

To: T13 Technical Committee
From: Rob Elliott, HP (elliott@hp.com)
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Subject: e05181r0 ATA8-ACS IDENTIFY PACKET DEVICE World Wide Name field

Revision history

Revision 0 (9 December 2005) First revision

Related documents

d1699r2 - AT Attachment - 8 ATA/ATAPI Command Set (ATA8-ACS) revision 2
e05178r0 - Mandatory World Wide Name (Ken Hirata, Emulex)
e05180r0 - IEEE OUI tutorials for SCSI, FC, and ATA (Rob Elliott, HP)

Overview

The IDENTIFY DEVICE command includes an optional World Wide Name field containing an IEEE NAA Registered identifier in words 108-111. Serial Attached SCSI HBAs may use this to identify that the drive is the same even if it changes locations in the SCSI domain (the SAS address given to a drive is based on the expander phy to which it is attached). e05178r0 proposes the field be upgraded to mandatory.

The IDENTIFY PACKET DEVICE command does not currently define that field. It would be helpful if it were optionally available, and if implemented by an ATAPI device supporting SCSI commands, matched the *SCSI target device name* returned in the SCSI INQUIRY command Device Identification VPD page (83h).

The other SCSI names/identifiers it could be each have problems:

- a) It cannot serve as the *SCSI target port name*, because if the SATA device is behind a SATA port selector, the same name appears in two different domains.
- b) It cannot serve as the *SCSI target port identifier*, because the value is not actually used for addressing within any domains. In SAS, the expander to which the SATA device is attached assigns it a SAS address. An advanced expander could send IDENTIFY PACKET DEVICE to retrieve the World Wide Name and use that as the SAS address, but this is not required in SAS-1.1.
- c) It cannot serve as the *logical unit name*, because the PACKET command payload might include a SCSI-2 compatible LOGICAL UNIT NUMBER field in the CDB (byte 1 bits 7:5), and each logical unit name must be unique.

For IDENTIFY PACKET DEVICE, the World Wide Name needs to be optional, because ATAPI DVD drives, which are the most common packet devices, have little need. ATAPI tape drives are more likely to implement it.

Suggested changes**2.1.1 ANSI References**

ISO/IEC 14776 – 321, SCSI-3 Block Commands (SBC) [ANSI INCITS 306-1998]

ISO/IEC 14776 – 332, SCSI Streaming Commands - 2 (SSC-2) [ANSI INCITS 380-2003]

ISO/IEC 14776 – 363, Multimedia Commands - 3 (MMC-3) [ANSI INCITS 360-2002]

[ISO/IEC 14776 – 412, SCSI Architecture Model - 2 \(SAM-2\) \[ANSI INCITS 366-2003\]](#)

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7.18 IDENTIFY PACKET DEVICE - A1h, PIO Data-in

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Table 1 — IDENTIFY PACKET DEVICE data

Word	O/M	F/V	Description
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95- 124 107		F	Reserved
108	O	E	15:12 NAA (3:0) 11:0 IEEE OUI (23:12)
109	O	E	15:4 IEEE OUI (11:0) 3:0 Unique ID (35:32)
110	O	E	15:0 Unique ID (31:16)
111	O	E	15:0 Unique ID (15:0)
112-124		E	Reserved
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7.18.7.xx Words (111:108): World Wide Name

[The use of these words is optional. If implemented, words \(111:108\) shall have the content described for words \(111:108\) of the IDENTIFY DEVICE command.](#)

[If the PACKET feature is used for a SCSI command set \(e.g., MMC-3\), the World Wide Name serves as the SCSI target device name \(see SAM-2\).](#)