

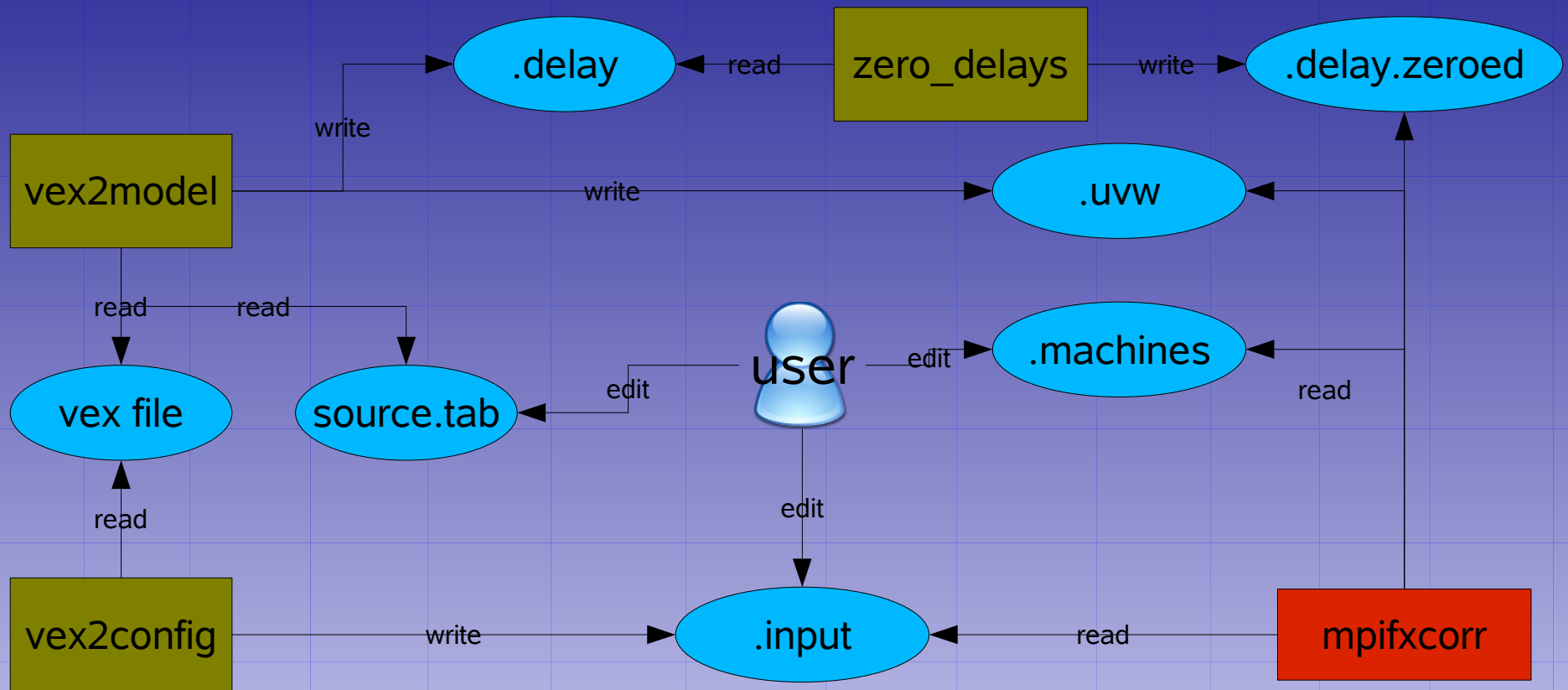


DiFX at the MPIfR

Helge Rottmann
Walter Alef

Max-Planck Institut
für
Radioastronomie

Local DiFX “architecture”



Current workflow requires quite a bit of manual work for the user.

=> MPIfR would like to change to the more sophisticated NRAO-DiFX
... but we need to solve the vex <=> job conversion

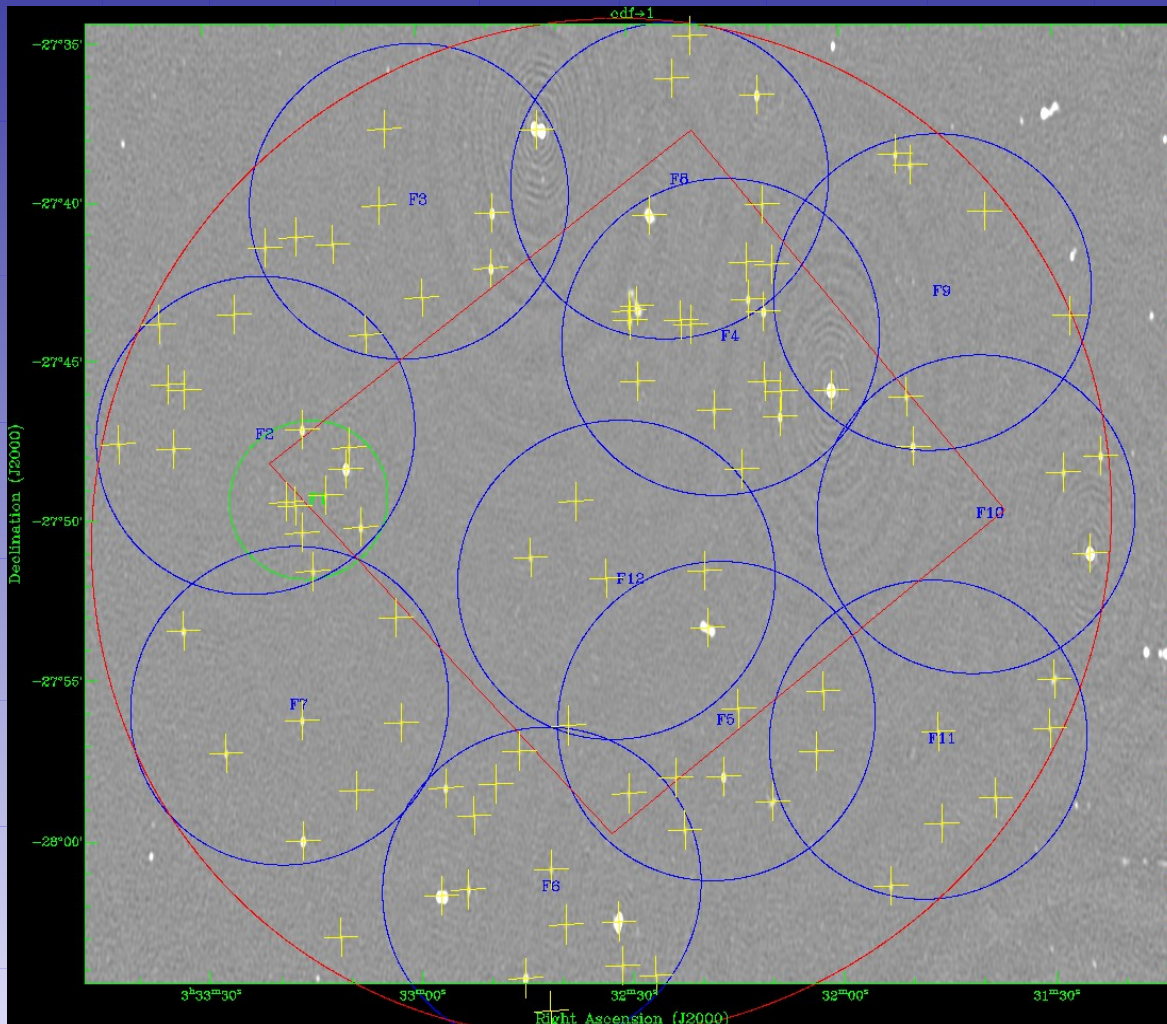


Data output path

- RPF output
 - use ATLOD to load to AIPS
but ATLOD has lots of flaws
(channel limit, number of station limit, output file size)
- => direct FITS-IDI output would be nice

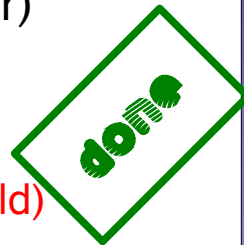
Correlation of BM261

Wide field VLBA imaging (Enno Middelberg et al.)



Correlation divided into:

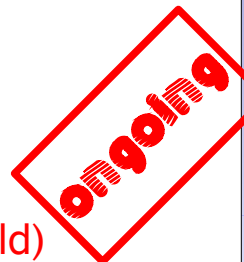
12 large fields (10' diameter)
integration time: 0.25 s
512 channels
464 GB output files
~ 20h correlation (each field)



1 small field (5' diameter)
integration time: 0.5 s
256 channels
250 GB output file
~ 18h correlation



96 individual sources
integration time: 2 s
64 channels
7.6 GB output files
~ 15h correlation (each field)



Correlation of BM261- cont.

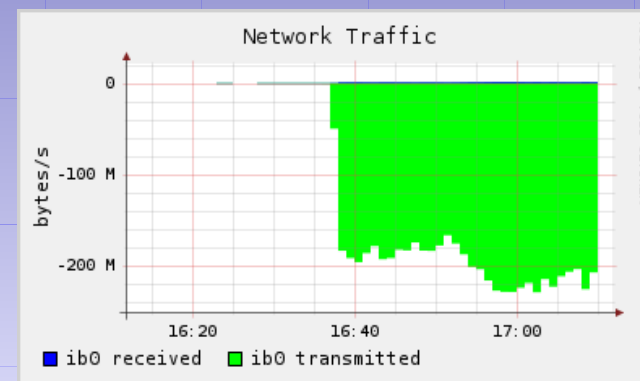
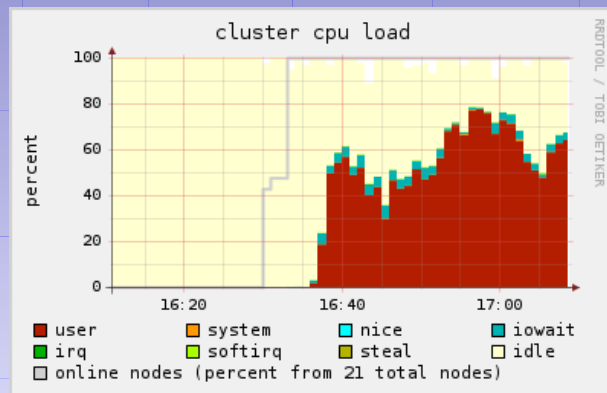
BM261 is a 10 station experiment

=> total size of data files is **18 TB**

currently data is stored on the cluster raid

mpifxcorr reads data off the disk via Infiniband (~250 Mb/sec)

=> with 128 cores we run into IO limits





Correlation using Fuse

We investigated using fuseMK5 (by Jan Wagner, Metsähovi)

=> installation recipe that works smoothly on standard MK5 machine

Mounting 8-pack via fuseMK5 works fine.

BUT exporting mounted Fuse-filesystem via NFS fails
seems to work in Metsähovi?
currently decided not to investigate any further