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To: **T10 SAS Protocol Working Group**
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Subject: SAS definitions

Introduction

The following proposes adjustments to the definitions clause in the SAS draft. Some of the other modifications required to incorporate this proposal into the draft document are detailed in the Maxtor SAS letter ballot comments document. However, more checking of the standard is required to insure consistency. I recommend that this checking begin by searching on "ATA" as this will find occurrences of both "ATA" and "SATA" to delete or change. The following proposal is based on SAS-r03.

This is the list of terms and definitions that should be deleted:

ATA device
ATA domain
ATA initiator device
ATA initiator port
ATA port
ATA target device
ATA target port
ATA target/initiator device
ATA target/initiator port
SATA domain
SATA target port

The following are new or modified definitions:

SAS device: An SSP device, an STP device, or an expander device in a SAS domain.

SAS domain: The I/O system defined by this standard that may serve as a SCSI domain.

SAS device port: Either an SSP device port or an STP device port in a SAS domain.

SAS domain: The I/O system defined by this standard.

SAS initiator device: An SSP initiator device or an STP initiator device in a SAS domain.

SAS initiator port: An SSP initiator port or STP initiator port in a SAS domain.

SAS target device: Either an SSP target device or an STP target device in a SAS domain.

SAS target port: Either an SSP target port or an STP target port in a SAS domain.

SAS target/initiator device: A device that has all of the characteristics of a SSP target/initiator device and an STP target/initiator device in a SAS domain.

SAS target/initiator port: A port that has all of the characteristics of an SSP target/initiator port and an STP target/initiator port in a SAS domain.

SATA device: A device that contains a SATA port and communicates with STP initiators via an STP/SATA bridge device.

SATA port: An object contained in a SATA device or an STP/SATA bridge device that communicates via the SATA protocol.

Serial ATA Tunneled Protocol (STP): The protocol defined in this standard used by STP initiator ports to communicate with STP target ports in a SAS domain.

service delivery subsystem: That part of an I/O system that transmits service requests from an initiator port to a target port and returns responses from a target port to an initiator port.

SSP device: An SSP target device, SSP initiator device, or SSP target/initiator device.

SSP device port: An SSP target port, SSP initiator port, or SSP target/initiator port.

SSP initiator device: A SCSI initiator device in a SAS domain that implements the SSP and SMP protocols.

SSP initiator port: A SCSI initiator port in a SAS domain that implements the SSP and SMP protocols.

SSP target device: A SCSI target device in a SAS domain that implements the SSP protocol and may implement the SMP protocol.

SSP target port: A SCSI target port in a SAS domain that implements the SSP protocol and may implement the SMP protocol.

SSP target/initiator device: A device that has all of the characteristics of an SSP target device and an SSP initiator device.

SSP target/initiator port: A port that has all of the characteristics of an SSP target port and an SSP initiator port.

STP/SATA bridge device: A device containing an STP port, a SATA port, and the functions required to perform communication between an STP initiator device and a SATA device.

STP device: An STP target device, STP initiator device, or STP target/initiator device.

STP port: An STP target port, STP initiator port, or STP target/initiator port.

STP initiator device: A device in a SAS domain containing an STP initiator port that implements the STP and SMP protocols to communicate with expander devices and STP target devices.

STP initiator port: A port in a SAS domain that implements the STP and SMP protocols to communicate with expander ports and STP target ports.

STP target device: A device in a SAS domain that contains an STP target port that implements the STP protocol and may implement the SMP protocol to communicate with expander devices and STP initiator devices. This device contains an STP/SATA bridge device and a SATA device.

STP target port: A port in a SAS domain that implements the STP protocol and may implement the SMP protocol to communicate with expander ports and STP initiator ports.

STP target/initiator device: A device that has all of the characteristics of an STP target device and an STP initiator device.

STP target/initiator port: A port that has all of the characteristics of an STP target port and an STP initiator port.

Something like the following figure should be included to illustrate an STP target device:

Note: the bridge device may physically be located in an expander or on the SATA device.