Title: Usage of the Coexistence Zone

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Purpose:

Usage of the Coexistence Zone

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Existing definition of the CXZ

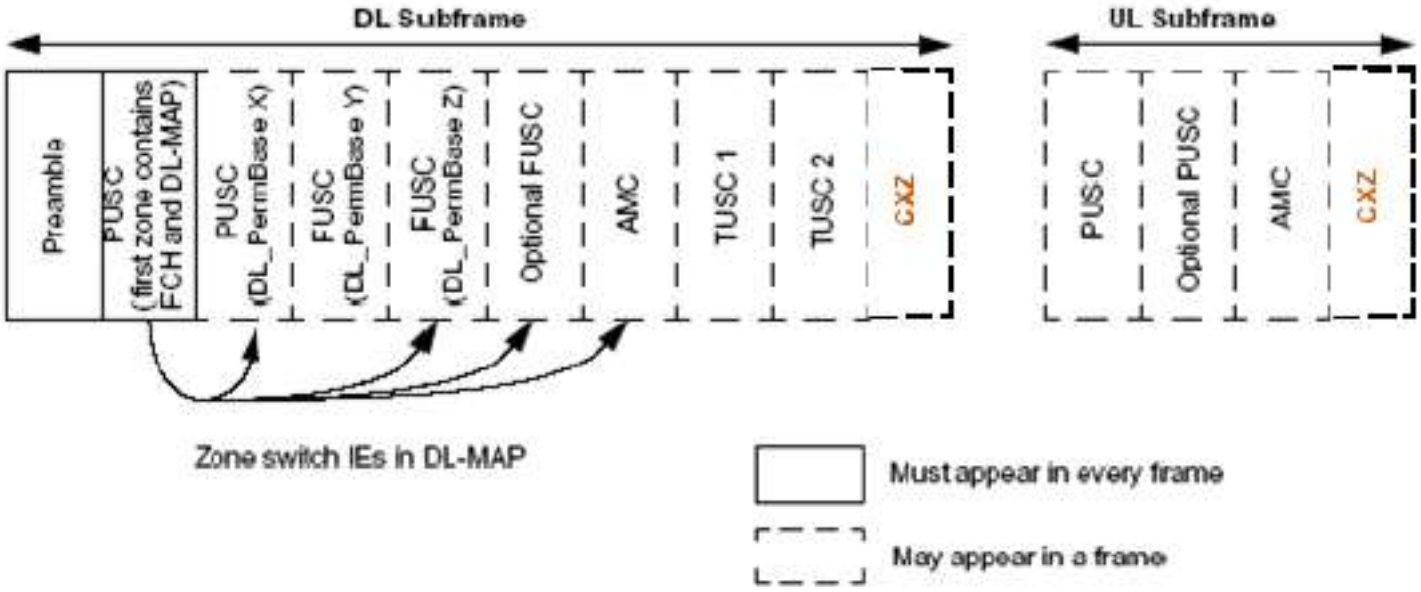

Figure 219—Illustration of OFDMA frame with multiple zones

How fits in the 802.16h coexistence scheduling

- Coexistence scheduling
  - Master sub-frame
    - The Master system does NOT experience interference
    - Coexistence Zone
      - UL: BS beneficiate from coexistence – reduced interference
      - DL: SSs beneficiate from coexistence – reduced interference
- Conclusion:
  - At MAC level the Master sub-frame is a CXZ!

Attributes of the CXZ

- Lower interference for SSs
  - MAP can be transmitted at higher rates
    - Resolve the problem of transmitting the MAP only in the OFDMA Zone 1
  - Data can be transmitted at higher rates
    - DL capacity is increased
  - Higher powers may be used
    - Cell size is increased
- Lower interference for BS
  - Data can be transmitted at higher rates
  - Higher powers may be used
    - Cell size is increased

Using the CXZ

- The MAP should point to every CXZ
  - Starting of the CXZ
  - CXZ permutation
    - May be more suitable to MIMO
  - CXZ modulation and coding
- The start and permutation of the CXZ are semi-permanent
    - Until a MAP indicating another position

Down-link CXZ

- Start with preambles
- FCH – indicates modulation and coding
- Private MAP
- Data

UL CXZ

- Can use a specific permutation
- The SS transmission may change the modulation and coding
- The SS transmission may use higher powers
  - The UL private MAP can include this info

Conclusion

- CXZ zone can increase the overall capacity of the system
- CXZ fits the Master sub-frame concept