

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Corrections to Reduced Private Maps for OFDM	
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Re:	IEEE P802.16e/D6	
Abstract	Correction of Reduced Private maps in OFDM	
Purpose	The document is intended for adaptation in IEEE P802.16e/D6	
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Corrections to Reduced Private Maps for OFDM

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Description of Problem

The tables describing the format of reduced private maps in OFDM (section 8.3.6.7 ff) contain fields that are not relevant in context with OFDM and therefore should be removed. Also a length field indicating the overall length of the map message is missing. The HCS should be at the end of the message, i.e. after the Reduced Private UL-MAP, if appended, or of the Reduced Private DL-MAP. The proposed text also corrects for wrong references and minor problems such as missing units for the size fields, etc.

Proposed Text Changes

Note to the editor: the editorial instructions are given w.r.t. P802.16e-/D6 in order to indicate the suggested changes. However, if the recommendations are adapted, the change should reflect differences w.r.t. the base document Std IEEE 802.16-2004. This section is not modified but added as a whole, hence the entries indicated with red/strikeout should be removed, the blue changes included in the default colour.

In section 8.3.6.7.1 (p.225 1.5ff) modify :

Table 251e—Reduced private DL-MAP message

<i>Syntax</i>	<i>Size</i>	<i>Notes</i>
Reduced Private DL_MAP()		
Compressed map indicator	2 bits	Set to binary 11 for compressed format
<i>Reserved</i>	1 bit	Shall be set to zero
UL-MAP appended	1 bit	

Compressed Map Type	1 bit	Shall be set to 1 for reduced private map
CID Included	1 bit	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 a multicast CID
DCD Count Included	1 bit	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 modulation Included	1 bit	1 = included.
Encoding Mode	2	Encoding for DL traffic burst 00: No HARQ 01: Chase Combining HARQ 10: Incremental Redundancy HARQ
Separate MCS Enabled	1 bit	Separate coding applied for reduced AAS_Private_MAP and DL data burst
Map message length	11 bits	
If (Separate MCS Enabled) {		
Duration	10 bits	Slot duration for reduced AAS Private Map
DIUC	4 bits	Modulation & Coding Level
Repetition Coding Indication	2	00: No repetition 01: Repetition of 2 10: Repetition of 4 11: Repetition of 6
<i>Reserved</i>	2 bits	Shall be set to zero
}		
if (CID Included) {		
CID	16 bits	
Allocation Index	6 bits	CQICH Sub-channel index within Fast-feedback region marked with UIUC=0
Report Period	2 bits	Reporting period indicator (in frames)

Frame offset	3 bits	Start frame offset for initial reporting
Report Duration	4 bits	Reporting duration indicator
Reserved	±	
}		
if (DCD Count Included) {		
DCD Count	8 bits	
}		
if (PHY modification Included) {		
Preamble Time Shift	8 bits	Updated preamble time shift to be used starting with the next frame.
}		
Preamble Present	1 bit	
Start Time	11 bits	
Duration	10 bits	
Reserved	6 bits	Shall be set to zero
If (UL-MAP appended) {		
Reduced Private UL_MAP()	Variable	
} else {		
HCS	8 bits	
}		
If (Permutation = 0b11) {		For the AMC permutation (2 x 3 type)
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 symbol	7	
No. subchannels	6	
}		
DIUC/NEP	4	DIUC for Encoding Mode 00, 01, 11; NEP for Encoding Mode 10
If (HARQ Enabled) {		
ACK Allocation Index	6	ACK channel index within HARQ ACK region
ACID	4 bits	HARQ channel ID
AI SN	1 bit	HARQ Seq. Number Indicator
Reserved	1	
If (IR Type) {		Incremental Redundancy
NSCH	4 bits	Applied for Encoding Mode 10
SPID	2 bits	Applied for Encoding Mode 10 and 11
Reserved	2	
}		
}		
Repetition Coding Indication	2	Applied for Encoding Mode 00 and 01: 00: No repetition; 01: Repetition of 2; 10: Repetition of 4; 11: Repetition of 6
Reserved	2	
}		

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Preamble Time Shift

The preamble time shift for subsequent DL allocations, as defined in [8.6.3.2.7](#). [8.3.6.3.7](#)

HCS

A HCS value, as defined in 6.3.2.1.1, is appended to the end of the compressed map(s) data. The HCS is computed across all bytes of the compressed map(s) starting with the byte containing the

Compressed map indicator and including appended UL-MAP, if present.

In section 8.3.6.7.2 (p.228 1.30ff) modify :

Table 251f—Reduced private UL-MAP message

<i>Syntax</i>	<i>Size</i>	<i>Notes</i>
Reduced Private UL_MAP()		
UCD Count Included	1 bit	1 = UCD Count Included. The UCS count should be included in the first allocation of a private map chain.
PHY modification Included	1 bit	1 = Preamble time shift included.
Power Control Included	1 bit	1 = Power control value included.
Encoding Mode	2	Encoding for DL traffic burst 00: No HARQ 01: Chase Combining HARQ 10: Incremental Redundancy HARQ 11: Conv. Code Incremental Redundancy
if (UCD Count Included) {		
UCD Count	8 bits	
}		
if (PHY modification Included) {		
Preamble Time Shift	8 bits	Updated preamble time shift to be used starting with the next frame.
}		
if (Power Control Included) {		
Power Control	8 bits	Signed integer in 0.25 dB units
}		
UIUC	4 bits	
Start Time	11 bits	
Duration	10 bits	
Subchannel Index	5 bits	
Midamble Repetition Interval	2 bits	
UIUC/NEP	4	UIUC for Encoding Mode 00, 01, 11 NEP for Encoding Mode 10
if (HARQ Enabled) {		
ACID	4 bits	HARQ channel ID
AI SN	1 bit	HARQ Seq. Number Indicator
Reserved	3	
if (IR Type) {		
NSCH	4 bits	Incremental Redundancy Applied for Encoding Mode 10
SPID	2 bits	Applied for Encoding Mode 10 and 11
Reserved	2	
}		6
}		
Reserved	15 bit	Set to zero
HCS	8 bits	
}		

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l.38
Preamble
Time
Shift

The
preamble

time shift for subsequent UL allocations, as defined in ~~8.6.3.2.7~~. 8.3.6.3.7