To: X3T10   X3T10/94-236r0

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Subject: Addressability of TARGET RESET task management function

The development of hierarchically organized address structures as described
in the SCC document (X3T10/1047D, Revision 3) requires the addition of a task
management function that can selectively perform a reset for a target below
the top level of the hierarchy. To meet this requirement a LOGICAL UNIT
RESET task management function is proposed as an addition to the SAM document
(X3T10/994D, Revision 16). This document proposes architectural concepts
and an implementation for the LOGICAL UNIT RESET function and proposes
wording additions to SAM to incorporate the new function.

Architectural Concepts:

At present, the TARGET RESET function acts on all logical units attached
to the SCSI port. In the case of hierarchically organized address
structures, targets actually exist in the address space defined by the logical
unit
number. LOGICAL UNIT RESET is defined to perform the TARGET RESET function
on those targets and logical units existing in the LUN address space. The
LOGICAL UNIT RESET function addressed to one of those targets or logical
units does not influence other peer units in the hierarchy and resets the
addressed unit and all targets and logical units below the addressed unit
in the hierarchy.

Proposed Implementation:

The object address for the LOGICAL UNIT RESET contains the logical unit
number of a destination logical unit. The logical unit and all dependent
logical units will be reset. SAM must be modified in the following manner.

Modifications to SAM:

Section 7 should have the following text added between the descriptions of
CLEAR TASK SET and TARGET RESET.

"LOGICAL UNIT RESET (Logical unit number||) - Reset the specified logical
unit and all targets and logical units hierarchically addressed from the
logical unit. All tasks in all task sets for all affected logical units
are reset. All hierarchically addressed SCSI devices shall support this
function. For SCSI targets not having hierarchical addressing,
implementation of this function is a logical unit option."

The following new section 7.n is added between the present section 7.4 and

7.5:

7.n LOGICAL UNIT RESET

Function Call:

Service Response =
            LOGICAL UNIT RESET (Logical unit identifier||)

Description:

This function shall be supported by all SCSI targets that support
hierarchical address structures. The function is optionally supported by
other SCSI
targets.

The logical unit addressed by the logical unit identifier is reset according
to the rules of the TARGET RESET function. That logical unit and all lower
logical units in the hierarchy are reset. Peer logical units and logical
units above the addressed logical unit are not affected by the
LOGICAL UNIT RESET function.

Before returning a Function Complete response the addressed logical unit
shall perform the hard reset functions specified in clause 6.6.6 and shall
create a unit attention condition in all affected logical units for all
initiators as specified in clause 6.6.5.