talk-around direct communication**

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**Figure 245-An example of talk-around direct communication resource allocation**

The highest four PRUs of uplink resources are assigned for Common Direct Mode Zone (CDMZ). For FFT size = 512, PRU 20, 21, 22, 23 are assigned for CDMZ, for FFT size = 1024, PRU 44, 45, 46, 47 are assigned for CDMZ, and for FFT size = 2048, PRU 92, 93, 94, 95 are assigned for CDMZ. The highest four PRUs of downlink resources are assigned for Common Direct Mode Zone Extended(CDMZ-E). For FFT size = 512, PRU 20, 21, 22, 23 are assigned for CDMZ-E, for FFT size = 1024, PRU 44, 45, 46, 47 are assigned for CDMZ-E, and for FFT 1 size = 2048, PRU 92, 93, 94, 95 are assigned for CDMZ-E. The resources for Cell Specific Direct Mode Zone (CSDMZ) are multiple of four PRUs, and determined by each HR-BS independently and the assignment information is transmitted in the CDMZ. The DL Subframe which is used for transmitting A-preamble and midamble shall not be assigned for talk-around direct communication. When the frame structure is supporting the WirelessMAN-OFDMA R1 reference system, talk-around direct communication is supported in UL TMD mode only.

[-------------------------------------------------End of Text Proposal---------------------------------------------------]