

XOR Command Study Group meeting minutes - Document number X3T10/95-232r0
Meeting place: Sheraton Inn Harrisburg, Harrisburg, PA
Date: May 8, 1995

Attendees:

Jay Elrod	Seagate
Gerry Houlder	Seagate
Paul Hodges	IBM
Bill Hutchison	Hewlett Packard
Stephen Holmstead	Hewlett Packard
Edward Fong	Amdahl
George Penokie	IBM
Duncan Penman	IIX
Gary Stephens	FSI
Gene Milligan	Seagate

Gerry Houlder acted as chairman for the meeting. Revision 8 of the xor document was discussed. Below is a summary of the major issues discussed. Note: several minor editorial changes were discussed which are not included in this list. The next revision should be referred to if details of these changes are needed.

1. REBUILD/REGENERATE parameter list - recent modifications were discussed. It was recommended that the source descriptors be broken out and described separately from the rest of the parameter list.
2. Annex A - recently added xor examples were discussed. No modifications were recommended.
3. Recently added definitions section was discussed. It was recommended that text be added which refers the reader to the appropriate document, such as SAM and SCC, for further clarification of the meaning of the terms defined.
4. Distributed regenerate/rebuild proposal - Paul Hodges (IBM) presented more implementation approaches for the proposal he presented at the March '95 xor meeting. The proposal involves distributing the xor task among the source devices involved in a regenerate or rebuild operation. The question still stands as to whether the idea would be worthwhile from a performance standpoint. Paul will work via the SCSI reflector to see if enough interest in the idea exists to pursue putting it in the standard.
5. RAID 3 multicast proposal - an idea was presented (proposed off-line by Steve Fuld of Storage Tek) for making use of multicasting capability to streamline RAID 3 type operations during writes to an entire stripe in a RAID 5 environment. The consensus was that the xor document is not the proper place to standardize such an idea, since not all physical interfaces to which the document applies support multicasting (e.g. parallel SCSI).
6. It was strongly recommended that the "Buffer Full" ending status method proposed in the xor document (section 1.4.1 of rev 8) be replaced by a method which uses check condition status and a new ASC & ASCQ indicating the buffer full condition, since getting a new status byte approved may be extremely difficult.

7. Future plans - there was discussion regarding what the next step should be regarding moving ahead with the xor document. It was moved that a vote be proposed at the plenary on Thursday for inclusion of revision 9 of the xor document in the SCSI Block Commands standard. There was unanimous agreement. Since neither Gerry Houlder or Jay Elrod were planning to be at the plenary, Gene Milligan (Seagate) agreed to propose that the vote be taken.