

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
gcroes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: ASAG Meeting for June 1991
Date: Tue, 18 Jun 91 17:03:33 MDT

After consultation with Doug, Gareth and Glen, I have decided to hold the once-postponed ASAG meeting this Friday, 21 June, at 1:30 PM (MDT), 3:30 (EDT). Please confirm this date is o.k., and submit topics for discussion to me.

Rick

From: abridle (Alan Bridle)
To: rperley@zia.AOC.NRAO.EDU (Rick Perley)
Subject: Re: ASAG Meeting for June 1991
Date: Wed, 19 Jun 91 10:38:10 -0400

OK, who is going to call who? I now have a speakerphone in my office so if I am the only one in CV you can call me there 804-296-0375.

I suggest that we discuss the manpower situation of AIPS1, and whether or not it is adequate in the light of recent hirings and transfers. I have been hearing considerable misgivings about this from the people who are actually doing the work. I'd like to come up-to-date on the situation.

There was also much concern at the users' meeting (mainly in private conversations) about how AIPS is going to support the VLBA code development now that Bill Junor and Phil Diamond have left the group and Bill Cotton is assigned to AIPS2. I'd like to have a clear idea of what code is still to be developed in AIPS1 for VLBA, who is going to do it, and when. I am not clear what the role of Tony Beasley and Athol Campbell is supposed to be. Are they to be attached to AIPS1 in any formal way?

Cheers, A.

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: abridle@polaris.cv.nrao.edu
Subject: Re: ASAG Meeting for June 1991
Date: Wed, 19 Jun 91 10:02:54 MDT

I'll have the meeting in the usual place, but to make it simple, we'll call you this time.

Definitely, the manpower situation in AIPS1 is topic #1. It's bad enough that AIPS1 is now supported by only 3 (essentially part-time) people, but it seems that two of these are expected to benchmark AIPS on a large subset of machines as well.

Rick

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
groes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: Meeting AGenda.
Date: Wed, 19 Jun 91 22:08:06 MDT

This is to confirm that the June ASAG meeting will be held on 20 June, at 1:30 PM (MDT), 3:30 PM (EDT). All but one of the regular members will be in Socorro, so we in Socorro will dial Alan's speakerphone at 804/296-0375. If Geoff wishes to attend, he may sit in with Alan (or even eavesdrop from across the hall!).

Only Doug and Alan replied to my call for topics. Consequently, the topics will be:

1) AIPS1 manpower. What is the current level, and what will happen to it over the next few months. What can be realistically done with the manpower now left.

2) VLBA support. With Diamond and Junor gone (or almost gone), and Cotton in AIPS2, who's minding this store? What is the condition of VLBA software? What critical tasks are missing? Is the current software well tested. Etc.

3) Status of the AIPS1 Spectral Line DDT.

4) Procedures for changing/inserting new tasks.

5) Bug fixing and bug procedures.

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
gcroes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: ERROR in ASAG Meeting Date
Date: Thu, 20 Jun 91 08:32:06 MDT

Due to total confusion within me, I gave you the WRONG date for the ASAG meeting.

The CORRECT date is FRIDAY, JUNE 21.

Sorry for the confusion.

Humiliatingly Yours,
Rick

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
groes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: Today's Meeting's Minutes -- already!
Date: Fri, 21 Jun 91 16:02:34 MDT

QUASI-MINUTES FROM THE 20 JUN 1991 MEETING OF ASAG

Rick Perley

The meeting convened at 1:30 MDT, with Glen Langston, Craig Walker, Gareth Hunt, Doug Wood, and Rick Perley in Socorro, and with Alan Bridle in Charlottesville.

1) AIPS1 Manpower. Alan raised the question of whether the AIPS1 manpower supply is sufficient to support the AIPS1 software requirements. It was pointed out that with Glen in Socorro (until mid-July), there was no designated person skilled in assisting users with procedural AIPS1 problems in Charlottesville. Within Socorro, Rick pointed out that Peggy and Dave are now assigned to this role, with the programmers (Gareth, Glen) a step away. Their counterpart in Charlottesville, Dean Schlemmer, is current here in Socorro being trained -- however it is clear that much training will be needed before he is up to full speed. Pat Murphy is being kept very busy answering the needs of external users.

The nener-ending problem with OS system changes, and the availability of different workstation display software, greatly complicates the AIPS1 support effort. Some discussion was held on asking Croes/Burns to issue a policy statement on which combinations of OS and software the AIPS1 group will attempt to ensure a working AIPS1 functionality.

2) 15APR91 Release. This has gone out.

3) VLBA Software Support. Phil Diamond has summarized the VLBA software situation in a document sent out about two months ago. Craig reviewed this statement, (available to anyone from me upon request), and stated agreement with Phil's assessment that all essential tasks are available and working. A VLBA experiment can, albeit with some difficulty, be read in, calibrated, and imaged. There are many rough spots, and lots of room for improvement. Rick stated that the loss of Phil D. and Bill J. from the AIPS group does not translate into absence of support for VLBI AIPS. Both individuals can be expected to continue to contribute to debugging and improving the code in this area.

Craig raised the perennial issue of Geodetic code -- which was not addressed in Phil's document. There seems little hope for improvement in this area in the near future. Rick offered the support of, for example, Bob Payne, to assist in translation of VLBA data to a format suitable for input into existing geodetic packages.

4) AIPS1 Spectral Line DDT. Doug Wood reported this job is finished. Glen expressed interest in running it on various platforms. Coordination of this was left to the above-named individuals.

5) Changes to STARS and CNTR. Doug has installed changes to these programs, and wished them to become part of the official AIPS1. Some discussion on procedures to do this ensued. The conclusion was that Glen/Gareth must coordinate such changes.

6) Gripes. Glen declared that organized bug harvesting has effectively ended, as the demise of the designated AIP program removed the only workable mechanism to review and act upon Gripes. Some wistful longing for the 'good old days' ensued, but a sharp dose of reality soon restored order. Glen stated that he occasionally reviews gripes on MX, but he is forced to ignore all others. It was decided that 'inappropriate' gripes (the kind which begin 'How do I ...') would be forwarded to an appropriate expert.

7) Future Changes/Wish List. Glen reviewed his personal wish list -- many of the items reflect his personal interest, and would rank near the bottom of the lists of most of the other committee members. The problem is how to rank these type of wishes against those submitted by the users. Perennial requests for allowing UVSUB to work on compressed data continue to arrive, and although by Geoff's definition these should not be considered, it clearly would improve efficiency, and morale, to implement these changes. Alan suggested that a working, but modestly short, wish list be generated and reviewed to assist in assigning priorities. It was decided that each committee member submit to Rick a short list of suggested improvements, which the committee will review and rank at the next meeting.

8) Gareth pointed out that the 'on-line imaging' project may require a change to FILLM -- the prospect of which caused Glen to visibly pale. It was pointed out by Gareth and Rick that this may entail a new, special purpose program which would not affect the rest of AIPS. The design work for this new VLA-centric feature has barely begun, and clearly won't finish for a few months. Minimum impact on AIPS1, and minimum effort on Gareth's part, are clearly high priorities.

The meeting ended at 3PM, sharp.

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
gcroes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: ASAG Meeting for July, 1991
Date: Mon, 8 Jul 91 12:11:04 MDT

The July ASAG,meeting will be held on Tuesday, 9 July, at 1:30 PM (MDT). Socorro will call Alan Bridle's office number (as he is the only C'Ville member currently in C'Ville).

Please submit topics. The only two I can come up with now are:

- a) Status of VLBA software support.
- b) Status of 15APR91 release.

It would appear that this meeting will be very short.

Rick Perley

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
groes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Date: Thu, 18 Jul 91 09:00:10 MDT
QUASI-MINUTES OF THE ASAG MEETING OF 9 JULY 1991.
Rick Perley, ASAG Chairman

The meeting commenced at 1:30 PM (MDT), with Hunt, Wood, and Perley in Socorro, and Bridle in Charlottesville.

- 1) 15APR91 Release. Gareth stated that the UNIX version of this release was finished. The VMS version awaits Gareth's trial installation on the VLA Site VAX before being declared ready. Gareth stated he hoped to get to this job next week. [18/7/91 - Gareth reports the installation is proceeding].
- 2) Changes to UVSUB. Gareth reported that Glen has enabled UVSUB to work on compressed data. However, this version is not part of the 15APR91 release. Since the next version of AIPS1 may not be ready for release until well into 1992, a discussion ensued about how useful program changes can be distributed. The AIPSERV facility is no longer working, and it was agreed that its resurrection was desirable. Gareth and Glen will discuss who will re-enable this facility. Pat Murphy was mentioned as the likely individual.
- 3) Remote Tape Access. Gareth has generated most of code required to allow remote tape access. However, it has been shown that certain operations (such as writing on a Convex tape drive from a workstation) do not work - for reasons still unknown. There is not a scrap of documentation about how to access remote tapes, and the committee felt that despite the few non-operative functions, documentation must be provided to allow users to make use of the operative functions. Gareth agreed to summarize the procedures -- as usual, 'next week'. The chairman will do his best to ensure this deadline is met! The problem of remote tape assignment still remains. The committee regards the solution of this problem as very important.
- 4) 15APR91 AIPS Newsletter. Gareth reported that the generation of this newsletter (to accompany the release) is his highest priority. GCH volunteered the information that the 15JAN91 newsletter also needs to be completed. The chairman noted that the generation of this newsletter is of low priority.
- 5) Geodetic/Astrometric Software in AIPS1. The chairman reported that at recently held meetings of the Visiting Committee, the Users' Committee, and the VLBI Network Users' Group, concerns were expressed about the support of VLBA software within AIPS1. (Note, however, that these outcries are not all independent -- there is considerable overlap in the membership of these committees). In particular, the VLBI NUG members generated the argument that without Geodetic/Astrometric software, the VLBA correlator cannot be adequately tested. The chairman reported that Peter Napier has made an offer to a programmer, using construction funds, to assist in VLBA software support. In particular, the individual will likely be asked to import/interface the CalTech astrometry package to AIPS1. The chairman noted (and has subsequently confirmed) that Peter will very likely take the money from the VLBA computer hardware fund.

The meeting adjourned at 2:06 MDT.

Next meeting: Tuesday, August 6, 1991.

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
gcroes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: Memo from Patrick Leahy
Date: Thu, 18 Jul 91 10:01:46 MDT

Patrick has sent me a memo detailing three problems with AIPS (and VLA) polarization calibration. The three points are:

1) An error in MULTI regarding conversion from radians to degrees. MULTI is in error by a factor of four in the definition of this conversion. Patrick points out the error is only the the precession algorithm, resulting in incorrect parallactic angles and elevations.

2) In the polarization correction algorithm DATPOL, AIPS is making the standard assumption that circular polarization is zero. Patrick points out that this leads to significant errors for circularly polarized objects (like masers, a big industry at Jodrell). The corrections needed are small -- four elements in the correction matrix.

3) Patrick has worked out the consequences of applying polarization corrections prior to self-calibration. The correct sequence is to apply them after -- the error, however, is very small, and is due to the deviation of the RHP phase from the LHP phase. The effect on a map should be less than a few tenths of 1 percent in Q or U. Only for BRIGHT sources will this be noticeable. For these, self-cal should easily be feasible.

Question: How important are the implementation of corrections to the errors noted by Patrick?

From: abridle (Alan Bridle)
To: rperley@zia.AOC.NRAO.EDU (Rick Perley)
Subject: Re: August ASAG Meeting
Date: Tue, 13 Aug 91 11:31:59 -0400

I am available any time Thursday pm your time (after 2 pm our time, that is).

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
gcroes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: August Meeting
Date: Tue, 13 Aug 91 16:28:25 MDT

The August Meeting will be on 15 August, 1:30 PM (MDT), 3:30 PM (EDT),
in the usual locations (3rd floor conference room at AOC, A. Bridle office for
C'Ville). Socorro will call C'Ville.

No other contributions for topics have arrived. Please contribute by
tomorrow, so I can circulate the list then. The default topics will be those
I circulated yesterday -- viz. AIPS1 support, and VLBA support within AIPS1.

Rick Perley

From: abridle (Alan Bridle)
To: rperley@zia.AOC.NRAO.EDU (Rick Perley)
Subject: Re: Gareth
Date: Wed, 14 Aug 91 11:54:07 -0400

Acknowledged. Makes the major issue a hidden one, though.

Also, Geoff has some major proposals re AIPS1 support and VLBA. It may be premature to discuss this matter before he has had a chance to talk with you folks at the AOC next week.

As the main items will therefore be under the table, maybe we should keep this meeting short, or hold it after Geoff's been in the AOC for a few days?

A.

From: abridle (Alan Bridle)
To: rperley
Subject: AIPS meeting today
Date: Wed, 2 Oct 91 11:51:58 -0400

Issues of some concern for ASAG from today's meeting:

1. Ongoing responsibilities of aips++ "thinkers" to AIPS1 operations. Some, especially Chris, may be getting too "detached". Chris doesn't even want to listen to discussion about tape incompatibilities as they affect AIPS1 operations, and threatened not to attend any more meetings if such matters are discussed. I'm worried about any trend for aips++ "thinkers" to detach from the real world, for various reasons. Maybe we should take the bull head-on and ask Geoff to assign Chris some explicit AIPS1 support duties?

Part of the problem this morning was the lack of a "moderator" at the AOC, as Gareth was here. The AOC AIPS people need a "moderator" at these meetings, right away. Phil would be a good choice, but he's going away mid-October.

But the real problem is longer-term, I don't think it's healthy or reasonable for aips++ people to have their heads in the sand about operational problems of AIPS1. They should at least be willing to listen to them so they can be reminded of what actual pitfalls the real world holds for their vaporware.

2. Have we actually frozen VMS support now, or not? I'm unclear. We've threatened it in several public places, but I gather that Pat is still doing VMS handholding (to outside users). Given his general overload, should he be doing this? Should there be an official announcement that NRAO will not support new VMS installations or new releases to VMS?

My overall impression is that the routine AIPS1 support and VLBA code development is currently going along o.k., perhaps "helped" by lack of visitors at AOC? Dave Adler seemed to have his head well above water, though it remains to be seen if it will stay there once he inherits total responsibility for all your "midnight jobs".

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
gcroes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: Meeting Time
Date: Wed, 2 Oct 91 12:06:57 MDT

Alan Bridle and I have had some trouble getting a jointly available meeting time. Our latest iteration suggests:

Tuesday, Oct 8 at 9AM (MDT), 11AM(EDT).

Please comment on this suggestion. There will be a HARD cutoff of one hour to this meeting.

Rick

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
groes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: October 1991 Meeting
Date: Wed, 2 Oct 91 17:03:22 MDT

ASAG Meeting for October, 1991

The ASAG Meeting will be held on 08 Oct., 1991, at 9AM (MDT), 11AM (EDT). Due to time constraints, the duration of this meeting will be no longer than one (1) hour. Because the AOC's 3rd floor meeting room is already booked for this time slot, the AOC meeting site will be either my office (835-7312) or the ground floor meeting room (835-7170). I will notify Alan of the final choice after I determine the availability of the latter room. The C'Ville participants should call the AOC number.

The only subject for discussion will be AIPS1 support. There are a number of facets:

1) Due to Gareth's departure from Socorro for his new role as Geoff's software coordinator, a yawning gap in AIPS1 support in general, and at the AOC in particular, will occur. Gareth's departure is officially in early December. An offer to a highly regarded individual to replace Gareth's AIPS1 functions is about to be made -- however, even if accepted immediately, the individual will not be available until mid-year, 1992. If the individual turns down the offer, we must quickly find another. In any event, there will be some months of even lower than usual support for AIPS1. The ASAG should discuss this serious situation.

2) Compounding this situation are the critical problems in various hardware and software issues in AIPS1. Following a discussion of this between myself and Geoff, Gareth was asked to survey the AIPS1 group, and to identify the key issues. His response will be circulated shortly for the ASAG's review. In a nutshell, the key problems are:

a) Tapes. This is by far the most serious issue. Outside users everywhere (and I can personally attest to this, having foundered on the issue while at MPIfA), are unable to get tape drives of all types to work with the various workstations running AIPS1. This problem applies to both 'direct' tapes and 'remote' tapes.

My view of this issue is the following: (i) The NRAO should publicly state which workstations and tape drives it will support AIPS1 on, and (ii) Do it. This means that a high level AIPSer must be assigned to this problem with the express purpose of deriving a stable, useable system which correctly operates the designated tape systems on the designated workstations. The definitions of 'designated tape systems' and 'designated workstations' will be left to the individual, Geoff, Gareth, and perhaps some others. But I strongly feel that both the statement and the action must be done if there is to be any peace for the AIPS1 support staff.

Gareth can expound on this issue.

(b) TVs There are still some problems, (which are quite obvious on the IBM550 here in Socorro). Is this so serious a problem that it requires priority action? My view is that in no way does it compete with item (a), above, but I'd like to hear more.

(c) Task Spawning. This is a new issue to me, just passed on by Gareth. He and/or Glen will discuss why it is important to prioritize it.

(d) General Task Support. It appears to be the view of the AIPS1 group that software support for key programs is sufficient, and does not

need priority action for the foreseeable future.

(e) Installation procedures. These are certainly difficult for the novitiate. Is there anything to be done? Does it really need to be done? Is the expenditure of manpower to help individuals install AIPS through the (in)famous 'Book 'o Hell' greater than that needed to rewrite/simplify the book, or the procedures? I have no feel for this, and must rely on the experts for advice.

Please think about these important issues well before the meeting. We must present Geoff with a strong recommendation regarding their importance and priority.

If there is time for other issues, they can be discussed after the above items.

Rick Perley

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
gcroes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: Gareth's Summary of AIPS1 Problems
Date: Fri, 4 Oct 91 08:28:34 MDT

Dear ASAGers: Below will be found Gareth's summary of critical AIPS1 problems. Any questions will best be addressed to Gareth.

I have learned that Eric Greisen has agreed to work on tape-related problems in the near future. I am awaiting more information on the particulars.

Rick Perley

>From ghunt Thu Aug 29 02:09:10 1991
Return-Path: <ghunt>
Date: Thu, 29 Aug 91 02:08:46 MDT
From: ghunt (Gareth Hunt)
To: gcroes
Subject: AIPS1 major problems
Cc: rperley
Status: RO

Hi, Geoff.

As promised, here are a list of the major outstanding problems with AIPS1. My experience combined with Pat's indicate that there is only one major problem at NRAO - tape drives. Installations at other sites have two additional major problems - understanding LIBR.DAT and workstation TVs. In both of these areas, the AIPS Unix Porting Reference Manual (aka the Book o' Hell) and the AIPS Unix Installation Summary provide the relevant references. The former is far too complicated for a person with no familiarity with AIPS and Unix; the latter is a simple summary, but apparently not simple enough. The lack of a straightforward procedure, similar to the one available on VMS, is due to the large variety of Unix systems and options that we have supported in the past.

1. Tapes need work.

2. LIBR.DAT is a problem that may be soluble, but it would take so much effort that it's not worth it. TVs apparently need simpler documentation. Chris wrote the original document. Glen, Dean, and Pat have all worked on incorporating it into the Installation Summary, but it is still apparently not clear enough. The TVs work fine when they've been correctly installed.

3. Application tasks have problems, of course. However, as far as I can tell, we can cover all of the known flavors of bugs with the manpower presently available - given the guideline that we don't fix a problem unless there's no work-around.

Details

=====

1. Tape drives.

Tape drives work beautifully on VMS systems and on Convexes. These have civilized tape handling primitives. Most other Unix systems do not. Allocation of devices is completely unknown to Unix. As far as I can see, the only thing that is reliably supported on Unix systems is a tape drive that operates as a (blocked) stream of bytes.

a) Functions such as "backspace record" are supported, but the status and behavior when passing over file marks or bumping into the Beginning of Tape are not predictably defined. AIPS tape handling tasks all assume that they can make arbitrary tape motions and get a sensible status at the end of the operation. Thus it is left to the system level Z-routines to try to provide this status.

On Suns, the BOT indication is never set on backspace. All FITS reading tasks read a record; process it to determine which routine to use; backspace file; and then advance file if BOT is not set. Since BOT is never set in this operation, the first file is always skipped. There are other procedures that could be tried, but would these work on all systems? Another problem that occurs is that the status bits for tape drives units using Xylogics tape controllers do not return the same hardware status bits as the HP units. Thus we have to have one Z-routine for each, since there is no way at present for the Z-routine to know which unit it is dealing with.

b) AIPS tape handling tasks have, in the past, had to deal with some unpredictable tape behavior, so they do some odd things. An example is the writing of a file mark at the on of a FITS file. At present, in at least one place, the procedure is to write 4 consecutive file marks, backfile over 4 file marks, and then to advance over one file mark!

On IBMs, this creates a lock. Traditional IBM systems have regarded files rather formally and, after all, two successive file marks conventionally indicated End of Tape. I suppose this is why the IBM sets a software error condition, which has to be specially reset. This is not currently done in the Z-routines. In addition, IBM, unlike many other Unix systems, does not have a system function "advance to end of tape," so this may have to be simulated in a special Z-routine.

c) Remote tapes. This needs to be redone. It does, however, work well between Sun Sparcs! I can even read Convex tapes from a Sparc. Other combinations should also work but, at present, I will not guarantee anything else.

d) The situation is not as bad as it sounds. There are only 11 tasks (including AIPS itself) which use tape drives and 3 of these (FILLR, UVLOD, and IMLOD) are obsolescent. I have a set of Sun routines from Mark Calabretta which supposedly address some problems more generically, but I have not had time to pursue this yet. I will do so as soon as the RFPs are out of the way.

2. Unix Installation - LIBR.DAT

When I first looked at LIBR.DAT, I was completely fazed. When you know what it does, it is an extremely powerful tool for customizing an AIPS Unix installation. In fact Kerry designed this scheme to help him to port to various flavors of Unix. It is not possible to install AIPS on a Unix system without knowing something about Unix.

a) First, AIPS subroutine libraries are hierarchical. The topmost directory is the most general, and the successive directories are more and more refined. For example Convex Z-routines: first the generic Fortran routines; then the Generic Unix C routines; then the Berkeley Unix C routines; then the Convex specific C routines; then the specific C routines for nrao1 (or yucca). Each Unix installation must select its own path down this tree. There is a similar hierarchy for the Q-routines and the Y-routines. This is all defined

in LIBR.DAT.

The Y-routine section depends upon your windowing environment. If you have a non-Sun workstation with X-windows, use XAS. If you have a Sun with Sunview, use SSS. If you have a Sun with X-windows, use XAS. If you have a Sun with X-windows and Openwindows, you can use either XAS or XVSS. If you have none of the above, you are out of luck. However, LIBR.DAT must reflect your selection. This is documented in the Installation Summary. Even though the description seems to me to be very straightforward, Pat gets endless calls about this.

b) Now all different tasks that call Z-, Q-, and Y-routines must have their search path defined so that they will always pick up all routines that they need.

There are generic versions of LIBR.DAT for many combinations of operating system configurations and windows systems. However, many people run into trouble if we don't provide one for their particular installation.

I even had problems when I changed one of the options in XVSS when it had been previously installed with another (Chris to the rescue!). If there is a problem with a TV, whether due to a system hiccup or whatever, I do not expect to be able to identify the problem. In this case, I call Chris. No-one else here in Socorro understands AIPS TVs.

3. Other

I asked at the AIPS programmers' meeting whether anyone had other problems. There are a few known bugs, but nothing else major was mentioned. Obviously the VLBA work that is going on is in addition to all this. I will ask around, and also send a copy of this to Rick so that he can comment.

4. Supported configurations.

I have not yet finished this list.

Summary

=====

We need work on AIPS tape drive interfaces urgently.
We need to keep an eye on TV problems in Socorro.

Gareth.

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
groes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: Meeting Notes
Date: Tue, 8 Oct 91 16:52:23 MDT

MINUTES OF THE OCTOBER 1991 AIPS1 SCIENTIFIC ADVISORY GROUP

The ASAG met on 8 October 1991. All members were present. The following notes summarize the discussion:

1) Personnel Issues. Gareth reviewed the recent personnel changes. Phil Diamond and Bill Junor have both left the AIPS group and are now scientific staff members at the AOC. However, these departures do not represent a total loss to the AIPS1 support -- Phil has continuing specific responsibilities to AIPS1 support, particularly with regards to VLBA software, and Bill will be available for support in case of emergencies. Dave Adler has been hired into Bill Junor's position, and is now on board in Socorro.

Gareth Hunt has accepted a position as Geoff's Head of Software, and is re-locating to Charlottesville. Although Gareth will retain interest in and some responsibility for activity in AIPS1, it is certain that his daily support of software will no longer be maintained. His position has been offered to Gustaaf van Moorsel, who would, if he accepts, occupy a position analogous to that of Phil Diamond. Gustaaf has promised a reply by 14 November. Should he turn down this position, we must be prepared to act quickly in hiring another. It was suggested that we advertise the position -- a step which must be done in any event to satisfy Labor Department requirements for obtaining a permanent visa for Gustaaf. I have raised this with Miller, who was well-disposed to the suggestion.

With Gareth's imminent departure from day-to-day AIPS1 issues, Glen will become the sole AIPS1 manager.

Rick announced that Athol Kembell has definitively turned down the VLBA-construction AIPS1 programming position. It was agreed that in view of the imminent OVLBI funding for an AIPS1 position (and a strong candidate in sight), the ASAG would not recommend filling of this VLBA Construction position.

2) AIPS1 Tape Support.

Rick reviewed a meeting held in August between himself, Geoff, and Gareth, at which it was agreed that Gareth would summarize the immediate critical needs for manpower support from the general AIPS programmer pool. The subsequent document has been distributed to all ASAG members. The top priority, by far, is support of tapes, both local and remote.

Geoff and Gareth stated that Eric Greisen, just returned from Australia, has expressed his willingness to take on this problem. In response to fears expressed by Rick that Eric might be too distracted by his upcoming role in AIPS++, it was pointed out that Eric strongly feels that all AIPS programmers should remain in close contact with AIPS1, and that he will certainly prove his own interest by helping out in this important area.

There was some discussion about whether 9-track tapes should be supported in the future. Given the rapid move to Exabytes and DATs, (as demonstrated by Jon Romney's survey of user wishes for the VLBA, which showed very little support for data via 9-track), Rick suggested that perhaps we should leave 9-tracks out of the general solution, and even went so far as to suggest that the NRAO could consider offering to convert old 9-track tapes to Exabyte or DAT, in order to avoid wasting manpower on the difficult problem of

accessing 9-tracks from all manner of workstations.

This discussion brought up the issue of the NRAO publishing a document advertising specifically which hardware combinations AIPS1 will run on. There was strong support for this, and Gareth promised a draft by next week, after consulting with Eric, Glen, and other members of the AIPS group.

3) Other Issues

a) It has been reported that certain members of the 'AIPS++' group have expressed negative opinions about continuing support of, or interest in, AIPS1. All agreed that this problem must be nipped in the bud, and Geoff assured us that steps have already been taken to remedy this situation.

b) With Gareth's upcoming departure from Socorro, a local host of the AIPS programmer meetings will be needed, Phil Diamond will be asked to do this.

c) Glen brought up the question of including '3-D' imaging into AIPS1. It was generally concluded that although this would be desirable, it was hardly necessary, given that good support for this very specialized form of imaging is available in Socorro with Tim's SDE package. Implementation of these procedures would require a competent, interested individual who is not currently overloaded with other, more pressing problems -- no such individual is currently available. Given the number of other issues needing resolution, no activity is expected soon on this subject.

d) The AIPS release schedule was reviewed. The plan is to issue one release a year, until that time when AIPS++ can take over. The next release is planned to be 15APR92. The multiple changes to AIPS1 which may be required when the VLBA correlator comes on-line in mid-1992 may necessitate another release later in 1992. The decision to do so will be made at that time.

e) A potentially serious issue was raised by Gareth. The movement to POSIX compliant operating systems MAY result in major problems with spawning AIPS1 tasks. This problem could affect all AIPS1 on all systems, and may require us to freeze operating systems on our computers until a solution is found. This approach is unsatisfactory overall, and it was estimated that a proper solution may require some man-weeks of time. No action will be taken at this time, until we can see if the problem is real or not.

Rick Perley
ASAG Chairman

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
gcroes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: Next ASAG Meeting
Date: Thu, 16 Jan 92 08:56:58 MST

There has not been a meeting of ASAG since last 8 October, and during this hiatus, a number of important AIPS1 issues have arisen. Consequently, I should like to schedule an ASAG meeting soon, preferably this month.

It has been suggested by Alan that due to the AIPS++ ramp-up now occurring in Charlottesville, the earliest good time for a meeting would be towards the end of the month. Thus, I would like to suggest the last day of this month, 31 January, for a meeting. Please inform me if this date is acceptable. Also send any topics you wish to discuss. I shall shortly circulate my own list.

Rick Perley

From: abridle (Alan Bridle)
To: rperley@zia.AOC.NRAO.EDU (Rick Perley)
Subject: Re: Next ASAG Meeting
Date: Thu, 16 Jan 92 11:36:28 -0500

I would like someone to review how prepared we are going to be to support tasks like TVHUINT and TV3COL once the IIS's current hosts (the Convex C-1's) are shut off at the end of 1992. Will the IPX's be able to host the functionality of these tasks? It was stated recently by Geoff that the new visualization machines would do this. But I have heard through the grapevine that most of the visualization machines have not met specs and that there might therefore be an attempt to wave off the current round of procurements. I am left uncertain about whether these useful display functions are going to be supported at NRAO by the end of the year, and would like some clarification of the situation.

- (a) which of the more sophisticated AIPS1 displays will the workstation hardware support?
- (b) is any new software effort needed to support them there?
- (c) are we going to shut down the IIS's before a full hardware/software replacement for these capabilities is present? (I hope not, but fear that this is the direction in which the Computer Division is heading).

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
groes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu
Subject: January 1992 meeting
Date: Tue, 28 Jan 92 10:59:22 MST

ASAG Meeting for 31 January, 1992

The ASAG meeting is scheduled for Friday, 31 January, at 1:30 (MST), 3:30 (EST). Socorro members will meet in the 3rd floor conference room, C'Ville members will meet in a space of their choosing. C'Ville members please call the Socorro number: (505) 835-7370.

As usual, the major topic is AIPS1 support. Based on conversations I have held with those individuals entrusted with support of AIPS1, it is clear to me that the lack of sufficient manpower is having a severe effect upon morale. And talking with AIPS1 users, both within the NRAO and amongst visitors, it is equally clear that a lack of faith in the NRAO's will and capability to support AIPS1 has surfaced.

Now it is quite clear that this sorry state of affairs cannot be turned around dramatically. The overriding priority is and will remain the AIPS++ development. However, I would like to hear discussion of a number of smaller steps that might be taken to assist in reducing the problems in morale and credibility which now are so visible. Below are listed three suggestions of my own. Please consider these, and bring your own suggestions as well.

1) Restoration of the AIPS Gripe Database. Just before the emergence of AIPS++ as the #1 priority, Bill Cotton had all but finished implementation of a database for AIPS gripes. I believe that this code still functions -- but has never really been tested or announced as available to the users. I have always felt this database to be an excellent idea, and would like to see it implemented, at least within the NRAO. I see this as more just a database for gripes -- it is also a confidence issue. My brief (and non-scientific) survey of users quickly demonstrated a rather obvious fact -- nobody is submitting gripes because they don't see why they should. But there are three good reasons: (a) Gripe-fixers need a list of submitted gripes to better judge the important problems; (b) Those entrusted with allocating manpower resources in the future will naturally see the lack of listed gripes as evidence that the AIPS1 situation is not serious, and (c) It is my view that the AIPS gripe database makes an excellent 'bulletin board' for known problems and work-arounds which others have encountered. This addresses a particular problem evident here in Socorro -- the large staff and large number of visitors are independently encountering the same problems. Much wasted effort goes into both the repeated discoveries and the various work-arounds. An electronic bulletin board seems a good way to record these problems, and 'fixes'.

2) AIPS Programmers Science Time. This is another old issue which has predictably resurfaced. The lack of manpower, combined with the endless onslaught of problems, is crushing the 'free time' of those whose primary responsibility is keeping AIPS afloat. The pressure is so great that these individuals feel they have no time left for their own work. And those scientific programmers who hope they can maintain a toehold in the research world see little chance of escaping the trap -- they have little chance of improving their position if they have no time for research. This issue goes beyond the AIPS programmers, it affects equally the AOC Scientific Staff who

are (or will be) expected to support AIPS1. Thus, I think we must consider ways to permit isolation of scientific programmers from the daily crush of AIPS1 problems, so they may pursue their own scientific interests. I have raised with Miller the possibility of allowing Dave Adler, Phil Diamond, and Gustaf van Moorsel one full, contiguous week off, per month (say), during which they can effectively hang a sign on their door, saying 'Go Away'. During this period, their daily AIPS1 function would be transferred to one of the others (including Bill Junor, if needed, or one of the other AIPS1 people we will be seeing here in the near future). A related suggestion follows.

3) Resurrection of the Designated AIP program. This program was one of the most successful inventions in recent years! We sorely miss its beneficial effects, which went beyond merely fixing bugs -- it also helped tremendously the inherent communications problems in the NRAO. I'd like to see this program revived, at least in limited form. AIPS1 people, (both those formally attached to AIPS, and those known as site scientific staff) will benefit by periodic visits to the other locale, during which they would become the 'front man' for everyday problems. I would also like to suggest that AIPS++ programmers also join this interchange -- perhaps not immediately, but in the near future. Re-implementation of this program should help Problem #2, listed above.

Please consider these and bring along your own ideas.

In other topics, I'd like to hear discussion of the following:

1) The remote tape handling. I understand Eric has come up with a fix to the problems of the code he left here earlier this month. Is this successful? Is there anything more to be done?

2) The situation with special codes written for the IIS, (such as TVHUINT and TV3COL) which are very useful for certain displays, and which currently have no known replacement in the workstation versions of AIPS1. Is there any plan for replacement of these unique functions?

3) The AIPS version situation. Eric and Brian have both agreed that having 3 version of AIPS1 is no longer beneficial, and have suggested a schedule whereby we contract to two. Can Gareth update this situation?

4) The current AIPS release schedule.

5) Miscellaneous items, to be raised by committee members as time allows.

From: rperley@zia.AOC.NRAO.EDU (Rick Perley)
To: rperley@zia.aoc.nrao.edu, ghunt@zia.aoc.nrao.edu, abridle@zia.aoc.nrao.edu,
groes@zia.aoc.nrao.edu, glangsto@zia.aoc.nrao.edu,
cwalker@zia.aoc.nrao.edu, dwood@zia.aoc.nrao.edu,
gustaaf@zia.aoc.nrao.edu
Subject: 1992 January Meeting notes
Date: Mon, 3 Feb 92 10:51:35 MST

Minutes of the 31 January 1992 Meeting of ASAG

The AIPS1 Scientific Advisory Group meeting was held at 1:30 PM (MST) on 31 January 1992. Attendees were Rick Perley, Doug Wood and Craig Walker (Socorro), Alan Bridle, Glen Langston, Gareth Hunt and Geoff Croes (C'Ville). The minutes below reflect the order in which subjects were discussed.

1) AIPS1 Releases. Gareth and Glen confirmed the intended yearly AIPS1 releases, starting with this April. Glen is hoping to make the releases be available via ftp, but this is not yet available. the 15APR92 version is now available for shakedown, but is not yet frozen. Glen expects this to occur in about one month. All agreed that adhering to the 15 April date is not as important as getting the bugs out of the release.

2) AIPS1 Support. Geoff announced that Bill Cotton and Eric Greison are largely out of the AIPS++ project, and will thus have more time available for support of AIPS1. Bill will be working primarily in VLBA code development, while Eric will be focussed on the Visualization code. In response to a question by Alan, Geoff stated that this visualization code will interface with AIPS1, but not be written 'in' AIPS1.

The availability of Bill and Eric to AIPS1 is very good news, but won't solve the 'front-line' problem of handling bugs and users gripes now so evident at the AOC. The very large number of problems combined with our 'front-line' staff of 1.5 (Dave and half of Phil) is causing a serious level of frustration. Geoff asked for a list of such problems, which was supplied by Doug Wood and Rick. After these preliminaries, discussion followed the categories listed by me in the meeting announcement:

2a) Gripes. Gripes are not being submitted, primarily because submitters have no faith in the gripe system. The Gripe Database does appear to be functional, although some more 'tuning' of the program (by Bill Cotton) might be necessary. It was noted that most users here at the AOC (at least) are unaware of the existence of this facility. There was some discussion on why this situation exists. Gareth and Rick will publish a specific letter to AIPS1 users, 'announcing' the facility and describing its use. In addition, they will appeal to users to continue to submit gripes, even if it appears to them there is little chance of corrective action. It is hoped that users will use the Gripe Database as a kind of clearinghouse of information on bugs, features, and their work-arounds. Should the Gripe Database not suffice for this, it is our hope that minor changes can be implemented to make it so.

2b) Scientific Programmers Science Time. AIPS1 programmers, by contract, are allowed to take 25% of their work time for their own scientific research. The problem is to ensure they can take this time without apparent penalty. This is an old issue, whose solution has never been adequately implemented. It is an important issue now as the stripped-down AIPS1 group is under increased pressure to respond to an increasing number of user problems. Geoff noted that we are obligated to provide this time, but it means a reduced level of bug-fixes and user assistance. Alan pointed out that 25% of a given day is not a proper solution -- the 25% must be something like a full week away from daily AIPS1 pressures out of every month. Rick

reported agreement with Miller on setting up an arrangement whereby the AIPS1 support people (at the AOC) will, in essence, hang a 'not available' sign on their door for a week per month, during which another AIPS1-literate person will handle the 'up-front' problems. The schedule of non-availability will have to be published in advance, so users know who should not be bothered.

2c) Rick pressed for re-institution of the Designated AIP program. Geoff agreed to this, but stated that he wanted it to work 'one-way', that way being Charlottesville-to-Socorro. Rick displayed great surprise at this, and Alan pointed out that the Designated AIP program was very effective in combatting the always-serious communications problems between Socorro and C'Ville. The issue of whether Socorro-based AIPS1 people will go to Charlottesville remains unclear. Gareth and Rick are charged with drawing up a detailed plan of the visits to Socorro by Charlottesville personnel.

2d) Rick asked about who's in daily charge of AIPS1. Geoff gave the current command chain (Pat Murphy - Glen Langston - Gareth Hunt - Geoff Croes) (all of whom, we note, are in Charlottesville), but this reply did not address the real question, which is: Who's coordinating the daily activities of AIPS1 programmers? Glen stated that the system is 'anarchical', implying that nobody is judging the importance of problems, assigning tasks, and monitoring progress. Individuals seem to be free to work on what they wish. Rick expressed (again) great displeasure with this system.

3) Remote Tapes. There was brief discussion on this issue. Eric's new remote tape system had serious problems which surfaced immediately after his return to Charlottesville, and there is now a 'fix' in, which has apparently helped. However, it was noted that it is too early to judge whether the remote tape system is really functional. Tests are continuing.

4) IIS and its special programs. Alan noted that when the IIS and its hosts (Convexes and Vaxes) are decommissioned, some very useful special purpose software will disappear. There are no workstation-available replacements, and little prospect for even approximations to be written. Geoff stated that the visualization engines should provide these capabilities, and we hope they will give this functionality before the end of the year, when the Charlottesville hosts (to the IIS) are scheduled for removal. Rick noted that the AOC is likely to support one Convex into next year, while VAX1 may stay here even longer. Alan pointed out that this was of little help to Charlottesville. It appears that relief depends on how quickly Eric can provide these functions on the visualization engines.

5) AIPS version support. Rick asked whether the three versions currently supported on the Convexes can be reduced to two (in order to give more disk space to AIPS, while not taking more from users). This set off a tiresome round of discussion, and the chairman certainly wished the subject had never been brought up. It remains unclear whether this reduction will take place, and the issue will certainly be moot in a few months' time.

6) HELP files. Glen raised the issue of improving/updating the AIPS1 HELP files. We agreed this was a very good thing to do, but doubted whether the necessary coordination and manpower could be arranged.

The meeting adjourned after approximately 70 minutes.

Rick Perley, Chairman.

From root Mon Jun 22 16:36:18 1992

X-VM-v5-Data: ([nil nil nil nil t nil nil nil nil])

["892" "Mon" "22" "June" "92" "14:40:12" "MDT" "Rick Perley" "rperley@sechelt.AOC.NRAO.EDU "
"<9206222040.AA00650@sechelt.aoc.nrao.edu>" "20" "Next ASAG Meeting" "^From:" nil nil "6"]
Received: from sechelt.aoc.nrao.edu by polaris.cv.nrao.edu (AIX 3.1/UCB 5.61/1.0)
id AA35144; Mon, 22 Jun 92 16:36:17 -0400
Received: by sechelt.aoc.nrao.edu (4.1/SMI-DDN)
id AA00650; Mon, 22 Jun 92 14:40:12 MDT
Message-Id: <9206222040.AA00650@sechelt.aoc.nrao.edu>
From: rperley@sechelt.AOC.NRAO.EDU (Rick Perley)
To: rperley@sechelt.aoc.nrao.edu, ghunt@sechelt.aoc.nrao.edu,
abridle@sechelt.aoc.nrao.edu, gcroes@sechelt.aoc.nrao.edu,
glangsto@sechelt.aoc.nrao.edu, cwalker@sechelt.aoc.nrao.edu,
dwood@sechelt.aoc.nrao.edu, gustaaf@sechelt.aoc.nrao.edu
Subject: Next ASAG Meeting
Date: Mon, 22 Jun 92 14:40:12 MDT

Dear ASAGers:

I am canvassing for a list of topics, and a date, for the next ASAG Meeting. I feel that a meeting within the next ten days would be appropriate, given the length of time since our last meeting, and the changes that have taken place since then.

Here are a list of topics to be considered, taken off the top of my head.

- 1) VMS Support. Should we abandon VMS entirely?
- 2) Support of the IIS. There are unique functions on these machines which will not appear for some time, if ever, on the Visualization Engines.
- 3) Exabytes and DATs. There is no a clearer realization of the limitations of these systems, plus considerable activity to improve their performance.

Please comment on these topics, and add concerns of your own. I suggest a meeting next week. Give me the dates you cannot attend, and I shall try get a time available to us all.

Rick Perley

From: abridle (Alan Bridle)
To: rperley@sechelt.AOC.NRAO.EDU (Rick Perley)
Subject: Re: Next ASAG Meeting
Date: Mon, 22 Jun 92 17:10:40 -0400

I'm available any day next week except July 1 (Wed).

VMS support has already been dropped (see last AIPSLetter?)

I would like to know how the new film recorder systems will be interfaced to AIPS1, and who is studying this.

I believe the general topic of "AIPS life after the Convexes" needs review, in the sense of looking at all the capabilities that are likely to be lost: IIS support, multiple 6250 bpi drives, overall tape-to-disk and disk-to-tape "bandwidth" at the NRAO, etc.

I'd also like to know how many of the "TV chairs" we will have available next year will allow you to look at images that have a decent dynamic range. I'm unimpressed by the display capabilities of the SPARC stations, and wonder how much better the IBM's are going to be (I suspect no better at all). Are we reaching the stage where we will have to go to a film recorder and a slide projector to look at our high dynamic range images as we used to on the IVAS/IIS? It would be good if someone could summarize the bits per pixel capability of all the displays that will be active in the AOC and CV once the IIS's are turned off. I'm very confused, and somewhat concerned, on this point.

A.

From: rperley@sechelt.AOC.NRAO.EDU (Rick Perley)
To: rperley@sechelt.aoc.nrao.edu, ghunt@sechelt.aoc.nrao.edu,
abridle@sechelt.aoc.nrao.edu, gcroes@sechelt.aoc.nrao.edu,
glangsto@sechelt.aoc.nrao.edu, cwalker@sechelt.aoc.nrao.edu,
dwood@sechelt.aoc.nrao.edu, gustaaf@sechelt.aoc.nrao.edu
Subject: Meeting Time
Date: Fri, 26 Jun 92 13:41:35 MDT

I propose a meeting on Tuesday, 30 June, at 1:30 (MDT), 3:30 (EDT) for the next ASAG meeting. With a bit of luck, Gustaaf will be able to attend. Let me know if you can make this time and date.

Rick

From: rperley@sechelt.AOC.NRAO.EDU (Rick Perley)
To: rperley@sechelt.aoc.nrao.edu, ghunt@sechelt.aoc.nrao.edu,
abridle@sechelt.aoc.nrao.edu, gcroes@sechelt.aoc.nrao.edu,
glangsto@sechelt.aoc.nrao.edu, cwalker@sechelt.aoc.nrao.edu,
dwood@sechelt.aoc.nrao.edu, gustaaf@sechelt.aoc.nrao.edu
Subject: ASAG Meeting for Tuesday, 30 June.
Date: Mon, 29 Jun 92 21:29:22 MDT

ASAG Meeting for June 1992

This message confirms the time and date of the next ASAG meeting: 30 June 1992 at 1:30 (MDT), 3:30 (EDT). Following the long-held tradition, would the Charlottesville participants call the AOC 3rd floor conference room number: (505)-835-7370.

The topics suggested thus far for discussion are:

1) AIPS1 Release schedule. The schedule advertised by Geoff last year had one release per year. It now appears, from the AIPS Newsletter, that a second release for this year is planned. Is this the anticipated rate for future releases? Is this the right rate, considering the impact of new VLBA-oriented software?

2) General AIPS1 support. We heard at the Users' Meeting the expected concern about the rate of VLBA oriented software. Is it our opinion that the efforts now directed to AIPS1 support in general, and to the VLBA software in particular, are sufficient?

3) Gripe Database. Some months ago, after the last ASAG meeting, it was decided to move the Gripe Database to Socorro, and to appoint a Socorro-based person to be the Database Manager. When will this change actually be effected?

4) Life after the Convexes. According to current plans, all Convexes, and thus all IIS/IVAS units, could be turned off by year's end. Significant, useful graphics capabilities will be lost, and it is not clear when, if ever, some of these will be regained by the Visualization workstations. Another consequence of the end of the Convexes will be the loss of all those 1/2inch tape drives. What are the plans for:
(1) Replacement of lost display functions? (2) Loss of the current main mode of visibility data entry?

5) Any other topics, as they arise.

From: rperley@sechelt.AOC.NRAO.EDU (Rick Perley)
To: rperley@sechelt.aoc.nrao.edu, ghunt@sechelt.aoc.nrao.edu,
abridle@sechelt.aoc.nrao.edu, gcroes@sechelt.aoc.nrao.edu,
glangsto@sechelt.aoc.nrao.edu, cwalker@sechelt.aoc.nrao.edu,
dwood@sechelt.aoc.nrao.edu, gustaaaf@sechelt.aoc.nrao.edu
Subject: ASAG Meeting Report
Date: Tue, 30 Jun 92 15:50:27 MDT

Notes of the ASAG Meeting of 30 June 1992

The meeting began at 1:30 PM (MDT). Attendees: D. Wood, C. Walker, G. Langston, R. Perley (from Socorro), A. Bridle and G. Hunt (C'Ville).
The following topics were discussed:

1) AIPS1 Release Schedule. There will be two releases this year, reflecting the impact of changes in AIPS1 tables, and other new software arising from the VLBA's needs. In response to the question of whether the future model will be 2 releases per year, rather than the one which is currently advertised, Alan suggested that the schedule will be 1 per year, and 2, if necessary.

2) AIPS1 Support. This subject was discussed at some length. The main conclusions appear to be: (i) With regards to organization of VLBA software needs, it was suggested that Phil Diamond produce a document detailing implemented tasks, and the schedule for producing new software. This document should go both to the interested User community, and to the ASAG group. We understand that Phil has already produced such a document, so the only real change that appears necessary is having it distributed to this group. (ii) There was some discussion about the slowness of IBLED, but it was concluded that this is matter for Phil and Eric to resolve. (See below). (iii) In many areas -- tape support, TV support, Visualization Engine, real-time support, Eric is the key man. More than that -- he is the only man. Given that the visualization effort is about to start up in a month or so, and that this is expected to take most of his time for many months, there appears little that we can expect him to do in the other areas. (iv) Documentation. VLA-oriented documentation is insufficient, and there appears little that can be done to improve this. After some discussion, it was generally agreed that VLBA documentation is premature at this time. Very few of our staff have used many of the emerging software yet. It is expected that as soon as the VLBA correlator comes on-line, and is producing data, the expertise of staff will rapidly rise. A concerted effort for documentation, including 'cook-books', will be appropriate at that time.

3) Gripe Database. There appears to be a couple of minor roadblocks preventing completion of the move of this database from Charlottesville to Socorro. In response to the chairman's appeal, Gareth promised to personally urge Bill Cotton to make the few(?) necessary changes. Glen and Bill will coordinate their efforts to get this program operational before Glen returns to Charlottesville (mid-July).

4) Impact of Decommissioning Convex and VAXen. The following emerged: (i) The ISU is a write-off. This statement (uttered by Gareth) evoked not a murmur of dissent. (ii) The key functionalities provided in hardware by the IIS which are not currently available on workstations are multiple planes and the TVHUEIN. Eric has stated that these functionalities will come available in the V.E. (Visualization Engine), but because they must be provided in software, it will take some months, and no prediction of the response can be made. Alan noted that if the responsiveness is longer

than a few seconds, the system will not be useful. (iii) The ASAG recommends that a small, knowledgeable advisory group be drawn up to advise Eric on needed functions on the V.E., and to assist in assigning priorities amongst the various options. (iv) It was pointed out that the IIS will be maintained in Socorro for the indefinite future, as one Convex will be kept up (using the other as spare parts). It was suggested that perhaps the same arrangement be made for NRAO1. This decision will be made by C'Ville management. (v) In the area of data entry and tape support, Rick pointed out that the newly-arrived Data Translation Station can copy a 6250 tape to Exabyte in about 7 minutes (compared to the 2 hours to 2 days it takes to write one). Furthermore, the operators' workstation will be equipped with a 1/2 inch drive, and already has an Exabyte, so that data translation at the site will be implemented long before the Convex tape drives are no longer available.

5) AIPS Screen Management Default. Gareth pointed out that the generic AIPS accounts in Charlottesville will bring up the TVTWM screen manager, which is essentially identical to generic X-windows. At the AOC, it is likely we will stay with Openwindows.

The meeting adjourned after 75 minutes.

Rick Perley

From: Rick Perley <rperley@aoc.nrao.edu>
To: rperley, ghunt, abridle, groes, glangsto, cwalker, dwood, gvanmoor
Subject: Call for Next ASAG Meeting
Date: Wed, 16 Sep 92 12:27:34 MDT

Gentlemen: I think the time is right for another ASAG meeting. I suggest next Tuesday, 22 Sept., at 1:30 Mountain Daylight Time. Is this acceptable to the rest of you?

Here are some subjects I have concerns about. Please submit topics of your own for this next meeting.

1) AIPS1 support in general, and the Gripe Database in particular. We are close to getting the Gripe Database up and running in a stable way. The biggest problem to using it is User Acceptance, part of which is that the users must have some confidence that their complaints are being heard and addressed. How to give that assurance?

2) Designated AIP program. Eric, on his recent trip here, advocated scrapping the Designated AIP program. He judged this on the near total lack of questions addressed to him during his stay. His conclusion is that there's nothing seriously broken that required C'Ville people to be here, so why spend money coming? I have answers to all these statements, plus other thoughts on the matter (to be offered up in the meeting). An additional problem is the widely rumoured refusal by Bill to come to the AOC. Neither I nor Miller has ever heard this from Bill, but numerous other individuals have told me that Bill has made this statement. Sigh.

3) What's happening with the Solitaire and Visualization Station? Out here, virtually nothing at all. Who's doing what? I think a plan needs to be formulated, with advisors and workers. Although it is understood that Eric will work on these items, is he getting any advice from knowledgeable people about what should be done? About what is more important? Should there be a committee of interested scientists formed to advise him on needs for the Visualization/Film Recorder? Out here in Socorro, there is no information flow, nor any sign of organization. The Solitaire sits, unused, and the Visualization 560 is being used by Phil Diamond for AIPS data reduction.

Rick Perley

From: abridle (Alan Bridle)
To: Rick Perley <rperley@aoc.nrao.edu>
Subject: Re: Call for Next ASAG Meeting
Date: Wed, 16 Sep 92 17:08:26 -0400

I am available Tuesday at 3.30 pm EDT.

I don't think there's anything the ASAG can discuss constructively re the Bill Cotton - AOC situation. This seems to be a private, silly tiff between Bill and Miller. If they can't sort something out, I don't see how the situation will be advanced by having a committee discuss it.

I think the Solitaire situation is a particular case of the need for AIPS1 to be able to write to color PostScript devices. If this is generally available, and either Eric or Chris Flatters has the skill for it, we will deal simultaneously with the need for color graphics and color imaging to either Solitaire or color Postscript printers.

The Visualization engine stuff is all dependent on AVS. Does anyone on the committee know anything about AVS? What Eric will probably need most is:

- 1) some advice on priorities from scientists (not necessarily a committee, and, knowing Eric, perhaps even not desirably a committee!
- 2) some shielding from multiple tasking while he works on the AVS development.

Note that the AVS stuff will not be part of AIPS and so we do need to discuss the balance between in and out of AIPS1 development of visualization tools. What are the things that really must have 24-bit color and fast cpus, what are the ones for which an in-AIPS version running on 8-bit Sun screens in slower cpus are still interesting so that people can do them in their offices? Some sort of triage might be discussed?

Out here in Charlottesville, there is no information flow nor any sign of organization either.

From: Rick Perley <rperley@aoc.nrao.edu>
To: abridle@polaris.cv.nrao.edu
Subject: Re: Call for Next ASAG Meeting
Date: Wed, 16 Sep 92 16:13:28 MDT

Regarding Bill, you are quite right. I have talked with Miller about this -- he's as much in the dark as the rest of us. I have encouraged him to independently take care of the situation, and I think he will. (NOte, when the 'famous incident' occurred, Miller wasn't even here. It was Dick who enforced the long-established rules, and only after some serious (and well founded) complaints).

I think Doug Wood knows something about AVS. But independent of that, I have sent an appeal to Miller and Geoff to consider this problem. (As usual, my e-mail to Geoff went unanswered and unacknowledged.) Chris Flatters is available to do exactly as you suggest (writing color postscript files from AIPS1), but this will need Miller's approval, since Chris works for OVLBI now (and is paid by NASA). So, in some real sense, it's up to Miller and Geoff to decide these things. I would hope the ASAG can come up with recommendations for them to consider.

Who do you think should work as 'scientific advisor' to Eric in his Visualization development role? Do you think programming help should be offered? I have out here STephane Beland, a very competent programmer (but not in Eric's league) who is eager to get involved at a suitable time. I feel we need a local expert in this development.

Another 1.1 inches of rain yesterday -- the year's total is now over 15 inches -- more than double the normal. Glub Glub

Rick

From: Rick Perley <rperley@aac.nrao.edu>
To: rperley, ghunt, abridle, gcroes, glangsto, cwalker, dwood, gvanmoor
Subject: Reminder of Meeting Today
Date: Tue, 22 Sep 92 09:34:18 MDT

Gentlemen:

Just a short reminder that the ASAG Meeting is scheduled for Today, 22 Sept., at 3:30 (EDT), 1:30 (MDT). The AOC location is the basement conference room. C'Ville people please call 505/835-7170.

The agenda consists of those items circulated by me last week, as no other items have been suggested. The major items will be, with the key person bracketed:

- 1) Report on current and future AIPS releases, and any problems therein. (Glen)
- 2) Discussion of the Designated AIP program. (Rick)
- 3) Report on the Gripe Database (Glen)
- 3) Management of the Visualization Engine project. (Geoff)
- 4) Management of the Solitaire software. (Geoff, Rick)
- 5) General Problems (all)

Rick

From: abridle (Alan Bridle)
To: rperley
Subject: FARAD
Date: Tue, 22 Sep 92 17:13:14 -0400

It turns out that Glen has stopped distributing it in AIPS because of the delays in updating the data base, and now argues that "it's more trouble than it's worth to put it back in because nobody in the AIPS programmer group is interested in using it."

I ranted at him in the hallway for about 10 minutes about this being a dumb dog-in-the-manger attitude and how it seemed to me to be silly to turf perfectly useful code and data out of AIPS just because he was fed up with answering peoples' questions about why the data base was so out of date.

But this had absolutely no effect.

If VLA management is concerned about keeping the FARAD capability alive in future via AIPS, some pressure is going to have to put on Glen, and someone is going to have to look after the database updates (were assigned to Chris, but when he was fired from AIPS I guess nobody thought to make sure someone picked up that part of his work).

I did not realise from what Glen said at the meeting that this was the import of his question, else I would have raised a stink there and then.

A.

From: abridle (Alan Bridle)
To: rperley
Subject: FARAD
Date: Tue, 22 Sep 92 17:13:14 -0400

It turns out that Glen has stopped distributing it in AIPS because of the delays in updating the data base, and now argues that "it's more trouble than it's worth to put it back in because nobody in the AIPS programmer group is interested in using it."

I ranted at him in the hallway for about 10 minutes about this being a dumb dog-in-the-manger attitude and how it seemed to me to be silly to turf perfectly useful code and data out of AIPS just because he was fed up with answering peoples' questions about why the data base was so out of date.

But this had absolutely no effect.

If VLA management is concerned about keeping the FARAD capability alive in future via AIPS, some pressure is going to have to put on Glen, and someone is going to have to look after the database updates (were assigned to Chris, but when he was fired from AIPS I guess nobody thought to make sure someone picked up that part of his work).

I did not realise from what Glen said at the meeting that this was the import of his question, else I would have raised a stink there and then.

A.

From: Rick Perley <rperley@aoe.nrao.edu>
To: abridle@polaris.cv.nrao.edu
Subject: Re: FARAD
Date: Tue, 22 Sep 92 20:27:48 MDT

Glen's attitude is quite regrettable. I had the impression that Chris Flatters had put in the last round of ionosphere data. I'll ask, and also see if he is amenable to continuing the effort.

Incidentally, does anybody know just now effective FARAD is, using these Boulder data? I wish we had somebody here, along with some \$\$, so we could put in our own monitoring system, and get numbers more relevant to our part of the sky.

Rick

From: abridle (Alan Bridle)
To: Rick Perley <rperley@aoc.nrao.edu>
Subject: Re: FARAD
Date: Wed, 23 Sep 92 09:27:25 -0400

I know only that FARAD has been used, apparently successfully, to make corrections to a number of 20cm polarimetric observations that I was involved in. I gather that the recent regime of large corrections has saturated the Boulder numbers, however, and I doubt that FARAD is useful when the corrections themselves are more than a few tens of degrees.

Yes, Chris, put the last ones in. That was my point. Now that he has been "fired" out of AIPS, there's nobody holding the ball, and Glen has not only deliberately dropped it, but is making lame excuses about why it should not be picked up!

A.

From: abridle (Alan Bridle)
To: rperley
Subject: Misc from ASAG
Date: Wed, 23 Sep 92 14:37:29 -0400

The situation with Chris may therefore be better than I had realised. I have not been going to the AIPS Wednesday meetings myself, so I am out of date on some of the details. Maybe Chris could take over the whole responsibility for putting FARAD back into AIPS1, i.e. for undoing the damage that Glen has recently done?

Re the Visualization get-together, Eric told me that Bob was organizing it for Socorro, i.e. the exact opposite of the conclusion that we came to in the ASAG meeting. Have you talked with Bob about that?

A.

From: Rick Perley <rperley@aoc.nrao.edu>
To: rperley, ghunt, abridle, groes, glangsto, cwalker, dwood, gvanmoor
Subject: report for yesterday's meeting
Date: Wed, 23 Sep 92 13:55:20 MDT

Notes from the AIPS Scientific Advisory Group meeting of
22 Sept., 1992.

An ASAG meeting was held on 22 Sept., beginning at 1:30 PM (MDT). Present in Socorro were Rick Perley, Gustaaf Van Moorsel, and Doug Wood. In Charlottesville were Geoff Croes, Gareth Hunt, Glen Langston, and Alan Bridle.

A summary of the discussion follows:

1) AIPS1 releases.

Glen reported that 15OCT92 was frozen as of this date, and that everything was on schedule for a timely release.

Some vigorous discussion then ensued on a related matter -- the table changes made by Bill and Glen to incorporate needed functionality for VLBA data have made CL tables in versions prior to 15OCT92 unreadable to versions after 15APR92. The problem affects only those who attempt to transfer multi-source databases from the new versions to an old one. This will likely never happen to a staff member, but is likely for a visitor who runs AIPS1 under 'TST', then transfers the data to an old version at home. The 'local AOC' advice now given to visitors is to either: (a) Calibrate entirely within 'TST' -- i.e., complete the calibration, and run SPLIT, or (b) Use 'OLD' if there is any chance they must return home before calibration is completed. This advice seems to be effective. Rick wondered if, in cases where this advice is not followed, and a user leaves with an incompleting calibration under 'TST', whether the user, at home, might elect to destroy the 'CL' table, create a new one (of the correct form), and simply recalibrate. Glen promised to investigate.

2) Designated AIP Program

Eric, on his last D.A. (Designated AIP) visit to the AOC, stated to Rick that he had essentially no AIPS1 questions posed to him during his stay, and concluded that perhaps the D.A. program was a waste of time and money. Upon discussion, it was agreed that the D.A. program is very valuable, but that local management (meaning Rick, specifically) must do a better job in informing staff and visitors about the presence and purpose of the Designated AIP. No change to the program was deemed necessary, and Glen will continue to schedule visits. The question of Bill Cotton's role here will be referred to higher authorities.

3) Gripe Database

Peggy is harvesting Gripes weekly (on Wednesday), but it is quite clear that no follow-up of submitted gripes is being performed. Specifically, no assignment of gripes is made, no gripe responses are generated, and gripes are not being cleared after having been addressed. All these functions lie in the realm of a 'Gripe Manager', and one is critically needed before the Gripe Database and System can perform as designed and desired. Gustaaf has stated that he will take over this role. This is an important job, and it is hoped that the effort required

will not be too great.

On a related issue, it was revealed that a significant fraction of gripes come in the form of E-mail messages, and the question was raised about how to get these into the Gripe Database. Doug claimed to be able (and has subsequently showed how) to transfer an e-mail into a gripe within 30 seconds. This demonstration may answer the need.

4) Visualization Engine

Bob Burns is setting up a one-day meeting, likely in Charlottesville to discuss what is desired of the Visualization Engines. It is hoped a small number of cognizant scientists and programmers will attend. Rick has nominated Stefan Beland as the 'AOC Visualization Engine' programmer. It is expected that Stefan will interact with local staff and Eric Greisen, who will be the lead man in the software effort.

5) Solitaire Film Recorder

There are, or may be, parallel efforts in C'Ville and Socorro dealing with grabbing images for transfer to the Solitaire. Glen will ensure uniqueness of effort. It was concluded that the basic operation of getting AIPS-TV images to the Solitaire is already, or nearly, available.

6) Tapes, etc.

Some discussion on the remote tape issue, and on the NRAO policy of maintaining availability of 6250 BPI drives. No firm conclusions, but everyone is aware of the continuing problems in these areas. If current plans actually work, there should not be a problem. There is evidence of problems, but it is not clear if this is anything to be unduly alarmed at.

7) FARAD

It appears that Glen doesn't think continuing to put the Boulder data into AIPS is worth the effort. Rick will investigate and report.

The meeting finished at about 2:50.

Rick Perley, scribe.

From: abridle (Alan Bridle)
To: rperley
Subject: Misc re AIPS1
Date: Fri, 25 Sep 92 12:04:52 -0400

Glen has just circulated the minutes from Wednesday's AIPS1 meeting. They show that he is still pissing and moaning about FARAD -- if the "Chris will do it" solution is viable, could you please tell Glen about it asap (just to shut off this inane diatribe from Glen!)

I have been consulting with Eric re replacing the IIS functions TVHUI and TV3COL on Suns. He is doing a very nice job on both of these, and although they will be slower to interact than before I think the substitutes (TVHUI and TVRGB) will be acceptable. I've also persuaded him to allow more than 199 colors in the XAS server, so that we can see up to 237 grey levels on the SPARC station screens. The price you pay for this is that some of the colors then have to be shared with the other (non-AIPS-TV) windows so these change color when you are adjusting the AIPS TV display. But I think this will be an acceptable (optional) tradeoff for those people who would actually like a bit more dynamic range in the images on their SPARC stations. This will be particularly the case when people are trying to grab images from these screens for sending to hard copy devices, for example.

Eric is currently in an excellent frame of mind and is responding very well to the suggestions I have been making to him for improved displays, both as to the philosophy of the improvements and in test-implementing them very quickly. Long may it last ...

There's an AIPS Memo No.82 just released in which Eric describes what he's developing for displays to replace the IIS capabilities. It's already obsolete because of some enhancements I've discussed with him, but it contains the essentials of his strategy.

In my conversations with Eric re the Visualization engine (prompted by your complaint that nobody was talking to him, I've been working on this recently), I learned that AVS has no ability to apply transfer functions to displayed images. So in the AVS environment we will have to work entirely with pixrange selection (which will be interactive and fast, unlike now). This sounds ominous, and both Eric and I have some misgivings about it given the extensive use that radio astronomers have made of transfer function modification. Also given the incredibly good interactivity you can achieve through things like the Control Panel in Xv, using polynomial transfer functions, etc. Eric mentioned that he is uneasy with this choice of AVS (made while he was away in Oz, of course), both for some of its restrictions (like this one) and because he does not find it particularly easy to program in. I will be interested to hear some discussion of this at the October meeting, especially if some of the other people who do have AVS experience have found good work-arounds.

I think he's making excellent progress at the moment, and perhaps just a little more interaction with the local staff is all that is needed. It will probably be important that you advertise his next visit to the AOC much more aggressively

Cheers, A.

From: Rick Perley <rperley@aoc.nrao.edu>
To: abridle
SubRect: FARAD
Date: Wed, 30 Sep 92 09:45:23 MDT

Alan: I have looked into the FARAD situation, and here it is:

Chris continues to update the TEC database. He has always done it, and intends to keep on doing it. He receives various data (and now is getting a lot more than before), and currently is considering how to incorporate it. I asked him to communicate to Eric some wording for the AIPSLetter, letting people know how to update their TEC files via AIPSSERVE (if it still works), or through the Banana Exploder.

It appears that Glen hasn't done his homework here.

Rick

From: glangsto@saips.CV.NRAO.EDU (Glen Langston)
To: abridle@polaris.cv.nrao.edu, rperley
Cc: glangsto
Subject: FARAD
Date: Wed, 30 Sep 92 13:10:06 EDT

Hi

I have talked to Chris about the IONS data. There is NO known person who has used FARAD in the last year, maybe not since the previous Boulder guy retired. There is no quality control on this program which is supposedly critical to polarization work at low frequencies.

>>>>> The AOC does not appear to be doing their job.

Cheers

----- Begin Included Message -----

From: abridle@polaris.CV.NRAO.EDU (Alan Bridle)
Message-Id: <9209301705.AA33326@polaris.cv.nrao.edu>
To: glangston@polaris.CV.NRAO.EDU
Subject: forwarded message from Rick Perley
Status: R

----- Start of forwarded message -----

From: Rick Perley <rperley@aoc.nrao.edu>
To: abridle
Subject: FARAD
Date: Wed, 30 Sep 92 09:45:23 MDT

Alan: I have looked into the FARAD situation, and here it is:

Chris continues to update the TEC database. He has always done it, and intends to keep on doing it. He receives various data (and now is getting a lot more than before), and currently is considering how to incorporate it. I asked him to communicate to Eric some wording for the AIPSLetter, letting people know how to update their TEC files via AIPSSERVE (if it still works), or through the Banana Exploder.

It appears that Glen hasn't done his homework here. <<<<< WHAT!?!?!>

Rick

----- End of forwarded message -----

----- End Included Message -----

From: Rick Perley <rperley@aac.nrao.edu>
To: glangsto@saips.CV.NRAO.EDU
Cc: abridle
Subject: Re: FARAD
Date: Wed, 30 Sep 92 12^01:28 MDT

Perhaps you should specify what 'quality control' means. As far as I'm concerned, our (meaning the NRAO's) responsibility is only to get the TEC data into AIPS for distribution. No more. It seems that we (meaning Chris in this case) are doing the job. How this translates into your charge that the AOC 'is not doing its job' mystifies me. I suggest that if you think what is being done is not enough, you should yourself suggest a constructive solution, rather than hurl non-specific and unsubstantiated charges. Be constructive.

Rick

From: glangsto@saips.CV.NRAO.EDU (Glen Langston)
To: cflatter@aoc.nrao.edu, rperley
Cc: abridle, glangsto
Subject: Re: FARAD
Date: Wed, 30 Sep 92 17:17:27 EDT

Hi

Chris writes> I verified that it worked the last time I changed it.

Chris last changed FARAD on 20 December 89.

Someone at the AT found format statement errors which were fixed by Bill C. on 10 April 1990

The last known use of FARAD was about 3 years ago.

Cheers

Glen

From: glangsto@saips.CV.NRAO.EDU (Glen Langston)
To: rperley@aoc.nrao.edu
Cc: abridle, glangsto
Subject: Re: FARAD
Date: Thu, 1 Oct 92 08:43:52 EDT

Hi

Rick writes> So What? What's the point? Your meanderings are wasting a lot of people's time.

The point remains that the job of providing software is includes

- a) Writing
- b) testing
- c) documenting

The AIPS group writes the software and the scientific staffs job is to test and help document. If no one has used this software in 3 years, and it is important, then we need some documenting.

This all arose out of the SETJY documentation scandal.

Cheers

Glen

- I am mostly waiting to have the last word, I keep getting email messages from you directly or from you via Alan. The following line appeared in your email message to Alan

> It appears that Glen hasn't done his homework here. <

I maintain that the above is not true and that someone at the AOC is the first to generate these "unconstructive hurls"

- We have an AIPS letter coming up, where such documentation could be distributed.

From: Rick Perley <rperley@aoc.nrao.edu>
To: glangsto@saips.CV.NRAO.EDU
Cc: abridle
Subject: Re: FARAD
Date: Thu, 1 Oct 92 08:09:58 MDT

The 'homework' reference was caused by my interpretation of Alan's interpretation of your latest crusade. The best I could understand was that you had mounted the FARAD crusade because the TEC data were not getting put into AIPS1 in a timely way. By talking to Chris, it transpired that the TEC data were being put in as they always were. Hence it appeared that you had not asked Chris about this, hence the conclusion that you were uninformed. Thus the comment.

It now appears the problem lies with 'documentation', and 'quality control'. A very different problem than what I had thought. While not wanting to defend the NRAO's low level of maintenance in these areas (note, I said NRAO, not AOC), I would like to point out to you that you should pick your battles carefully. Ranting and raving about this subject just isn't going to get you anywhere. There is far more work to be done than we have staff to do. The jobs of bringing up the VLBA and maintaining the VLA are overwhelming the staff here, and there is simply no way that those favorite items of yours are going to be addressed. So if you want to mount a crusade, pick a Truly Important Subject. A task which is truly important, which is used regularly, which generates lots of user complaints, which truly needs modification. Heaven knows there's a lot of these. FARAD is rarely used, not because it's documentation is poor, but because nearly nobody Really needs it. (For instance, I have never used it -- RMs of a few tens are of no importance in objects with RMs of many thousands). There are probably a hundred tasks which are rarely used. The simple fact is that in our current state of reduced support, problems with these will have to be ignored.

So, give up this silly crusade, and pick an important problem to sound the alarms on. We'll all thank you for it.

From: abridle (Alan Bridle)
To: rperley, glangston
Subject: Re: FARAD
Date: Thu, 1 Oct 92 12:08:51 -0400

I think this FARAD business is getting out of hand, and Rick's message this morning was a good example. While RM's of a few tens may be of no concern to Rick if he's only ever going to study things in rich gas environments or at high redshifts with RM's of thousands, the typical radio-galaxy or quasar environment only produces RM's in the regime 10's to a few 100, so the ionospheric corrections can matter to people who are dealing with less extreme objects. Rick also asserted that "he" has never used FARAD, which I know to be incorrect as we used it together on some joint projects a few years back.

Furthermore, it now appears that the reason Glen *originally* gave me for dropping FARAD out of AIPS (that the ionospheric data weren't being collected, so it could not be used on fresh data) was incorrect. If Boulder are still making it available and Chris is collecting it, I see no good reason why FARAD should ever have been dropped from AIPS. The algorithm is tested and unchanging, and the need is not changing. As we head away from solar maximum, the corrections should be better described by the model, also.

The fact is that these corrections can improve the accuracy of low-frequency polarimetry with the VLA, especially at L Band where they are often significant (in a normal extragalactic context) but modest (and there is therefore some chance of applying them properly).

If Glen simply can't be bothered even distributing a part of AIPS that he personally wouldn't ever use (an attitude that I deplore, by the way), then maybe we could get Chris, who seems to be doing all the ongoing work that FARAD needs for AIPS1 support) to put FARAD back into the system from wherever Glen dropped it?

On a point of principle, I would like to ask Glen in future not to drop AIPS1 services that have been around for many years on the basis of his own whims, but to fly such proposals past the ASAG so he can hear a more balanced view of users' needs first. *None* of us (Glen, Rick or me included) individually has a particularly broad perspective on the range of all AIPS users' needs and that is one reason why we have internal advisory groups made up of people with a variety of scientific directions. My objection in this case is that Glen dropped something that the VLA has made available to its users for years without even telling anybody.

Glen also implied that he had a utility for determining which AIPS tasks had been used or not used in recent years (he was claiming that FARAD had not been used by anybody for some years, so I am inferring the existence of such a utility). This might be a useful tool for the next Site Survey, and I'd like to hear more about it. It might help us set priorities in other areas as well.

A.

From: Rick Perley <rperley@aac.nrao.edu>
To: abridle@polaris.cv.nrao.edu
Subject: Re: FARAD
Date: Thu, 1 Oct 92 11:11:46 MDT

I certainly regret having made that comment about use of FARAD in my last message, since it has obviously been misunderstood. What I meant was:

(1) Very few people do RM work.

(2) Many of these do high RM work, for which these small corrections are not critical.

These two factors guarantee that FARAD will not be often used.

I would also add:

(3) Even those for whom the small ionospheric corrections are helpful will find that they don't NEED it, as the corrections will not affect the distribution of RM across the object, only the 'zero point'. (But of course, the ionospheric variations can very much make a good fit very poor, and thus ruin an RM experiment).

None of the above should be taken as evidence to support discontinuation of support of FARAD. There is no doubt the TEC data can be useful. There is no evidence that the program doesn't work. And I still don't understand what Glen is all fired up about.

From: abridle (Alan Bridle)
To: Rick Perley <rperley@aoc.nrao.edu>
Subject: Re: FARAD
Date: Thu, 1 Oct 92 13:45:31 -0400

Rick, you're still basically assuming that there is absolutely no interest in measuring the actual (as opposed to differential) RM's of any "normal" extragalactic object. I'm really not at all sure that this is correct, witness the fact that Phil Kronberg and his generations of students have made a lifelong interest of it. Surely in the end anyone who is asking questions about thermal electrons along the line of sight to a "normal" radio source would like to have the opportunity to check what fraction of them is in the ionosphere, and what fraction potentially in the Universe beyond?

I agree that we have made some progress by measuring RM gradients in sources, and these are unaffected (at least to first order) by the FARAD corrections. But there comes a point where the actual RM values are of interest in themselves.

My fundamental problem with this is not the details of FARAD and his uses, but a tendency of some of the APEs (of whom Glen is probably the worst example) to have very little interest in code that they do not understand the use for. Most of the time, this doesn't matter as they simply leave it alone and only interact with it if it's broken by some new change, but here was a case where Glen just got fed up with answering questions about where the TEC data were and decided to drop the code out of the AIPS distribution altogether. So far as I can tell, the only person he ever asked anything about this was Bill Cotton, who said that if the AOC people weren't doing their end of it (incorrect, as it happens) why should Glen worry about distributing it? Bill of course is not a VLA user in any real sense of the word, and Glen should have the maturity to know that he should canvas a wider community before making such decisionsk

Gawd knows how much else is going on inside AIPS, while it still has gravitational-lens-modeling codes and Mandelbrot sets and other Glen toys that he likes to arbitrarily add from time to time ...

Geoff seems to have thought that it might help Glen to "grow up" if he was made responsible for AIPS1. Geoff also has no notion whatsoever of the importance of AIPS1 to the operation of the observatory and of our users' research programs for the next few years, and probably considered that it didn't matter if Glen mucked around with AIPS1 management as "aips++ is the future!".

Maybe we need to think about making someone else the AIPS1 Manager? Glen doesn't particularly like the job, and some of this petulance on his part stems from that. He thinks it's "beneath him" as he's really an important scientist in his own view.

Would Gustaaf be a better AIPS1 Manager once he's had time to settle in out there? He seems to me to have a more appropriate personality for the job.

Regards, A.

From: Rick Perley <rperley@aoc.nrao.edu>
To: abridle
Subject: Visualization Meeting
Date: Thu, 22 Oct 92 16:40:26 MDT

Alan: What was your impression of the Vis. Meeting? I have gotten two, rather different views: The first from Geoff, and the second from Tim B. Tim is rather discouraged (to say the least) with the outlook, and especially with Eric. Can you summarize how you saw it?

Rick

From: abridle (Alan Bridle)
To: Rick Perley <rperley@aoc.nrao.edu>
Subject: Re: Visualization Meeting
Date: Mon, 26 Oct 92 09:05:44 -0500

I was going down with the 'flu during the meeting and succumbed to it for the next three days, so my recollections are a trifle fuzzy as well as delayed

There were lots of good suggestions for visualization effort, probably far too many to be undertaken by Eric in a reasonable time. This was good for the aips++ target-setting but set Eric into one of his well-known temporary funks of "I don't know where to start so I won't start anywhere". Bob Burns handled the situation quite well, and started developing a priority list, but those who are not well familiar with Eric probably got a surprise from his reaction.

On the matter of commercial packages, it began to come out that all of those presently available for visualization *appear* to have some fairly serious flaws and it is not at all clear that any of them represents a viable long-term path. Possibly the flaws that are now apparent can be worked around, and it may be that some first impressions (e.g. of IBM Explorer) are actually incorrect, so the conclusion seemed to be that a little more testing and exploration of these packages is needed before we can come to a firm conclusion. It may be that the strategy of developing new visualization outside aips++ but inside commercial tools will have to be rethought. There was strong input from all of the scientists that visualization and image construction/analysis should be well integrated in the long run, and concern over the extra learning curves and data transfer overheads of going into commercial packages, especially if these provide only limited capabilities.

This struck me as the major issue for the long run, and it was clear that "more data are needed". Especially difficult is the choice of whether to put short-term effort into packages like AVS and Explorer rather than AIPS1, given that anything that is done in the short term will be supplanted by whatever is done in aips++ in the long term.

In the short run, it also appeared that the Miriad XVisualizer package has some goodies to offer, including some features that were already on the scientists' wishlists. I gather that it is being installed here and at the AOC and it may help set priorities if a few scientists get some experience with it as well as with the commercial packages.

There was great unhappiness with Geoff's attitude to ongoing support of AIPS1, which boiled over a few times in the meeting, and culminated in some outright lies from Geoff near the end. (He had recently attempted to restrain Eric and Bill from writing about AIPS1 developments in the recent AIPSLetter, showing disregard for the need to inform current AIPS1 users about important changes and facilities. There was a major flareup here over that, with Geoff on one side and Bob, Gareth, Bill and Eric all on the other.) When asked (by me) to state what was permissible in AIPS1 development, he first attempted to dodge the issue and then patently lied about his recent actions. I am extremely pissed off with him over this but have been home and out of action last Wed, Thu and Fri so I do not know where the issue sits

since I got ill. But my opinion of Geoff went a long way downhill through the meeting, whereas Bob was at his best at perceiving the difficult issues and trying to address them.

So -- some good ideas, some obvious roadblocks, and much better management by Bob than by Geoff on some key issues.

A.

From: Rick Perley <rperley@aoe.nrao.edu>
To: abridle@polaris.cv.nrao.edu
Subject: Re: Visualization Meeting
Date: Mon, 26 Oct 92 08:52:41 MST

I've certainly picked up on Geoff's recent actions with regards to AIPS1, -- in particular, his 'cleansing' of the recent AIPSLetter. Although I think I understand his motivations here, it appears to me his actions are completely wrong and quite damaging. It is patently false (and absurd) to claim there is no development in AIPS1. I told Eric I would talk with Geoff about his actions, when a suitable opportunity arises (which hasn't come yet).

I guess you have heard that Glen Langston is being transferred to aips++. I don't think this is a good move (and told Geoff so), but it does solve the problem of Glen 'leading' the AIPS1 group. Gustaaf will be taking over formal responsibilities there, Geoff and Miller are formulating a joint announcement (or, are supposed to be...)

Gotta go to a meeting. I'll pass on some more stuff later.

Rick

From: Tim Cornwell <tcornwel@aoe.nrao.edu>
To: abridle
Cc: tcornwel
Subject: Polarization
Date: Tue, 23 Feb 93 14:38:47 MST

Dear Alan,

I just wanted to bring you up to date on the plans for polarization D-terms. Mark will measure them two months in a row and check for stationarity over that time scale. The current information is that this should work well but we want to check it more carefully. If it does work then we will move ahead with arranging for default D-terms files to be distributed. In any event Mark will try to monitor the D-terms month-by-month for the next year or so.

One other line of attack is to fix AIPS so that the D-terms can be bypassed entirely. One can make respectable polarization images down to a few % without estimates for the D-terms. As I understand it, AIPS at the moment does not allow polarization calibration (DOPOL=1 in SPLIT) if the D-term estimates are not present. This could and should be changed if possible and may solve some of the requests for the D-terms.

On the subject of AIPS, I would like to revive the ASAG with myself as Chairman. Geoff has agreed that this is the correct setup but he has done little to help it along. I've had trouble getting his attention on AIPS issues even to the extent of asking him 3 times to send out an announcement of the new structure with Eric and Gustaaf sharing management. He has not yet done the latter. I'm generally concerned about AIPS since I am not holding my breath waiting for AIPS++, and I think that we will need AIPS beyond the cutoff date of the end of this year which Geoff has decreed. We certainly will need to write VLBA software in AIPS for some time to come unless progress on AIPS++ picks up. In your view, how is the current setup with Gustaaf and Eric working?

Cheers, Tim

From: abridle (Alan Bridle)
To: Tim Cornwell <tcornwel@aoc.nrao.edu>
Subject: Re: Polarization
Date: Tue, 23 Feb 1993 17:34:51 -0500

The situation with getting D-term corrections into AIPS is a little tricky because SPLIT does not merely check whether there are D-term entries in the AN table, it also checks some flags that are set when PCAL is applied. So you can't just edit D-terms into an AN table and go ahead -- SPLIT (and LISTR) will still be able to detect that you haven't actually run PCAL.

However, I would think that copying an AN table across from a dataset on which PCAL had been run **would** work, as that would also copy the "PCAL done" flags across. I have not actually tried that but I don't know of anything that would obstruct it. (The problem that Mark Swain hit was the reverse of this, he wanted to try running with all the D-terms set to zero in order to second-guess a crummy PCAL, and **that** required hand-editing).

Re your question about Gustaaf/Eric interaction, I've really not had enough opportunities to observe and evaluate. Most of my recent problems with AIPS have been resolved by Eric or by Glen and have not had to go to Gustaaf. I now have a problem that will have to go through him (FILLM is failing miserably on the archive tape copy from a run we did in January) and I'll have more basis for answering your question when that gets sorted out.

Thanks for the update, sounds exactly like what I was hoping for. Maybe the distribution method has to be a dummy uv dataset whose AN file contains the PCAL solutions and the updated header info to say PCAL has been run?

Cheers, A.