Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Support for additional block sizes for CTC in OFDMA**
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Re:	IEEE P802.16e/D5-2004
Abstract	Optimal interleaver parameters for CTCs (Convolutional Turbo Codes) are given to support a larger range of frame sizes for OFDMA subchannelization
Purpose	To incorporate the given table in this contribution into IEEE 802.16e/D5-2004
Notice	
Release	
Patent Policy and Procedures	

Support for additional block sizes for CTC in OFDMA

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Motivation

Due to the subchannelization of the OFDMA channel, new optimal interleaver parameters for CTCs are given to support a larger set of block sizes. This will ensure maximum performance gain at each new block size.

Suggestion: To add Table 324a to Section 8.4.9.2.3.1 and include the following text.

1. Section 8.4.9.2.3.1

<ADDED TEXT> Table 324a specifies optimal interleaver parameters for frame sizes (unencoded blocks) between 64-216 bytes. This can be used for OFDMA subchannelization with QPSK, 16-QAM and 64-QAM. The interleaver parameters in the table are independent of the modulation used.

Table 324a – Optimal CTC channel coding for additional OFDMA Block Sizes

Data Block size (bytes)	Encoded Data Block size (bytes)	Code Rate	N couples (2 bit pairs)	P0	P1	P2	P3
64	96	2/3	256	23	52	132	116
66	132	1/2	264	23	2	160	30
72	144	1/2	288	23	50	188	50
78	156	1/2	312	23	102	64	38
80	120	2/3	320	23	32	116	64
81	108	3/4	324	11	172	164	16
88	132	2/3	352	29	46	228	46
90	180	1/2	360	29	56	0	68
90	120	3/4	360	29	56	0	68
96	192	1/2	384	29	68	140	56
96	144	2/3	384	29	68	140	56
99	132	3/4	396	29	36	128	76
102	204	1/2	408	29	124	204	40
104	156	2/3	416	29	50	152	82
108	216	1/2	432	13	0	4	8
108	144	3/4	432	13	0	4	8
114	228	1/2	456	31	100	224	104
117	156	3/4	468	31	98	220	98
120	240	1/2	480	31	52	240	52
120	180	2/3	480	31	52	240	52
126	252	1/2	504	31	2	148	10
126	168	3/4	504	31	2	148	10
135	180	3/4	540	31	42	248	34

136	204	2/3	544	31	82	4	102
138	276	1/2	552	35	14	136	6
144	288	1/2	576	31	42	232	18
144	216	2/3	576	31	88	156	52
152	228	2/3	608	37	60	248	4
153	204	3/4	612	37	6	164	14
160	240	2/3	640	37	54	12	86
162	216	3/4	648	37	62	160	34
171	228	3/4	684	37	108	136	8
176	264	2/3	704	37	72	28	116
180	240	3/4	720	37	92	100	68
184	276	2/3	736	37	58	184	10
192	288	2/3	768	19	384	216	600
198	264	3/4	792	41	0	228	24
207	276	3/4	828	41	136	288	192
216	288	3/4	864	19	2	16	6