T10/01-012r0

Draft Minutes
SSC-2 Working Group
AdHoc Meeting
December 6, 2000 - Austin, TX
2:00 PM - 9:00 AM

Agenda:

1. Introductions: Group
2. Approval of this agenda: T10/01-011r0 Dave Peterson
    a. Call for Secretary
3. Approval of minutes: T10/00-412r0 Dave Peterson
4. Review of old action items: Dave Peterson
5. Discussion items:
a. Explicit state change proposal T10/00-318r2 Rob Basham
8. Unscheduled business:
9. Next meeting requirements:
10. Review new action items: Dave Peterson
11. Adjournment: Group

The group introduced themselves.

There was a call for secretary for this meeting. Joe Breher of Exabyte volunteered to fulfill this role.

The meeting Agenda 01-011r0 was approved.

There was a call for a permanent secretary. Rob Basham of IBM indicated that he may be able to fulfill this role effective next meeting.

The minutes of the last meeting, as embodied within T10/00-412, were approved by the group.

The acting secretary read action items from Meeting Minutes of 2000oct30 (T10/00-412r0).
1) Op codes for the new commands. Action to Ralph Weber. COMPLETED
2) Study of buffer mode requirements. Action to Rob Basham. December goal. COMPLETED
3) Study of statefulness of tape and how to manage it. Action to Rob Basham. December goal. COMPLETED
4) Study of punctuation between read series and write series. Action to Rob Basham. December goal. COMPLETED
5) Work with Rob Basham to structure SCC-2 document. Action to Dave Peterson. CARRY FORWARD
6) Schedule meeting for December. Action to Dave Peterson. Goal is to be reviewing from the SSC document in January. COMPLETED

Rob Basham of IBM presented T10/00-318r2.pdf for a page by page review.

The document states that there will be two tape models: Explicit and Implicit
Explicit will be mandatory
Implicit will be optional

Rob Basham of IBM made a motion the the command queing model be optional. This was not seconded, and discussion of this point ensued.

Much discussion ensued regarding the nature of tape buffering.

There was a distinction made between read and write in order to constrain the discussion.

Rob Basham of IBM requested a vote for the group to accept that Read, in the non queued case, be truly stateless, in that it would contain an implicit Locate. This passed 6:3.

Consensus was built regarding semantics as follows:
Read, Non-Queueing

- Do not validate recieved LBA against current position
- Perform implicit Locate if necessary
- Process Command
Read, Queueing
- Do not validate received LBA against current position
- Perform implicit Locate if necessary
- Process Command
Write, Non-Queueing
- Validate received LBA against current tape position
- Return Check Condition if LBA does not match current position
- Process command if LBA does match current position
Write, Queueing
- Validate received LBA against current position
- Hold in queue until prior command(s) (with respect to LBA) arrive (if not in order) until resources are exhausted.
- Process commands as they can be ordered
- Upon resource exhaustion, return Check Condition for all outstanding commands with new (TBD) ASC / ASCQ.

The concept of states was discussed. Joe Breher of Exabyte made a request to enumerate the states. Rob Basham of IBM enumerated the states thusly:

- Neutral
- Implicit (old model)
- ExplicitRead
- ExplicitWrite

The concept of Punctuation was discussed. The Punctuation Mark is a unique CDB such that, if anything is in the queue when this CDB is received, the CDB is rejected. Reception of the Punctuation Mark CDB will cause a transition to the Neutral state.

An action item was assigned to Rob Basham of IBM to develop a state chart, including transitions between states.

Joe Breher of Exabyte objected to the change in tape processing semantics regarding unanticipated tape marks. Historically, encountering a tape mark during a read or space operation resulted in positioning to the EOT side of the tape mark. The document under discussion indicates that the tape would be positioned on the BOT side of the tape mark under these conditions. Rob Basham of IBM noted that in his discussions with various application vendors, Microsoft also objected to this change in semantics.

Paul Entzel of Quantum noted that the 16 byte Locate CDB does not allow both Current Position and Relative Count. This may result in data corruption during a space operation, which is invoked via the Locate CDB.

An action item was assigned to Rob Basham to resolve the Space Block issues.

There was a fair amount of discussion regarding whether the new command set becomes Mandatory for SSC-2, and the Implicit command set becomes optional. No conclusion reached.

Joe Breher of Exabyte noted that there is no mechanism for reporting when LBA counters overflow. The group pointed out that this is not unique to the sequential command set. Any such problem is likely to be solved by the disk world before it is encountered by the tape world.

Request for Monday @ T10 in Jan
4 hrs @ T11 in Feb

REVIEW OF NEW ACTION ITEMS
1) (Carry Forward) Work with Rob Basham to structure SCC-2 document. Action to Dave Peterson.
2) Develop a state chart, including transitions between states. Action to Rob Basham
3) Resolve the Space Block issues. The specific issues are that: the 16 byte CDB does not allow both Current Position and Relative Count; and that Microsoft and Exabyte object to the change in FileMark traversal rules. Action to Rob Basham

Attendance:

Adaptec	Moore	Dennis	dmoore@ix.netcom.com
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