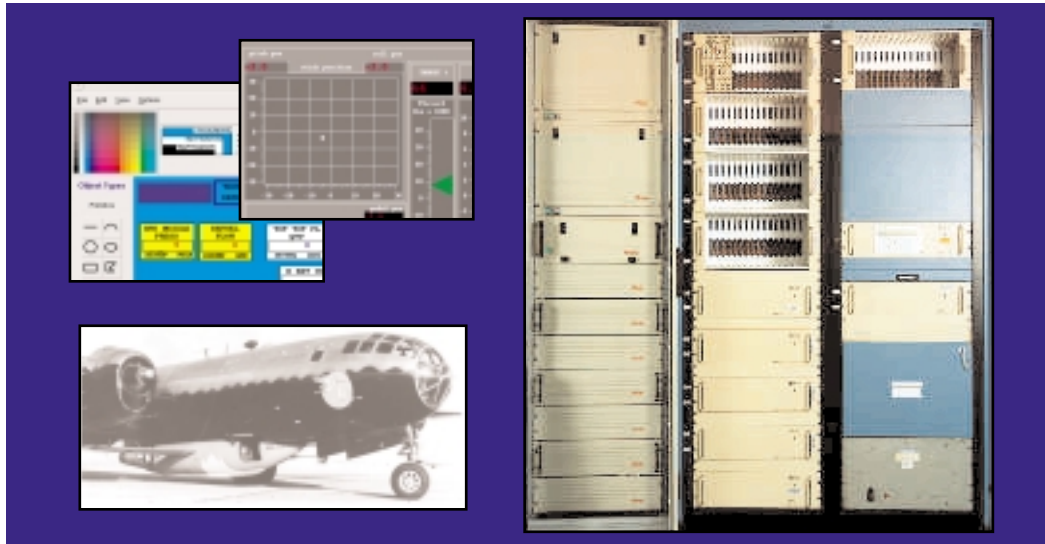


## Application Note

## Avionics System Test Facility

### Multiple MIL-STD 1553 Avionics Bus Data Acquisition System



The Avionics System Test Facility uses the latest AP Labs software and integrated system products to facilitate the acquisition of real-time avionics bus data to verify avionics subsystem performance during the development of a new fighter aircraft.

This system employs several AP Labs software components to provide an integrated aircraft test lab environment. A single VMEwindow session provides control over four Motorola PowerPC single board computers. Among the many supported interfaces is support for ten MIL-STD-1553 avionics buses and multiple independent SCRAMNet Rings. The AP Labs software components include:

- VMEwindow® to provide overall test system control
- Profiler to provide automated tagging of archived test data
- Observer to provide real-time remote display of test data
- Xplore for detailed archive post processing

The system also features AP Labs High Speed Tustin Electronics Data Acquisition system with 160 channels of high speed 16 bit A/D. The Tustin subsystem's operation is fully integrated with the VMEwindow "test conductor" environment.

#### ***Interfaces provided by the system include the following:***

- MIL-STD-1553
- Digital I/O  
(228 channels)
- Analog to Digital (Tustin,  
160 channels)
- Digital to Analog  
(64 channels)
- SCRAMNet
- IRIG Timestamp
- SCSI Disks for  
archive/retrieval