T10/05-375 revision 1

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To: T10 Committee (SCSI)

From: George Penokie (IBM/Tivoli)

Subject: SPC-4: EBACKERR bit Error Reporting Clarification

1 Overview

In SPC-4 it is not clear what the relationship is between the EBACKERR bit and the interval timer and the report count values.

The intent was that the EBACKERR bit not relate to either the interval timer or the report count. Background scan errors should be reported as soon as they are found so action can be taken at the system level to correct the error. For this to occur the drive needs to report background scan error conditions as soon as possible after they are discovered so recovery can be initiated (e.g., issuing a Reassign Block Command and then rewriting the LBA lost due to a hard read error) to minimize the duration of data loss exposure. This is very different from the necessity for reporting multiple instances of an information exception condition error.

2 SPC-4 changes

An enable background error (EBACKERR) bit set to zero indicates the target shall disable reporting of background self-test errors (see 5.5.3.4) and background scan errors (see SBC-3). An EBACKERR bit set to one indicates reporting of background self-test errors and background scan errors shall be enabled. The method for reporting background self-test errors and background scan errors is determined by contents of the MRIE field. Background self-test errors and background scan errors shall be reported as soon as the method specified in the MRIE field occurs (i.e., the INTERVAL TIMER field and REPORT COUNT field do not apply for background self-test errors and background scan errors).