Subject: Re: PCIe-AS - Tutorial -- Is there a CRC for the address header ?
Posted by Walter F.J. Müller on Sun, 19 Sep 2004 18:57:25 GMT
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David Slogsnat wrote on Wed, 15 September 2004 14:59
This is true. However, things get more complicated when looking at the ASI specification:
-The Turn Pointer is not included in the header CRC.
-The final receiver of an AS Packet has to check the CRC. The intermediate switches may check it, but they don't have to.

All true. However, so far we ignored that ASI is a transaction layer build on top of the PCIe physical and data link layer. This adds
a transaction layer sequence number
a link layer CRC (LCRC)
and a link layer ACK/NAK
The LCRC is checked and regenerated at the link level.

So a switch will eventually realize that a packet is corrupted. The question is now what happens if such a corrupted packet is being already cut-through forwarded. I guess, that the only possible action in this case is to
make sure that the outgoing packet gets a bad LCRC too, to that it will eventually be dropped
send a data link level NAK, so that the sender will eventually retransmit.
If this is true, the exclusion of some fields in the header CRC isn't a real issue. However, the above is a guess (or hope), I don't know what the standart says for this case.