To: T10 Technical Committee
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Subject: 03-353r0 SPC-3 Report initiator port identifiers

Revision history
Revision 0 (15 October 2003) First revision

Related documents
spc3r15 - SCSI Primary Commands - 3 revision 15
02-419 SPC-3 Device names and VPD data
03-339 SPC-3 Third-party persistent reservations
03-344 SPC-3 Report all target port identifiers
03-354 SPC-3 Specify initiator ports in EXTENDED COPY target descriptors

Overview

A SCSI device supporting "third party" commands like EXTENDED COPY (SPC-3) and XDWRITE
EXTENDED, REBUILD, and REGENERATE (SBC-2) contains both SCSI target ports and SCSI initiator ports.
The initiator and target ports might be in the same in different SCSI domains. There might be more than one
initiator port available to service the command.

When sending one of these commands (to a target port), there is no way currently provided to specify which
initiator port(s) to use. Such an extension will be proposed separately for EXTENDED COPY.

To enable this, a relative initiator port identifier feature is proposed, similar to the relative target port identifier
feature used by asymmetric logical unit access (target port groups) and persistent reservations to identify
target ports.

Suggested changes

7.6 Vital product data parameters

7.6.1 Vital product data parameters overview and page codes

This subclause describes the vital product data (VPD) page structure and the VPD pages (see table 269) that
are applicable to all SCSI target devices. These VPD pages are optionally returned by the INQUIRY command
(see 6.4) and contain vendor specific product information about a ~~target or~~ logical unit or other objects in the
SCSI device containing that logical unit. The vital product data may include vendor identification, product
identification, unit serial numbers, device operating definitions, manufacturing data, field replaceable unit
information, and other vendor specific information. This standard defines the structure of the vital product
data, but not the contents.

Table 1 — Vital product data page codes

Page code	VPD page name	Reference	Support requirements
88h	All Initiator Ports	7.6.x	Optional

7.6.x All Initiator Ports VPD page [all new - text is not highlighted any more]

The All Initiator Ports VPD page (see table 2) provides the means to retrieve identification descriptors applying to all the initiator ports in the SCSI target/initiator device.

Table 2 — All Initiator Ports VPD page

Byte\Bit	7	6	5	4	3	2	1	0
0	PERIPHERAL QUALIFIER				PERIPHERAL DEVICE TYPE			
1	PAGE CODE (88h)							
2	(MSB)							
3				PAGE LENGTH (n - 3)				(LSB)
4	(MSB)							
7			NUMBER OF INITIATOR PORTS					(LSB)
	All Initiator Ports Identification descriptor list							
8	All Initiator Ports Identification descriptor (first)							
	...							
n	All Initiator Ports Identification descriptor (last)							

The PERIPHERAL QUALIFIER field and the PERIPHERAL DEVICE TYPE field are as defined in 6.4.2.

The NUMBER OF INITIATOR PORTS field indicates how many initiator ports are supported by the SCSI target/initiator device.

Each All Initiator Ports identification descriptor (see table 3) contains information identifying an initiator port. An All Initiator Ports identification descriptor shall be included for each initiator port that may be used by a third-party command (e.g., EXTENDED COPY (see 7.xx) or XDWRITE EXTENDED, REBUILD, or

REGENERATE (see SBC-2)). The number of All Initiator Ports Identification descriptors is not required to be the same as the number of initiator ports indicated by the NUMBER OF INITIATOR PORTS field.

Table 3 — All Initiator Ports identification descriptor

Byte\Bit	7	6	5	4	3	2	1	0
0	(MSB)							
3			RELATIVE INITIATOR PORT					(LSB)
4	(MSB)							
7			TRANSPORTID LENGTH (n - 7)					(LSB)
8								
n				TRANSPORTID				

The RELATIVE INITIATOR PORT field identifies the initiator port relative to other initiator ports in the SCSI target/initiator device as described in table 4. If an initiator port is also a target port (i.e., it is a target/initiator port), it shall have the same relative identifier as the relative target port identifier (see 7.6.4.6) reported for the target port.

Table 4 — Relative initiator port

Value	Description
0h	Reserved
1h	Relative port 1
2h	Relative port 2
3h - 7FFFFFFFh	Relative port 3 through 2 147 483 647
80000000 - FFFFFFFFh	Reserved

The TRANSPORTID fields contains a TransportID identifying the initiator port as specified in 7.5.4.

Editor's Note 1: This field is much bigger than should ever be needed, but is modeled exactly after the relative target port field. It might be better to only use bytes 2 and 3 and provide a 16-bit identifier.