| | |
|---|---|
| Project | **IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>** |
| Title | **Adjacent Carrier Permutation for OFDMA** |
| Date Submitted | **2002-05-15** |
| Source(s) | Phil Kelly<br>BeamReach Networks<br>755 N. Mathilda Ave<br>Sunnyvale, CA 94086 USA<br><br>Voice: 408-869-8700<br>Fax: 408-869-8701<br>mailto:pkelly@beamreachnetworks.com |
| Re: | Call for Contributions on P802.16a Mergers and Consolidation<br>Document Number: IEEE 802.16a-02/22, April 15, 2002.<br>URL: < http://ieee802.org/16/docs/02/80216-02_22.pdf> |
| Abstract | Describes an adjacent carrier permutation for OFDMA. |
| Purpose | Addresses an interoperability concern within OFDMA not addressed by C802.16a-02/49. Make proposed changes to P802.16a/D3. |
| Notice |  |
| Release |  |
| Patent Policy and Procedures |  |

# Adjacent Carrier Permutation for OFDMA

*Phil Kelly*

## Purpose

This contribution, in conjunction with C802.16-02/49, achieves complete harmonization of the OFDMA2 PHY mode with the previous OFDMA PHY mode.

## Comment

| Page | Line | Section |
|---|---|---|
| 212 | 55 | 8.3.4.5 |

**Comment**

Merge the OFDMA2 mode into the OFDMA mode

**Remedy**

Move (with editorial modifications) the text from line 57 down to line 30 in page 213 to a new section. The modified text should read:

8.3.4.4.3.3 Adjacent Carrier Permutation

An OFDMA BS may use the distributed carrier permutations specified in section 8.3.4.4.3 or the adjacent carrier permutation specified in this clause. An OFDMA SS shall be compatible with both permutations. With the adjacent carrier permutation, symbol data within a subchannel is assigned to adjacent carriers and the pilot and data carriers are assigned fixed positions in the frequency domain within an OFDM symbol.

Table ?: Carrier Allocations for the Adjacent Carrier Permutation

| Parameter | Value |
|---|---|
| Number of dc carriers | 1 |
| Number of Guard Carriers, Left | 176 |
| Number of Guard Carriers, Right | 175 |
| Nused Number of Used Carriers N | 1696 |
| Total Number of Carriers | 2048 |
| Number of Variable-Location Pilots | 0 |
| Number of Fixed-location Pilots | 160 |
| Number of Variable-Location Pilots which coincide with Fixed-Location Pilots | 0 |
| Total Number of Pilots | 160 |
| Number of data carriers | 1536 |
| Nsubchannels | 32 |
| Nsubcarriers | 53 |
| Number of data carriers per subchannel | 48 |
| BasicFixedLocationPilots | {5,16,27,38,49} within each subchannel |

"