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Re:	A response to a Call for Technical Proposal, http://wirelessman.org/relay/docs/80216j-07_007r2.pdf
Abstract	The contribution proposes frame structure configuration signaling.
Purpose	To incorporate the proposed text into the P802.16j Baseline Document (IEEE 802.16j-06/026r2)
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Frame Structure Configuration Signaling

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1. Introduction

Frame structure configuration consists of RS zone configuration (location and duration) and repetition pattern of RS zone. In this contribution, we propose the signaling support for frame structure configuration.

Basically, two configurations shall be supported:
- dynamic frame structure configuration where the RS zone configuration can be changed on per-frame basis
- Static frame structure configuration where the RS zone configuration remain unchanged until update

2. Proposal

2.1 Dynamic frame structure configuration

During the initial network access, RS can get the location of the DL RS_Zone within the same frame while it is still in MS mode from FCH. Once RS is switched to the relay mode, the R-FCH is used to indicate the DL RS_Zone within the following frame. The UL RS_Zone location is described by a R-MAP IE

2.2 Static frame configuration

The MR-BS or a parent RS can multicast its RS-Zone configuration through a MAC control message (e.g., RS_CD) message. The information shall include
- RS_Zone superframe length (in unit of frame)
- Description of DL/UL RS_Zones in each frame within the superframe (location/duration)
- Frame number for this configuration to take effect

The dynamic frame structure signal shall override the static frame structure configuration.

3. Proposed text change

3.1 Proposed text change for FCH to enable indication of the location of DL RS_Zone within the frame

[Change row 9 in Table 268 in Page 359 in section 8.4.4.3 as indicated]

Syntax	Size	Notes
~~*Reserved*~~ RS_Zone Prefix location	4 bits	~~Shall be set to zero~~ Indicates the OFDM symbol index relative to the beginning of current frame in unit of 2 OFDM symbols.

[Insert the following sentence at end of page 359]

RS_Zone Prefix location
Indicates the OFDM symbol index relative to the beginning of current frame in unit of 2 OFDM symbols.

4.2 Proposed text change for R-FCH to enable indication of RS_Zone location in the following frame

[Insert section 8.4.4.7.3]

8.4.4.7.3 R-FCH channel

If a DL RS_Zone contains a R-FCH channel, the R-FCH channel shall be transmitted in the first sub-channel. The R_FCH shall be transmitted using QPSK rate ½ with four repetitions. The R-FCH contains the RS-Zone Prefix as described in 8.4.4.7.4. The location of first DL RS_Zone is described by FCH in the same frame as described in 8.4.4.3 and by R-FCH of the previous frame. A RS, during network entry, shall identify the location of the first DL RS_Zone based on FCH. A RS, during normal operation, may identify the location of the first DL RS_Zone based on the R-FCH transmitted in the previous frame.

8. 4.4.7.4 RS-Zone prefix

The RS-Zone prefix is a data structure transmitted on R-FCH of a DL RS_Zone. The RS-Zone prefix includes information regarding the location of RS_Zone in the next frame, information required for decoding R-MAP and etc. Table XXX defines the format of RS_Zone prefix.

Syntax	Size(bits)	Notes
RS_Zone_Prefix_format () {		
RS_Zone location	8	The field indicates the OFDM symbol index reference to the beginning of next frame in unit of 2 OFDM symbols
R-MAP length	5	Length in unit of sub-channel
MCS index used for R-MAP	5	Modulation and coding index
Reserved	6	
}		

RS_Zone location
An indicator regarding the location of RS_Zone in the next frame. The first OFDM symbol in each frame is indexed as 0. The RS_Zone location indicates the OFDM symbol index relative to the first OFDM symbol in next frame. The unit is 2 OFDM symbols.

R-MAP length
The length in sub-channels of R-MAP message that immediately follows the RS_Zone prefix.

MCS index used for R-MAP
An indicator indicating the modulation and code rate used for R-MAP message.

3.3. Proposed text change for enabling static RS_Zone superframe configuration

[Add new sections 6.3.2.3.62 after section 6.3.2.3.61 in page 172]

6.3.2.3.63 RS configuration description message

This massage is a broadcast/multicast message among all or group of associated RSs of a MR-BS. This message shall be transmitted by a MR-BS and forwarded by intermediate RSs or transmitted by a parent RS. This massge is used by a MR-BS to broadcast description of configurations specific to all of its associated RSs to enable RSs' operations, such as network entry, initialization, and 802.16e traffic forwarding.

Table XXX. RS_configuration description (RS-CD) message format.

Syntax	Size	Notes
RS_CD format {		
_Management message type = 67	8 bits	
_TLVs	Variable	Configuration TLV
}		

[Add new sections11.20]

11.20 RS_CD encodings

Name	Type	Length	Value
RS_Zone superframe configuration	1	Variable	Bits #0-3: superframe length (in frames) For each frame (for loop) _Number of DL RS_Zone (2 bits) _For each DL RS_Zone _{Location (OFDM symbol index relative to the beginning of the frame (8 bits) Duration in OFDM symbols (8 bits)) _Number of UL RS_Zone (2 bits) _For each UL RS_Zone _{Location (OFDM symbol index relative to the beginning of the UL sub-frame (8 _Duration in OFDM symbols (8 bits))
Effective time in frame number	1	1	8 LSB of frame number