

# OAM Proposal

Mike Potts, GM

Natalie Wienckowski, GM

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# Problem Statement

- Need a simple method to detect all link state failures
- Need a simple method to detect link state failures between link partners
- Need a standard method to read failed states

# OAM Bit usage

- Define standard usage of OAM bits
- No “RAM” associated with OAM
- OAM is not configurable
- OAM data is stored in a predefined register
- OAM is not divided across multiple message frames
- Use Parity bit(s) to fault check OAM
- Backward compatibility to Clause 97 is not maintained
  - 2.5GBASE-T1 PHY capable of 1000BASE-T1 communication when 1000BASE-T1 does not implement OAM (or implements Multi-Gig OAM, if possible)

# OAM Faults Reported

(In order of importance)

- Local Link Status – Up, Down
- Remote Failure Indication – The peer is not available – True, False
- Remote Loopback Status – True, False
- PHY frame error rate at limit (e.g. 97 RFER) – True, False
- Cable Fault; Open, Short (determined by reading a register) – True, False
- Supply voltage low – True, False
- Polarity correction active – True, False