

Doc: X3T10.1/96a107r0
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To: X3T10.1 members
From: Ian Judd
Subject: RSN field in Link Status Byte

The note from Bill Boyle below points out an error in the definition of the RSN field in the SSA Link Status Byte.

Currently the definition of the Link Status Byte in the ANSI and UIG documents says that the RSN field contains 'the Receive Sequence Number for the LAST Privileged or Application frame that was acknowledged by the port'. It should say that the RSN field contains 'the Receive Sequence Number for the NEXT Privileged or Application frame expected by the port'. This corrected definition is consistent with the definition of RSN in the Control field description and step 8 of the link ERP. It is also what we have implemented in the IBM UltraStar disk drive and our MicroChannel and PCI adapters.

I checked a historical SSA-PH specification from 1991 and it contains the same error. So the text has just been copied into the current specs.

Thank-you for pointing this out Bill. If no one objects I think this correction should be rolled into the next revision of SSA-TL1. Larry, please can you assign me a document number?

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I have a question about the RSN field of the Link Status Byte. I am implementing my target device per SSA-IA/95PH-9509 revision 2. Section 3.4 (Control Field) specifies that the RSN maintained by a device for a port will contain the FSN value expected in the next Application/Privileged frame. The FSN is compared to the RSN to detect lost frames. The RSN is "incremented modulo 4 when the receiver acknowledges a valid Privileged or Application Frame". Section 5.2.2 (Link Status Byte) specifies that the RSN value in the Link Status Byte "is the Receive Sequence Number" for the last Privileged or Application frame that was acknowledged by the port." This implies that the current RSN value must be decremented by 1 before inserted into the Link Status Byte for the Link Reset in ERP. I have found that the Eclipse tester and the IBM Concord card have implemented the current RSN value instead of the value minus 1 in the Link Status Byte. Has there been a change to the specification or am I interpreting it wrong?

Thank You
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