

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Clarification on Local Forwarding over IEEE 802.16n	
Date Submitted	2012-01-09	
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Re:	“IEEE 802.16n-11/0029,” in response to Call for Comments on GRIDMAN AWD	
Abstract	Clarification on local forwarding in GRIDMAN Amendment Draft Standard	
Purpose	To discuss and adopt the proposed text in the draft amendment document on GRIDMAN	
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Clarification on Local Forwarding over IEEE 802.16n

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1. Introduction

In IEEE 802.16n[2], local forwarding is defined in 16.6.

This contribution provides the clarification on local forwarding to avoid some ambiguous description.

2. References

- [1] IEEE 802.16n-10/0048r3, 802.16n System Requirement Document including SARM annex, November 2011.
- [2] IEEE 802.16n-11/0032, P802.16n Draft AWD, November 2011.
- [3] IEEE 802.16n-11/0033, P802.16.1a Draft AWD, November 2011.
- [4] IEEE P802.16Rev3/D3, IEEE Draft Standard for Local and metropolitan area networks; Part 16: Air Interface for Fixed and Mobile Broadband Wireless Access Systems,” November 2011.
- [5] IEEE P802.16.1TM/D3, IEEE Draft for WirelessMAN-Advanced Air Interface for Broadband Wireless Access Systems, November 2011.

3. Proposed Text on the IEEE 802.16n Amendment Draft Standard

Note:

The text in **BLACK** color: the existing text in the IEEE 802.16 GRIDMAN AWD

The text in ~~RED~~ color: the removal of existing IEEE 802.16 GRIDMAN AWD

The text in BLUE color: the new text added to the IEEE 802.16 GRIDMAN AWD

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

[Remedy: Change the text in 16.6 on 802.16n AWD as follows:]

16.6 Support for Local Forwarding

16.6.1 Detection of LF Opportunity

When local forwarding opportunity (LF) is determined, an HR-MS may communicate with one or more HR-MSs via an HR-infrastructure station without going through the backhaul. HR-infrastructure station may detect the LF opportunity. Otherwise, LF is detected by upper layer, which is outside the scope of this specification.

16.6.2 LF Setup and Termination

When HR-infrastructure station detects the LF opportunity, it may ~~send control message request~~ to ASN to get permission for the LF to be done by HR-infrastructure station. However, how to request and get the permission are outside the scope of this specification.

Local forwarding path for HR-MSs inside an HR-infrastructure station may be set up during/after connection establishment.

An infrastructure station capable of providing local forwarding shall (re)assign and manage the uplink CID for the source HR-MS and downlink CID for destination HR-MS during DSA procedure. Any available CID may be used for the local forwarding (i.e., there are no dedicated CIDs for local forwarding connections). An HR-MS may not be aware of local forwarding but shall follow the same procedure defined in 6.3.

If HR-BS/ASN detects the LF opportunity during DSA procedure to setup a uplink service of the source HR-MS, ~~data path setup for the current DSA-REQ shall be deferred. The source HR-MS shall wait for HR-BS setup service flow on the downlink through DSA transaction between HR-infrastructure station and the destination HR-MS. After the service flow on uplink of the source HR-MS and the service flow on downlink of the destination HR-MS are is setup for using DSA transaction individually, the HR-infrastructure station shall continue the service flow setup on uplink by sending DSA-RSP to the source HR-MS. The source HR-MS confirms with DSA-ACK after receiving the DSA-RSP.~~

Alternatively, if LF opportunity is detected after connection establishment, HR infrastructure station ~~can~~may initiate the DSA-REQ to set up the LF. HR infrastructure station performs LF as described in 16.6.3. HR-BS may communicate with ASN entities to remove data path between the HR-BS and the ASN for the corresponding uplink flow from the source HR-MS and the corresponding downlink flow to the destination HR-MS.

When DSD procedure is performed, LF is terminated. If the destination HR-MS terminates the downlink service flow, HR-infrastructure station may ~~setup~~release a data path for the flow from the source HR-MS.

16.6.3 Data Traffic Forwarding

When local forwarding is adopted for a flow, the HR-infrastructure station forwards the received data traffic from the source HR-MS to the destination HR-MS based on the CIDs of the flow.

Each MAC PDU shall begin with a fixed-length MAC Header and its format is the same as that are defined in 6.3.2.1. The header may be followed by the Payload of the MAC PDU. If present, the Payload shall consist of zero or more subheaders and zero or more MAC SDUs and/or fragments thereof. The payload information may vary in length, so that an HR-MS' MAC PDU may represent a variable number of bytes. A MAC PDU may contain a CRC, as described in 6.3.3.5. MAC PDUs sent on the connection used by local forwarding shall follow the same format as shown in Figure 20.

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