

**August 13, 2003**  
**ADC Status Meeting**

**Present**

Joe Miller, Vern Wallace, Will Deich, David Cowley

**Requirements Document**

We have received a revised Requirements Document from CARA, which incorporates many of the comments given. The largest concern is still the cost and time to comply to several standard specifications. Vern, Will and Barry will estimate the time necessary to comply with these standards, and evaluate what they think the value added would be to compliance.

An example would be that Vern estimates it would cost a man month of his effort to do the lifetime calculations being requested. He noted that the calculations are statistical and apply to large numbers, such as a fleet of ships.

Action: David Cowley will respond to CARA with our comments on the revised Requirements Document.

We have also received an Interface Control Document, which largely duplicates parts of the Requirements Document.

**Optics:**

CARA has given us an additional \$2,000 to fix the Zemax model they gave us of LRIS.

Drew is on vacation, no report.

Corning has offered an additional 5% off the cost of the optical material if we could place an order by October 1<sup>st</sup>. As it is very unlikely we could hold a Preliminary Design Review (PDR) before that, it is not likely we could take advantage of this offer.

**Mechanical:**

Vern showed the latest edition of the mechanical design. Jerry Cabak did a structural analysis and as a result of that analysis, Vern was making some minor changes. Jerry will re-do the analysis once the changes are made. The current estimated weigh is 450 kg without the cladding.

Vern has started design of the “jack stand” to hold the ADC in the storage position. This stand would be welded to the floor at RT4

Vern expects to complete the design work by Sept 15<sup>th</sup>, not including any significant effort that would be need to done as a result of the requirements document.

### **Electronics:**

No report

### **Software:**

Will will estimate the amount of extra work that is being asked for in the Requirements Document, but does not think there is much.

### **PDR**

The estimated date of the PDR is currently October 15<sup>th</sup>.

### **Task List**

Optical:

Fix the CARA Zemax model of LRIS, and model the performance of the ADC with LRIS.

Mechanical:

1. Complete mechanical design
  - a. Prism cells – complete pending final analysis and ball screw placement.
  - b. Slide assembly – complete pending final analysis
  - c. Ball screw drive assembly – specify screw, complete bearing design to fit in space
  - d. Gearing and drive motor assembly –finish with adjustment method, and attachment to structure
  - e. Hardpoint attachments, location and mounting – location is set, need to attach to structure
  - f. Cladding – partially done
  - g. Limits, fiducals, encoders – specify encoder, design fiducal mounts
  - h. Electrical enclosure and cooling
2. Structural analysis of mechanical design – First run complete
3. Confirm final optical parameters with Drew Phillips – to do
4. Design of handling fixture – conceptual design complete
5. Confirm assembly to ICD – to do
6. Specification of mechanical performance – to do
7. Detailed cost estimate – to do

Electronic:

Estimate the cost of compliance to the standards referenced in the Requirements Document.

