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Abstract			
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Subchannelized Network Entry Correction

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Alvarion

1. Introduction

SS can perform subchannelized network entry by energizing a single subchannel. The BS need only detect that energy is sent on a single subchannel and may respond by providing an allocation in subchannelized region . The SS is identified by the Transmit Opportunity (TO), and Frame Number in which the subchannelized network entry signal was received. In 802.16d-D3, no such allocation mechanisms are described. This submission defines the allocation information elements. Additionally, the identification of the SS is improved by specifying the ranging subchannel, which was used in the network entry signal.

Another correction made here, is the definition of the duration of an Initial Ranging TO. Currently this parameter is not defined. This parameter is needed for an unambiguous identification of the transmit opportunity. The duration of the TO should be big enough to contain the RNG-REQ message plus the maximum round trip delay. As a consequence, it should be configured by the BS. It is proposed to configure the duration using a TLV in the UCD message.

The ~~text to delete is denoted by blue~~, while the text to add is denoted by red

2. Proposed Text

UL-MAP_Information_Element() {		
CID	16 bits	
UIUC	4 bits	
Reserved	1 bit	
Start Time	11 bits	
if (UIUC==1) and subchannelization Subchannelized_Network_entry_IE()		
if (UIUC==4).		
Focused_contention_IE		

[Add new heading]
"8.4.5.3.7 Subchannelized Network entry IE

Table NNN defines the UL-MAP IE for allocation of bandwidth in response to a subchannelized network entry signal (See 8.4.6.2). This UL-MAP IE is identified by UIUC = 1 in the subchannelized section of the UL-MAP. A SS responding to a bandwidth allocation using the Subchannelized Network entry IE shall start its burst with a short preamble (see 8.4.3.6) and use only the most robust mandatory burst profile in that burst. The Subchannelized_Network Entry_IE allocation can appear only in the subchannelized region.

Table NNN

Syntax	Size	Notes
Subchannelized_Network_Entry_IE() {		
Frame number index	4 bits	
Transmit opportunity index	4 bits	
Contention Subchannel	4 bits	
}		

Frame number index
Identifies the frame in which the network entry request, which this message responds to, was transmitted The 4 least significant bits of the frame number are used as the frame number index.

Transmit Opportunity Index
Index number of the Transmit Opportunity that was used in the network entry, within the frame pointed by the Frame number index.

Contention Subchannel
The number of the subchannel that was used for network entry. The contention subchannels are numbered from 0 to 0xF according to table 180."

[Change in 8.4.6.2 Ranging]

"The BS needs only detect that energy is sent on a single subchannel and may respond by allocating a single subchannel identifying the SS by the Transmit Opportunity, Frame Number and in which the transmission was received. The allocation is accomplished by sending an UL MAP IE containing a Subchannelized_Network_Entry_IE (see 8.4.5.3.7). The allocated BW shall be big enough as to contain at least one RNG-REQ message."

[Add to table 264 RNG RSP parameters]

Name	Type [1 byte]	Length	Value	PHY scope
Ranging	13	1	Used to indicate the OFDM	OFDMA

subchannel			subchannel reference that was used to transmit the ranging code ~~(unsigned 6-bit)~~ (in OFDMA) or the initial ranging message (in OFDM in subchannelization). In OFDMA the ranging subchannel are numbered from 0x00…0x3F. In OFDM the ranging subchannels are numbered from 00 to 0x0F according to table 180.“	OFDM in sub-channelization

[Add to table 252 UCD encoding]

Name	Type [1 byte]	Length	Value	PHY scope
Duration of an Initial ranging Transmit Opportunity.	19	1	Indicates the duration of the transmit opportunity in initial ranging, in OFDM symbols. Should be large enough to contain at least one RNG-REQ message , in the most robust mode, plus the maximum supported roundtrip delay.	OFDM