Evaluation Criteria

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Evaluation Criteria

- This presentation is essentially a "call" for future contribution and Study Group work
- The Study Group should begin producing a set of evaluation criteria that can be used here and refined in the Task Force effort for:
  - Stimulating consensus
  - Evaluating proposals
  - Guiding Task Force work
- Based strongly on cable operator requirements, CFI and other consensus objectives set by the Study Group
  - Will require input from cable operators around the globe

Several Types of Criteria

- Evaluation Criteria would contain:
  - Hard requirements
    - I.e., things that are required in order for a proposal to be considered
    - E.g., "MUST coexist with existing cable operator services on the same piece of coax"
  - Soft requirements: i.e., "MAY", optional functionality
    - I.e., things that may advantage one proposal over another, but would not exclude a proposal
    - E.g., "tuning flexibility beyond what is required"
    - Includes comparative criteria, such as relative cost impact on CNU

Criteria from CFI

- The CFI laid out a number of points that can be considered for use as evaluation criteria

- There were possible criteria in the following areas:
  - Scope and Service
  - Common Coaxial Topologies
  - Provisioning and Flexibility
  - Environmental Performance

- The following slides go into each in more detail

CFI Review: Scope and Service

- "Up to" downstream speed(s)

- "Up to" upstream speed(s)

- Symmetric speed options

- Asymmetric speed options

- Full duplex?

- No substantive changes to other EPON sublayers?
  - OAM impact?

- Carrier Ethernet considerations:
  - Minimum BER?
  - Impact on meeting MEF 9, 14, and 23 certification?

CFI Review: Common Coaxial Topologies

- MSO deployment topology support:
    1. Passive , "Node + 0"?
    2. Node + N (N > 1 to ?)?
    3. Traditional HFC?
- MxU deployment support:
    4. MxU?
- Common criteria
    - What are requirements / assumptions for operating?
    - Any modifications required to the network?

CFI Review: Provisioning and Flexibility

- Flexibility in Provisioning
  - Spectrum Coverage?
    - Downstream
    - Upstream
  - Working around any existing downstream and upstream services?
    - E.g. use of contiguous and non-contiguous spectrum, etc.
  - Future flexibility?
  - Other
    - Spectrum efficiency
    - Modulation Rates
    - Adjustability in Forward Error Correction techniques
      - e.g., latency versus burst performance similar to ITU J.83b

CFI Review: Environmental Performance

- SNR requirements?
- Meet/exceed DOCSIS BER performance in same conditions?

Recommendations

- Study Group develop and maintain a "living" set of evaluation criteria
  - Pass to Task for ongoing development and for evaluating future PHY proposals
  - The Criteria should be based on:
    - Cable operator requirements
    - The CFI
    - Other criteria as developed as part of the consensus work of the SG
- Study Group participants, to the extent they are able, contribute opinions on the possible evaluation criteria identified in this deck (and other discussions as appropriate)
  - Which criteria to include, which are hard requirements, which are soft requirements, what those requirements are, etc.
- In addition, encourage cable operators to contribute example plant scenarios to evaluate proposals against
  - Need real world scenarios to use for evaluation purposes, performance comparisons, etc.