

# EFM OAM – January 2002

Loop back and status indication



# Loop back – why bother?

- An effective aid to fault isolation
- Useful confidence test at installation



# Loop back – where?

- At the ingress point i.e. the ‘WAN’ termination point, as near to the medium as possible. Allows remote quality / confidence check of the medium.
- At the egress point of the EFM subsystem (may be out of scope).



# Status Indication – why bother?

- Fault indication without a special action
- Useful confidence test at installation
- Useful for minimal system plug and play start up (EFM nodes do not have to be bridges / routers)



# Assume continuous transmission of OAM messages

- Not a poll-response mechanism
- EFM system sends OAM messages by whatever transport is eventually defined
- OAM messages are sent at whatever frequency is eventually defined
- EFM system runs a state machine that uses system status and received OAM message content as its data



# Loop back control and Status indication in four bits

- Bit one 'I'm OK'
- Bit two 'I know your OK'
- Bit three 'I want you to loop back'
- Bit four 'I've actioned your loop back request'

(see email archive for more details)



# Dying gasp

- Bit one set to zero
- Greater detail in other fields to be defined



# Dead system

- Doesn't send anything





# System on start up

- Sends I'm OK – 1000 – and listens for in-bound OAM messages
- State machine needs some awareness to cope with lost / corrupted OAM messages, but it is pretty simple
- P2MP catered for by OAM transport sub-addressing

