Project	IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>
Title	OFDM preamble Ad Hoc interim voting results
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Source(s)	Preamble Ad Hoc group
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Re:	OFDM preamble Ad Hoc
Abstract	This document contains ad hoc voting results for the OFDM preamble design for the 802.16ab system.
Purpose	OFDM preamble design first round comments
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The OFDM preamble ad hoc has voted on preamble structures for the following scenarios: Uplink/Downlink, TDD/FDD, and Licensed/Unlicensed Bands. The decisions with the most votes are captured in the comments below.

The following text should be inserted into

Insert at: Page 197, Line 43
Section 8.3.5.3.3.5 Preamble Structure

For OFDM Licensed bands, uplink and downlink with both TDD and FDD, the preamble consists of a single symbol with the following structure

| C P	128	128

Insert at: Page 227, Line 35

Insert the following text under a new section 8.3.5.4.4.1 Preambles ,
insert an empty section 8.3.5.4.3.1 Preambles at page 226, line 48, and delete section
"8.3.5.4.2.2 Preambles" entirely starting on page 214, line 19.

For OFDM unlicensed bands, downlink with both TDD and FDD, the preamble has the following structure
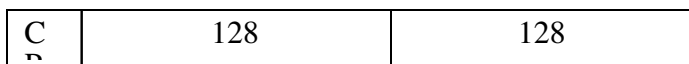
Mandatory:

C P	128	128

Optional:

C P	64	64	64	64

+

C P	128	128
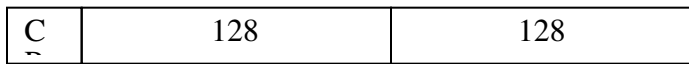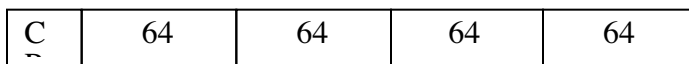
For OFDM unlicensed bands, uplink with both TDD and FDD, the preamble has the following structure

C P	128	128

The proposals for licensed bands are then:

1. Eliminate coarse frequency acquisition as a requirement and perform the remaining tasks with a CP+128+128 symbol (Lek/Radia/Runcom approach.)

2. The proposals of Apu/Wi-lan/Octavian where short sequences (for time and coarse freq sync) are followed by multiple longer sequences (for channel estimation)
3. Hikmet suggested we have within each superframe, coarse frequency acquisition within one frame (Apu/Wi-Lan approach) and the remaining tasks (fine freq./time / channel estimation) within the remaining frames using Lek/Radia/Runcom approach.
4. Have proposal 1 as mandatory and proposal 2 as optional

The proposals for unlicensed bands are those above plus:

5. Charlie Cahn s multiple symbol proposal
6. Octavian s extended symbol proposal
7. Jun Shen s (Aperto) proposal for multiple symbols
8. Yossi s CP+2*128 mandatory and CP+4*64+CP+2*128 optional

The total number of votes for each scenario was (first number = proposal, second number = number of people voting for that proposal)

1. Licensed downstream TDD
1)9, 2)1, 3)1, 5)1 6)5 7)3
2. Licensed upstream TDD
1)15, 4)1, 5)1 7)3
3. Licensed downstream FDD
1)10, 2)1, 3)1 6)5 7)3
4. Licensed upstream FDD
1)14, 2)1, 7)3
5. Unlicensed downstream TDD
1)2, 2)1, 3)1 6)5, 7)3, 8)8
6. Unlicensed upstream TDD
1)8, 4)1, 5)1 7)3, 8)7
7. Unlicensed Downstream FDD
1)2, 2)1, 5)1 6)5, 7)3, 8)8
8. Unlicensed Upstream FDD
1)8, 2)1, 5)1, 7)3, 8)7

The people that voted are:

VanWaes Nico; Octavian Sarca; Amir Sarajedini; Manoneet Singh; Zion Hadad; Robert M. Ward Jr.; Tal Kaitz; Yossi Segal; Joe Hakim; Shawn Taylor; Jun Shen; Yigal Leiba; Wendy Wong; Chin-Chen Lee; Apurva Mody; Moshe Levinson; Itzik Kitroser; Hikmet Sari, Robert Ward, Charlie Cahn,

The people on the email chain are:

VanWaes Nico; Eric Jacobsen; 'Octavian Sarca; Amir Sarajedini; Shawn Taylor; Charlie Cahn; Manoneet Singh; Mike Paff; Brian Edmonston; Carl Scarpa; Naftali Chayat; Jerry Krinock; Zion Hadad; Robert M. Ward Jr.; Phil Kelly; Arthur Wang; Jose Tellado; Tal Kaitz; Yossi Segal; Joe Hakim; Jun Shen; Yigal Leiba; Gordon Antonello; Wendy Wong; Ron Murias; John Liebetreu; Chin-Chen Lee; Hank Eilts; Panyuh Joo; Daniel Kim; Jason Li; Apurva Mody; Larry Watkins; Inchul Kang; Wenhan Zhang; Lek Ariyavisitakul