

**Accredited Standards Committee\***  
**INCITS, National Committee for Information Technology Standards**

Doc. No.: T13/E04034R0  
 Date: 10/18/2004  
 Project: 1572D  
 Ref. Doc.: e02027r0, d1572R2a  
 d04029r0  
 Reply to: Dan Colegrove

To: Membership of T13

Subject: Results of letter ballot E04029R0

For the ballot to forward Draft Standard 1572D, BIOS Enhanced Disk Drive Services - 3 (EDD-3), to INCITS for further processing, the vote was as follows:

When the ballot was issued on 16 September 2004, twenty-one voting member organizations existed. The results of the letter ballot are 18 yes votes, 1 no vote, 0 abstain vote, 2 ballots not returned. The motion passes. Details of the vote appear below.

Name	Company	Vote	Comments
Phil Gardner	Absolute Software	Yes	No
Larry Barras	Apple Computer	Yes	No
Kenneth Hirata	Emulex	Yes	No
Sumit Puri	Fujitsu	-	-
Dan Colegrove	Hitachi GST	Yes	No
Steve Livaccari	IBM	Yes	No
Robert Strong	Intel	Yes	No
Tim Thompson	LSI Logic	Yes	No
Mark Evans	Maxtor	No	Yes
Nathan Obr	Microsoft	Yes	No
Conrad Maxwell	Net Cell	Yes	No
Mark Overby	nVidia	Yes	No
Stefan Thurnhofer	Pacific Digital	Yes	No
Karen Zelenko	Phoenix Technologies	Yes	Yes
Greg Elkins	Qlogic	Yes	No
Joe Chen	Samsung	Yes	No
Jim Hatfield	Seagate	Yes	No
Raymond Liu	Sillicon Image	Yes	No
Glenn Lott	ST Microelectronics	Yes	No
Yutaka Arakawa	Toshiba	-	-
John Masiewicz	Western Digital	Yes	No

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INCITS Secretariat: Information Technology Industries Council (ITI)

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The comments are listed below. Fujitsu and Toshiba did not vote.

Regards,

Dan Colegrove  
T13 Chairman

Phoenix 1. Section 8.24.3.9.2

Has a reference to non-existing section 3.5.9.11.  
Should be 8.24.3.9.11

Phoenix 2. Section 8.24.3.9.11

Has a reference to non-existing section 6.8.3.9.2.  
Should be 8.24.3.9.2\_

Maxtor #1

PDF Page 14

3.2.3 BIOS: Change “embedded on a chip” to “stored in non-volatile memory”.

Maxtor #2

PDF Page 14

3.2.6 CHS: Delete the superfluous period before “See”.

Maxtor #3

PDF Page 14

3.2.3 BIOS: Change “POST” to “POST see 3.2.20”.

Maxtor #4

PDF Page 14

3.2.7 Conventional and enhanced and global: “conventional” is defined as “legacy”, but “legacy” is used in many places following. Choose one and stick with it.

Maxtor #5

PDF Page 14

3.2.7 Conventional and enhanced: these are two separate terms and, therefore, require two separate entries with cross references as CHS and LBA have.

Maxtor #6

PDF Page 15

3.2.10 Host: Change “PC” to “computer system”.

Maxtor #7

PDF Page 15

3.2.1.17 Logical Address/Geometry: Change “INT 13h Fn 8” to “Function 08h of the INT 13h service (called INT 13h Fn 08h)...”

Maxtor #8

PDF Page 15

3.2.11 IA-32 compatible: Either add a definition for “CPU” or change this to “computer processor”.

Maxtor #9

PDF Page 15

3.2.12 IA-64 compatible: Either add a definition for “CPU” or change this to “computer processor”.

Maxtor #10

PDF Page 16

3.2.18 NV Memory: Change “PC” to “computer system”.

Maxtor #11

PDF Page 16

3.2.21 Protected Mode: Change “x86 compatible processors” to “Computer processors that are compatible with the Intel x86 architecture...”

Maxtor #12

PDF Page 16

3.2.21 Protected Mode: Change “...Real Mode.” to “...Real Mode (see 3.2.23).”

Maxtor #13

PDF Page 16

3.2.21 Protected Mode: Delete “See section 3.2.23 for the definition of Real Mode.”

Maxtor #14

PDF Page 16

3.2.23 Real Mode: Change “x86 compatible processors” to “Computer processors that are compatible with the Intel x86 architecture...”

Maxtor #15

PDF Page 16

3.2.23 Real Mode: Change “...Protected Mode.” to “...Protected Mode (see 3.2.21).”

Maxtor #16

PDF Page 16

3.2.23 Real Mode: Delete “See section 3.2.21 for the definition of Protected Mode.”

Maxtor #17

PDF Page 16

3.2.18 NV Memory: Change “Non-Volatile memory...” to “Non-Volatile (NV) memory...”

Maxtor #18

PDF Page 17

3.3.1 Numeric Notation and global: This is the first of several instances where there is a table without a number. Number each table and make sure there is a textual introduction and cross reference. For example, in this case, the preceding sentence should read something like, “Table x defines the notation for each base as used in this standard.”

Maxtor #19

PDF Page 18

4 Overview, first paragraph: Change, “The maximum theoretical capacity of this Applications Program Interface (API) shall be 8.4 GB.” to, “The maximum capacity that can be addressed by this Applications Program Interface (API) on a disk drive is 8.4 GB.”

Maxtor #20

PDF Page 18

4 Overview, first paragraph: Change “1 through 15h” to “01h through 15h”. However, table 2 also includes function numbers 00h, 18h, 19h, and 25h. Which is correct?

Maxtor #21

PDF Page 18

4 Overview, bulleted list, second item: Add a reference after, “...the current requirement of using interrupt 41h/46h to point at the Fixed Disk Parameter Table information.”

Maxtor #22

PDF Page 18

4 Overview, third paragraph and global: You don’t have to use “shall”, “should”, and “may” all of the time. Use those only for specific requirements. In this case, change “...shall gain the capability...” to “add the capability...”

Maxtor #23

PDF Page 18

4 Overview third, paragraph: Change “shall be” to “is”.

Maxtor #24

PDF Page 18

4 Overview, fourth paragraph: Change “shall” to “should” (it would be very difficult to enforce this requirement).”

Maxtor #25

PDF Page 18

4 Overview, third paragraph: Change “shall not” to “do not”.

Maxtor #26

PDF Page 18

4 Overview, fifth paragraph: Change: “The following diagram...” to “Figure 1...”.

Maxtor #27

PDF Page 19

Table 1 Legacy Register Definitions, smaller table in row 5, column 2: Does “This value is 1 based. 0 is an illegal value.” Mean that this value shall be greater than or equal to one and less than or equal to 31?

Maxtor #28

PDF Page 19

6 >8GB INT 13h Functions, second paragraph: Is it “INT 13h FN xxh” or “INT 13h Fn xxh”? Maybe there should be something in the conventions clause about this format.

Maxtor #29

PDF Page 19

Table 2 - Legacy Functions Definitions: For each entry in the table, add a cross reference to the clause where the function is described in the form of “(see x.y)”.

Maxtor #30

PDF Page 19

Table 1 Legacy Register Definitions, row 5, column 2: Change “Buffer pointer.” to “This register contains the buffer pointer (i.e., the beginning address of the buffer in system memory).”

Maxtor #31

PDF Page 20

Table 3 - Device Address Packet, row 7, column 3 (offset 2): Change “A block count of 0 means no data shall be transferred.” To “If this field is set to 00h, then no data shall be transferred.”

Maxtor #32

PDF Page 20

Table 3 - Device Address Packet, row 7, column 3 (offset 8): Delete the commas in “...address, on the target device, of...”

Maxtor #33

PDF Page 20

Table 3 - Device Address Packet, row 7, column 3 (offset 8): What is a “callee”.

Maxtor #34

PDF Page 20

Table 3 - Device Address Packet, row 7, column 3 (offset 8): Delete the commas in “...devices, with less than or equal to 15,482,880 logical sectors, the...”

Maxtor #35

PDF Page 20

6 >8GB INT 13h Functions: It would be VERY helpful to have tables for the extended register definitions and extended functions definitions as there are for the legacy functions. Cross references could then be included to the clauses where these functions are defined.

Maxtor #36

PDF Page 21

6.2 Removable Media, first paragraph: What are “Return codes”? Do we need a definition of this somewhere?

Maxtor #37

PDF Page 21

6.3 INT 13h Interface Subsets, first paragraph: Change “shall be” to “is”.

Maxtor #38

PDF Page 21

6.3 INT 13h Interface Subsets, first paragraph, Check Extensions Preset function: If there was a table of these functions above you wouldn't have to add a definition for the Check Extensions Present function.

Maxtor #39

PDF Page 24

7.1 Boot Methods, second paragraph: Is "0-3Fh" supposed to mean "00h through 3Fh"? If so, state that. Now I wonder is it "Function", "function", "FN", "Fn", "fn", or something else? This is another item that shall be made consistent in this standard.

Maxtor #40

PDF Page 24

7.1 Boot Methods, second paragraph: Is "0-3" supposed to mean "0 through 3" or negative 3?

Maxtor #41

PDF Page 24

7.1.1 Emulation Process, first paragraph: Is "0-3Fh" supposed to mean "00h through 3Fh"? If so, state that.

Maxtor #42

PDF Page 25

7.1.1 Emulation Process, second paragraph: another "0-3".

Maxtor #43

PDF Page 25

7.1.1 Emulation Process, second paragraph: and a "4-7".

Maxtor #44

PDF Page 25

7.1.1 Emulation Process, second paragraph: and an "8-11". They are all negative 3! I won't make note of any more -- THIS time. (Hint: search on "-".)

Maxtor #45

PDF Page 25

7.1.1 Emulation Process, third paragraph: delete "shall".

Maxtor #46

PDF Page 25

7.1.1 Emulation Process, second paragraph: Change "can" to "may".

Maxtor #47

PDF Page 25

7.1.1 Emulation Process, third paragraph: Change "shall allow" to "allows".

Maxtor #48

PDF Page 25

7.1.1 Emulation Process, third paragraph: Change “could make” to “may make” or “makes”. This applies to “call” and “boot”, as well.

Maxtor #49

PDF Page 25

7.1.3 Floppy Boot, first paragraph: Change “If there is one or more standard floppy drives...” to, “If there are one or more standard floppy drives...”

Maxtor #50

PDF Page 25

Table 4 - Floppy Geometries: Change the font in the table to be Arial.

Maxtor #51

PDF Page 26

7.1.4 Hard Drive Boot, second paragraph: There need to be some sort of definitions for FAT-16 and FAT-32.

Maxtor #52

PDF Page 26

7.2.1 Boot Volume Descriptor, first paragraph: Change “EDD-3” to “this standard”.

Maxtor #53

PDF Page 26

Table 5 - Boot Volume Descriptor, row two, column three: Does “0 – Boot Record Indicator” mean “zero minus the boot record indicator”? If not, change this to what it means.

Maxtor #54

PDF Page 26

Table 5 - Boot Volume Descriptor, row four, column three: : Does “1 - Version of this descriptor” mean “one minus the version of this descriptor”? If not, change this to what it means. I think the “two columns” recommendation fixes this type of issue, so I won’t highlight the several times where it occurs in the following.

Maxtor #55

PDF Page 26

7.2.2 Validation Entry, first paragraph: Change the beginning “This” to “The”.

Maxtor #56

PDF Page 26

Table 5 - Boot Volume Descriptor: I think part of my confusion lies in the fact that you should have another column in the table. I think that you are trying to specify both the content of the field and its description in the same column. If you made one column for each, then the table would be clearer.

Maxtor #57

PDF Page 26

Table 6 - Validation Entry, Description column: Make this into two columns, one for content and one for description.

Maxtor #58

PDF Page 27

Table 7 - Initial/Default Entry, Description column: Make this into two columns, one for content and one for description.

Maxtor #59

PDF Page 27

7.2.3 Initial/Default Entry, first paragraph: Does "...shall point to the initial boot image." mean "...shall point to the starting address of the initial boot image,"? If so, change it.

Maxtor #60

PDF Page 28

Table 8 - Section Header, Description column: Make this into two columns, one for content and one for description.

Maxtor #61

PDF Page 28

7.2.4 Section Header, first paragraph: Change "...the various images..." to "...the starting addresses of the various images...".

Maxtor #62

PDF Page 29

Table 9 - Section Entry, Description column: Make this into two columns, one for content and one for description.

Maxtor #63

PDF Page 30

Table 10 - Section Entry Extension, Description column: Make this into two columns, one for content and one for description.

Maxtor #64

PDF Page 30

8.1 - Reset Disk Subsystem, Entry and global: In the conventions clause you state that the format for this should be "AH = 00h" not "AH - 00h". There are many instances in the following to be changed. (Hint: search on "-".)

Maxtor #65

PDF Page 30

8.1 - Reset Disk Subsystem and global: I'd prefer to see the text for this (e.g., "This function shall be used to reset all the devices controlled by the INT 13 interface.") and in the following clauses come before the entry and exit conditions in the following clauses.

Maxtor #66

PDF Page 30

7.2.6 Section Entry Extension, first paragraph: Change “1” to “one”. I think the rule is: spell out numbers from zero through ten, then uses the numerals after that.

Maxtor #67

PDF Page 30

7.2.6 Section Entry Extension, first paragraph: Change “2” to “two”.

Maxtor #68

PDF Page 30

8.1 Reset Disk Subsystem, global: The “entry” and “exit” parts of this and the following clauses are too cryptic. At the very least add a description of what this means in the Conventions clause.

Maxtor #69

PDF Page 30

8.1 Reset Disk Subsystem and global: Does “carry clear” mean “CF = 0b” as defined in the Conventions clause? If so, change this and all of the following to be so. (Hint: search on “carry”.)

Maxtor #70

PDF Page 30

8.1 Reset Disk Subsystem, and all of the clauses for functions that follow: Add the function number (e.g., “8.1 Reset Disk Subsystem (Fn 00h)”). The table listing the functions with cross references would be most helpful to point to these.

Maxtor #71

PDF Page 31

8.3 Read Sectors into Memory, first paragraph and global: I think that the phrase “...into host memory buffer pointed to by ES:BX.” means “...into the host memory buffer beginning at the location specified by the contents of the ES:BX registers.” If this is true, then change it to be like that. (Hint: search on “point”.)

Maxtor #72

PDF Page 32

8.5 Verify Sectors: Insert a carriage return between the conditions statements and the text (or move the text above the conditions).

Maxtor #73

PDF Page 36

Table 11 - Check Extensions Present Buffer: Add a textual description of what this table means.

Maxtor #74

PDF Page 36

8.19 Extended Write, several places in this clause: What is “write with verify”? Is this a function? Add clarification. Again, if the text was first, the clarification could be added there.

Maxtor #75

PDF Page 37

8.21 Lock/Unlock Media: What does “logically locks” mean? Is this opposed to some sort of illogical locking? Delete “logically” or clarify the meaning.

Maxtor #76

PDF Page 38

8.22 Eject Removable Media: This function either “...shall eject media from the specified device. “ or “This function represents a request to remove media from the selected device.” Which is it?

Maxtor #77

PDF Page 38

8.23 Extended Seek: Add a carriage return between the “entry/exit” stuff and the text.

Maxtor #78

PDF Page 39

Table 12 - Result Buffer, row 2, column 3: Add a definition for “DPT”.

Maxtor #79

PDF Page 39

Table 12 - Result Buffer (and several following tables), Description column: Make this into two columns, one for content and one for description. After making this comment several times, I now see that this is true for most of the following tables, so this comment applies to those, as well.

Maxtor #80

PDF Page 40

Table 12 - Result Buffer: Add a title to the “continued” portion of the table on the second page.

Maxtor #81

PDF Page 40

Table 12 - Result Buffer: There is a line missing between the first and second rows in the second and third columns in my version of the pdf. If possible, fix this.

Maxtor #82

PDF Page 41

8.24.1 Interface Path, first paragraph: Delete “currently”.

Maxtor #83

PDF Page 41

Table 13 - Interface Path Definitions, row 8, column 4: Does the sentence, “If more than one interface of the same type is in a single Bus, Slot, Function, then the channel number shall identify each interface.” mean that there can be more than one entry? How does this work?

Maxtor #84

PDF Page 41

Table 13 - Interface Path Definitions, row 13, column 4: Does the sentence, “If more than one interface of the same type is in a single Bus, Slot, Function, then the channel number shall identify each interface.” mean that there can be more than one entry? How does this work?

Maxtor #85

PDF Page 43

Table 14 - Device Path Definitions: Add a title to the “continued” portion of the table on the second page.

Maxtor #86

PDF Page 45

8.24.3.7 Offset 8 - DMA channel/Multiword DMA Type: “ATA-5” is not a defined reference. Add ATA/ATAPI-5 in the references or change this to “ATA/ATAPI-6”.

Maxtor #87

PDF Page 49

8.27 Terminate Disk Emulation, first paragraph and several that follow: The previous clauses describing functions began with “This function...” I don’t care which form is used, but it should be consistent throughout the document.

Maxtor #88

PDF Page 49

8.27 Terminate Disk Emulation, first paragraph, two places: Change “Effectuated” to “Affected”.

Maxtor #89

PDF Page 49

Table 17 - CD Specification Packet: Add a title to the “continued” portion of the table on the second page.

Maxtor #90

PDF Page 49

Table 17 - CD Specification Packet, row 9: Change the row so that it is all on one page.

Maxtor #91

PDF Page 52

8.31.1 Packet Sending Service (PSS) For SCSI Command Data Block’s (CDB), title: Change “Command Data Block’s (CDB)” to “Command Descriptor Blocks (CDBs)”.

Maxtor #92

PDF Page 52

8.31.1 Packet Sending Service (PSS) For SCSI Command Data Block’s (CDB), first paragraph, and several places in this clause: To which interface does “this interface” refer? Do you mean “the PSS”? If so, replace “this interface” with “the PSS”.

Maxtor #93

PDF Page 52

8.31 Send Packet Command, second paragraph: The first sentence in this paragraph reads, “The BIOS is a single threaded, master device.” This does not fit the normal definition of “device” used in other ATA standards. This would be okay, except that “device” is used in the following sentences having the ATA meaning. Change this to be consistent. I also recommend that a definition for “device” be included in the Definitions clause.

Maxtor #94

PDF Page 52

8.31 Send Packet Command, first paragraph: Change "...a packet oriented device." to something like "...a device implementing a protocol using packet transfers."

Maxtor #95

PDF Page 52

8.31 Send Packet Command, first paragraph: What does "...takes the hook..." mean? Try to put this in standard English. Also see the second paragraph in this clause.

Maxtor #96

PDF Page 52

8.31.1 Packet Sending Service (PSS) For SCSI Command Data Block's (CDB), second paragraph: What does "...shall provide transport specific wrappers..." mean? Change this to something like, "...shall add transport specific information (e.g., header information and CRC)..."

Maxtor #97

PDF Page 53

Table 21 - Formatted Protocol Specific Data, row 9, column 3: What is an "80h error"? I think this is defined in the next clause. Either add a definition here or add a cross reference.

Maxtor #98

PDF Page 53

Table 21 - Formatted Protocol Specific Data, row six, column 3: Are ..."the data direction bits..." in the Flags Register or someplace else? Be specific here.

Maxtor #99

PDF Page 53

Table 21 - Formatted Protocol Specific Data, row six, column 3: Change "0-byte" to "zero-byte".

Maxtor #100

PDF Page 54

Table 22 - Output Parameters, row 3, column 2: Change the text in this cell to be Arial.

Maxtor #101

PDF Page 54

9 INT 15h Removable Media Eject, second paragraph: What does, "A disk cache program may hook this INT15h call..."? Try to put this in better English.

Maxtor #102

PDF Page 54

8.31.1.2 Output Parameters, first paragraph: Change "...parameters, see Table 22," to "...parameters (see Table 22)"