Project	IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>
Title	**Action Item from Session #46: Text and Figure fixing comment 544**
Date Submitted	2007-01-09
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Re:	**IEEE 802.16 Working Group Letter Ballot #24, on P802.16h/D1**
Abstract	**Thic contribution proposes to enhance adaptive channel seelection using 2-hop BS working channel ID to increase spacial efficiency.**
Purpose	**To consolidate the working document**
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Action Item from Session #46: Text and Figure fixing comment 544

----Enhancements to the Optimization of channel Distribution

By

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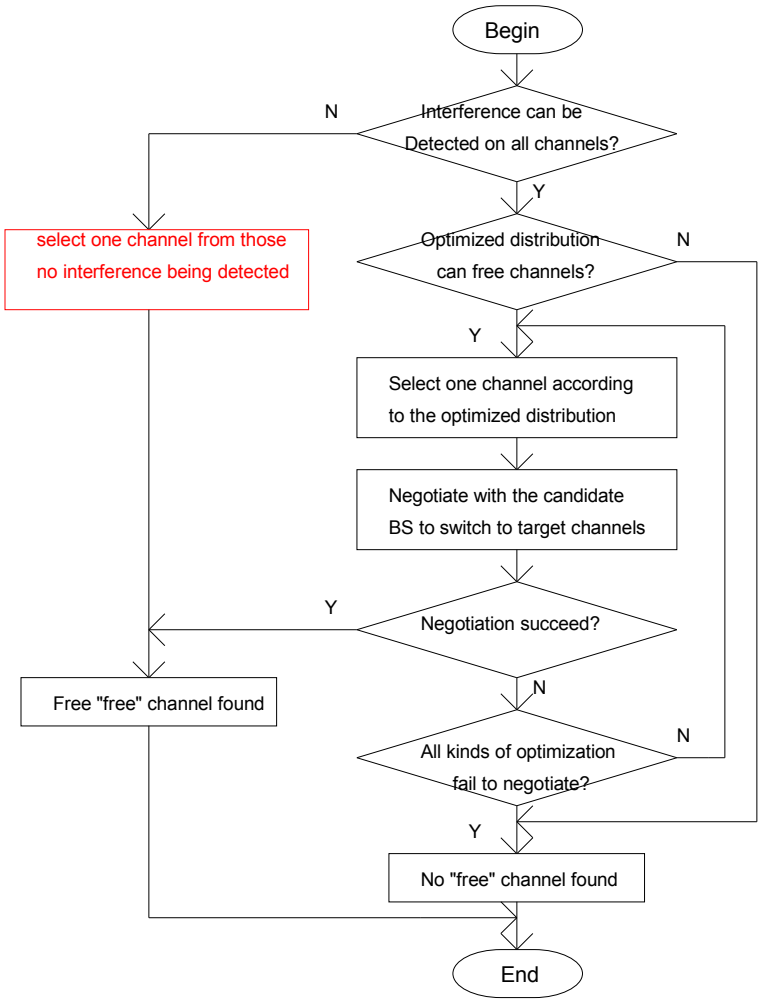
Introduction

In November meeting, the part 1 of contribution S80216h-06_101 (slide2 to slide 8) was accepted by the 16h task group. But the editorial change indication is not provided in S80216h-06_101. Here we provide editorial change indication for the part 1 of the idea proposed in S80216h-06_101.

The following is the summary of the part 1 of contribution S80216h-06_101. One of the basic coexistence mechanism of 802.16h is the adaptive channel selection. The IBS (initializing BS) finds a less interfered or less used frequency to work on. The algorithm in the current draft [1] randomly selects a non-interfered channel as IBS's working channel if there is at least one non-interfered channel. This may decrease frequency efficiency, as described in S80216h-06_101 ([2]). We provides an enhancement to the algorithm in draft [1] to increase the frequency efficiency. The key idea is that an IBS selects one of its 2-hop OBS's (operating BS) working channels which are the IBS's non-interference channels as its working channel. If an IBS can not find such kind of non-interfered channels, it randomly selects one of its non-interfered channels as the working channel.

15.4.1.1 How to select a "free" channel (for ACS and DFS)

Change Figure h38 as follows:



15.4.1.2 Optimization of Channel Distribution

Insert the following red text:

In the initialization phase of an IBS, its neighbors will send their current working channel ID, neighbor's working channel ID, OCSI allocation and subframe allocation using CXP messages, as well as a flag having alternative channels. The IBS maintains the channel information of all neighbors in the BS information table. The IBS also maintains its 2-hop neighbor's working channel ID.

When the IBS can find any non-interference channels at the initialization phase it shall select a non-interference channel as its working channel: If there is at least one non-interference channel which is it's 2-hop neighbor's working channel, it should first random select one such kind of non-interference channel as its working channel. Otherwise it should first random select one of it non-interference channel as its working chanel.

Reference

[1] IEEE P802.16h/D1: Working Document for P802.16h
[2] IEEE S80216h-06_101: Enhancements to the optimization of channel distribution

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