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| Title                        | Enhanced Mode Selection Feedback header   |  |
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| Re:                          | This is a response to a Call for Comments on IEEE P802.16e-D5   |  |
| Abstract                     | we propose to enhance the Mode selection Feedback header to support extended codeword and dual selection demands  |  |
| Purpose                      | This document is submitted for review by 802.16e Working Group members  |  |
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# Enhanced Mode Selection Feedback header

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## 1. Introduction

In current IEEE802.16e/D5, MSS initiates the Mode selection feedback using Mode Selection Feedback header whenever there is a change in selected mode. This header contains the Feedback type ( MIMO mode and permutation feedback ) and the Feedback content ( as described in table 296a Encoding of payload bits for Fast-feedback slot with 4 bits). As mentioned above, the value of Feedback content depends on which payload bits used. In order that MSS carries more selection demand, the feedback content of this header needs to extend instead of reserved bits. Therefore, MSS is available to select another demand by using this header at the same time. For example, the MSS needs to change MIMO mode from STC to SM and change antenna group at the same time. This header contains dual demands and is reported to BS.

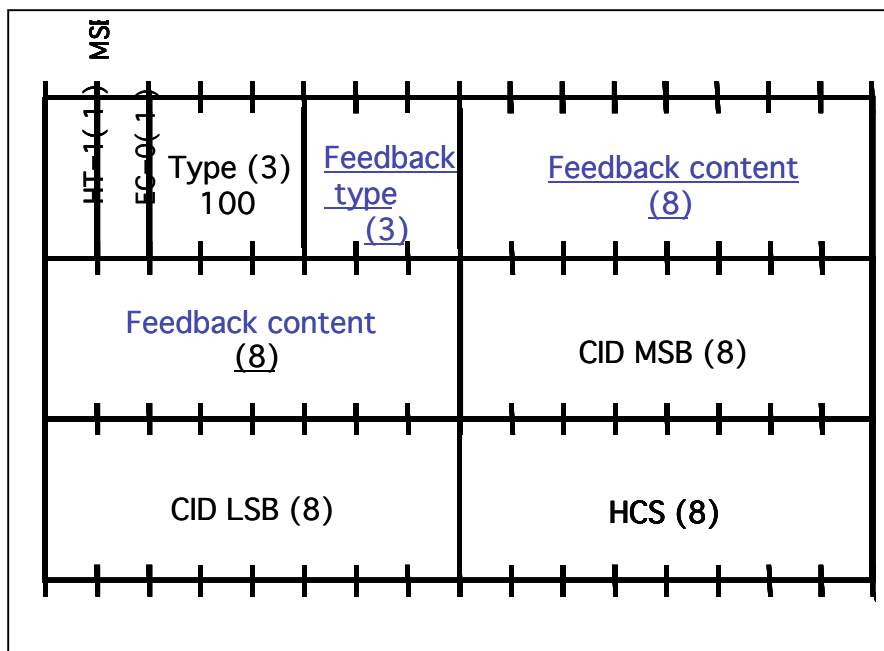
So we propose to enhance the Mode selection Feedback header to support extended codeword and dual selection demands.

## 2. Suggested Text Change.

### Action 1.

We suggest the new header format to support extended codeword and dual selection demands

*[Change the following new Figure 20b – Mode Selection Feedback header. in page 15]*



**Action 2.**

First of all, the Mode Selection Feedback header is alone and shall not contain a payload like the Bandwidth request header. So HT field is set to '1'. Then EC field should be set to '0' indicating no encryption. Secondly, this header is kind of bandwidth request header. The Type field should indicate the type using 3 bits. And MSB bit of feedback contents shall be flag that indicates dual demands.

We propose to change the properties of the Mode Selection Feedback header.

*[Change following sentences in 6.3.2.1.4 , line 1, page 16]*

- a) The length of the header shall always be 6byte.
- b) The HT field is set to 1 and the EC field is set to ~~1~~, 0, indication no encryption.
- c) The Type field shall be set to ~~000000~~ 100, indication Mode Selection Feedback header type.
- d) The feedback type field shall be set according to Table 7b.
- e) The feedback content field shall be set accordingly based on the value of the feedback type field. MSB bit of Feedback content is a flag. If the flag is set to '1', feedback content indicates dual demands.

Table 7b – Feedback type

| Feedback type | Description  |
|---------------|--|
| 0b000         | MIMO mode and permutation. When feedback type is set to this, <u>the feedback content shall be set as described in table 296d.</u> |
| 0b001 – 0b111 | Reserved   |