To: INCITS Technical Committee T10
From: Rich Ramos, Xyratex
Date: Mar 8th, 2006
Subject: SPC-4: ALL_TG_PT clarification

1. Revisions

0: 3/8/2006, initial draft

2. Introduction

The ALL_TG_PT bit is defined as optional in SPC-4 (as well as previous versions of SPC), however no explicit statement is made about what to do if the bit is not supported yet is requested from a SCSI initiator. Granted any device server is allowed to return CHECK CONDITION status whenever it deems appropriate, even when not explicitly stated. However explicit consistency with other optional bits within Persistent Reservations would be desirable. Plus a sampling of other optional bits in other features shows that most of them dictate what to do when an optional item is not supported. There is also evidence from email traffic on the T10 reflector that the proposal below is consistent with people's already existing understanding of the optional bit.

3. Proposal

This proposal recommends the addition of an explicit statement to the ALL_TG_PT definition paragraph in section 6.12.3

Original text:

"The All Target Ports (ALL_TG_PT) bit is valid only for the REGISTER service action and the REGISTER AND IGNORE EXISTING KEY service action, and shall be ignored for all other service actions. Support for the ALL_TG_PT bit is optional. If the device server receives a REGISTER service action or a REGISTER AND IGNORE EXISTING KEY service action with the ALL_TG_PT bit set to one, it shall create the specified registration on all target ports in the SCSI target device known to the device server (i.e., as if the same registration request had been received individually through each target port). If the device server receives a REGISTER service action or a REGISTER AND IGNORE EXISTING KEY service action with the ALL_TG_PT bit set to zero, it shall apply the registration only to the target port through which the PERSISTENT RESERVE OUT command was received."

Text to add, this text is taken from and would make ALL_TG_PT consistent with APTPL, which is also optional.:

"If a device server that does not support an ALL_TG_PT bit set to one receives that value in a REGISTER service action or a REGISTER AND IGNORE EXISTING KEY service action, the command shall be terminated with CHECK CONDITION status, with

the sense key set to ILLEGAL REQUEST, and the additional sense code set to INVALID FIELD IN PARAMETER LIST."

In other words the new paragraph would be:

"The All Target Ports (ALL_TG_PT) bit is valid only for the REGISTER service action and the REGISTER AND IGNORE EXISTING KEY service action, and shall be ignored for all other service actions. Support for the ALL_TG_PT bit is optional. If the device server receives a REGISTER service action or a REGISTER AND IGNORE EXISTING KEY service action with the ALL_TG_PT bit set to one, it shall create the specified registration on all target ports in the SCSI target device known to the device server (i.e., as if the same registration request had been received individually through each target port). If the device server receives a REGISTER service action or a REGISTER AND IGNORE EXISTING KEY service action with the ALL_TG_PT bit set to zero, it shall apply the registration only to the target port through which the PERSISTENT RESERVE OUT command was received. If a device server that does not support an ALL_TG_PT bit set to one receives that value in a REGISTER service action or a REGISTER AND IGNORE EXISTING KEY service action, the command shall be terminated with CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST, and the additional sense code set to INVALID FIELD IN PARAMETER LIST."