March 15, 1984

To: Don Retallack
From: Ed Fomalont
Concerning: PIPELINE experience over the last two weeks

The recent guinea pigs for the PIPELINE have shown that it is a
good system and is ready to be opened up to users. As with new systems,
the PIPELINE needs a lot of bullet-proofing and documentation at the
detailed level is still lacking for many of the tasks. The following
is a compendium of comments generated over the last few weeks. I will
try to generate another list in about a week.

SOFTWARE IMPROVEMENTS

UVFITS: PASSBAND is YES or NO. Should use the GRIDER convention where
PASSBAND is NO or is file name in the DEC-10. One often has several pass
bands associated with one data base (different source, frequency). At
the present time UVFITS insists only on the pass band file dbname.PAS.

HEADERS: We should get channel frequencies and channel separations correct
on the maps generated by GRIDER. Incorrect values are causing a lot of
confusion.

BTMAP: Display of phase made are confusing since the undefined pixel
has value 0, the same as that for phase=0. Thus, the background cannot
be easily distinguished from the map.

DBFILL: PASSFLAG parameter should use the same convention as the DEC-10
or GRIDER syntax for PASSFLAG.

DBUTIL: User does not need to be aware that his visibility data are
broken into files of eight channels.

DBUTIL: Needs to be made a little more user-friendly. Standard commands
would be useful

PROBE: Good feature, recently added, shows the amount of space on the
two GRIDER disks. The space remaining for the DEC-10 data base area
should be put in units of DEC-10 blocks since the user will know this.

UVFITS: Source * does not seem to work

UVFITS: When an EOT is hit, many error messages are generated.

FITS: This program is a little bit more foregiving when hitting an EOF.
Still needs a little work.

CATLST: All CATLST programs should list the channel number associated
with each map. Now, only the DISPLY CATLST program does.

FITS: Need more selection options. At the present time, only one map or
all of the maps can be written with one command. Selection by Channels,
with wild card options for NAME, CLASS and VERSION would be very useful.

SPECTR: The DEC-10 program SPECTR generates an enormous amount of
text in the DEC-10 history files. Many of the tapes generated by UVFITS
have history files in which 95% of the entries are from SPECTR.

SYSTEM IMPROVEMENTS

1. Need more disks on GRIDER, less on SORTER.

2. The specific disk units associated with SORTER, GRIDER or DISPLY should be invisible to the users for most applications. For example DBFILL will pick the disk with the most space upon execution. The task GRIDER should do the same.

3. We need two tape drives assigned to SORTER. Both DBFILL and UVFITS takes many hours to execute for a reasonably sized data base. Is it possible to share a tape drive between DISPLY and SORTER?

4. We need some mechanism to tell a user if the SORTER tape drive is in use. I think a piece of paper stuck on the tape drive giving the user name, program, anticipated time use and telephone number would alleviate problems of conflicts in the past few days. It is difficult for a user to look at the various decwriters to see what is really happening in the PIPELINE. A sign-up sheet for this tape drive may be necessary.

5. We need clear instructions on how to abort programs during execution. Otherwise, users (including me) will try all sorts of things and most likely, bring down the PIPELINE.

6. R PIPELN using the GRIDER system needs work.

7. Can one user run several R PIPELN jobs concurrently? Are there other limitations which the user should be aware of?

8. Can some of the output that the user sees flying by on the terminal be put in a file which can easily be printed out on the line-printer?

9. Program PROBE is very useful and should ultimately be the main user interogator of the PIPELINE. The output should be made as readable as possible