

# VLBA-DiFX Operations Plan

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VLBA Test and Development Meeting

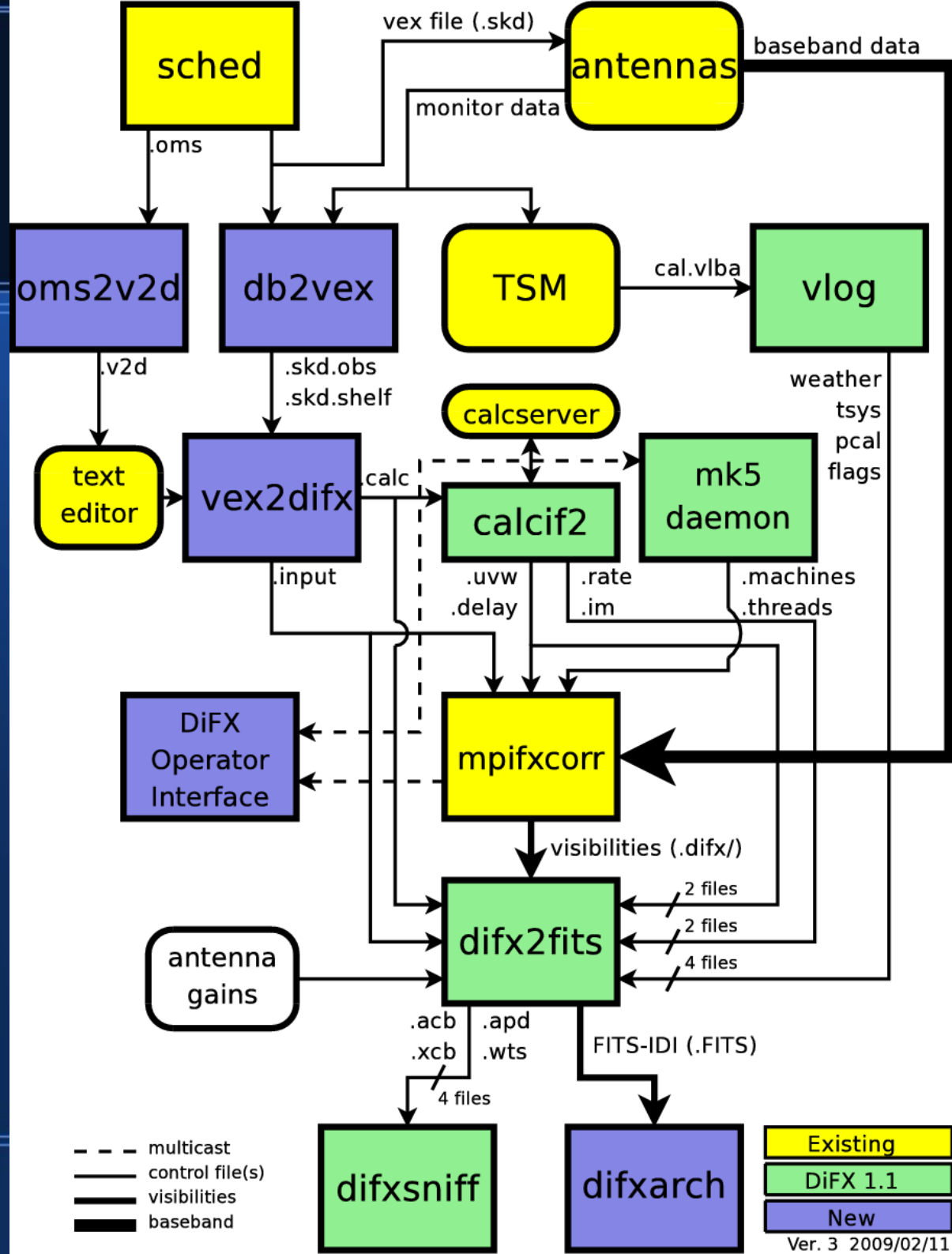
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# VLBA-DiFX

- The new official name of the VLBA software correlator
- Adam Deller's mpifxcorr is the core
- Lots of software surrounds mpifxcorr for format conversions, bookkeeping and archive and database interface
- Miguel Guerra's operator interface nearing first release
  - Demo at next month's meeting?
- Stable release 1.5 coming soon
  - Implements the operations plan being discussed

# VLBA-DiFX Block diagram

- cjobgen + job2difx replaced with vex2difx
- All non-trivial input from analysts is in editing of .v2d files
- Archiving no longer needs any tapes



# Step by step example

- VLBA-DiFX does not impose any changes on the observing operations
  - The DBE/Mark5C will have an impact here
- A simple example is used to demonstrate the main operational features
- A more complicated example is contained in VLBA Sensitivity Upgrade Memo 25 (released yesterday)
- **Yellow** is used to indicate commands to be entered
- Project mt904 is used as a real-life example

# Job preparation (part 1)

- Enter project directory  
`cd /home/vlbiobs/astronomy/feb09/mt904`
- Supplement vex file with monitor data
  - Creates `mt904.skd.obs` and `mt904.skd.shelf`  
`db2vex mt904.skd`
- Create template `vex2difx` input file
  - Makes `mt904.v2d`  
`oms2v2d mt904.oms`

# Job preparation (part 2)

- Edit the .v2d file (see next slide)
  - Note in this case the defaults in this file are OK

```
emacs mt904.v2d
```

- Create DiFX input files
  - 12 jobs to be created in this example

```
Vex2difx mt904.v2d
```

- Submit input files

```
difxqueue mt904
```

# Default mt904.v2d file

```
# base .v2d file autogenerated by oms2v2d
# operating on file mt904.oms

vex = mt904.skd.obs

antennas =BR, FD, HN, KP, LA, MK, NL, OV, PT, SC

SOURCE 1749+096 { }

SETUP default
{
  tInt = 1.835
  nChan = 64
  doPolar = True
}
```

# Post correlation

- Generate FITS files  
`makefits mt904`
- Generate and view sniffer plots
  - Note multiple reference antennas at once`difxsniff LA KP mt904`  
`gv sniffer/mt904/apdfile.ps`  
`gv sniffer/mt904/wtsfile.ps`
- Archive the data if things look good  
`difxarch mt904`