Data Acquisition Delivery Risk Assessment

Summary

The risk to DAQ cost & schedule delivery is primarily driven by three factors:

1. Unexpected parts inspection failures or Government-Industry Data Exchange Program (GIDEP) alerts requiring late change in planned flight parts, new order for alternate parts, delay in box assembly or re-work of box.
2. Box assembly subcontractors do not execute as required to achieve the delivery schedule.
3. Unexpected failure of box qualification and/or acceptance tests requiring re-work and retest.

Flight part risk: Risk to completing in FY05 - Moderate

SLAC has purchased all required parts for the flight electronics fabrication, however several parts have liens against them that must be resolved prior to box assembly.

BAE Rad750 CPU – This part is a subject of an industry wide GIDEP. Internal heat-sinks associated with the BAE board design need to be re-worked. In addition, an Omnirel regulator needs to be replaced with an alternate part. Over 60 units industry wide with priority given to defense related projects. SLAC need date is April 05, BAE capability to deliver is not yet defined.

SIB EEPROM – Austin EEPROMs did not pass GSFC/NASA inspection. Review of part quality issues ongoing. Alternate part availability may not meet fabrication schedule. SLAC need date is April 05.

Mitigation:
Maintain continued project emphasis.

Box qualification and/or acceptance test failure Risk to completing in FY05 - Low

Each box is subject to structural, thermal EMI/EMC, electrical and functional tests prior to completion of the fabrication effort. Only the first three flight TEM and TPS boxes have completed this process. Nineteen additional units of each type will be subject to this test program from February through July 05. The SIU, EPU, PDU, GASU, HCU and associated harnesses are scheduled to be completed by August 05. Any significant test failure could result in schedule delay.

Mitigation:
Engineering models of each box have completed multiple test programs. Lessons learned have been incorporated into the flight design. Test approach has been reviewed to ensure that an over-test condition does not occur.
Box assembly subcontractor schedule delays: Risk to completing in FY05 - Low

Board level and box level assembly has been subcontracted to vendors qualified to fabricate space flight quality hardware. General Technology Corporation in New Mexico is responsible for the TEM and TPS. Aeroflex in Colorado is responsible for the PDU and GASU. Cicon in California is responsible for harness construction. Subcontractors for the remaining components are planned to be selected by March 05.

Mitigation:

**General Technology Corporation**
GTC experienced significant delays in the assembly of the first three TEM/TPS units. Daily production meetings between SLAC & GTC were required to establish and maintain the fabrication plan. Lessons learned from this effort have been rolled into plan for the remaining units. GTC continues to have manpower short-falls; however senior LAT management has established an interface with GTC management to ensure LAT project priorities are maintained.

**Aeroflex**
Aeroflex is in the initial stages of production planning. Technical exchange meetings between SLAC and Aeroflex have been established to proactively establish the fabrication plan and have been very productive. To date Aeroflex has met all expectations.

**Cicon:**
Cicon is in the initial stages of production planning. Technical exchange meetings between SLAC and Cicon have been established to proactively establish the fabrication plan and have been very productive. To date Cicon has met all expectations.