To: John Lohmeyer, Chairman, X3T10 Committee (SCSI)

From: Dennis Pak
        IEEE P1285 Liaison to X3T10

Date: July 7, 1995

Subject: P1285 Liaison Report for July 1995

Scope

IEEE P1285 is a standards group organized to define a new interface for
"high-latency", non-volatile memory elements such as rotating media and
solid state memory. The group is targeting configurations where storage
elements are small enough to be attached directly to the motherboard.
The goals are to provide support for scheduling of data transfers
spanning large numbers of units and to represent the traditional
secondary storage elements as an extension to the system's main memory
(memory-mapped).

Issues of concurrency, latency, bandwidth, extensibility, scalability
are being addressed. The increasing demand for deterministic data
transfers by real-time applications is being examined. Support is to
be provided for scheduling data transfers in a predetermined manner in
order to support time dependent applications.

The major features of P1285 are identified below:

  o Control and data space is memory mapped using P1212
  o Three interface levels: Alpha, Beta & Gamma
  o Alpha Level: 32-bit optimized, slave
  o Beta Level: 32-bit optimized, master/slave
  o Gamma Level: 64-bit optimized, master/slave
  o Byte addressable, true memory mapped disk architecture
  o Inherent spindle synchronization support
  o Isochronous support
  o Self-synchronous data transfer
  o Live insertion/removal
  o Motherboard direct attach
  o Scalability in performance and cost

IEEE P1285 Project Status

* A new association with the National Storage Consortium has resulted
  in a revival of interest in an alpha level interface.

* An alpha level interface has been added to the P1285 document. It is a
  slave only interface with 4 byte commands. Each command is associated
  with a block of device buffer memory. Media-to-device-buffer and
  device-buffer-to-media transfers occur for single blocks.

* Support for passing other classes of storage commands across the
  P1285 interface has been added as a result of technical interactions
  with the P1394 Trade Association committees.

* Isochronous support in P1285 has been used in P1394 to achieve
  a disk drive capability that supports both asynchronous and
  isochronous activity.

* A motion to re-affirm submission of the P1285 document to the
  IEEE for balloting has been passed by the P1285 working group
  at the June 14 meeting.

* The P1285 balloting body was closed at the end of June.

* The P1285 document was forwarded to the IEEE for balloting
  at the beginning of July.

* A P1285 WWW webpage is under construction with a link to the new
  P1285 document.

Upcoming Events

Future meetings are scheduled as follows:

   August 3   Quantum Corporation, 500 McCarthy Blvd, Milpitas, CA