Introduction

The Osprey emulator from Strobe Data, Inc. is a PC based emulator that replaces all of the DEC cards located in the front of the TCS card cage. This includes the LSI-11/23, the 128k ram, the floppy drive controller, and all three of the serial cards.

The Osprey system is comprised of two cards, one is a PCI card within the PC (T5) and the other is a QBUS controller card located in the DEC card cage on the Master Bus side. The connection between the two circuit boards is made through a Firewire serial link. The Osprey runs the exact same TCS software which has been ported over from the 8" floppy disks. The STEFAN and MAX serial links are connected to Ports 3 and 4 on the PC. The console is a window on the PC monitor.

The Osprey system can be interchanged with the old LSI 11/23 in about 5 minutes. The is accomplished by changing the serial port connections via an A-B switch and by interchanging the Osprey Firewire card with the Master Bus termination card.

Status

The following integration activities and checks have been made:

- The system has been run during the day and at night during the engineering run on January 23, 2003 and is tracking correctly.
- The serial ports have been verified between the Osprey PC ports and MAX and STEFAN. A problem with the operation of the function keys found on MAX during the engineering run was corrected by changing receive buffer parameters on the Osprey. A problem with the TCSD not consistently receiving command acknowledges also found during the engineering run is corrected by extending the TCSD acknowledge time-out period from 0.5 seconds to 0.75 seconds. This increase in loop time is perceived to be cause by the additional windows 2000 operating system hardware extraction layer existing between the serial ports and the executing TCS program.
- Pointing coefficient updates has been verified by writing to the TSC container file located on the Osprey hard disk and rebooting the system to confirm the new coefficients were written. The Osprey can be used with the pointing program since MAX writes the new coefficients to the PC container file.
- Container files have been written to the hard drive on the Osprey PC up to and including the year 2006.
- The Super Tech is non-operational due to a disk drive failure. Therefore, we were not able to investigate if the Osprey would run with the old Super Tech system.