ENGINEERING CHANGE NOTICE

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PART I

Brief description of the functional changes proposed:

Create a new class code for SerialATA host-based adapters (HBAs) that can be identified by system software. Add this to Appendix D.

Current Definition:

Base Class 01h

Base Class	Sub-Class	Interface	Meaning
01h	00h	00h	SCSI bus controller
	01h	xxh	IDE controller (see below)
	02h	00h	Floppy disk controller
	03h	00h	IPI bus controller
	04h	00h	RAID controller
	05h	20h	ATA Controller with Single DMA
		30h	ATA Controller with chained DMA
	80h	00h	Other Mass Storage Controller

Proposed Definition:

Base Class 01h

Base Class	Sub-Class	Interface	Meaning
01h	00h	00h	SCSI bus controller
	01h	xxh	IDE controller (see note 1)
	02h	00h	Floppy disk controller
	03h	00h	IPI bus controller
	04h	00h	RAID controller
	05h	20h	ATA Controller with ADMA interface - single stepping (see note 2)
		30h	ATA Controller with ADMA interface – continuous operation (see note 2)
	06h	00h	Serial ATA Controller – vendor specific interface
		01h	Serial ATA Controller – AHCI 1.0 interface
	07h	00h	Serial Attached SCSI (SAS) Controller
	80h	00h	Other Mass Storage Controller

1 Register interface conforms to the PCI Compatibility and PCI-Native Mode Bus interface defined in ANSI INCITS.370:2003: ATA Host Adapters Standard (see http://www.incits.org and http://www.t13.org),

2 Register interface conforms to the ADMA interface defined in ANSI INCITS.370:2003: ATA Host Adapters Standard (see http://www.incits.org and http://www.t13.org),

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Benefits as a result of the proposed changes:
The new class code will allow for system software to identify a controller as being attached to serial ATA devices and serial attached SCSI devices. This will help system software load drivers that may be specific to these interfaces.

An assessment of the impact to the existing revision and systems that currently conform to the PCI specification:
No impact – serial ATA controllers may still use the existing class code of IDE (01h), and serial attached SCSI controllers may still use the existing class code of SCSI (00h).

An analysis of the hardware implications:
Hardware impact is considered minimal as this is a change to a read only register in the serial ATA or serial attached SCSI HBAs (host bus adapters).

An analysis of the software implications:
System software which reads the class codes will need to comprehend the new class code of 06h for serial ATA HBAs, and 07h for serial attached SCSI.