To: T10 Technical Committee
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Subject: T10/06-0177r0 SAS 2.0 Zoning BROADCAST Processing Clarification

Revision History
Revision0 (30 March 2005) first revision

Related Documents
Serial Attached SCSI –2 (SAS 2) 03

Overview
SAS 2 r03 describes the behavior of a zoning expander when a BROADCAST primitive or an SMP
ORIGINATE BROADCAST PRIMITIVES request is received. The intent was for a BROADCAST primitive
or an SMP ORIGINATE BROADCAST PRIMITIVES request to be transmitted by the zoning expander
using a similar set of rules. Unfortunately, as written in SAS 2 r03, different rules are used, resulting in
different behavior.

For example, a received BROADCAST primitive will be transmitted on ports with the zone participating bit
set to zero only when the group ID of the receiving and transmitting ports match. The intended rule is for
the BROADCAST primitive to be transmitted on all ports which have permission to communicate with the
receiving port according to the zone permission table.

Suggested Changes

4.8.5 BROADCAST processing
If a zoning expander device receives a BROADCAST or an SMP ZONED BROADCAST request, then the
zoning expander device shall process the broadcast on each other expander port as follows (where d is
the group of the destination port):

   a) Transmit an SMP ZONED BROADCAST request from its SMP initiator port if the expander port
       has its ZONE PARTICIPATING bit set to one and has at least one zone permission bit is set to one in:
          A) at least one ZP[s,d] is set to one where s is any of the zone groups listed in the received
              SMP ZONED BROADCAST request; or
          B) the ZP[s,d] is set to 1 where s is the zone group of the expander port on which the
              BROADCAST was received;

       or

   b) transmit a BROADCAST if the expander port has its ZONE PARTICIPATING bit set to zero and
       one of the following conditions is met:
          A) at least one zone permission bit ZP[s,d] is set to one where s is in any of the zone groups
              listed in the received SMP ZONED BROADCAST request; or
          B) ZP[s,d] is set to 1 where s is the zone group of the expander port matches the zone
              group of the expander port on which the BROADCAST was received.