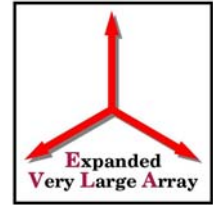# EVLA Monitor & Control Software PDR

Status

Requirements, Schedule

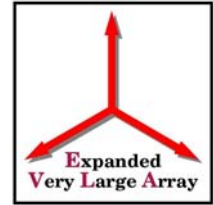Requirements (High Level, Raw):

	target	completed
Antenna Monitor & Control (AMCS)	03/22/02	04/04/02
Operational Interface	03/22/02	04/04/02
Correlator Backend	3/18/02	03/05/02
Correlator Monitor & Control		
Fill vacancy	02/18/02	04/15/02
Requirements, 1st draft	04/16/02	?

But, we do have Brent Carlson's document of 01/23/02.

Requirements, Schedule

We may need an additional requirements document for the Observing Layer of the software.

The position intended to handle the software for the Observing Layer is still vacant.

If we do not fill the vacant position soon, our ability to meet the single dish phase of the test antenna development effort will be threatened.

Test Antenna M&C, Schedule
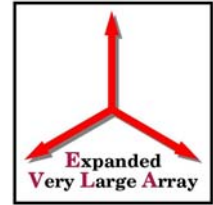
Goal - Outfit test antenna with new M&C System   Q2 2003

|	
Select AMCS MIB chip	done
TC11IB development board in-house (late)	05/17/2002
Select Systems Software for AMCS MIB	05/21/2002
Delivery of simulation environment	06/25/2002
Begin development of MIB software apps	07/09/2002
Prototype MIB board available	07/15/2002
RFI testing of MIB prototype board	TBD
Port of MIB Systems Software complete (12 wks)	08/13/2002
AMCS MIB RTOS on development board	08/27/2002

Test Antenna M&C, Schedule
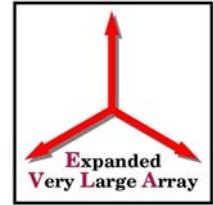
AMCS MIB RTOS on prototype MIB board	09/10/2002
MIB software apps onto prototype MIB board	09/17/2002
Continued MIB software development	thru 03/2003
Bench Testing & Integration of AMCS	thru 03/2003

We will have 6 months after installation of the MIB RTOS on the prototype board for continuing software development, but this development effort will be intermixed with the bench testing.

Our ability to be ready for the start of bench testing and integration depends upon having a useful simulation environment available to us.
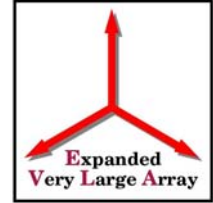
Test Antenna, Software Tasks
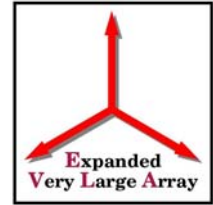
- AMCS MIB
  - Systems Software & Toolset
  - Communication Functions
  - Computation Functions
  - Interface Screens: Technician, Operator, Astronomer
- Test Antenna, Single Dish Phase
  - Command Line Interpreter
  - Timekeeping routines
  - Geometry routines
 - Antenna Pointing model

Test Antenna, Software Tasks

- Test Antenna, Single Dish Phase, cont.
  - Archive system for pointing model parameters
  - Archive system for monitor data
  - Operator interface screens
- Test Antenna, Interferometer Phase
  - Translator, Modcomp card input to new system commands
  - Lobe rotator & phase switching drivers
  - Fiber optic IF system – test, monitor, control
  - Data flagging system

Correlator Monitor & Control, Schedule
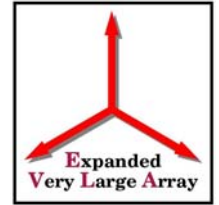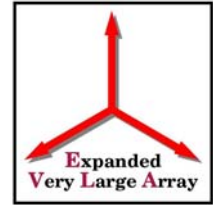
- Correlator M&C MIB selection   07/31/2002
- Correlator M&C MIB RTOS   07/31/2002
- Correlator M&C requirements   09/30/2002

- We can select the Correlator M&C MIB & RTOS before formal requirements have been written on the basis of the information contained in Brent Carlson's memo (NRC-EVLA memo #15) of 01/23/2002.

- The AMCS MIB & software is under consideration for use with the correlator. In part, the decision will be cost driven.
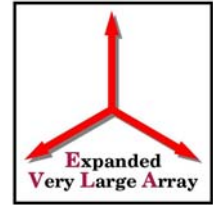
High Priority Items

- Requirements and a design for a security model must be developed.

- We need a much more thoroughly developed and detailed plan, with timelines, for the test antenna.

- We must develop a detailed, timelined transition plan.

Summary

- We are making reasonably good use of in-house personnel, but the software effort will continue to lag until our vacancies are filled. The software effort is still falling behind, but it is losing ground less quickly.

- We have a reasonable chance of being able to provide software support for bench testing only if we can purchase a good simulation environment for the AMCS MIB software.

- Our ability to meet the single dish and interferometry phases of the test antenna is threatened by our inability to fill vacant positions.

Summary
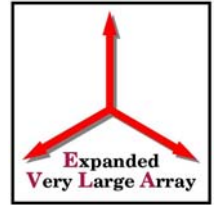
- Thought and planning concerning the embryonic control system and operator interface for the test antenna is needed, but it was appropriate to 1st concentrate our limited resources on the AMCS MIB hardware and software.

Q & A