

Slides for “Proposal for 802.16j TG Process and Schedule document”

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Purpose:

The purpose of this slide set is to introduce our contribution C802.16j-06_017. This contribution is proposed as the basis for the 802.16j Process Document. The process described in this contribution is proposed as the process that the 802.16j TG should follow.

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Inputs to Harmonization Effort for 802.16j Usage Model

Jerry Sydir

Overview

- Purpose is to identify points of agreement and disagreement in usage model contributions
- Structure of this presentation:
 - Identify the major concepts in contribution 026 that don't exist in other contributions
 - For all other contributions identify points of difference and similarity with 026
- Rationale for this approach:
 - 026 is already a harmonized contribution of members from 5 companies/organizations
 - 026 is written as a document

Unique Items in 026

- Split of RS types, usage models, deployment strategies
- Capacity Enhancement as explicit usage model
- Discussion of frequency reuse (029 mentions also)
- Discussion of traffic characteristics (limited)
- Discussion of security and management considerations (limited)

Contribution 028

- Different
 - link configurations Disagree on:
 - No link between FRS and MRS
 - Restriction that MRS can associate with only 1 MS (what is the usage model?) slide 6 seems to conflict
 - MRS can talk to MRS? (what is usage model)
- Same
 - Symmetric 2 hop is same as our 3 usage models
 - Multi-hop relay (slide 7) is covered by 026 (can call out the different possibilities more explicitly)
 - Added Link configuration section to 026
 - Added Asymmetric 2 hop to 026 as special cases of coverage enhancement.

Contribution 004

- Different
 - Throughput enhancement relay
 - Don't agree that this mode is possible. RS must transmit preamble and broadcast
- Same
 - Coverage Extension

Contribution 029

- Different
 - Requirement that RS has at least 2 antennas
 - Handover – not sure this is part of usage models
 - Re-transmission policy – not sure this is part of usage models
 - Environmental – these seem like requirements (too detailed)
- Not sure (to be discussed for clarification)
 - Access control
- Same
 - Antenna Usage is covered
 - Topology (add explicit section/text on number of hops and topologies)
 - Radio resource assignment

Contribution 007

- Merged contents into 026

Contribution 008

- Different
 - Throughput enhancement relay (Simple 2 hop solution pg 8)
 - Don't agree that this mode is possible. RS must transmit preamble and broadcast
 - Dual mode solution
 - This is not really part of usage model, this is part of standard design.
 - Usage model take away is something like: 2 hop topology will be most common
- Same
 - Temporary event, Disaster recovery – portable RS coverage, range or capacity
 - Expanded network coverage – fixed RS – coverage, range, capacity
 - Support for PMP (pure tree topology) and hybrid mesh (multiple routes)

Contribution 001

- Different
 - 001 says that FRS is deployed only with LOS, while 026 says that either LOS or NLOS strategy can be used
 - Technical challenges and ARQ results are not part of usage models
- Same
 - Other RS types and deployment strategies

Contribution 002

- Different
 - Throughput enhancement relay (type 1 RS)
 - Don't agree that this mode is possible. RS must transmit preamble and broadcast
 - Limitation to 2 hop solution
 - Agree that protocol should be optimized for 2 hops, but not at the expense of excluding >2 hop topologies completely

Contribution 005

- Different
 - Handover scenarios not discussed in 026
 - Not sure if they should be part of usage models

Contribution 018

- Different
- Same
 - Define a slightly different RS – fixed, but enters/exits network intermittently
 - This is a variation of the client owned nomadic RS in that it appears and disappears within the network.

Key points to agree on

- RS Types
 - Is Throughput enhancement RS feasible?
- Topology
 - Number of hops
 - 2 or >2
 - Topology between RSs
 - Tree vs mesh (redundant routes)
 - Restrictions on numbers of links
 - MRS -> MS
 - Only 1 MS or >1 MS
 - FRS to MRS?
 - MRS to MRS?

Things to make more explicit in 026

- RS Type Attributes
 - Fixed, Fixed-intermittent, Portable, Mobile
 - Complexity: Simple, full function
 - Antenna types (maybe an independent section)
- Topology
 - Number of hops
 - Connectivity restrictions
 - Number of routes
 - Restrictions between station types and numbers