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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** | |
| Title | **Modification of feedback channel codeword sequence** | |
| Date Submitted | **2012-07-09** | |
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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 feedback channel codeword sequence | |
| Purpose | To be discussed and adopted by TGn | |
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**Modification of feedback channel codeword sequence**

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# Introduction

Table 1 shows CQI and Feedback codeword sequence in talk-around direct communication. Same codeword domain is used for CQI and feedback channel. Also, Supplementary channel (Sup-CH) is shared by CQI channel and feedback channel to transmit CQI and Feedback codeword sequence. CQI channel and Feedback channel codeword sequence are differentiated by TDM manner except ‘Send Indication’. ‘Send Indication’ is used for link establishment. We suggest index change of ‘Send Indication’ for implementation convenience.

Table 1 CQI and Feedback codeword sequence

|  |  |  |  |
| --- | --- | --- | --- |
| Index | Codeword sequence | Usage  (CQI channel) | Usage  (Feedback channel) |
| 0 | 1111111111 | Level 0 | ACK |
| 1 | 0010110001 | Level 1 | NAK for frame 0 |
| 2 | 0100100110 | Level 2 | NAK for frame 1 |
| 3 | 1001101000 | Level 3 | NAK for frame 2 |
| 4 | 1011000100 | Level 4 | NAK for frame 3 |
| 5 | 0110001010 | Level 5 | MCS Change Confirm |
| 6 | 0000011101 | Level 6 | RCHG Request Indication |
| 7 | 1101010011 | Level 7 | Send Indication |
| 8 | 1100011000 | Reserved | Token Request Indication |
| 9 | 0001010110 | Reserved | Reserved |
| 10 | 0111000001 | Reserved | Reserved |
| 11 | 1010001111 | Reserved | Reserved |
| 12 | 1000100011 | Reserved | Reserved |
| 13 | 0101101101 | Reserved | Reserved |
| 14 | 0011111010 | Reserved | Reserved |
| 15 | 1110110100 | Reserved | Reserved |

# 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 table in the section 6.12.2.3.2.4.3 in the IEEE P802.16.1a/D3]*

**Table 199 – Sequences and mapping of feedback channel**

|  |  |  |
| --- | --- | --- |
| Index | Sequence | Usage |
| 0 | 1111111111 | ACK |
| 1 | 0010110001 | NAK for frame 0 |
| 2 | 0100100110 | NAK for frame 1 |
| 3 | 1001101000 | NAK for frame 2 |
| 4 | 1011000100 | NAK for frame 3 |
| 5 | 0110001010 | Message Confirm Indication |
| 6 | 0000011101 | RCHG Request Indication |
| 7 | 1101010011 | ~~Send Indication~~  Token Request Indication |
| 8 | 1100011000 | ~~Token Request Indication~~  Reserved |
| 9 | 0001010110 | Reserved |
| 10 | 0111000001 | Reserved |
| 11 | 1010001111 | Reserved |
| 12 | 1000100011 | Reserved |
| 13 | 0101101101 | Reserved |
| 14 | 0011111010 | Reserved |
| 15 | 1110110100 | ~~Reserved~~  Send Indication |

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