VSOP Observation Summary File Format

Version 1.0 — 05-Sep-1997 — P.G. Edwards

1 What is the OSF?

The Observation Summary File (OSF) is a condensed version of the long-term schedule GSTS file with additional details from the proposal cover sheets, with emphasis on which mission elements are participating in each observation, and for what length of time they will be recording VLBI data. This information will enable correlators to meet the tape needs of the various sites. A summary of tape usage for GRTs appears at the end of the file.

2 File naming convention

The files are named `YYMMDD_YYMMDD.osf[.v]`, where the YYMMDDs are the first and last dates covered by the file. The final extension is omitted for the first version, becomes '.a' for the first revision, '.b' for the second, and so on.

3 Generation timescale and revisions

Correlators need the OSF of the order of 6 weeks before the first experiment described in the file. During the early stages of the mission it is expected that the schedule will change, sometimes significantly, in the intervening period – these changes will be reflected in updated versions of the OSF.

Also, a simple algorithm is used to assign tracking stations for the GSTS file which may differ from the assignment made in the Space Radio-Telescope Schedule (SRS). Once the SRS and GRT schedule files have been made, a Revised Summary File (RSF) will be generated, which will more accurately describe the time and tape usage of the mission elements.

4 Format

The OSF format is designed to be self-explanatory. An example is:

```
Observation code : VS01d
Source name      : J2253+16
Band             : C
Observation type : Continuum
Standard freqs?  : Standard
Correlator       : Penticton
UTC range        : 277:21:30 to 278:02:00
Start date       : 1997-Oct-04
Length (hrs)     :  4.50 ( 0.25 with no space baselines)
No. of GRTs      :  4
Note             :
TR : 1997:277:21:30:00 to 1997:278:02:00:00      4.50    1 x VLBA
NT : 1997:277:21:30:00 to 1997:278:02:00:00      4.50    1 x S2
```

```
AR : 1997:278:01:15:00 to 1997:278:02:00:00      0.75    1 x S2
GB : 1997:277:21:30:00 to 1997:278:02:00:00      4.50    1 x S2
GZ : 1997:277:21:30:00 to 1997:278:01:00:00      3.50      (S2)
NZ : 1997:278:01:00:00 to 1997:278:01:45:00      0.75      (S2)
-------------------------------------------------------------------
```

The observation code is the five (or, for multi-epoch experiments, six) character observation code. The source name is the nsame that appears in the GSTS file and which is used in both the satellite and Ground Radio Telescope (GRT) schedule files. The observing band is a single letter: L (1.6 GHz), C (5 GHz) or K (22 GHz). The observation type is one of Continuum, Line or Other. The 'Standard freqs?' is either Standard or Non-Standard. The Correlator is one (or more) of Penticton, Mitaka or Socorro. The UTC range lists the day number, hour and minute of the start and end of the observation. The start date is given in YYYY-MMM-DD format. The length of the experiment is given in hours and accompanied in brackets by the amount of time – according to the GSTS file – for which there are no space baselines. This latter number is useful in determining the tape usage for GRTs. The number of GRTs participating is self-explanatory. Finally, the Note line can be used to draw attention to any unusual aspects of the observation.

It is envisaged that the above format will change. In particular it is planned to include the exact observing frequencies rather than have two lines listing the observing band and whether or not standard observing frequencies will be used. Any software written to process the OSF should be developed with possible changes such as this in mind.

Following the Note line is information on the individual GRTs and tracking stations. These are formatted as shown above: the two- (or one- in the case of the VLA) letter code for the GRT or tracking station, the start and stop time of data recording, in YYYY:DDD:HH:MM:SS format and separated by the word 'to', the duration in hours between the start and stop time. For GRTs this is followed by an estimate of the tape usage, e.g. '1 x VLBA' indicates one thin VLBA tape recorded at high density. '1 x S2' indicates one set of eight S2 tapes.

The current version of the software that generates the OSF does not handle the case where a GRT participates for two separate periods correctly. This occurs if, e.g., the source sets for a given GRT early in the observation but rises again later in the same observation. At present two lines are generated for the GRT in this case, each with an estimate of the tape usage. Generally this means two tapes are assumed when only one would be necessary. Currently the tape summary at the end of the OSF is edited manually to correct for such instances.

For tracking stations no attempt is made to convert the recording time into tape usage, as tracking stations may record consecutive tracking passes on the same tape(s) if they are destined for the same correlator. Only the recording format is indicated, in brackets.

The end of the entries for one observation is indicated by the dashed line.

After all observations are listed individually, the tape usage is summarised for all GRTs participating in the period covered by the OSF:

```
================================================
                Tape Usage Summary
================================================
AR  :     1    S2 tape
AT  :     8    S2 tapes
EB  :     1  VLBA tape
OV  :     6  VLBA tapes
```

```
MK  :     6  VLBA tapes
==================================================
```

Once again, an 'S2 tape' refers to a full set of eight tapes. VLBA tape and MkIV tape are, now that high-density thin-tape recording is the standard, one and the same.

The two letter codes for GRTs are listed in the VMOH, and also at http://www.nrao.edu/~bclark/stationcodes.html .

5 Availability

The files are placed in the `/vsop/vsopoper/schedule/grtsched/summary` directory on the VSOG FTP site vsoper1.vsop.isas.ac.jp (133.74.17.21). See the VSOP Mission Operations Handbook (VMOH) for more details.