

Here are John Reynolds' instructions for producing SNAP and procedure files from ATCA schedules:

# THESE ARE TOTALLY OUT OF DATE. YOU REALLY NEED TO BE CAREFUL IF YOU ARE READING THIS AS MOSTLY THINGS HAVE CHANGED SIGNIFICANTLY

1. Prepare AT SCHED schedule, as normal, on LEON.

- Allow additional setup time at Narrabri for calibration.
- Add 5 second offset to the reference time to synchronise ATCA source changes correctly.

2. on LEON;

```
$ run/nodebug at$run:vsched (from VLBI account, $ VSCHED will do)
AT schedfile : v100e2
next file [none] :
FORTRAN STOP
$ dd v100e2.*.
```

```
Directory $2$DKA300:[AT.SCHED]
```

```
V100E2.CAT;1          2/3          8-NOV-1998 11:45:47.45
V100E2.DRG;1          16/18         8-NOV-1998 11:45:47.26
V100E2.LBA;1          9/9           8-NOV-1998 11:45:47.37
V100E2.SCH;1         172/174       8-NOV-1998 00:02:37.14
```

\* The .DRG file is then used (next step) to make a simple SNAP file. The .LBA file is a skeleton for the LBA correlator.SCH file, while the .CAT file contains the source positions in standard AT format and can be simply copied to elleba::cor\$db:\*.TAB. (Note: these won't necessarily be the most precise positions for some sources though). The confusing naming conventions (.LBA => .SCH, .CAT => .TAB) are unfortunate legacies, but we're stuck with them short-term).

3. Make the SNAP file

```
$ skedr
Input DRUDG file : v088i1.drg
```

```
Station code to select [P] :
```

```
Experiment name: [v088i1] :
Write ATCA schedule [N] :
Snap file epoch [J2000] :
Station PARKES : mount type AZEL
```

```
Sources read from SKED file:      5
SOURCE: 0823-500 has 1 scans
SOURCE: 1718-649 has 1 scans
SOURCE: J1729-22 has 111 scans
SOURCE: PSR1730 has 104 scans
SOURCE: 1730-130 has 6 scans
```

```
Scans by baseline to selected station:
ATCA01  PARKES  MOPRA
 223    223    223
Normal Stop
```

4. The above produces a skeleton SNAP file called, in this case, v088i1.snp which may now be hand-edited to add tape control. This is fairly straightforward, but does require care and checking. See any recent examples of snap files to see how this is done.

5. The companion .prc file is usually cribbed from any recent, similar experiment, modifying the experiment and, and the S2 mode where necessary.

The second schedule is the field system schedule. Again for most LBA observations this will be provided but for VSOP observations it needs to be made. In case the field system schedule needs to be made, there are at least two ways to make it. Firstly, and most simply if the user is inexperienced with the VLBI scheduling software SCHED (by Craig Walker, NRAO), the ATCA schedule can be sent to John Reynolds well before the experiment. From the ATCA schedule the field system schedules can be made for all the participating telescopes and delivered to the correct places.

Secondly, if the user is experienced with SCHED, they may wish to produce all of the schedules themselves. In this case it is suggested that while preparing the schedule they consult John Reynolds and/or Tasso Tzioumis, for advice on setup files, S2 configurations etc. When the keyin format file is prepared and passed through the SCHED software the output includes two files, <filename>.sum and <filename>.skd. These are the two files of interest for producing the field system schedules. To do this, follow these steps:

FTP the <filename>.sum and <filename>.skd files to one of the field system pc machines (whichever is convenient). At Narrabri this machine is called v1ca. Login with username oper.

Move the two files to /usr2/sched

Type drudg to run the software that converts the <filename>.skd file to the field system schedule. Select the station you wish to create schedules for. Select options 3 (create snap file) and 12 (create procedure file).

Repeat the above procedure until all the schedules are made for all the stations.

Move the snap file <filename>.snp for each station to the corresponding field system machine in /usr2/sched and likewise the procedure file <filename>.prc to /usr2/proc. Alternatively, place all of the schedules on the VLBI FTP server in Epping and tell all of the relevant people at each station where they are so that they can be picked up and placed in the correct areas.

Also, from the <filename>.skd file it is possible to create the CAOBS schedule for the ATCA and the

VLOBS schedule for Mopra. This is done via a PERL script that can be found in

```
/data/MORPHEUS_1/tingay/observing/vlba2sched/vlba2sched
```

Run it on the <filename>.skd file by typing

```
vlba2sched <filename>
```

and selecting ATCA or Mopra for the schedule output. The output will be a <filename>\_**.com file which can be run in the ATCA SCHED software by going into SCHED and typing @<filename>\_**.com

This PERL script is still under development and several things need to be altered by hand in SCHED. It is worth listing the SCHED output against the <filename>.sum file to see that the scan times etc all agree.

The SCHED output should be placed in at\$sched on LEON for the ATCA or in at\$sched on MOPRA for Mopra, or on the VLBI FTP server in Epping.

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