

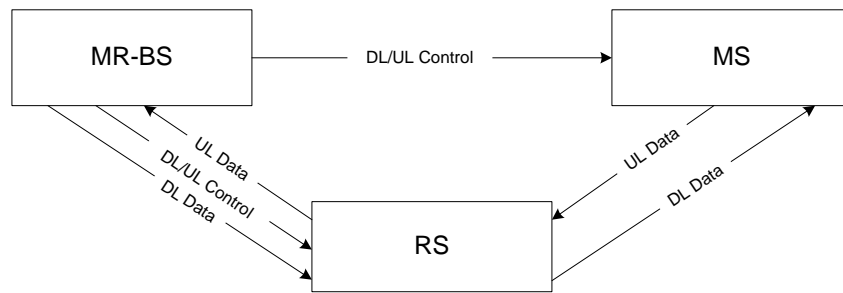
Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Frame Structure to Support Transparent Relay Node Operation	
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Re:	This document is in response to call for technical proposals IEEE 80216-06/027 dated 15 October 2006. This document proposes text regarding signaling for efficient routing for insertion in baseline document IEEE 80216j-06/026.	
Abstract	Providing support for a simplified uplink-only relaying mode in the P802.16j context.	
Purpose	Adoption of proposed text into P802.16j	
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Frame Structure to Support Transparent Relay Node Operation

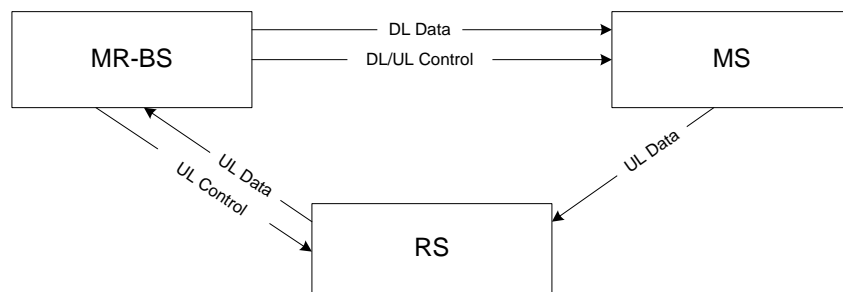
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Introduction

In this contribution, frame structure for transparent RS operation is proposed. A transparent RS does not transmit a preamble and control information in the DL access zone. A transparent RS may relay both uplink and downlink data bursts or relay uplink bursts only. The flow of control and data for both configurations are illustrated in Figure 1. In the DL/UL Transparent Relay mode, an RS is primarily utilized for capacity improvement on the downlink and both capacity and coverage improvement on the uplink. In certain network deployments, as MR-BS transmits at a higher power than either RS or MS, the performance of single-hop downlink could be satisfactory, in which case an RS could be employed in the UL-Only Relay mode for capacity and coverage improvement on the uplink. The decision to employ an RS in either of the two transparent relay modes could be made at the time of the RS network entry or handover into a new cell, and could be based on its capability negotiation with the MR-BS.



a) DL/UL Transparent Relay mode



b) UL-Only Transparent Relay mode

Figure 1. Possible Transparent Relay Configurations

Proposed Text Changes

In section 8.4.4.7.1, insert the following paragraph

The transparent relay frame structure shall include support for an Uplink-Only Transparent Relay mode, where only uplink data is relayed. An RS configured to operate in the Uplink-Only Transparent Relay mode is not required to support a DL Access zone. In general, an RS configured to operate in either an Uplink-Only or Uplink-Downlink Transparent Relay mode is not required to transmit a preamble, FCH, DL MAP, or UL MAP in the DL Access Zone.