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To: T10 Technical Committee
From: Ralph Weber, LSI Logic Alternate Member of T10
Subj: Changes made while incorporating Logical Unit Self-tests

While incorporating the Logical Unit Self-tests proposal (99-179r5) in SPC-2 revision 12, I encountered several problems mostly concerning the relationship between the new proposal an the classic self-tests defined by the SELFTEST bit. This document describes the changes made to give both self-test methods an identifiable definition.

The classic self-test has been given the name "default self-test". This name is consistent with the existing text: "A self-test (SELFTEST) bit of one directs the device server to complete the target's default self-test." It has the additional advantage of being different from all the names for the new self-test: "short", "extended", "foreground", and "background".

The conditions stated in 99-179r5 for terminating other SEND DIAGNOSTICS commands while a background mode self-test is in progress allowed a command with the SELFTEST bit set to one to execute and prohibited SES SEND DIAGNOSTICS commands (which are pretty much the only commands SES has). This was modified to prohibit SELFTEST=1 and allow the SES uses of SEND DIAGNOSTICS.

The first paragraph in the description of the SEND DIAGNOSTICS command was modified to clarify that implementation of the self test features in 99-179r5 is optional.

99-179r5 requires that the response to an attempt to abort a non-existent background self-test is NOT READY - LOGICAL UNIT NOT READY, SELF-TEST IN PROGRESS. This looks like a cut and paste error. It has been changed to ILLEGAL REQUEST - INVALID FIELD IN CDB.

99-179r5 does not specify the interaction between the newly defined function codes and the parameter list length. Requirements have been added that the parameter list length shall be zero when the function code is non-zero. This provides for future enhancements of the short or extended self-test features.

Since 99-179r5 provides for returned self-test data in a log page, numerous references to "returning data" that formerly were applicable to diagnostic page data no longer fully apply, because the new self-test feature returns data but not in response to a REQUEST DIAGNOSTIC RESULTS command. This technicality has been corrected by changing "data" to "parameter data" wherever applicable in the SEND DIAGNOSTIC command description.

The following requirements have been added to the ends of the paragraphs describing the DEFOFFL and UNITOFFL bits, to restrict their usage to the default (classic) self-test:

> "When the SELFTEST bit is zero, the DEFOFFL bit shall be ignored."
> "When the SELFTEST bit is zero, the UNITOFFL bit shall be ignored."

It is believed that the two sentences above should have been added when the SES usage of the SEND DIAGNOSTIC command was defined.

The table describing the exception commands for background self-tests and the text describing the table were restructured to combine identical situations and make the presentation of requirements more direct. This restructuring was intended to have no effect on the requirements.