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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** |
| Title | **ASN.1 coding for synchronization control messages of multimode operation over IEEE 802.16.1a**  |
| Date Submitted | **2012-05-04** |
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| Re: | “IEEE 802.16-12-271,” in response to Letter Ballot Recirc #38a on P802.16.1a/D2 |
| Abstract | This provides AWD text proposals for ASN.1 coding of AAI-MM-RS-SYN-REQ and AAI-MM-RS-SYN-RSP on multimode operation in IEEE p802.16.1a |
| Purpose | To discuss and adopt the proposed text in the draft amendment document on GRIDMAN |
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**ASN.1 coding for synchronization control messages of multimode operation over IEEE 802.16.1a**

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# Introduction

This document provides ASN.1 coding of AAI-MM-RS-SYN-REQ/RSP message for HR-Network.

# References

[1] IEEE P802.16nTM/D2, Air Interface for Broadband Wireless Access Systems - Draft Amendment: Higher Reliability Networks, April 2012.

[2] IEEE P802.16.1aTM/D2, WirelessMAN-Advanced Air Interface for Broadband Access Systems - Draft Amendment: Higher Reliability Networks, April 2012.

[3] EEE P802.16Rev3/D6, IEEE Draft Standard for Local and metropolitan area networks; Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems,” April 2012.

[4] IEEE P802.16.1TM/D6, IEEE Draft for WirelessMAN-Advanced Air Interface for Broadband Wireless Access Systems, April 2012.

# Proposed Text for the 802.16.1a AWD

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---------------------------------------------------]

**Annex A**

***...***

**A.2 MAC control message definitions (normative)**

***Change Annex A.2 as indicated:***

WirelessMAN-Advanced-Air-Interface DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- MAC Control Messages

MAC-Control-Message ::= SEQUENCE {

message MAC-Control-Msg-Type,

...

}

**[*Remedy1: Add the following codes below Line# 64, Page#218 in IEEE P802.16.1a/D2.*]**

MAC-Control-Msg-Type ::= CHOICE {

...

-- HR Multicast message

aaiHrMgInd AAI-HR-MG-IND,

aaiHrMtInd AAI-HR-MT-IND,

-- HR Multimode operation

aaiMmRsSynReq AAI-MM-RS-SYN-REQ,

aaiMmRsSynRsp AAI-MM-RS-SYN-RSP,

...

}

-- \*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

-- Common type definitions

-- \*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

...

-- \*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

-- MAC control messages for HR-Networks

-- \*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

...

-- +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-

-- HR Multicast Traffic Indication Message

-- +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-

...

**[*Remedy2: Add the following codes below Line# 18, Page#229 in IEEE P802.16.1a/D2.*]**

-- +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-

-- HR Multimode RS Synchronization Request message

-- +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-

AAI-MM-RS-SYN-REQ ::= SEQUENCE {

scanDurationControl ENUMERATED {

increaseTimeDuration,

decreaseTimeDuration

},

timeIntervalControl ENUMERATED {

increaseTimeInterval,

decreaseTimeInterval

}

}

-- +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-

-- HR Multimode RS Synchronization Response message

-- +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-

RelaySyncInfo ::= SEQUENCE {

scanDuration INTEGER (0..255),

startSuperFrame SuperframeNumberLSB,

startFrame INTEGER (0..3),

interleavingInterval INTEGER (0..255)

}

AAI-MM-RS-SYN-RSP ::= SEQUENCE {

scanDuration CHOICE {

zeroScanDuration NULL,

nonzeroScanDuration RelayScanInfo

}

}