OAM-AH

September 2002

OAM Ad-Hoc goals

- Agree on OAM tools to be standardized in 802.17

- Propose text improvements to current draft

Draft Status

- Includes the following tools:
  - Echo: Required
  - CC and RDI: Optional
  - Activate/Deactivate: Optional (With editors note: FFS)
- Defects:
  - LOC
  - RDI

Status

- Flush message
  - Proposed text in pj_clause12_oam
  - Frame sent around the ring back to the source
  - Source can select Service class and protection
  - No specific payload defined

- BAH is encouraged to review and provide comments

Status (continued)

- Activation/Deactivation
  - To be removed from this version of the standard

- CC/RDI
  - Proposal to replace with Echo based scheme in pj_clause12_cc_annex
  - No agreement in OAM-AH
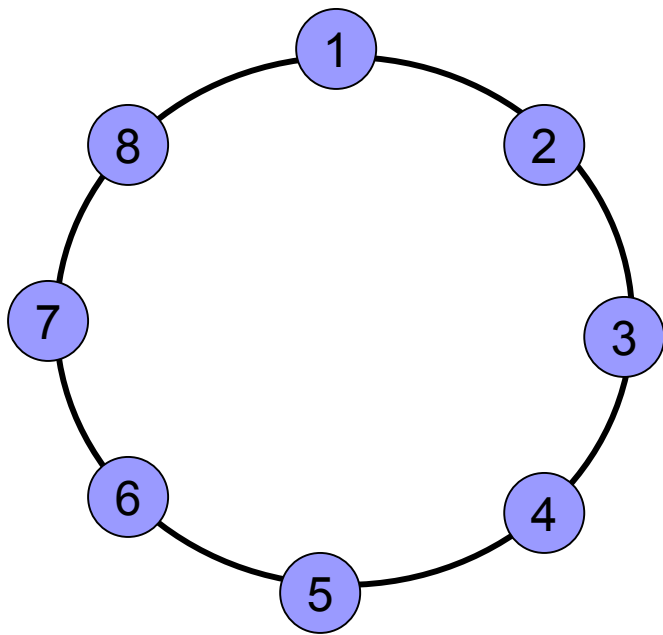
Echo continuity check

Fault monitoring

- ## Hard failures only

    - ### May not catch intermittent failures

- ## MAC packets stealing:

    - ### MAC hardware is stripping wrong packets because of DA or TTL logic failure

- ## Misconfigurations

    - ### The Station address is duplicated

    - ### Topology discovery will also indicate a problem
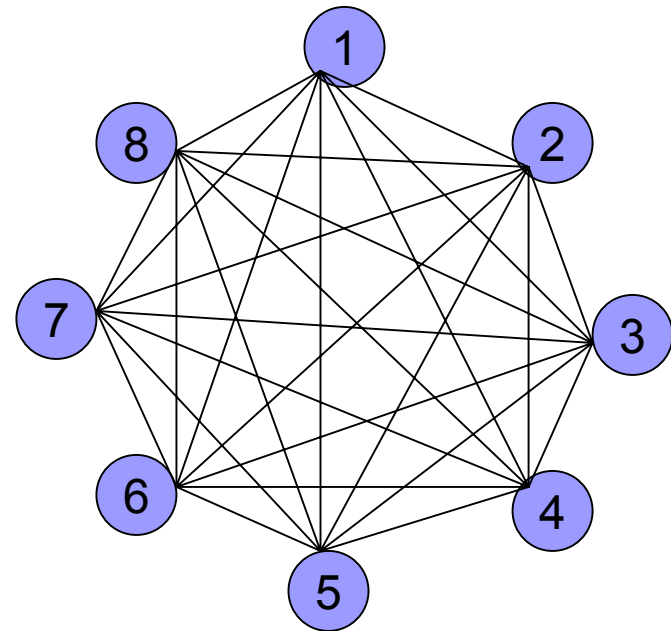
Fault monitoring

- Transit path failures
  - Station not passing frames
  - Monitoring per transit buffer and per ringlet
- Summary:
  - Echo scheme should catch all hard failures on the MAC level

Network views

- Physical layout

- Connectivity layout

Tools

- Physical layer and fairness (used as keep alive) verify only adjacent nodes reachability (physical layout)

- Topology frames are broadcast control frames
  - Not necessarily uses the same resources as unicast data frames

- Echo scheme verifies connectivity between any pair of stations
  - Verifies the whole data transit path without relying on client frames

Echo connectivity monitoring

- Implemented at the LME
  - Not a MAC function. Annex to standard.
- Based on standard Echo frames
  - No need to coordinate between stations
- Can be activated for one or both ringlets and for any of the service classes

Echo connectivity monitoring - parameters

- Monitored stations, ringlets, service classes
  - Configured at source station only
- Repetition rate
  - 10 to 1000 msec. Default TBD
  - Echo reply :1 to 100 msec. Default 10 msec
- LOC failure detection
  - No reply in a 2.5 sec period
- LOC failure clear
  - No response missing for 10 sec

What next on CC/RDI – Echo ?

- There are 2 options to be considered:
  - Define CC/RDI in the standard as optional
  - Remove CC/RDI and Add informative annex describing the use of Echo for continuity monitoring
- Straw poll to be held at beginning of OAM comment resolution section to resolve this issue