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| Project | **IEEE 802.16 Broadband Wireless Access Working Group <**<http://ieee802.org/16>**>** |
| Title | **Clarification on relay function of HR-MS over IEEE 802.16n**  |
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| Re: | “IEEE 802.16-12-400-00-Gdoc,” in response to Letter Ballot Recirc #37b on P802.16n/D3 |
| Abstract | This provides AWD text proposals for clarification on relay function of HR-MS over IEEE 802.16n |
| Purpose | To discuss and adopt the proposed text in the draft amendment document on GRIDMAN |
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**Clarification on relay function of HR-MS over IEEE 802.16n**

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# Introduction

In this contribution, we suggest the corrections of typos and modification of the sentences in Section 16.1.2 Relay function for HR-MS over IEEE P802.16n/D3. The major suggestions are listed in below.

* Grammar errors : verb tense, article, etc.
* Move a paragraph from subsection to subsection
* Remove a paragraph
* Reordering of subsections
* Modifications of sentences

# References

[1] IEEE P802.16nTM/D3, Air Interface for Broadband Wireless Access Systems - Draft Amendment: Higher Reliability Networks, June 2012.

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

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

# Proposed Text for the 802.16n AWD

Note:

The text in **BLACK** color: the existing text in the 802.16n AWD

The text in **~~RED~~** color: the removal of existing 802.16n AWD

The text in **BLUE** color: the new text added to the 802.16n AWD

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

**16. Support for HR-Networks**

**16.1 Multi-mode operation**

**16.1.2 Relay function for HR-MS**

***[Remedy1: Modify the sentences in Section 16.1.2 in IEEE P802.16n/D3.]***

***[Page# 72, Line# 2]***

An HR-MS may operate as an HR-RS to provide connectivity for multiple out-of-coverage HR-MSs. During basic capability negotiation at network entry, an HR-MS that is capable of role change to HR-RS shall report such capability to the ~~super-ordinate~~ superordinate HR-BS/HR-RS.

While operating as HR-RS, the station may maintain ~~certain HR-MS functionalities~~ MS functionalities by performing dual-role operation described in 16.1.2.4. A mode switch to HR-RS shall be commanded by its superordinate HR-BS.

***[Remedy2: Remove the sentence in Section 16.1.2.2 in IEEE P802.16n/D3.]***

***[Page# 72, Line# 32]***

**16.1.2.2 Relay link configuration**

While HR-MS is acting as relay mode, the superordinate HR-BS may send an RCD message to configure the Relay operation parameters as specified in 6.3.9.18. The HR-BS also shall send RS-Config-CMD message in the DL relay zone when PHY layer parameter needs to be reconfigured.

~~While an HR-MS operating as HR-BS, any communication is performing with superordinate HR-BS in DL/UL relay zone to maintain HR-MS functionalities.~~

HR-MS acting as relay mode may transmit MM-ADV message described in 6.3.2.3.99.1 to update PHY/MAC layer parameter after receiving RCD or RS-Config-CMD message.

***[Remedy3: Modify the sentences in Section 16.1.2.3 in IEEE P802.16n/D3.]***

***[Page# 73, Line# 10]***

*[Exchange the position between Relay link release and Dual-role operation of HR-MS]*

**~~16.1.2.3~~ 16.1.2.4 Relay link release**

An HR-MS acting as RS may end its relay service and remove the relay link from the HR-BS. During the HR-MS’ relay mode release process, all subordinate HR-MSs of the HR-MS acting as RS shall be transferred to another infrastructure station prior to HR-MS’ relay mode release. The HR-MS acting as RS prevents HR-MS (re)entry and transmits MM-ADV message to transfer all subordinate HR-MSs to another infrastructure station. An HR-MS acting as RS may transmit an MM-RL-REQ message described in 6.3.2.3.99.7 in UL relay zone to an HR-BS so that it initiates the release procedure and requests handover of all its subordinate HR-MSs. Upon receiving the MM-RL-REQ message, the HR-BS decides whether it allows the HR-MS’ relay mode release. If the request is accepted, the HR-BS may transmit the MM-RL-RSP message described in 6.3.2.3.99.8 in DL relay zone to inform the acceptance ~~and start BS-initiated handover process for the requested HR-MSs. After handover procedures between the HR-BS and HR-MS acting as RS’ subordinate HR-MSs are completed, the HR-BS informs the HR-MS acting as RS that handover is completed by transmitting an MM-RL-RSP message in DL relay zone~~. Upon receiving the MM-RL-RSP message, the HR-MS acting as RS starts relay mode release process immediately or at action time expires. If the HR-BS rejects the request, the HR-BS informs the HR-MS acting as RS the rejection of the request by transmitting the MM-RL-RSP message in DL relay zone. Upon receiving the MM-RL-RSP message with rejection information, the HR-MS acting as RS continues operating in relay mode. After action time expires, the HR-MS acting as RS retransmits an MM-RL-REQ message in UL relay zone to the HR-BS.

**…**

***[Remedy4: Change the section number in IEEE P802.16n/D3.]***

***[Page# 73, Line# 27]***

**~~16.1.2.4~~ 16.1.2.3 Dual-role operation of HR-MS**

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