

T10/01-337r0

**Project Proposal
For a New
NCITS Standard**

**AV Direct-access Commands
(AVD)**

November 8, 2001

1. IDENTIFICATION OF PROPOSED PROJECT

1.1 **TITLE:** AV Direct-access commands (AVD).

1.2 **PROPOSER:** T10.

1.3 **DATE SUBMITTED:** November 8, 2001

1.4 **PROJECT TYPE:** D - Development of a standard within a T10 Technical Committee.

2. JUSTIFICATION OF PROPOSED STANDARD

2.1 NEEDS:

The SBP-3 working group has identified a need for commands that extend the capabilities of direct-access devices (e.g., disks, optical storage and DVD) with respect to streaming audio and video (AV) data. Prototype developments have demonstrated the viability of "disk appliances" that, in one mode, may record or play AV data in real-time without intermediate processing by a computer yet, in another mode, access the AV data for off-line editing or transfer to the medium at rates faster than real time. The consensus of the working group is that a standard should be developed to meet these needs.

2.2 RECOMMENDED SCOPE OF STANDARD:

The AVD draft standard will define commands which may be incorporated by reference into other SCSI command sets. Although work on the draft standard is motivated by experience gained with ANSI NCITS 325-1998 and the continued evolution of High Performance Serial Bus, IEEE Std 1394-1995 as amended by IEEE Std 1394a-2000, it is anticipated that the commands to be developed may be suitable for use with other transports.

Candidates for inclusion in the AVD draft standard are:

- a) commands that enable the direct-access device to manage a rudimentary file system;
- b) commands that permit the direct recording or play of audio or video streams without intermediate processing by a computer;
- c) explanation of how other SCSI command sets may incorporate the AVD commands by reference; and
- d) other capabilities which fit within the general application scope of AVD that may be proposed during the development phase by the participants in the project.

The AVD draft standard is intended to be harmonized with existing SCSI command sets.

2.3 EXISTING PRACTICE IN AREA OF PROPOSED STANDARD:

None.

2.4 EXPECTED STABILITY OF PROPOSED STANDARD WITH RESPECT TO CURRENT AND POTENTIAL TECHNOLOGICAL ADVANCE:

The nature of the proposed project is to extend the applicability of SCSI command sets to emerging areas of technological advance. This will enhance the value of investment in SCSI command sets and promote their continued stability.

3. DESCRIPTION OF PROPOSED PROJECT:

3.1 **TYPE OF DOCUMENT:** Standard.

3.2 **DEFINITION OF CONCEPTS AND SPECIAL TERMS:** None.

3.3 **EXPECTED RELATIONSHIP WITH APPROVED NCITS REFERENCE MODELS:**

The AVD standard is intended for use in closed systems.

3.4 RECOMMENDED PROGRAM OF WORK:

The following program of work is planned for the AVD:

- a) solicit continuing participation by the current membership of T10 through NCITS procedures. Invite comments and proposals from others that may have a contribution to the AVD standard,
- b) establish functional requirements for AVD,
- c) prepare a draft proposed standard based on proposals submitted and other information gathered during the initial investigation,
- d) consider the results of AVD testing as may be available to the committee through the voluntary efforts of the T10 membership and others, and
- e) submit the draft proposed standard to NCITS for further processing.

3.5 RESOURCES - INDIVIDUALS AND ORGANIZATIONS COMPETENT IN THE SUBJECT MATTER:

The current membership of T10 includes representatives from all parts of the computer industry, from semiconductor chip manufacturers to large mainframe system manufacturers as well as government agencies. The members of T10 have expressed their desire to participate and cooperate in the development of this proposed standard.

There are sufficient resources to complete the development of this standard without delaying work on other projects.

Relevant expertise from the Audio/Video working group of the 1394 Trade Association should be considered in the development of this standard.

3.6 RECOMMENDED NCITS DEVELOPMENT TECHNICAL COMMITTEE:

It is recommended that the development work be done in Technical Committee T10 which is responsible for developing lower-level interface standards.

3.7 ANTICIPATED FREQUENCY AND DURATION OF MEETINGS:

Technical Committee T10 meets bimonthly. Specific task *ad hoc* groups are called as may be required for one to three days between the regular meetings but their results are not binding.

3.8 TARGET DATE FOR dpANS TO NCITS: May, 2003.

3.9 ESTIMATED USEFUL LIFE OF STANDARD:

It is anticipated that this standard will have a life of five (5) years.

4. IMPLEMENTATION IMPACTS

4.1 IMPACT ON EXISTING USER PRACTICES AND INVESTMENTS:

The proposed AVD standard will provide an evolutionary growth path to the existing practices and investments. It is likely that any isolated negative impacts would occur in any case through non-standard evolution or revolution.

4.2 IMPACT ON SUPPLIER PRODUCTS AND SUPPORT:

The proposed AVD standard will provide an evolutionary growth path to the existing practices and investments. It is likely that any isolated negative impacts would occur in any case through non-standard evolution or revolution.

4.3 TECHNIQUES AND COSTS FOR COMPLIANCE VERIFICATION:

The committee will consider the results of AVD testing as may be available to the committee through the voluntary efforts of the various participants in T10 and others. With this method all costs are borne by the organizations of the various participants and have for the most part been mainly an adjunct of their normal development costs.

4.4 LEGAL CONSIDERATIONS:

There are no known legal considerations unique to AVD. A Call for Patents will be made.

5. CLOSELY RELATED STANDARDS ACTIVITIES**5.1 EXISTING NCITS STANDARDS:**

ANSI NCITS 325-1998 Serial Bus Protocol 2

5.2 NCITS STANDARDS DEVELOPMENT PROJECTS:

T10 Project 1467D Serial Bus Protocol 3

5.3 NCITS STUDY GROUPS: None.

5.4 OTHER RELATED DOMESTIC STANDARDS EFFORTS: None.

5.5 ISO/IEC JTC 1 STANDARDS DEVELOPMENT PROJECTS:

It is anticipated that AVD will be proposed to ISO/IEC JTC1/SC25/WG4.

5.6 OTHER RELATED INTERNATIONAL STANDARDS DEVELOPMENT PROJECTS: None.

5.7 RECOMMENDATIONS FOR COORDINATING LIAISON: None.

5.8 RECOMMENDATIONS FOR CLOSE LIAISON: None.