To: T10 Technical Committee
From: Steven Fairchild, HP (steve.Fairchild@hp.com)
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Subject: SMP Report Phy SATA Modifications

The purpose for this proposal is to modify the documented behavior of the SMP Report Phy SATA function.

The current SAS specification (10.3.1.7) states;

The REPORT PHY SATA function returns information about the SATA state for a specified phy. This function shall be implemented by expander devices supporting attachment to SATA target devices. It shall not be implemented by any other type of device.

...

The REGISTER DEVICE TO HOST FIS field contains the contents of the last Register – Device to Host FIS delivered by the attached SATA target device. The first byte is always set to 34h, the FIS type (see SATA).

Editor's Note 77 indicates that the function and its results are needed primarily to support recording the initial signature of SATA devices. This makes the power on signature available for each initiator in multiple initiator solutions.

Suggest the following change;

The REPORT PHY SATA function returns information about the initial SATA device signature ~~SATA state~~ *for a specified phy. This function shall be implemented by expander devices supporting attachment to SATA target devices.* This function ~~It~~ *shall not be implemented by any other type of device.*

...

The REGISTER DEVICE TO HOST FIS field contains the contents of the initial ~~last~~ *Register – Device to Host FIS delivered by the attached SATA target device* after a link reset has occurred. ~~The first byte is always set to 34h, the FIS type (see SATA).~~ The contents of the field shall remain constant until a link reset sequence causes the attached SATA target to deliver another initial Register – Device to Host FIS (see SATA). The contents of the field shall be initialized to zeros on a link reset sequence to indicate the field is invalid and the attached SATA target device has not delivered a Register – Device to Host FIS. The first byte of the field shall be set to 34h when the attached SATA target device has delivered the initial Register – Device to Host FIS.

An expander device that receives an OPEN request for a SATA target device that has not delivered the initial Register – Device to Host FIS shall return an OPEN-REJECT (RETRY).