

## Comments on the “Missing Joint ALMA Office” in the Draft ALMA Agreement from N. Koenig

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There are many important differences between the drafts of the ALMA Agreement produced by Bob Dickman on our behalf, and by Norbert Koenig on behalf of the ECC. The purpose of this note is to focus on only one of those differences, namely the provision for a Joint ALMA Office in our draft and the lack of such an office in the ECC draft. I believe the existence of the Joint ALMA Office, as we have described it, is absolutely indispensable to the successful execution of the ALMA Project. Below is an outline of the role of the Joint ALMA Office together with some editorial comments of my own put in square brackets [].

The Joint ALMA Office is responsible for (1) the Project scope and schedule, (2) the Project budget and costs, and (3) it is the entity accountable to the scientists and funding agencies for successful execution of the Project. In my view, and experience, none of these functions can be accomplished as a “gentleman’s agreement” between the two Executives.

### **Project Scope and Schedule: The Joint ALMA Office will:**

- Establish and maintain the scope of the project. This is done through a negotiation involving the scientists on one hand (the ASAC), and the ALMA Board on the other. It is a tradeoff between prioritized science goals and costs. This requires an entity capable of objectively assessing both and negotiating agreement. The Joint ALMA Office is that entity.
- Establish and maintain the Project WBS and Schedule. This is the core of the management task for ALMA. It is the WBS and schedule that ties the efforts of the two Executives together. The two Executives need to be held to their performance schedules and the Joint ALMA Office does that—it is unworkable to hope that they will do so without external influence. [Richard Wade described this with a phrase I very much like: he said, "The Project needs a constructive tension between the Joint ALMA Office and the Executives". That is exactly the point.]
- Establish and control the configuration. This means enforcing strict adherence to the WBS. Where the WBS must be changed, those changes have to be managed centrally. It is the Joint ALMA Office that controls the change process and manages the consequences of a change. [It cannot be left to the two Executives to define, at their discretion, what is, and what is not, part of the Project. The consequences of one Executive’s decisions may be profound for the other.]
- Define, maintain and enforce Interface Control—indispensable for a project done by many institutions working cooperatively. The Joint ALMA Office is the entity responsible for the ICDs.

**Costs.** The Joint ALMA Office will:

- Provide an impartial, and consistent, determination of the costs. This applies both to the cost of the baseline project and the cost of any additions or proposed alternatives. This prevents the two Executives from being their own arbiter of costs.
- Negotiate an adjustment of “valued” cost estimates in the face of experience where necessary. This is to handle the case where, for some external reason, the cost of a particular task increases substantially above the value previously fixed for it (e.g. the chip makers form a cartel and dramatically raise prices). Such an event will have consequences for both Executives, not just the one with the task facing such an increase. An equitable adjustment will need to be negotiated.
- Serve as “scorekeeper” to assure that the valued contributions of each Executive remain on a par with those of the other. This is to handle the case where the action, or inaction, of one Executive causes a cost increase for the other. An example would be the failure of one Executive to deliver a subassembly to the other Executive on schedule causing the second Executive to idle some part of his workforce. The Joint ALMA Office will assess and tabulate those consequences for future settlement.

**Accountability.** The ALMA Project Office will:

- Establish and enforce acceptance criteria for delivered hardware and software from the two Executives. [Here the danger is one of collusion between the Executives acting to the detriment of the Project by the Executives agreeing to relax specs and relieve the burden on the construction teams. The Joint ALMA Office exists to assure that this does not happen.]
- Be accountable to the ALMA Board for management of the Project. This includes accountability for the actions of the Executives. When the ALMA Board establishes a Management Oversight Committee, that oversight is done of the Joint ALMA Office. [You may have noticed that in the Koenig draft of the ALMA Agreement there is no Management Oversight or Advisory Committee. That is because there is no central management to oversee! A huge deficiency in my view.]
- Be accountable to the scientists for proper execution of the project in achieving its science goals. The ASAC advises and reviews the Joint ALMA Office with their reports going to the ALMA Board. [Again, you see in the Koenig draft of the ALMA agreement that, in section 13.3, he recognizes the need for a Science Advisory Committee, but he has no one for that Science Advisory Committee to report to! It is a complete orphan. That is because in his model there is no central project.]