

Date: October 21, 2003

To: T10 Committee (SCSI)

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Subject: Command Classification Field

1 Overview

The following proposed wording represents changes to SCSI Block Commands - 2 (SBC-2) to enable the transmission of classification information on a per-command basis.

This proposal standardizes a function that allows application clients to classify commands into groups so that device servers can collect information about each class of command. A application client can then, in turn, read the information collected by the device server and use that information to do things like work load balancing.

SBC-2 additions

1.1 Affected commands

It is proposed that a 4-bit field (CLASSIFY) be added to at least the following commands:

- a) READ (10)
- b) READ (12)
- c) READ (16)
- d) VERIFY (10)
- e) VERIFY (12)
- f) VERIFY (16)
- g) WRITE (10)
- h) WRITE (12)
- i) WRITE (16)
- j) WRITE AND VERIFY (10)
- k) WRITE AND VERIFY (12)
- l) WRITE AND VERIFY (16)

In addition the CLASSIFY field should be added to the following commands:

- a) PRE-FETCH (10)
- b) PRE-FETCH (16)
- c) REBUILD (16)
- d) REBUILD (32)
- e) REGENERATE (16)
- f) REGENERATE (32)
- g) SEEK (10)
- h) SYNCHRONIZE CACHE (10)
- i) SYNCHRONIZE CACHE (16)
- j) WRITE SAME (10)
- k) WRITE SAME (16)
- l) XDREAD (10)
- m) XDREAD (32)
- n) XDWRITE (10)
- o) XDWRITE (32)
- p) XDWRITEREAD (10)
- q) XDWRITEREAD (32)
- r) XDWRITE EXTENDED (16)
- s) XDWRITE EXTENDED (32)
- t) XDWRITE EXTENDED (64)
- u) XPWRITE (10)

v) XPWRITE (32)

The [CLASSIFY](#) field would be in bits 4-0 in byte 6 of 10-byte commands, byte 10 of 12-byte commands, byte 14 of 16-byte commands and byte 11 of 32-byte commands.

1.1.1 READ (10) command

The READ (10) command (see table 1) requests that the device server transfer data to the application client. The most recent data value written in the addressed logical block shall be returned.

Table 1 — READ (10) command

Byte\Bit	7	6	5	4	3	2	1	0
0	OPERATION CODE (28h)							
1	Reserved			DPO	FUA	Reserved		RELADR
2	(MSB) _____							
5	LOGICAL BLOCK ADDRESS _____ (LSB)							
6	Reserved	CLASSIFY						
7	(MSB) _____							
8	TRANSFER LENGTH _____ (LSB)							
9	CONTROL							

[The CLASSIFY field specifies the class of this task. If the device server collects information \(e.g., number of bytes read, time needed to transfer bytes, how many of this type of command have been received\) it may use the CLASSIFY field to group the information by class.](#)