Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Corrections for CINR measurement**
Date Submitted	**2005-04-28**
Source(s)	Jaehee Cho, Seungjoo Maeng, Jaeho Jeon, Soonyoung Yoon, Jeong-Heon Kim, Jaehyok Lee, Myungkwang Byun, Inseok Hwang, Panyuh Joo, Jaeweon Cho, Jiho Jang, Sanghoon Sung, Hoon Huh, janghoon yang, ByoungHa Yi, Samsung Electronics Co. Ltd. jaehee1.cho@samsung.com
Re:	Recirculation of P802.16 REVe/D7
Abstract	Clarifications on CINR measurement
Purpose	Adoption of suggested changes into P802.16e/D7
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Introduction
In the current spec. the CINR report is carried with REP-RSP MAC message or fast feedback channel (CQICH). However, there are still some ambiguities regarding the frequency reuse factor, whether the loading is reflected on the estimate or not. In this contribution, we propose the clarification to get rid of such ambiguities for fast feedback channel.

Motivations
1. The REP-REQ/RSP messages are used to ask SS to report DL channel status and to report DL channel status to BS, respectively. They have nothing to do with UL channel status. The sounding channel is only defined for UL not for DL. So there is no reason for REP-REQ/RSP messages include TLVs to report UL sounding channel.
2. In the corrigenda, the definition of the REP-RSP for band AMC is modified for the CINR report correction. It is necessary to modify the 5 band report REP-RSP for band AMC TLV.
3. Other REP-RSP TLV encodings are duplicates in Cor1/D2.

Suggested Remedies
1. We propose to modify the 5 band report REP-RSP for band AMC TLV as the suggested text.

Suggested Text changes-1 (option-1: when CINR correction is not accepted in maint session)

11.11 REP-REQ management message encodings
[Delete the following text in 11.11 on page 553]

[Change third row in the second table in 11.11 as indicated]

Name	Type	Length	Value
Channel Type request	1.~~1~~3	1	00 = Normal subchannel, 01 = Band AMC Channel, 10 = Safety Channel, 11 = ~~Reserved~~/Sounding

11.12 REP-RSP management message encodings
[Modify the table as follows in 11.12 on page 553]

REP-REQ Channel Type request (binary)	Name	Type	Length	Value
~~00~~	~~Normal subchannel Report (CQI value)~~	~~2.41~~ 2.4	~~1~~	~~First 5 bits for the CINR measurement report and the rest for don't care~~ ~~5 MSBs for CINR measurement~~
01	Band AMC Report (CQI value)	~~2.52~~ 2.5~~4~~	~~54~~5	First 12 bits for the band indicating bitmap and next 25 bits for CINR measurement (5 bits per each band)
~~10~~	~~Safety Channel Report (CQI value)~~	~~2.63~~ 2.6	~~65~~	~~The first 20 bits for the reported bin indices and the next 20 bits for CINR reports (5 bits for each bin)~~ ~~The first 23 bits for the reported bin indices and the next 25 bits for CINR measurement (5 bits for each band)~~
~~11~~	~~Sounding Report~~	~~2.4~~ 2.7	~~1~~	~~Average SINR.~~ ~~8 bits in the same format used in 8.4.10.3~~

For the type 2.~~4, 2.5, 2.6~~x, the following 5 bit, CINR measurement encoding shall be used:

Suggested Text changes-2 (option-2: when CINR correction is accepted in maint session)

11.11 REP-REQ management message encodings
[Delete the following text in 11.11 on page 553]

[Change third row in the second table in 11.11 as indicated]

Name	Type	Length	Value
Channel Type request	1.~~1~~3	1	00 = Normal subchannel, 01 = Band AMC Channel, 10 = Safety Channel, 11 = ~~Reserved~~Sounding

11.12 REP-RSP management message encodings
[Delete the following text in 11.12 on page 553]

[Change the third table in 11.12 as indicated:]

REP-REQ Channel Type request	Name	Type	Length	Value
Channel Type = 00	Normal subchannel Report (CQI value)	~~2.4~~1 2.4	1	~~First 5 bits for the CINR measurement report and the rest for don't care~~ 5 MSBs for CINR measurement
Channel Type = 01	Band AMC Report (CQI value)	~~2.5~~2 2.5	~~5~~4	First 12 bits for the band indicating bit-map and next 25 bits for CINR measurement (5 bits per each band)
Channel Type = 10	Safety Channel Report (CQI value)	~~2.6~~2 2.6	~~6~~5	~~The first 20 bits for the reported bin indices and the next 20 bits for CINR reports (5 bits for each bin)~~ The first 23 bits for the reported bin indices and the next 25 bits for CINR measurement (5 bits for each band)
Channel Type = 11	Sounding Report	~~2.4~~ 2.7	1	Average SINR. 8 bits in the same format used in 8.4.10.3

[Insert the following text at the end of 11.12:]

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

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

[Add the tables as follows at page 554, line 11 in 11.12]

REP-REQ Zone-specific CINR Type request	Name	Type	Length	Value
Bit #4 = 1	Band AMC zone	2.8	5	CINR_estimate_for_Band_AMC_zone_with_PRBS_ID indicated by 'CINR type request' bits #8-9. First 12 bits for the band indicating bitmap and Next 25 bits for CINR reports (5 bits per each band). Bit #37: Report type: 0 - CINR estimate from the pilot subcarrier, 1- CINR estimate from the data subcarrier. Bit#38-39: reserved.

REP-REQ Preamble CINR type request	Name	Type	Length	Value
Bit #2 = 1	The estimation of CINR measured from preamble for Band AMC zone.	3.4	5	The estimation of CINR measured from preamble for band AMC subchannel. First 12 bits for the band indicating bitmap and Next 25 bits for CINR reports (5 bits per each band). Bit#37-39: reserved.