

## **SCHEDULE CONTROL**

The objective is to achieve control of the ALMA project schedules. The IPS (Integrated Project Schedule) of the PMCS (Project Management and Control System) will continue to be the tool used by the ALMA project. We are implementing changes to how we use that tool to facilitate better schedule control by project management at all levels (work package manager to Director). To this end a Schedule Control Board (SCB) is established.

### **1. Hierarchy of Schedules**

Three versions of the IPS will be maintained in a hierarchy.

a. **Baseline Schedule** – this is the project schedule that is presented to the world outside of the project, e.g., the ALMA Board, partner organizations, etc. It will be updated before each face-to-face meeting of the ALMA Board (currently three times per year and likely to drop to twice per year). This schedule will not be changed between these updates and is controlled by the SCB. This schedule goes down to Level 3, which is the level of deliveries of individual components such as front end cartridges.

b. **Delta Baseline Schedule** – this is the schedule internal to the project that is controlled by the SCB. Changes at Level 3 and above must be approved by the SCB. This schedule will be the reference against which schedule performance is measured with the PMCS. The current version at the time of the periodic updates of the Baseline Schedule normally would become the new baseline.

c. **Forecast Schedule** – this is the living, working schedule as the IPS is today. It is internal to the project and not controlled by the SCB. It reflects the best current estimates of delivery dates, etc. at the working level. When the responsible manager(s) concludes that all available means have been exhausted to prevent a schedule change at level 3 or above, the responsible manager(s) shall initiate a Change Request (CR) to the SCB.

### **2. Schedule Control Board**

a. **Composition** – the members of the SCB are: the JAO project manager (PM), the three regional PMs, and the PMCS manager. The Project Scientist, the Head of the Technical Services Department, and at least one of the Computing IPT Leads are observers (nonvoting members).

b. **Purpose** – to establish and control the Baseline and Delta Baseline Schedules. The SCB shall:

- review all CRs and confirm that it is not feasible/possible to prevent or mitigate the schedule change.
- ensure that the impact of schedule changes has been assessed across the project.

- approve and recommend changes to the ALMA Director.

c. **Process** – the SCB will operate in a manner similar to the CCB. The PMCS Manager will be secretary of the SCB. CRs submitted to the secretary shall include justification – what is the reason for the change, and what has been done to mitigate the change and to minimize the impact of the change – workarounds, etc. The secretary distributes CRs to the SCB and sets the deadline for action. The SCB must take action on a CR not later than two weeks after its submittal.

### **3. Comprehensive Schedule Review**

The ALMA project will conduct a comprehensive (line-by-line of the IPS) review of all schedules in the fall of 2008 in order to have a new Baseline Schedule to present to the ALMA Board at their November 2008 meeting. Front End, Back End, and Antenna IPTs will be reviewed in September (before the 1-3 October MIPT meeting), Site and Correlator<sup>1</sup> IPTs will be reviewed in October. Each regional PM will be responsible for review of the schedules for all of their deliverables.

#### **What about SE, PA and AIV (review by JAO PM), and CSV (review by PS)?**

The overall structure and linkages of schedule will be reviewed as well as the definition and appropriateness of the tracking points at various Levels (1 to 4). The following guidelines should be followed to achieve a common degree of realism and accuracy in the various elements of the schedule. To the maximum extent possible determine the date of completion of a task that has a ~10% probability of achievement (i.e., optimistic completion date) and the date of completion that has a ~90% probability of achievement (pessimistic). The optimistic date will be used in the schedule of the deliverer. The pessimistic date will be used in the schedule of the recipient. Hence the schedules will contain a margin or contingency equal to the difference between the 10 and 90% dates. This contingency is held by the recipient.

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<sup>1</sup> Whereas the correlator schedule is expected to be in good shape, it should be reviewed to assure common practice with the other IPTs.