Proposal for Multihop Relay Frame Structure for 802.16j

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Frame Structure Recommendations for 802.16j

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What should be standardized?

- Preamble, FCH, MAPs at beginning of every frame for both the MR-BS and the RS
  - current implementations of MS may not be able to search over entire frame for handover measurements
  - WiMax forum is specifying only synchronous systems

- Option for null preamble and MAPs from RS

- Separate independent zone for RS-to/from-RS and MR-BS to/from RS communications
  - enables enhanced design for increased spectrum efficiency on this advantaged link

- 16e PHY enhancements for the relay links

What should be standardized?

- New RS preambles for start of downlink relay zone
  - preclude MS from synchronizing to the RS Zone

- Separate zones for uplink BS-to-RS and uplink BS-to-MR-BS communications
  - MS can be time advanced to either the RS or the MR-BS but not both at one time

- Signalling to support relay zone specifications and other relay-related functions

- The requirement to allow time gaps for transmit to receive transitions

What should NOT be standardized?

- Specific locations within frame for all of the zones

- Methods for extending the frame structure to multiframe sequences

- The multihop scheduler operation

Nevertheless: A recommended example frame structure...