Project	**IEEE 802.16 Broadband Wireless Access Working Group** <http://ieee802.org/16>
Title	**Clean-up Text for DL Basic Assignment A-MAP IE (15.3.6.5.4.2.)**
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Re:	IEEE 802.16m-09/0044, "Letter Ballot #30" Area: 15.3.6 Downlink control structure
Abstract	The contribution proposes the text of DL control structure.
Purpose	To be discussed and adopted by TGm.
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Clean-up Text for DL Basic Assignment A-MAP IE

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1. Introduction

The MIMO-related parameters in the current DL basic assignment A-MAP IE are described according to the number of transmission antennas, N_t. However, the basic assignment A-MAP IE size was fixed to 56 bits considering the case for the maximum N_t. Thus, there's no need to describe the MIMO parameters according to N_t. The description for $N_t=8$ can cover those for $N_t=2$ and $N_t=4$.

Note that text proposal is based on the proposed text in IEEE C802.16m-09/1709.

2. Text Proposal for Inclusion in P802.16m/D1

-- Text Start --

15.3.6.5.4.2. DL basic assignment A-MAP IE

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Table 679 - DL basic assignment A-MAP IE*

Syntax	Size in bits	Description/Notes
~~DL-MAP_IE~~DL basic A-A-MAP IE() {	-	-
A-MAP IE Type	4	DL Basic Assignment A-MAP IE
$I_{SizeOffset}$	5	Offset used to compute burst size index
MEF	2	MIMO encoder format 0b00: SFBC 0b01: Vertical encoding 0b10: Horizontal encoding 0b11: n/a
if (MEF == 0b01){		Parameters for vertical encoding
~~if(Nt == 2){~~		
~~Mt~~	~~1~~	~~Number of streams in transmission for Nt = 2~~ ~~($M_t <= N_t$)~~ ~~0b0: 1 stream~~ ~~0b1: 2 streams~~
~~}else if(Nt == 4){~~		

~~Mt~~	~~2~~	~~Number of streams in transmission for Nt = 4~~ ~~($M_t <= N_t$)~~ ~~0b00: 1 stream~~ ~~0b01: 2 streams~~ ~~0b10: 3 streams~~ ~~0b11: 4 streams~~
~~}else if(Nt == 8){~~		
Mt	3	Number of streams in transmission ~~for Nt = 8~~ ($M_t <= N_t$) 0b000: 1 stream 0b001: 2 streams 0b010: 3 streams 0b011: 4 streams 0b100: 5 streams 0b101: 6 streams 0b110: 7 streams 0b111: 8 streams
Reserved	1	Reserved bits
} else if(MEF == 0b10){		Parameters for horizontal encoding
~~If(Nt == 2){~~		
~~PSI~~	~~1~~	~~Allocated pilot stream index for Nt = 2~~ ~~0b0: #1 stream~~ ~~0b1: #2 stream~~
~~M_p~~	~~2~~	~~Modulation constellation of the paired user~~ ~~0b00: QPSK~~ ~~0b01: 16 QAM~~ ~~0b10: 64 QAM~~ ~~0b11: other modulation information not available.~~
~~} else {~~		
Si	4	Index ~~used when Nt= 4 or 8,~~ to identify the combination of the number of streams and the allocated pilot stream index in a transmission with MU-MIMO , and the modulation constellation of paired user in the case of 2 stream transmission 0b0000: 2 streams with PSI=stream1 and other modulation =QPSK 0b0001: 2 streams with PSI=stream1 and other modulation =16QAM 0b0010: 2 streams with PSI=stream1 and other modulation =64QAM 0b0011: 2 streams with PSI=stream1 and other modulation information not available 0b0100: 2 streams with PSI=stream2 and other modulation

		=QPSK 0b0101: 2 streams with PSI=stream2 and other modulation =16QAM 0b0110: 2 streams with PSI=stream2 and other modulation =64QAM 0b0111: 2 streams with PSI=stream2 and other modulation information not available 0b1000: 3 streams with PSI=stream1 0b1001: 3 streams with PSI=stream2 0b1010: 3 streams with PSI=stream3 0b1011: 4 streams with PSI=stream1 0b1100: 4 stream with PSI=stream2 0b1101: 4 streams with PSI=stream3 0b1110: 4 streams with PSI=stream4 0b1111: n/a
~~}~~		
}		
Resource Index	11	5 MHz: 0 in first 2 MSB bits + 9 bits for resource index 10 MHz: 11 bits for resource index 20 MHz: 11 bits for resource index Resource index includes location and allocation size
Long TTI Indicator	1	Indicates number of subframes spanned by the allocated resource. 0b0: 1 subframe (default) 0b1: 4 DL subframes for FDD or all DL subframes for TDD
HFA	[4]	TBD HARQ Feedback Allocation
AI_SN	1	HARQ identifier sequence number
ACID	4	HARQ channel identifier
SPID/CoRe Version	[3]	HARQ subpacket identifier for IR and Constellation Rearrangement version
Reserved	~~TBD~~2	Reserved bits
~~Padding~~	~~Variable~~	~~Padding to reach byte boundary~~
}	-	-

…
-- Text End ---