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Title	**Additional TLV encoding for REP-RSP message**
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Re:	Recirculation of P802.16 REVe/D3
Abstract	This contribution presents additional TLV encoding for REP-RSP message.
Purpose	Adopt into P802.16e/D4
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Additional TLV encoding for REP-RSP message

Problem Definition

The current REP-RSP message defines TVL encodings to report CINR measurements of diversity, AMC and safety subchannel. For each CINR measurement, 5 bit field represents 5 MSBs of CINR measurement defined in 8.2.2, 8.3.9, 8.4.11. However, the CINR measurement is not the CINR value, instead, the encoding of CINR between -10 ~ 53 dB as 0x00 to 0x3F by the unit of 1 dB. Thus, the 5 MSBs of the CINR measurement do not have useful meaning for the REP-RSP.

Proposed Enhancement

Considering link level simulation results, it is reasonable to set the CINR measurement of -3dB ~ 27dB in 1 dB unit. We propose the following CINR measurement encoding for bit width of 5 bits.

$$n = \begin{cases} 0 & CINR \le -3dB \\ n & n-4 < CINR \le n-3,\ 0 < n < 31 \\ 31 & CINR > 27dB \end{cases}$$

Suggested text change.

[Add the following text at the end of 11.2 “REP-RSP management message encodings”]

REP-REQ Channel Type request	Name	Type	Length	Value
Channel type=00	Normal subchannel Report (CQI value)	2.4	1	5 MSBs for CINR measurement
Channel type=01	Band AMC Report (CQI value)	2.5	5	First 12 bits for the band indicating bitmap and next 25 bits for CINR measurement (5 bits per each band)
Channel type=10	Safety Channel Report (CQI value)	2.6	6	The first 28 bits for the reported bin indices and the next 20 bits for CINR measurement (5 bits per each band)

For the type 2.4, 2.5, 2.6, the following 5 bit, CINR measurement encoding shall be used.

$$n = \begin{cases} 0 & CINR \le -3dB \\ n & n-4 < CINR \le n-3,\ 0 < n < 31 \\ 31 & CINR > 27dB \end{cases}$$