Bridge Controller Command
Set project proposal issues

01-151r0
by Rob Elliott, Compaq Computer Corporation
2 May 2001
What are the project goals?

- Bridge needs
  - Expose multiprotocol fabric topology to SCSI software
  - EXTENDED COPY target descriptors
    - backup app, copy manager, data source, data destination may each be on different fabrics
Bridge needs continued

- ACCESS CONTROL Transport IDs
  - TransportID must use target protocol’s identifier type
  - target may be on different fabric from initiator

- Asymmetric target ports
  - all target ports may not be reachable
  - need to understand how each target port is mapped through a bridge

- Multiple paths
  - multiple bridges connecting same protocol islands possible
  - many paths through a fabric possible

- Bridge configuration
  - Query beyond bridge, open/close maps to different devices
General management needs

- Access all MIB or XML data in-band
  - alternate way to get at the data
- In-band vs. out-of-band management
  - both useful in different scenarios
- Management Command Set (MCS)?
- SCSI Socket Services (SSS) to transport IP over SCSI?
- same or different from bridge needs?
  - two proposals or one
  - define bridge commands as MIBs or something that can be shared with IP management tools
What device type?

- BCC (new) vs. SCC-3 (existing)
- Existing bridges claim to be SCC devices
- Existing RAID controllers also claim to be SCC devices
- Neither implements all the required features of SCC
  - MAINTENANCE IN
  - VOLUME SET IN/OUT
  - REDUNDANCY GROUP IN (one “configuration method” is required - simple, basic, general - which implies at least this command be supported)
What device type continued

- Current operating systems tolerate SCC devices, may not understand a new device type
- New type indicates new commands supported
- How to differentiate SCC-2 vs SCC-3
  - Version descriptors in INQUIRY data
  - Try new command, rejection means likely SCC-2 only device
  - CmdDT INQUIRY feature
    - broken for MAINTENANCE IN/OUT and variable length CDBs
Target port cognizant functions?

- Multiported target behind a bridge
- Bridge may have access to all the ports or just a subset
- Bridge may have multiple ports on either side (near/far)
- Relative target port ID
  - Real LU only knows about its own hardware
  - In a LUN mapping bridge, does the bridge need to make them identifiers for its own near ports?
- REPORT and SET TARGET PORT GROUPS
  - Logical unit has control of its target ports
  - No control of bridge target ports