March 29, 2007

Product Note: FC vs. SCSI Library Command Interface

One of the fundamental advantages of Qualstar's library architecture is that the data paths and the library control interface path are separate. Customers using DFA drives can take advantage of this design to optimize how library commands are transported in their systems.

All libraries use SCSI medium changer command protocols. Choosing SCSI or fiber channel (FC) just selects the physical interface used to transport the SCSI commands. The library is indifferent to which interface is used since it only sees SCSI in either case.

Figures 1 and 2 represent the choices that TLS and RLS users can make to configure the library physical interface. While the examples show a TLS-8466, the methodology applies to any TLS or RLS that uses DFA drives.

SCSI cable length limitations may dictate choosing FC, or the customer may want to use FC for SAN management reasons. Note that using FC consumes a switch port, another consideration that the user needs to take into account.

As Figure 1 shows, an FCO is required to connect the library control interface to FC. The Single Channel FCO or FC IPM is used. Figure 2 illustrates connecting the library controller directly to the backup server via SCSI, thereby avoiding the cost of the FCO.

RLS and TLS libraries with SCSI drives usually daisy chain the library controller with one of the drives to eliminate a SCSI cable, but could assign the library controller to a separate bus if desired.

XLS library control can be delivered by FC or SCSI. The library command path is always separate from any data path, even when the library and the drives are both operating over SCSI. The appropriate HBA must be specified. Up to eight servers can control an XLS via up to four dual channel HBA cards.

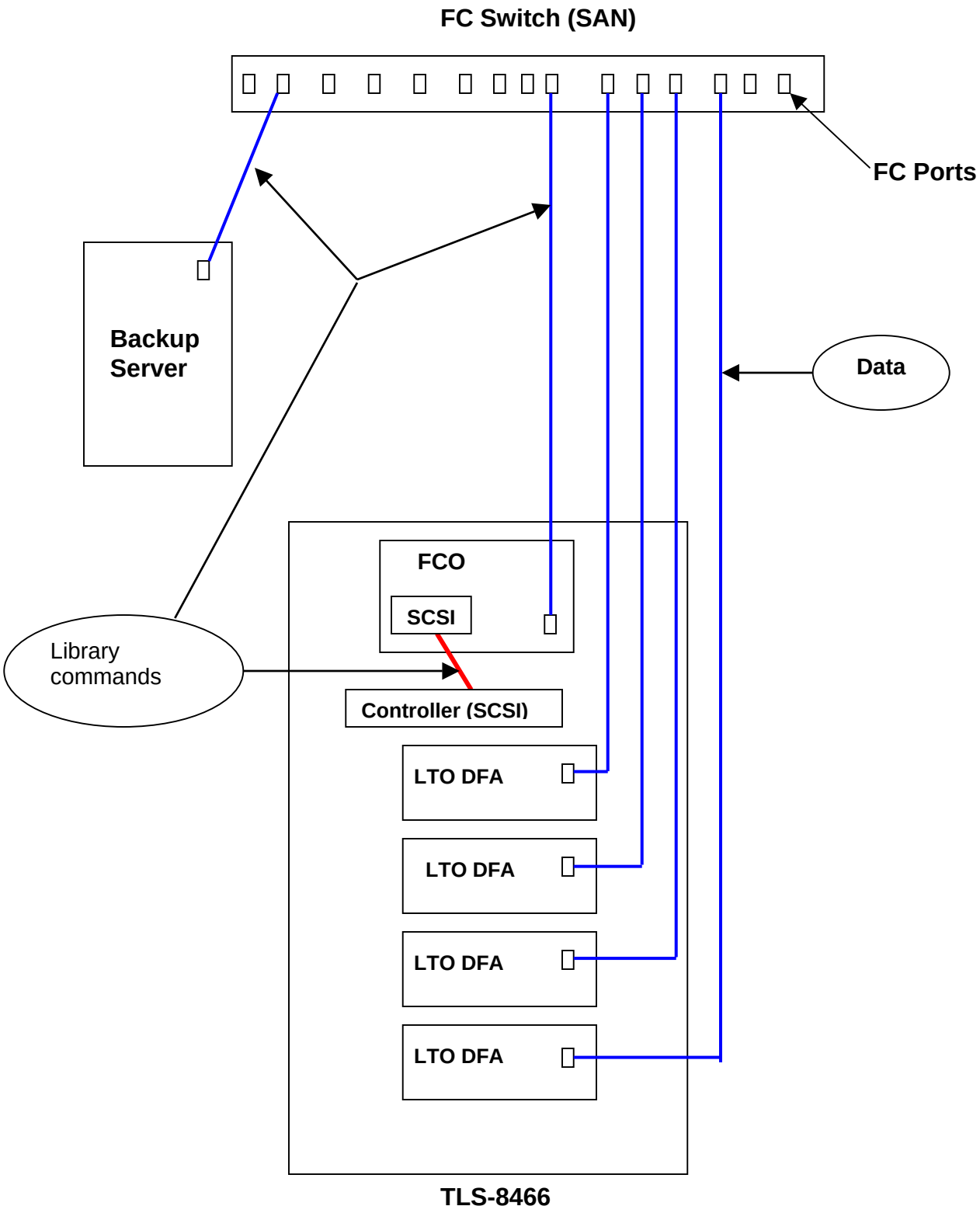

Fig. 1 Connecting Library via Fibre Channel Using FCO

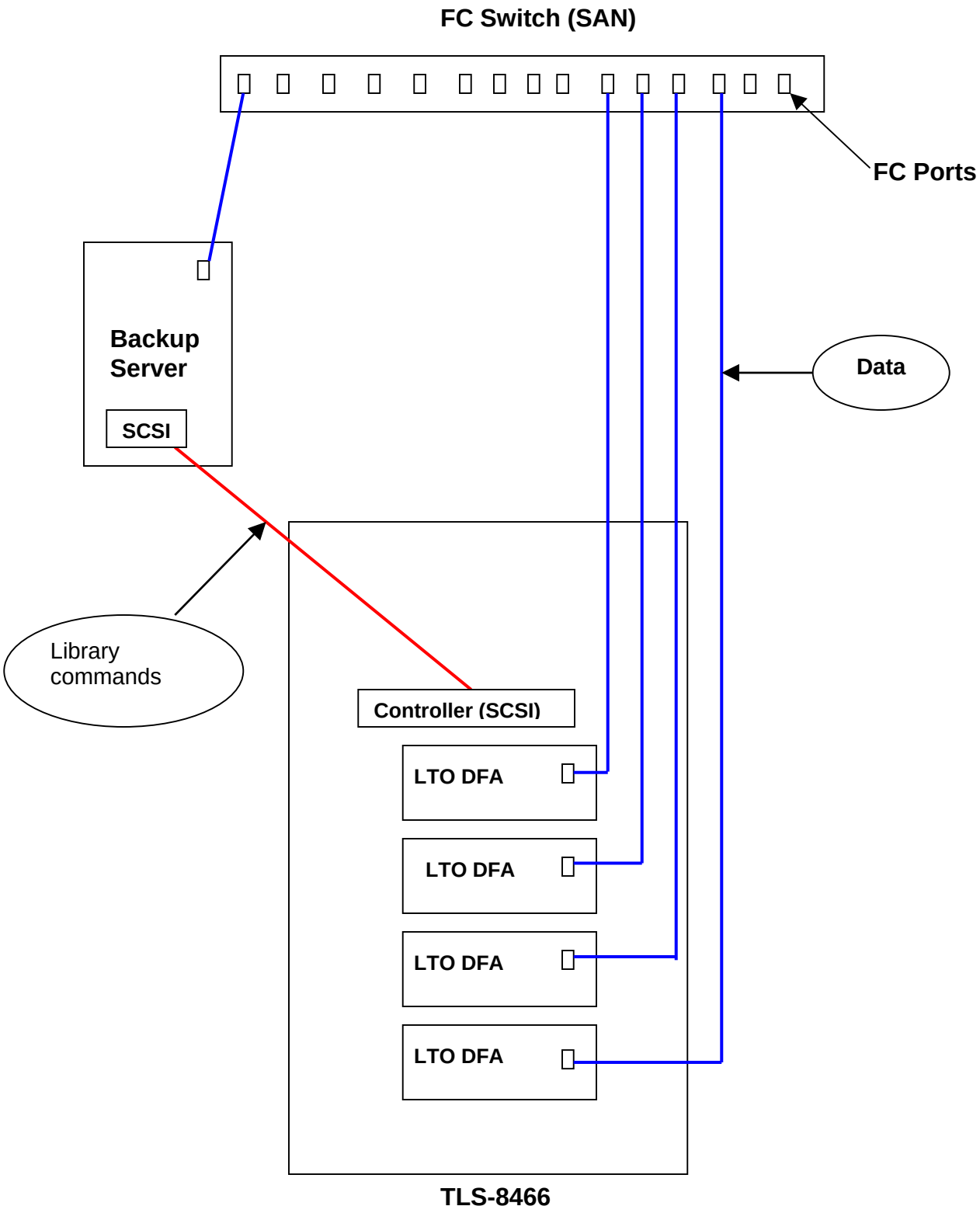

Fig. 2 Connecting Library via SCSI