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Title	Corrections for Reduced Compressed Private Maps		
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Source(s)	Joanne Wilson, Asaf Matatyaou, Dave Pechner	ArrayComm Inc.	Joanne@arraycomm.com, asaf@arraycomm.com, dpechner@arraycomm.com
Re:	IEEE P802.16e/D8 and C802.16e-05/216r1		
Abstract	This contribution makes corrections for Reduced Private Maps		
Purpose	Adopt into P802.16e/D8		
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Corrections for Reduced Private Maps

Joanne Wilson, Asaf Matatyaou, Dave Pechner

1 Problem Statement

1) The contribution related to Reduced Private Maps has not been correctly incorporated into D8. C802.16e-05/216r1 was accepted in session #37.

2 Proposed Solution

1) Update Tables 308a and 308b in D8 to reflect the previously accepted changes to the Reduced Private Maps. **Note that this contribution contains no new technical content.**

3 Proposed Text Changes

8.4.5.8 Optional reduced AAS private maps

[Modify table 308a as follows:]

Table 308a—Reduced AAS-private DL-MAP message format

Syntax	Size (bits)	Notes
Reduced_AAS_Private_DL-MAP() {	–	–
Compressed map indicator	3	Set to 0b110 for compressed format
UL-MAP appended	1	1 = reduced UL Private map is appended
Compressed Map Type	2	Shall be set to 0b11 for reduced private map
Multiple IE	1	1 = Multiple IE Mode
Reserved	1	Shall be set to zero
If (Multiple IE) {	–	–
NUM IE	8	–
}	–	–
for (ii = 1:NUM IE) {	–	–
Periodicity	2	00 = single command, not periodic, or terminate periodicity. Otherwise, repeat DL and UL allocations once per *r* frames, where *r* = 2^(n-1), where n is the decimal equivalent of the periodicity field.
CID Included	1	1 = CID included. The CID shall be included in the first compressed private MAP if it was pointed to by a DL-MAP IE with INC_CID == 0 or by a DL-MAP IE with a multicast CID.
DCD Count Included	1	1 = DCD Count included. The DCD count is expected to be the same as in the broadcast map that initiated the private map chain. The DCD count can be included in the private map if it changes.
PHY modification Included	1	1 = included.

CQICH Control Indicator	1	1 = CQICH control information included.
Encoding Mode	2	Encoding for DL traffic burst 00: No HARQ 01: Chase Combing HARQ 10: Incremental Redundancy HARQ 11: Conv. Code Incremental Redundancy
Separate MCS Enabled	1	Separate coding applied for reduced AAS_Private_MAP and DL data burst
If (Separate MCS Enabled) {	–	Specifies coding for the next private map in the allocation specified by this private map
Duration	10	Slot duration for reduced AAS Private Map
DIUC	4	Modulation & Coding Level
Repetition Coding Indication	2	00: No repetition 01: Repetition of 2 10: Repetition of 4 11: Repetition of 6
}		
If (CID Included) {	–	
CID	16	Must be a unicast CID
}		
If (CQICH Control Indicator ==1) {		
Allocation Index	6	CQICH Sub-channel index within Fast-feedback region marked with UIUC = 0
Report Period	3 ~~2~~	Reporting period indicator (in frames)
Frame offset	3	Start frame offset for initial reporting
Report Duration	4 ~~1~~	Reporting duration indicator
CQI Measurement Type	2	0b00 – CINR measurement based upon DL allocation 0b01 – CINR measurement based upon DL frame preamble 0b10 – reserved 0b11 – reserved
Reserved	~~2~~1	Shall be set to zero
}	–	–
If (DCD Count Included) {	–	–
DCD Count	8	Matches the value of the configuration change count of the DCD, which describes the down-link burst profiles that apply to this map.
}	–	–
If (PHY modification Included) {	–	–
Preamble Select	1	0 = Frequency shifted preamble 1 = Time shifted preamble
Preamble Shift Index	4	Updated preamble shift index to be used start-ing with the frame specified by the Frame Offset.
Pilot Pattern Modifier	1	0: Not applied, 1: Applied Shall be set to 0 if PUSC AAS zone
Pilot Pattern Index	2	pilot pattern used for this allocation (see sec-tion 8.4.6.3.3 (AMC), 8.4.6.1.2.6 (TUSC)): 00 – Pilot Pattern #A, 01 – Pilot Pattern #B 10 – Pilot Pattern #C, 11 – Pilot Pattern #D
}	–	–
DL Frame Offset	3	Defines the frame in which the burst is located. A value of zero indicates an alloca-tion in the subsequent frame.
if (current zone permutation is FUSC or	–	–

optional FUSC) {		
Zone symbol offset	8	The offset of the OFDMA symbol in which the zone containing the burst starts, measured in OFDMA symbols from beginning of the downlink frame referred to by the Frame Offset.
}	–	–
OFDMA Symbol Offset	8	Starting symbol offset referenced to DL preamble of the downlink frame specified by the Frame Offset
~~If (Permutation = 0b11){~~ If (current zone permutation is AMC, TUSC1 or TUSC2) {		~~For the AMC Permutation (2 x 3 type)~~ AMC (2 x 3 type), TUSC1 and TUSC2 all have triple symbol slot lengths
Subchannel offset	8	–
No. OFDMA triple symbol	5	Number of OFDMA symbols is given in multiples of 3 symbols
No. subchannels	6	–
} Else {		–
Subchannel offset	6	–
No. OFDMA Symbols	7	–
No. subchannels	6	–
}		–
DIUC/N_{EP}	4	DIUC for Encoding Mode 00, 01, 11 N_{EP} for Encoding Mode 10
If (HARQ Enabled) {		Encoding Mode 01, 10, 11
DL HARQ ACK bitmap	1	HARQ ACK for previous UL burst.
ACK Allocation Index	6	ACK channel index within HARQ ACK region
ACID	4	HARQ channel ID
AI_SN	1	HARQ Seq. Number Indicator
If (IR Type) {		Incremental Redundancy
N_{SCH}	4	Applied for Encoding Mode 10
SPID	2	Applied for Encoding Mode 10 and 11
Reserved	2	–
}		–
}		–
Repetition Coding Indication	2	Applied for Encoding Modes 00 and 01 only 0b00 – No repetition coding ~~0~~ 0b01 – Repetition coding of 2 used 0b10 – Repetition coding of 4 used 0b11 – Repetition coding of 6 used
If (UL-MAP appended) {		
Reduced_AAS_Private_UL-MAP()	*variable*	
}		
Reserved	3	–
} (end NUM IE loop)	–	–
~~CRC-162~~	~~16~~	~~-~~
Nibble Padding	variable	Padding depends upon HARQ options.
CRC-16	16	–
}		

[Modify Table 308b as follows:]

Table 308b— Reduced AAS private UL-MAP message format

Syntax	Size (bits)	Notes
Reduced_AAS_Private_UL-MAP() {	–	–
AAS zone configuration Included	1	1 = AAS zone configuration included. AAS configuration should be included in the first UL map of a private map chain to define the UL AAS Zone.
AAS zone position Included	1	1 = AAS zone position included. AAS zone position should be included in the first UL map of a private map chain to define the UL AAS Zone and any time the UL AAS zone is changed.
UL MAP Information Included	1	1 = UL Map Information is included (UCD Count and Private Map Allocation Start Time). These fields should be included in the first allocation of a private map chain.
PHY modification Included	1	1 = Preamble shift index included.
Power Control Included	1	1 = Power control value included.
Include Feedback Header	2	0b00 = No feedback 0b01 = MS shall transmit a CINR feedback header (type 0b1011) based upon the DL allocation 0b10 = MS shall transmit a CINR feedback header (type 0b1011) based upon the DL frame preamble 0b11 = *Reserved*
Encoding Mode	2	Encoding for UL traffic burst 00: No HARQ 01: Chase Combing HARQ 10: Incremental Redundancy HARQ 11: Conv. Code Incremental Redundancy
if (AAS Zone Config Included) {	–	–
Permutation	2	0b00 = PUSC permutation 0b01 = Optional PUSC permutation 0b10 = AMC permutation 0b11 = Reserved
UL_PermBase	7	–
Preamble Indication	2	0b00 = 0 symbols 0b01 = 1 symbol 0b10 = 2 symbols 0b11 = 3 symbols
Padding	5	–
}	–	–
if (AAS Zone Position Included) {	–	–
Zone Symbol Offset	8	The symbol offset of the UL AAS Zone referenced to the start of the UL subframe in the frame specified by the UL frame offset.
Zone Length	8	The duration of the UL AAS Zone, specified in number of OFDMA symbols.
}	–	–
if (UL MAP Information Included) {	–	–
UCD Count	8	Matches the value of the configuration change count of the UCD, which describes the uplink burst profiles that apply to this map.
Private Map Allocation Start Time	32	Defines the start of the UL subframe rela-

		tive to the start of the frame pointed to by the UL frame offset. This is defined in units of PS, and restricted to be less than Tf.
}	–	–
if (PHY modification Included) {	–	–
Preamble Select	1	0 = Frequency shifted preamble 1 = Time shifted preamble
Preamble Shift Index	4	Updated preamble index to be used starting with the frame specified by the Frame Offset
Pilot Pattern Modifier	1	0: Not applied, 1: Applied
~~**Pilot Pattern Modifier**~~ **Pilot Pattern Index**	~~1~~ 2	~~0: Not applied, 1: Applied~~ See sections 8.4.8.1.5 (Fig. 249) and 8.4.6.3.3: 00 – Pilot Pattern #A, 01 – Pilot Pattern #B 10 – Pilot Pattern #C, 11 – Pilot Pattern #D
}	–	–
if (Power Control Included) {	–	–
Power Control	8	Signed integer in 0.25 dB units
}	–	–
UL Frame Offset	3	Defines the frame in which the burst is located. A value of zero indicates an allocation in the subsequent frame.
Slot Offset	12	The offset to the starting location of the uplink burst from the beginning of the UL AAS zone in slots.
Slot Duration	10	The duration of the UL burst, specified in slots
UIUC/N_{EP}	4	UIUC for Encoding Mode 00, 01, 11 N_{EP} for Encoding Mode 10
If (HARQ Enabled) {	–	Encoding Mode 01, 10, 11
ACID	4	HARQ channel ID
AI_SN	1	HARQ S~~we~~q. Number Indicator
Reserved	3	Shall be set to zero.
If (IR Type) {	–	Incremental Redundancy
N_{SCH}	4	Applied for Encoding Mode 10
SPID	2	Applied for Encoding Mode 10 and 11
Reserved	2	Shall be set to zero.
}	–	–
}	–	–
Repetition coding Indication	2	Applied for Encoding Mode 00 and 01 0b00 - No repetition coding 0b01 - Repetition coding of 2 used 0b10 - Repetition coding of 4 used 0b11 - Repetition coding of 6 used.
}	–	–