Resource Reuse and Interference Management Mechanism

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IEEE C802.16j-06/149 and URL <http://ieee802.org/16/… C80216j-06_149.pdf>.

Purpose:

For discussion and approval of inclusion of the proposed text into the P802.16j baseline document.

Introduction

- Goal: Take advantage of resource reuse while mitigating interference
  - Resource reuse enhances system capacity, but causes potential interference
  - Resource reuse group could include combinations of access links and relay links
- Definition of "resource": one region in time-frequency 2D domain

Interference Control and Resource Reuse

- Phase 1: interference measurement
  - RSs measure sounding signals with each other

- Phase 2: resource allocation and interference calibration
  - Adjust reuse assignment when encountering interference

Secondary Usage Indication Bit in MAP IE

- We propose to add a bit "secondary usage indication" in MAP IEs for distributed scheduling case
- When an RS receives an MAP IE with this bit enabled, it knows that it is the secondary user and has to give the priority to the primary user if interference is detected

- RS1,RS2, RS3 all use the same resource in [t2,t3] but RS3 is the primary user
- RS4 is far away RS1~3 and reuse resource in [t1,t4]