Relay Zone Indicator, Frame signaling

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Purpose:
The purpose of this slide is to support proposed relay zone indicator, frame signaling, and amble location for the relay link.

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Relay zone indicator and Frame signaling:
#07/235, #07/236

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Outline

• Introduction

• Relay zone indicator

• Frame signaling

• Summary
Introduction

- Relay Zone Indicator
  - STC_DL_ZONE_IE (one reserved bit for relay zone indicator)
    - RS is informed of OFDMA Symbol offset of the relay zone
    - MS recognizes the existence of another zone for other MSs

- Frame Configuration Signaling
  - Propose MAC message
Relay Zone
Indicator
#07/235
Relay Zone Indicator [1/2]

◆ Problem Statement:

After completing its initial network entry in the access zone,

RS needs to be informed of the location of the relay zone

◆ Suggested Remedy

- MR-BS or RS transmits STC_DL_ZONE_IE
  - One reserved bit is being used for relay zone indicator
  - RS recognizes the relay zone by relay zone indicator
  - MS recognizes another zone for other MSs

◆ Propose

- Change STC_DL_ZONE_IE
  - One reserved bit into relay zone indicator
After RS moves to the relay zone, RS receives frame configuration message [802.16j-07/265] at relay zone.
Frame Configuration

Signaling

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Frame Configuration Signaling [1/2]

- The agreed Multi-hop relay Frame Structure supports
  - Single frame and multi frame
  - Number of relay zone in a single frame is configurable
  - Number of frame in a multi frame is configurable

Figure 2: An examples of Single frame / Multi frame
Frame Configuration Signaling [2/2]

◆ For RS to configure Multi-hop relay Frame structure,

◆ Propose

◆ Relay Configuration MAC message
  ➢ Frame type: Single frame / Multi frame
  ➢ Frame Number (to take effect)
  ➢ Single Frame
    ➢ Number of relay zone, offset, and duration
    ➢ Transceiver mode (Tx, Rx, idle) for each relay zone
  ➢ Multi Frame
    ➢ Number of frame
    ➢ Transceiver mode for each relay zone

◆ Text proposal
  ➢ R-FCH and R-DL-MAP shall be transmitted in the first DL relay zone that is in Tx mode
Summary

- Relay zone indicator
  - STC_DL_Zone_IE (one reserved bit for relay zone indicator)

- Frame Configuration Signaling
  - Propose MAC message
  - Single frame/ multi frame
  - Frame number (to take effect)
  - Number of relay zone in single frame, offset, duration
  - Number of frame in multi frame