

IEEE 802.16m Fast Feedback Design Details

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Venue:

SDD Session 56 Cleanup, Call for PHY Details

Base Contribution:

IEEE C802.16m-08/919

Abstract:

Proposal for 16m fast feedback design.

Purpose:

Adoption of proposed text/content for 802.16m System Description Document

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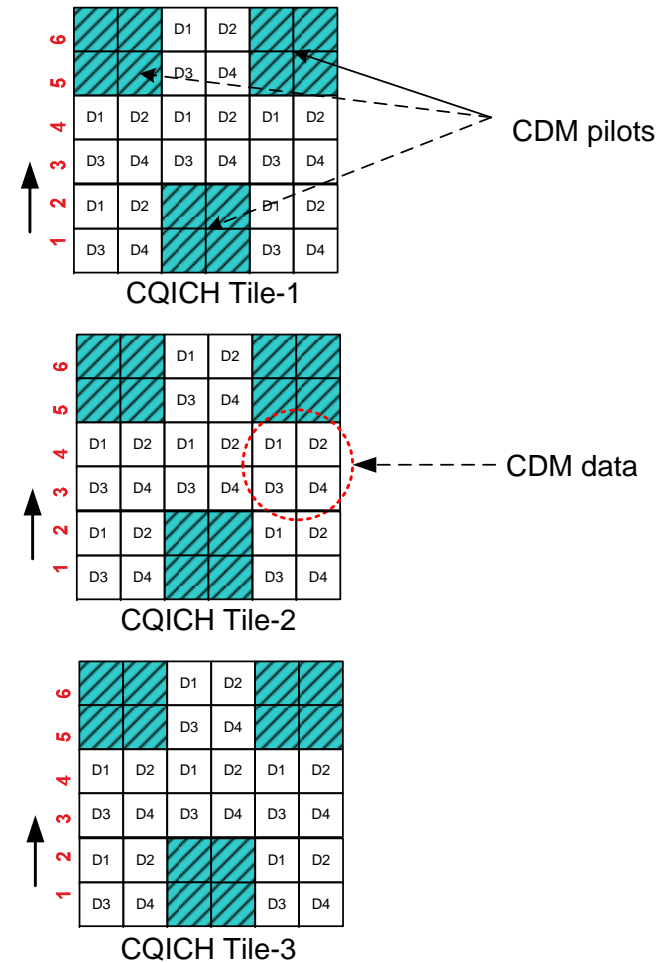
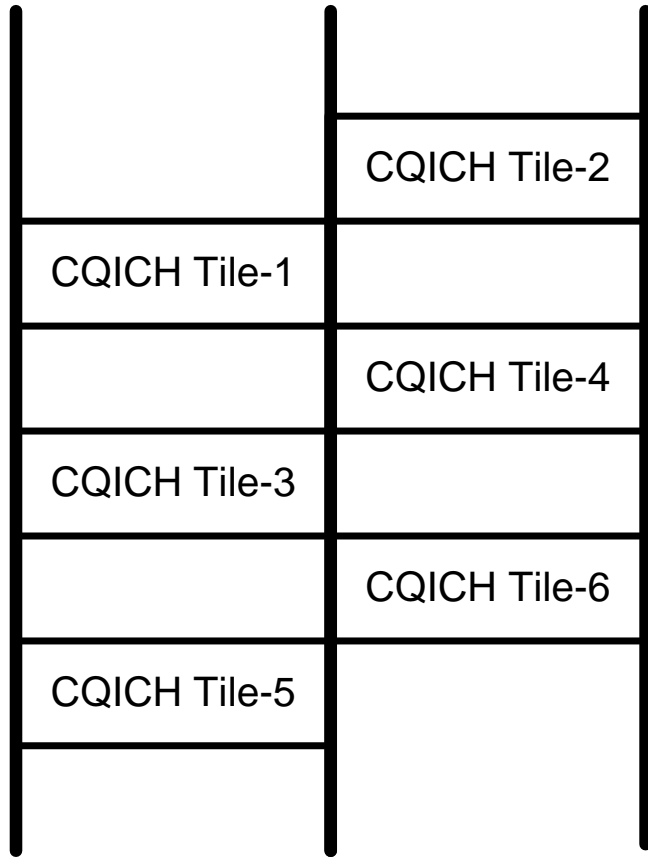
<http://standards.ieee.org/guides/bylaws/sect6-7.html#6>> and <http://standards.ieee.org/guides/opman/sect6.html#6.3>>.

Further information is located at <http://standards.ieee.org/board/pat/pat-material.html>> and <http://standards.ieee.org/board/pat> >.

16m CQICH Design

- ❑ 1 LRU (3 distributed tiles) shared by 4 CQICH
 - Pilot subcarriers are shared using CDM
 - Data subcarriers are shared using CDM
 - CDM has link budget advantage over TDM/FDM
 - CQICH overhead: 27 tones/CQICH channel → Slightly lower overhead than LTE
- ❑ To improve coverage, the tiles are allocated “time first”
 - Tile hopping in different subframes
 - Details in the next slides
- ❑ Support WB and NB CQICH feedback
- ❑ CQICH can also be transmitted with data

16m CQICH PHY Design



CQICH Timing

- ❑ CQI is feedback on CQICH periodically
- ❑ RI (rank indicator) can be inserted with low frequency
- ❑ WB CQI and NB CQI can be interlaced, with NB CQI report having higher frequency

CQICH Timing

