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Title	Clarification of CQICH allocation request header	
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Source(s)	Yongseok Jin, Bin-Chul Ihm, Jin Young Chun, and Ki-seon Ryu LG Electronics Inc. Hyoung Kyu Lim, Hyunjeong Kang, Jungje Son Samsung Electronics.	Voice: 82-31-450-7187 Fax: 82-31-450-7129 jayjay@lge.com hk03.lim@samsung.com
Re:	Response to Sponsor Ballot on IEEE802.16e/D7 document.	
Abstract	In the case that MS requests CQICH bandwidth to report the data that are much longer than 4 or 6bit, this becomes impossible because data must be transmitted over a CQI channel which is based on 4 or 6 bits. Revised text is pink	
Purpose	We suggest to add a new table which consists of the feedback contents only transmitted over CQICH for feedback type of this header	
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Clarification of CQICH allocation header

*Yongseok Jin, Bin-Chul Ihm, Jinyoung Chun, and Ki-seon Ryu
LG Electronics Inc.*

*[Hyoung Kyu Lim, Jungje Son](#)
[Samsung Electronics.](#)*

Introduction

MS uses CQICH allocation request header when the MS has reporting feedback values like in the table 7i. The reporting feedback values should be encoded 4 or 6bits and transmitted over CQICH (Fast feedback channel). However, when MS requests CQICH to report feedback contents that are much longer than 4 or 6bits like in the red box, it becomes not compatible with current control operation of CQICH (Fast feedback channel) thus BS can not understand what MS reports.

Feedback Type (binary)	Feedback contents	Description
0000	Set as described in Table 296d	MIMO mode and permutation feedback
0001	DL average CQI (5 bits)	5 bits CQI feedback
0010	Number of index, L (2 bits) + L occurrences of Antenna index (2 bits) + MIMO coefficients (5 bits, 8.4.5.4.10.6)	MIMO coefficients feedback
0011	Preferred-DIUC (4 bits)	Preferred DL channel DIUC feedback
0100	UL-TX-Power (7 bits) (see Table 7a)	UL transmission power
0101	Preferred DIUC(4 bits) + UL-TX-Power(7 bits) + UL-headroom (6 bits) (see Table 7a)	PHY channel feedback
0110	Number of bands, N (2 bits) + N occurrences of 'band index (6 bits) + CQI (5 bits)'	CQIs of multiple AMC bands
0111	Number of feedback types, θ (2 bits) + θ occurrences of 'feedback type (4 bits) + feedback content (variable)'	Multiple types of feedback
1000	Feedback of index to long term precoding matrix in code book (6 bits), rank of precoding code book (2 bits) and FEC and QAM feedback (6 bits) according to Table Z.	Long term precoding feedback
1001	Life span of short term precoding feedback (4 bits) according to Table Z2.	The recommended number of frames the short term precoding feedback can be used for.
1000	Combined CQI of Active BSs (5 bits).	Combined CQI value of all Active BSs within the Active Set.
1011	MIMO channel feedback (see Table 7k)	MIMO mode channel condition feedback
0b1011	CINR Meas (8 bits) + CINR Standard Deviation (8 bits)	CINR Feedback (values and coding defined in 8.4.11.3).
1100-1111	Reserved for future use	—

Table – Feedback values much longer than 4 or 6bits in the table 7i

To solve the problem above, we suggest to add a new table-7x which consists of the feedback contents transmitted over CQICH. Moreover, the new table includes that 'Anchor BS report' field for Fast Anchor BS selection Feedback mechanism In addition, in order that MS requests BS to allocate Fast-feedback channel with period which MS prefer, we add 'Preferred-Period'.

Suggested Changes

[To clarity, add new table and new field in the section 6.3.2.1.2.3]

6.3.2.1.2.3 CQICH allocation Request Header

The CQICH Allocation request PDU shall consist of CQICH allocation request header alone and shall not contain a payload. [This header shall be sent by MS to request the allocation of CQICH](#) .The CQICH allocation request header is illustrated in Figure 20d

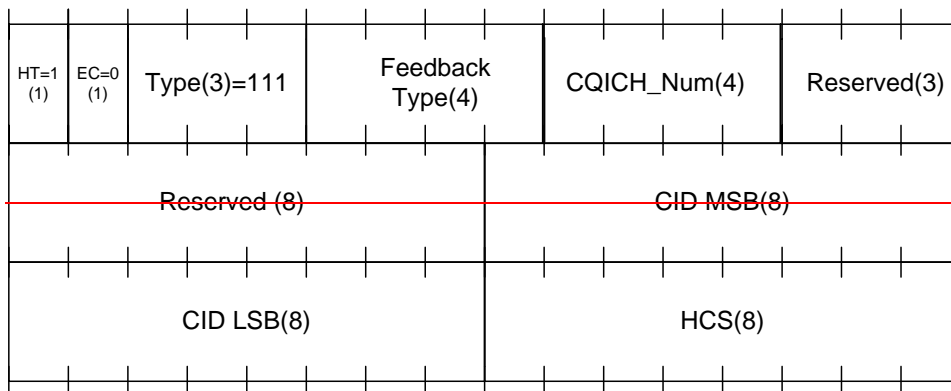


Figure 20d—CQICH Allocation Bandwidth request

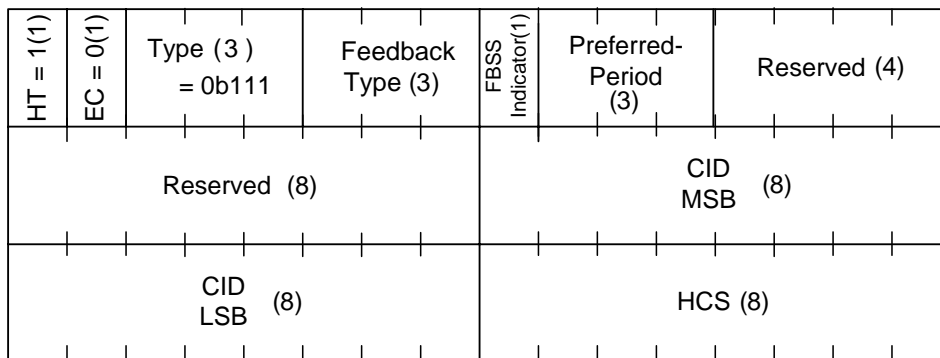


Figure 20d—CQICH allocation request header

The CQICH Allocation request header shall have the following properties:

- a) [The length of the header shall always be 6 bytes.](#)
- b) [The EC field shall be set to 0, indicating no encryption.](#)
- c) [The CID shall indicate the MS basic CID.](#)
- d) [The Type field shall be 0b111.](#)

[The fields of the CQICH allocation request header are defined in Table 7c](#)

Table 7c – Description of the fields of CQICH allocation Request Header

Name	Length(bits)	Description
HT	1	Header Type =1
EC	1	Always set to zero
Type	3	Set according to Table 7i Type = 0b111
Feedback type	3	Set according to 'Feedback type' of Table 302a When FBSSI is set to 1, this field is neglected
CQICH_Num	-4	The number of CQICH requested by MS
FBSS Indicator	1	Set when MS request CQICH during FBSS handover.
Preferred-Period(=p)	3	CQICH allocation period MS prefer. The value is defined by 2^p frame. When FBSSI is set to 1, the value contained in this field shall be neglected
RSVD	12	Set to zero
CID	16	MS basic CID
HCS	8	Header Check Sequence (same usage as HCS entry in Table 5)

[Change page 160, line 21-25, section 6.3.21.2.6.2]

If after the switch, the MS does not receive a CQICH allocation within duration equals to the switching period, the MS requests the new anchor BS (e.g. BS B) to allocate CQICH channel by transmitting ~~Bandwidth Request header with Type=0b111~~ CQICH Allocation Request Header. If the new anchor BS (e.g. BS B) receives ~~Bandwidth Request header with Type=0b111~~ CQICH Allocation Request Header, the BS shall allocate a CQICH for the MSS.