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To: T10 Technical Committee  
From: Bill Galloway  
Subj: SAS Hash Removal

*Since the open frames are CRC protected there is no need to have a check in each frame header. Remove the hashed check fields and make them reserved.*

Remove: **4.3.3 Hashed device name****7.11.8.1.3.4 Transition SL1:SL4 (Arb\_sel:Connected)**

...

The SL1:SL4 transition shall pass a parameter indicating an SSP link has been opened to the connected ~~state and the hashed value of the source port identifier and the destination port identifier~~. At this point an SSP link has been opened between the source SCSI port and the destination SCSI port.

If the PROTOCOL field in the transmitted OPEN address frame indicated an SMP link is to be opened then send a confirmation to the port layer using the connection opened indication that an SMP link has been opened before the SL1:SL4 transition.

The SL1:SL4 transition shall pass a parameter indicating an SMP link has been opened to the connected state ~~and the hashed value of the source port identifier and the destination port identifier~~. At this point an SMP link has been opened between the source SAS port and the destination SAS port.

**7.11.8.1.4.3 Transition SL2:SL4 (Selected:Connected)**

...

The SL2:SL4 transition shall pass a parameter indicating an SSP link has been opened to the connected state ~~and the hashed value of the source port identifier and the destination port identifier~~. At this point an SSP link has been opened between source SCSI port and the destination SCSI port.

...

The SL2:SL4 transition shall pass a parameter indicating an SMP link has been opened to the connected state ~~and the hashed value of the source port identifier and the destination port identifier~~. At this point an SMP link has been opened between source SAS port and the destination SAS port.

...

**7.11.8.1.5.1 SL4:Connected state description**

The connected state enables a set of connection state machines than control the transfer of data between SAS devices.

If there was a parameter in the transition from the selected state or arb\_sel state that indicates an SMP link has been opened then the connected state shall send an enable SMP parameter ~~and the hashed value of the source port identifier and the destination port identifier~~ to the SMP state machines (see 9.4.5).

If there was a parameter in the transition from the selected state or arb\_sel state that indicates an SSP link has been opened then the connected state shall send an enable SSP parameter ~~and the hashed value of the source port identifier and the destination port identifier~~ to the SSP state machines (see 9.2.5).

...

**9.2.1 SSP frame format**

Table 53 defines the SSP frame format.

**Table 53. General frame format**

Byte	7	6	5	4	3	2	1	0
0	Information Unit Type							
1								
2	<del>Hashed Destination Device Name</del> Reserved							
3								
4	Reserved							
5								
6	<del>Hashed Source Device Name</del> Reserved							
7								
8	Reserved							
9	Reserved							
10	Reserved						TMO	Rsvd
11	Reserved						Fill Bytes	
12	Command ID							
13	Reserved							
14								
15	Reserved							
16	TAG							
17								
18	Target Port Transfer Tag							
19								
20	Reserved							
23								
24	Information Unit							
m								
	Fill bytes if needed							
n - 3								
n	CRC							

~~The HASHED-DESTINATION-DEVICE-NAME field contains the hashed value (see 4.3.3) of the destination device name. The recipient may compare this to its own device name to verify that the frame was delivered to the correct destination. If the HASHED-DESTINATION-DEVICE-NAME does not match the device name used to open the connection, the frame may be discarded.~~

~~The HASHED-SOURCE-DEVICE-NAME fields contains the hashed value of the source device name. The recipient may compare this to the device name which opened the connection to verify the frame was from the correct source. If the HASHED-SOURCE-DEVICE-NAME does not match the device name used to open the connection, the frame may be discarded.~~

Remove: **Appendix B**