



ISO / IEC JTC 1 / SC25 N 24

Date: 1990 - 09 - 17

ISO / IEC JTC1/SC25

Interconnection of Information Technology Equipment

Title: Results of voting on DP JTC1 / SC25 N8
(Enhanced) Small Computer Systems Interface
SCSI-2

Source: SC 25 Secretariat

Project: JTC1.25.13.10.13

Requested action: To take notice of the attached results
Project editor: to resolve the comments

Distribution: P - Members of SC 25 and Project Editors,
L -, O - Members of SC 25 (summary only)

RESULTS OF VOTING / RESULTATS DE VOTE JTCl / SC25 N8

(Enhanced) Small Computer Systems Interface - 2 (SCSI-2)

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ABSTENTION -----+
DISAPPROVAL/DESAPPROBATION ----+ !
APPROVAL/APPROBATION -----+ ! !
                               ! ! !
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AUSTRALIA                P ! ! ! !
BELGIUM                   P ! ! ! !
CANADA                    P ! ! !X! **
DENMARK                   P !X! ! !
FRANCE                    P ! ! !X! **
JAPAN                     P !X! ! ! *
SWEDEN                    P !X! ! !
UNITED KINGDOM           P !X! ! !
U.S.A.                    P !X! ! ! *
U.S.S.R.                  P !X! ! ! *
AUSTRIA                   P ! ! ! !
CHINA                     P ! ! ! !
CZECHOSLOVAKIA           P !X! ! !
FINLAND                   P !X! ! !
GERMAN DEMOCRATIC REP.    P !X! ! !
GERMANY FR                P !X! ! ! *
IRAN, ISLAMIC REPUBLIC OF P ! ! ! !
ITALY                     P ! ! ! !
NETHERLANDS              P !X! ! !
NORWAY                    P ! ! ! !
POLAND                    P ! ! ! !
ROUMANIA                  P ! ! ! !
SPAIN                     P ! ! ! !
SWITZERLAND               ! ! !X!
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(*) COMMENTS / COMMENTAIRES

(**) P-MEMBER HAVING ABSTAINED AND IS THEREFORE NOT COUNTED
 IN THE VOTE / MEMBRE (P) S'ABSTENANT DE VOTER; N'EST
 DONC PAS COMPTE DANS CE VOTE

The Document has obtained substantial support.

The Project Editor is requested to resolve the comments and
 to forward the updated version of the document to the SC25
 Secretariat for further processing.



Rudolf Barth
 Secretary JTCl / SC25

Japanese comments on the document

ISO/IEC JTC1/SC25 N8 '(Enhanced)Small Computer System Interface - 2 (SCSI-2)'

Japan approve the document with the following editorial comments:

1. 'American National Standard(s)' should be 'International Standard(s)' .
P.1-1, L.2; P.2-1, L.5; P.9-4, L.5
2. 'X3.131(-1986)' should be 'ISO 9316' .
P.1.1, L.4; P.2-1, L.5; P.3-3, L.26, P.7-4, Table 7.3; P.7-22, Table 7-8;
P.7-84, Table 7-71; P.8-35, NOTE; P.8-37, Note
3. 'X3.131-198X' should be 'ISO 10288' .
P.3-3, L.27; P.7-4, Table 7.3
4. 'Defined by ASC IT8(Graphics Pre-Press Devices)' should be 'Reserved (see NOTE)' and add 'NOTE: Defined by ASC IT8(Graphics Pre-Press Devices)' under the Table.
P.7-21, Table 7-17
5. 'ANSI approved' should be 'ISO approved' .
P.7-22, Table 7-8(X2)
6. Delete the sentence 'This code is reserved to designated this standard upon approved by ANSI' .
P.7-22, Table 7-18
7. '3h-7h' shall be '3h' .
P.7-22, Table 7-18 (ISO version has only 2-bits)
8. 'ASCII' should be 'ISO 646 Character Set' .
P.7-23, L.30; P.7-23, L.36; P.7-24, L.4; p-7-84, Table 7-2(X2);
P.7-85(X7); P.7-86(X7); P.7-87(X2), P.7-89(X1); P.10-14, L.33;
P.13-34 last paragraph
9. 'X3.91M-1987' should be 'ISO 9324' ,
'X3.170' should be 'ISO 10222' ,
'X3.130-1986;X3T9.3/87-002' should be 'ISO 9318-2, ISO 9318-5'
and 'X3.132-1986;X3.147-1988' should be 'ISO 9318-3, ISO 9318-4' .
P.7-84, Table 7-71

10. 'ISO 9315 (Interface between flexible disk cartridge drives and their controllers)' should be added in Table 7-71.
P.7-84, Table 7-71
11. 'a floppy disk' should be 'a flexible disk' and 'a hard disk' should be 'a rigid disk to be consistent with the Table 8-46.'
P.8-1, L.20 and 21
12. 'when medium access commands' should be 'when medium access commands'
P.8-2, L.34
13. '(see Table 8-7 to 8-9)' should be '(see Table 8-8 to 8-10)'
P.8-13, L.32
14. Command names are not consistent between in the Tables and in the texts.
For examples:
 - (a) 'LOCK-UNLOCK CACHE' (P.8-10, Table 8-1),
'LOCK UNLOCK CACHE' (P.8-22, Title of the section) and
'LOCK/UNLOCK CACHE' (P.8-4, L.34)
 - (b) 'PREVENT-ALLOW MEDIUM REMOVAL' (P.8-10, Table 8-1),
'PREVENT ALLOW MEDIUM REMOVAL' (P.8-24, Title of the section) and
'PREVENT/ALLOW MEDIUM REMOVAL' (P.8-5, L.31)
 - (c) 'START STOP UNIT' (P.8-10, Table 8-2) and
'START/STOP UNIT' (P.8-1, L.32)
15. 'third-party reservation option' should be 'third- party reservation'
Because the third-party reservation function is mandatory.
P.8-41, L.14
16. 'More than one physical or logical block' should be
'More than one logical block'.
P.8-33, L.7
17. 'ANSI X3.73-1980' should be 'ISO 5654-1, ISO 5654-2' ,
'ANSI X3.121-1984' should be 'ISO 7065-1, ISO 7065-2' ,
'ANSI X3.82-1980' should be 'ISO 6596-1, ISO 6596-2' ,
'ANSI X3.125-1985' should be 'ISO 7487-1, ISO 7487-2, ISO 7487-3' ,
'ANSI X3.126-1986' should be 'DIS 8378/1, DIS 8378/2, DIS 8378/3' ,
'ISO DIS 8630' should be 'DIS 8630/1, DIS 8630/2'
and 'ANSI X3.137' should be 'DIS/8860/1 DIS 8860/2' .
P.8-60, Table 8-44

18. Add the units(e.g. kbit/s, $\times 100 \mu s$, $\times 100ms$ and etc.) to the parameter names in the Tables, such as Table 8-49, 8-60, 9-24 and so on.

19. ISO 9315 defines of usages all pins for 200 mm(8 in) flexible disk, but allows optional use of pins 34, 4, 2 and 1 for 130 mm(5.25 in) flexible disk. That is, the indications of usage of pins 34, 4, 2 and 1 are only applicable for 130 mm flexible disk. Therefore, the following paragraph should be added before the last paragraph of page 8-69.

'ISO 9315(Interface between flexible disk cartridge drives and their controllers) allows optional usages of interface pins 34, 4, 2 and 1, for 130 mm(5.25 in) flexible disk cartridge drives. Those optional pin usages for 130 mm are specified by the fields of Pin 34, Pin 4, Pin 2, and Pin 1, as following.'

P.8-69

20. 'see Table 8-34' should be 'see Table 8-44'
P.8-74, last paragraph

21. 'the PLN bit' should be 'the LPN bit'
P.8-76, L.17, 18, 22 and 23

22. 'BSR x3.17-198X' should be 'ISO 10222'
P.8-86, last paragraph

23. '...0Dh, 0Eh.' should be '...0Dh,0Eh, C0h through FFh.' to consistent with other sections.
P.9-12, last paragraph.

24. 'X3.22-1983' should be 'ISO 1863' ,
'X3.39-1986' should be 'ISO 3788' ,
'X3.54-1986' should be 'ISO 5652' ,
'X3.116-1987' should be 'ISO 8063/1'
and 'X3.56-1986' should be 'ISO 4057' .

Other references should be blank, and original table should be described in Table D.2.

P.9-41, Table 9-22

25. Delete a line of '0Eh' .

26. 'ASCII' should be deleted.
P.10-5(X5); P.10-6(X5)
27. 'EIA RS-232C' should be 'ISO 2110(ANSI/EIA 232D)'
P.10-1; P.10-16
28. No vendor specific commands are specified for Scanner devices.
Is this true ?
P.14-3
29. Blank the fields of Reference Standard of Table 15-26, and delete NOTE(1).
Original Table 15-26 and its NOTES should be moved into Table D-3 of
Appendix D, as media of Direct Access Devices and Sequential Access Devices.
P.15-26 and P.D-3.

~~SCSI-2~~ Approval (USA)

Del Shoemaker Chair X3T9
Dr. Kovacs Secretary IEC/ISO JTC 1/SC 25/WG 4
Kate McMillan X3 Secretariat

SCSI-2 Editorial Changes

A summary of the non-substantive improvements included in Revision 10c (as compared to Revision 10b) are:

1. Several minor inconsistencies between command names in the body of the document and those used in Appendix I have been corrected.
2. Three missing operations codes were added to the summary table in Appendix I.
3. Table headings were added to the second and subsequent pages of the multi-page tables.
4. Notes were added to the operation code and ASC/ASCC tables to point out that these tables are present in both alphabetical and numeric order.
5. A note was added in three places to alert readers that X3T9.2 is considering an alternative wide data transfer method employing a single 16-bit cable.
6. The cable specifications were clarified to show that 28 AWG wire is only required on lines that distribute power. Signal lines may use smaller gauge wires. While cable impedances above 90 ohms are recommended, those with impedances below 90 ohms are now permitted since such cables have been demonstrated to operate successfully and they are more readily available.
7. The document was ambiguous on whether a transfer period of 200 ns should use the new fast data transfer timings. This was clarified so that 200 ns transfer periods use the slow timings, which is compatible with SCSI-1.
8. A subsection on "Unexpected Reselection" was added to recommend that the initiator send an ABORT message to a target that attempts to reselect an initiator when there is no valid nexus.
9. The document was clarified so that the requirement that a target not accept both tagged and untagged queued commands applies on a per-initiator basis. It would be difficult to manage a multi-initiator system if all initiators were required to use the same queuing method.
10. The ITS Committee's peripheral device type name was corrected to "Graphics Arts Pre-Press Devices".
11. An implementors note was added to the mode pages to suggest a method to improve compatibility with SCSI-1 initiators.

12. An implementors note was added to the CHANGE DEFINITION command to list possible areas where SCSI-2 target behavior may cause compatibility problems with SCSI-1 initiators.

13. Several omitted ASC/ASCQ codes were added to the ASC/ASCQ table.

14. The RELEASE command description was clarified to avoid misinterpretations regarding the release of third-party reservations via a non-third-party RELEASE command. Third-party reservations are only released by third-party RELEASE commands. The requirement to "ignore" invalid attempts to release a reservation was moved from the RESERVE command description to the RELEASE command description, where it properly belongs.

Similar changes were made to the RESERVE UNIT and RELEASE UNIT commands in section 9 and to the RESERVE and RELEASE commands in section 16.

15. The list of commands that may be accepted while a unit reservation is active was updated to include a RESERVE command in section 8 and a RESERVE UNIT command in section 9. Section 16 already included the RESERVE command in the list. This change is necessary because of the requirement to accept superseding reservations.

16. An implementors note was added clarifying the target actions when a write command encounters the physical end-of-medium. This note also explains the different interpretation which was possible in SCSI-1.

17. The models for the optical memory devices now include a statement that media standards may impose other requirements regarding defect management.

18. "Power-up" was changed to "power-on" for consistency.

19. The Vendor ID code table in Appendix J was updated to include recent additions.

20. An implementors note was added to section 7.2.10.5 recommending a method for SCSI-2 target's to improve their compatibility with SCSI-1 initiators.

21. A section (8.1.10) was added to the direct-access device model to mention rotational position locking. This concept was missing from the model, but no new requirements were added.

22. The direct-access device model now has statement explaining the defect management differences between fixed and removable media.

23. Definitions of "buffered mode" and "spacing" were added to the sequential-access device glossary.

24. The READ BLOCK LIMITS command description was clarified.
25. The last sentence of the seventh paragraph of section 8.3.3.6 was corrected to "the TB bit does not affect the action taken for recovered data."
26. The implementors note in 5.1.3 was expanded to document that SCSI-2 devices are permitted to accept the SCSI-1 select-without-ATN protocol as documented in SCSI-1.
27. Table 7-7 was merged with the following in-line table and the terminology was clarified. Previously, the term "direct-access" was used for device types 0, 4, 5, and 7. But device type 0 is known as a "direct-access device". The term "block device" is now used for this group. A similar conflict existed for sequential-access devices (device types 1, 2, 3, and 9). This group is now identified as "stream devices". The paragraph permitting device type 5 to be a destination in the case of a COMPARE command was incorporated as a note in Table 7-7.
28. The description of the VFU Control Byte in the Parallel Printer Interface Parameters mode page was made into an implementors note since it contains no requirements and the VFU Control Byte is not part of the SCSI-2 standard.

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secretariat iso/iec jtc 1/sc 25

ussr national body approves doc n 8 as presented and approves doc n 6 with comments

1 page 9 line 14 from the bottom the number should be 6 144

2 page 13 line 27 the words wbc and assignment should be separated

3 page 25 subclause 6.4.4.1 lines 6 and 7 it's necessary to correct parameter denominations to hi cycle sync and hi cycle sequence

4 page 26 subclause 6.4.4.2 line 3 it's necessary to correct primitive denomination to hi cycle sync indication

5 page 27 subclause 6.5.1.1 it's necessary to put in conformity parameter denominations in the lines 13 15 17 29 31 34 of the text to those in semantics of the primitive

6 page 33 subclause 6.6.2.2 line 4 it's necessary to correct the primitive denomination and to change wording of the sentence for example to the period of the time between subsequent im unitdata indication generations will vary

7 page 34 subclause 6.6.4.1 lines 6 and 7 it's necessary to correct parameter denominations to im cycle sync and im cycle sequence

letter ballots follow
regards v otrokhov

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Approval

Editorial Comments of the German National Committee
Accompanying its Vote on Document
JTC 1/SC 25 N 8

- it should be taken care of that footnotes are used only according to the ISO/IEC Directives (Part 3, Sub-clause 2.5.2).
- the numbering of pages should be for the whole of document, not for chapters only