

A No Phantom proposal

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Uses of Phantom Detection in Port operating in TXI

- Insert completion detection
- Remove station detection
- Power-off station detection
- Beacon lobe test repeat path request

Insert Completion Detection

- Sets 2 flags (FPINSD, FPINSLE) to enable loss of phantom detection in the future
 - Ensure flags are set on entering JS=PJCI

Remove Station Detection

- Propose creating a new MAC frame, which the Station will send on Disconnect.MAC requests from management
 - Reuse FR_REMOVE?
 - e.g. FR_REMOVE(DA=SUA, SA=SUA)

Power-off Station Detection

- Port must poll link_status
 - When link_status deasserts, without the Port seeing the Station Removed MAC frame, the Station has been powered off (or the cable cut...)
 - Do we need to specify a poll frequency (min, max)?

Beacon Lobe Test Repeat Path Request

- On entering MS=PIT, and starting INTERNAL_PTEST, reset a new timer (1.2s ?) to delay until end of station's internal test.
- Modify R1406 to fire on timer expiry, rather than FPINSD=0. Enable BER repeat path.
- Disable BER repeat path on FR_INS_REQ or beacon test failure (TPLMTR=E)

Other random thoughts...

- A 100Mbit/s only port may still see phantom.
 - 4/16 implementation may use phantom during an auto-negotiation phase
- No phantom implies no wire fault detect in station
- May as well drop signal_loss while we are at it...