

FC-BB-5: Link Incident Text

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Problem Statement:

The link incidents used for Fibre Channel do not directly correspond to link incidents available via the IEEE 802.3 MAC/MAU/PHY layers in an FC-BB_E topology, thus a new mapping of link incidents for FC-BB_E usage is needed.

Proposal: Add a new subclause to Clause 7 with the following text:

7.11 Link Incidents definition

The Link Incident reporting procedure (see FC-LS-2) defines link incidents and corresponding incident codes that are based on the Fibre Channel physical layer. A definition of FC-BB_E Link Incidents and their respective Incident Code values (see table 1) are based on the IEEE 802.3 physical layer and the FC-BB_E Virtual Link maintenance protocol.

Bit-error rate thresholding (see FC-FS-3) defines error intervals as a time period during which Fibre Channel invalid Transmission Words are recognized. For FC-BB_E devices an error interval is a time period during which one or more error blocks (see 802.3-2008 subclause 45.2.3.12.4) are recognized.

Table 1 specifies the Link Incidents for FC-BB_E that shall be used in a RLIR ELS request by an FC-BB_E VN_Port, VF_Port, or VE_Port.

Table 1 – FC-BB_E Link Incidents

Value	Meaning
00h	Reserved
01h	Implicit incident: A condition, caused by an event known to have occurred within the incident port, has been recognized by the incident port. The condition affects the attached link in such a way that it may cause a link incident to be recognized by the connected port.
02h	Bit-error-rate threshold exceeded: The incident port has detected that the Error Interval Count equals the Error Threshold (see FC-FS-3) where the Error Interval Count is based on errored blocks (see 802.3-2008 subclause 45.2.3.12.4).
03h	Link Failure - Loss-of-Signal: The aLoseMediaCounter has been incremented for entering an aMediaAvailable state indicating anything other than a remote fault (see 802.3-2008 subclause 30.5.1.1.4 and 802.3-2008 subclause 30.5.1.1.5).
04h	Link Failure - Remote fault: The aLoseMediaCounter has been incremented for an aMediaAvailable state being entered indicating a remote fault (see 802.3-2008 subclause 30.5.1.1.4 and 802.3-2008 subclause 30.5.1.1.5).
05h	Link Failure - Virtual Link failure: The incident port has detected a Virtual Link failure using the Virtual Link maintenance protocol.
06h to FFh	Reserved