

Error Recovery Policy Requirements for Command Queuing

T10/97-187r0

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Proposal X3T10/96-277r2, which was passed by the Committee at the March Plenary, added a new QErr behavior to resolve a multi-initiator CHECK CONDITION deadlock. In doing so, the proposal, as passed, deleted the requirements defining what QErr behaviors shall be supported by a device implementing command queuing.

During the subsequent working group discussion, there appeared to be agreement among device vendors and systems integrators that values of 00 or 11 were acceptable and that at least one of these could be implemented by all devices, regardless of the type of queuing supported (basic or full). However, since agreement on precise wording could not be obtained, the proposal as passed directed that the requirements for QErr behavior be deleted from the Basic Queuing model.

This proposal addresses that deletion by modifying clause 7 of SAM-2 (Task Set Management) as described below.

“Devices that implement any of the command queuing behaviors defined in this standard shall support at least one of the queue error management policies defined in the Control mode page (see the SPC standard) and may optionally support more than one policy. In any case, at least one of the supported policies shall implement QErr behavior corresponding to a value of either 00h (resume blocked tasks after an ACA condition is cleared) or 11h (abort all tasks belonging to the faulted initiator after an ACA condition is cleared).”