To: T10 Technical Committee
From: Robert Sheffield, Intel (robert.l.sheffield@intel.com)
Date: 7 March 2005
Subject: 05-058r1: SAS-1.1 - COMWAKE Received clarification

Revision history
Revision 0 (28 January 2005) First revision
Revision 1 (7 March 2005) Moved the requirement to set COMWAKE_received to zero up to the unordered list.

Related documents
sas1.1-r08 - Serial Attached SCSI 1.1 revision 8

Overview

A note on the reflector from Henry Wong pointed out some inconsistent wording regarding the behavior of the COMWAKE Received state machine variable defined in the SAS Phy OOB state machine.

In SAS1.1-r7, section 6.8, the last sentence in the paragraph describing the state machine variable COMWAKE_Received says: "Any transition to SP0: OOB_COMINIT shall set COMWAKE_Received to zero."

In SAS1.1-r7, SP0:OOB_COMINIT section 6.8.3.2.1, 4th paragraph says: "Entry into this state due to power on shall set the ATTACHED SATA PORT SELECTOR bit to zero in the DISCOVER response, and shall set the COMWAKE_Received state machine variable to zero."

While not incorrect (i.e., entering SP0:OOB_COMINIT due to a power on condition is *one* of the cases qualifying as "any transition to SP0:OOB_COMINIT"), the wording could lead to confusion regarding whether COMWAKE_Received should be set to zero on any transition to SP0, or only with a power on condition.

This proposal suggests revising the text in subclause 6.8.3.2.1 to clarify the intent.

Suggested changes

6.8.3.2 SP0:OOB_COMINIT state

6.8.3.2.1 State description

This state is the initial state for this state machine.

Upon entry into this state, this state shall:

   a)   send a Transmit COMINIT message to the SP transmitter;
   b)   send a Stop DWS message to the SP_DWS state machine; ~~and~~
   c)   send a Phy Layer Not Ready confirmation to the link layer; and
   d)   set the COMWAKE_Recieved state machine variable to zero.

This state machine waits for receipt of a COMINIT Transmitted message and/or a COMINIT Detected

message.

Entry into this state due to power on shall set the ATTACHED SATA PORT SELECTOR bit to zero in the DISCOVER response~~,~~. ~~and shall set the COMWAKE_Received state machine variable to zero.~~

If the phy supports attachment to a SATA device (i.e., the phy is attached to an STP/SATA bridge), supports attachment to a SATA port selector, and this state receives a COMWAKE Detected message it shall set the state machine variable COMWAKE_Received to one, and if the value of the ATTACHED SATA PORT SELECTOR bit in the DISCOVER response is zero, it shall:

   a)   set the ATTACHED SATA PORT SELECTOR bit in the DISCOVER response to one; and
   b)   end a SATA Port Selector Change confirmation to the link layer.

State machine variable MgmtReset shall be set to one if this state is entered due to a Management Reset request or SMP Reset request. MgmtReset shall be set to zero if this state is entered due to a power on, a hard reset, DWS Lost message received, or COMINIT received.