Enclosure to JTC/96-0028 - J

ISO/IEC JTC 1
INFORMATION TECHNOLOGY
Secretariat: U.S.A. (ANSI)

TITLE: Proposal for a New Work Item: SCSI Specifications for Optical Memory Card Reader/Writer

SOURCE: Secretariat, ISO/IEC JTC 1/SC 17

PROJECT: -

STATUS: New Work Item which, if approved, will be assigned to SC 17 for development.

REQUESTED ACTION: Please complete the enclosed letter ballot and return it to the JTC 1 Secretariat no later than April 1996. Comments should be submitted to the Secretariat in electronic format (via email or diskette).

DISTRIBUTION: P and L Members
SC 17 Secretariat

MAILED ON
JUN 26 1996

TO:
C. Dyball, X3B10 Chair
A. Leach, X3B10 TR

Address Reply to:
Secretariat - ISO/IEC JTC1 - American National Standards Institute, 11 West 42nd Street, NY, NY 10036
Telephone: 212 842 4932, Facsimile: 212 308 0032; e-mail: rejchel@ansi.org
# Proposal for a New Work Item

A proposal for a new work item shall be submitted to the Secretariat of the ISO/IEC Joint Technical Committees concerned, with a copy to the ISO Central Secretariat.

**Presentation of the proposal** - to be completed by the proposer.

**Guidelines for proposing and justifying a new work item** are given in ISO Guide 20. For ease of reference an extract is given overleaf:

### SCOPE (and field of application)
A subset of commands of SC RT interface used for optical memory card reader/writer terminal interface into consideration. Make programming interface for optical memory card reader/writer units uniquely defined independent from reader/writer unit vendors.

### Purpose and justification
If the proposed new work item is approved, which of the following document(s) is (are) expected to be developed?
- A single document in an International Standard
- More than one International Standard (expected number: ___)
- A multi-part International Standard consisting of ___ parts
- An addendum or addenda to the following International Standard(s): ISO/IEC 9016,
  - A technical report, type ___

### Relevant documents to be considered

### Cooperation and liaison
SC 25/WG 4

### Preparatory work offered with target date (if any)
21 July 1995

### Signature

### Will the services of a maintenance agency or registration authority be required?
- [ ] Yes
- [ ] No

### Are there any known requirements for costing?
- [ ] Yes
- [ ] No

### Does the proposed standard contain known patented items?
- [ ] Yes
- [ ] No

### Comments and recommendations of the JTC secretariat - attach a separate page as annex, if necessary

### Voting on the proposal
Each member of the ISO/IEC Joint Technical Committees has the obligation to vote within the time limits laid down (normally three months after the date of circulation).

<table>
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<th>Date of circulation</th>
<th>Closing date for voting</th>
<th>Signature of JTC secretary</th>
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PROPOSAL FOR NEW WORK ITEM

TITLE:
Identification cards & related devices - SCSI specifications for optical memory card reader/writer

SCOPE:
This NWI will define the command specifications which are part of the user interface between the Optical Memory Card Reader/Writer (hereafter OMC R/W) and its controlling host computer. The command specifications are to be compliant with the SCSI standard.

PURPOSE AND JUSTIFICATION:
Standards for the Optical Memory Card itself are now established, and OMC R/Ws have already been marketed by several companies; however, OMC R/W user interface specifications have yet to be standardized. To date, OMC R/W user interface specifications are vendor specific and are incompatible at the command level. Consequently, an application program built for a particular OMC R/W has to be modified for other OMC models. Moreover, the lack of command compatibility is seen as a disadvantage by users, which is likely to prevent the widespread take-up of OMCs by the market. Users therefore, request that application programs must be capable of supporting multiple vendors' OMC R/Ws without modification.

In order to implement command compatibility, it is necessary to specify the user interface specifications between any OMC R/W and its controlling host computer. One way of doing this is to leave the specification to the manufacturer. They would then describe driver/library specifications to access their OMC R/W from any application program. However, this approach has the following shortcomings:

- It would be necessary to prepare a driver/library for each vendor's OMC R/W.
- When the OMC R/W is replaced by a different model, its corresponding driver/library would have to be installed.
- It would be difficult to produce a common driver/library able to connect/control multiple vendors' OMC R/Ws. Even if such a driver/library were produced, newly developed OMC R/Ws may not be supported as they are likely to require new or unsupported commands.

The above problems can be overcome by standardizing a SCSI command specification for OMC R/Ws. By creating such a standard, it is reasonable to expect that a standardized access library including BIOS, would become available for OMC R/Ws. Such a standard would thus be attractive to both vendors of drivers and users alike.

This NWI will produce the SCSI command specifications for OMC R/Ws, to form the basis of the user interface specification. From this:

- It would be possible to create one driver/library to control all OMC R/W regardless of the vendor.
- Specific OMC R/Ws do not require the installation of their own driver/library.
- The driver/library can control a newly developed OMC R/W regardless of whether it was entered for or not at the time of developing the driver/library.
In order to standardise OMC R/W command specifications, it is desirable to choose the optimum command specifications from among the available interface specifications.

Choosing any new or unique specification would lack compatibility with existing conventional technology. This NWI aims to produce a command specification based on SCSI for the following reasons:

- All OMC R/W providers support SCSI.
- SCSI is the standard interface supported by the computer and peripherals industry.
- When the logical block accessing mode is employed (as described by SCSI), the user interface is independent of the OMC format and recording method used.

The SCSI standard is extremely flexible and provides for a wide range of user options, including vendor specific if required. Consequently, SCSI compliant specifications are not required to be identical and can vary from each other. For example, to read data from an OMC sector, either a vendor specific Read Data command or a standardised Read command could be used, both of which are compliant with the SCSI standard. Although SCSI is already standardised, an OMC R/W command compliant with SCSI has yet to be standardised in any uniform manner.

This NWI would specify the command specifications based on the SCSI standard which every OMC R/W should commonly support. However, vendors would not be prevented from implementing other commands outside of those specified by this NWI.

Additionally, data access via SCSI normally employs a fixed block size. Optical Memory Cards are capable of supporting various sector sizes. This NWI will specify a method to select the appropriate block size for the OMC R/W and OMC card being used.