

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >
Title	OFDM Preamble Ad Hoc Report
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Re:	
Abstract	This document outlines the results of thje Ad Hoc meeting.
Purpose	Discussion and adoption
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September 13, 2001

OFDM Preamble Design Ad-Hoc Group Report

Hikmet Sari

Meeting Summary:

Presentations of proposals from the following members:

Manoneet Singh

Shawn Taylor

Yossi Segal

Pan Yuh Joo declined to present as he felt there was no new information since the last presentation in Portland.

Charlie Cahn was not present, so no presentation representing his proposal was made.

Lek expressed concern about the maximum cyclic prefix length being up to 64 samples, and that is not enough to combat long delay spreads.

Strowpolls:

- For the downlink preamble use a single OFDM symbol, not two: 20 people were in favor of 1 symbol and 8 in favor of 2 symbols.

- Remove the short training sequences from the regularly transmitted preamble: unanimity
- For the uplink preamble, the group was unanimous that the same format should be used as for the downlink. But it was also suggested that the cyclic prefix should be longer due to initial timing problems. No decision was reached on this point.
- For transmit diversity, we have two proposals on the table:
 1. A preamble of the form: “S+S, S-S”,
 2. Use odd-order carriers for one antenna and even-order carriers for the other antenna.

The two contributing groups are working together to merge the two proposals.

- Specification of the preamble sequence: No decision was reached. It was suggested that a list of sequences be defined instead of a single sequence. This would allow neighboring base stations to use different sequences.
- Ron Murias is the Clause Editor for the OFDM Preamble Section of IEEE 802.16a.