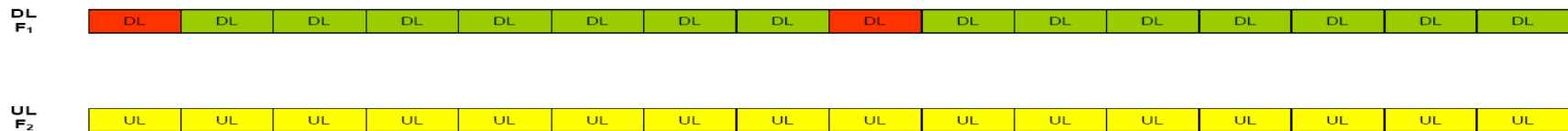| Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Transmission of Additional Broadcast Information**
Date Submitted	**2008-05-09**
Source(s)	Lei Huang Panasonic Singapore Laboratories E-mail:lei.huang@sg.panasonic.com Isamu Yoshii E-mail:yoshii.isamu@jp.panasonic.com Matsushita Electric (Panasonic)
Re:	Comments on IEEE 802.16m-08/297, "Proposed Baseline Content on the Downlink Control Structure for the 802.16m SDD"
Abstract	The contribution proposes to transmit the additional broadcast information in the first subframe of the frame or the superframe for the benefits of H-FDD operations.
Purpose	To be discussed and adopted by TGm for the 802.16m SDD
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Patent Policy	The contributor is familiar with the IEEE-SA Patent Policy and Procedures: <http://standards.ieee.org/guides/bylaws/sect6-7.html#6> and <http://standards.ieee.org/guides/opman/sect6.html#6.3>. Further information is located at <http://standards.ieee.org/board/pat/pat-material.html> and <http://standards.ieee.org/board/pat>.

Background

❑ Observations on Additional Broadcast Information in C802.16m-08/297

  ❖ There is consensus that additional broadcast information is not included in the SFH. Examples include neighbour BS information and paging information

  ❖ There is consensus that MAC management messages may be used to transmit additional broadcast information. However, it is not excluded that additional broadcast information may be included in other control channels outside of the SFH

  ❖ There is the following bracketed text requiring further resolution

  [Additional broadcast information is transmitted in the first subframe of the frame or the superframe]

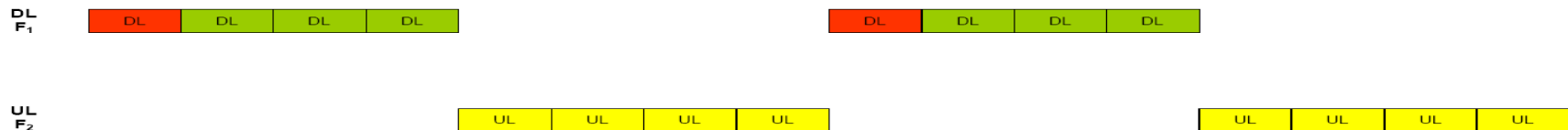❑ The purpose of this contribution is to support the proposal of un-bracketing the above text in C802.16m-08/297

H-FDD Operation in C802.16m-08/003r1

❑ The H-FDD MSs are grouped into two complementary groups whose DL and UL transmissions are not concurrent.

❑ The H-FDD MS groups are not have any UL transmissions scheduled in the first subframe of each frame.

❑ Such a complementary grouping and scheduling scheme can ensure efficient use of the radio resources when operating with H-FDD MSs in an FDD network

Frame Structure from the BS point of view (full FDD)

| DL F₁ | DL | DL | DL | DL | DL | DL | DL | DL | DL | DL | DL | DL | DL | DL | DL | DL |

| UL F₂ | UL | UL | UL | UL | UL | UL | UL | UL | UL | UL | UL | UL | UL | UL | UL | UL |

Frame Structure from the Group I MS point of view (H-FDD)

Frame Structure from the Group II MS point of view (H-FDD)

Preferred Way of Transmitting Additional Broadcast Information

❑ In FDD mode, a preferred way is to transmit additional broadcast information in the first subframe of the frame so that all H-FDD MSs are able to receive additional broadcast information.

❑ Since TDD had better have a similar control structure to FDD, it is also preferred to transmit additional broadcast information in the first subframe of the frame in TDD mode.

❑ Two alternatives to transmit additional broadcast information

   ❖ using other control channels outside of the SFH

      ▪ how additional broadcast information is transmitted shall be standardized.

   ❖ using MAC management messages

      ▪ how additional broadcast information is transmitted is a vendors' choice, and but it is still fine to explain how the additional broadcast information is transmitted, as long as we are clear what is a desirable implementation vs. what needs to be standardized.

References

1) IEEE C802.16m-08/297, Proposed baseline content on the downlink control structure for the 802.16m SDD.

2) IEEE C802.16m-08/003r1, The Draft IEEE 802.16m system description document.