Self-backhaul Relay

IEEE 802.16 Presentation Submission Template (Rev. 8.3)

Document Number:
IEEE C802.16mmr-05/024

Date Submitted:
2005-11-11

Source:

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Venue:
IEEE 802.16 Session #40 Vancouver, CANADA
Mobile Multihop Relay (MMR) Study Group Meeting

Base Document:
None

Purpose:
Proposal of self-backhaul relay for MMR

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Self-backhaul Relay

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Oct, 2005
Outline

• Purpose of the proposal
• Self-backhaul relay concepts, scenarios
• Features of self-backhaul relay
• Summary
Objective

• Need a simple and efficient method to support BS-RS wireless link
Self-backhaul Relay

- **Self-backhaul** is defined as using BS-owned radio resources and protocol for backhaul.
- Self-backhaul RS performs BS functionalities
  - For both user access and RS backhaul.
- SS function block is required in the BS side.
- In this case, BS works at $f_1$ for its own user access and $f_2$ for BS-RS communication.

![Diagram of Self-backhaul Relay](image-url)
Another Scenario of Self-backhaul Relay

- Portion of BS radio resources for self-backhaul
  - RS-BS communication is provided by self-backhaul link
- MS function block is required in the RS side
  - RS acts as BS for user access, and acts as SS for backhaul
Features

• Using access resource for backhaul
• From the view of MS in the coverage of RS, self-backhaul RS behaves as BS
• Compatible with the 802.16 standard
Summary

• This proposal introduced self-backhaul concept, which could be taken as one of approaches for mobile multi-hop relay
  – Self-backhaul relay shares radio resources for both user access and RS-BS link
  – Two cases of self-backhaul relay and their features are presented
  – Further technical schemes and performance analysis will be studied