

BCH telecon, January 19 2015

via telephone: Alessandra, Walter, Helge

locally: Mark, Des, Harro, Arpad

## Agenda

e-VLBI work package (near real time fringe tests)

- equipment at stations
- what stations accessible at all

unclear to us:

- mode of observing
- scan length
- dead time, duty cycle
- amount of data needed
- subband size

- e-VLBI on Mark6? Extra equipment like switches or splitters or Harroboxes?

if on Mark6:

- modify/add to Haystack code, write own code?
- problem with way Haystack code writes to disk pack, also for correlator

Dynamic scheduling and remote control work package

- control of VLBI equipment
- integration of Wetzell software in FS?
- dynamic scheduling: fast semi-automatic generation and distribution of schedules (is that enough?)
- what is setup at stations? how many use FS and SCHED?

Way forward

- involvements of Haystack: who?
- set up meeting with Haystack folks
- define test bed
- define realistic goals (hopefully)

next meeting

aob

e-VLBI

- stations: friendly territory: Pico Valeta, Apex, Ef. Pico and Ef preferable for tests
  - equipment: Pico: DBBC2 right now, will move to 3. For March observations maybe use R2DBE, which will then be shipped to Ef. \*\*action Arpad: let Remo know this R2DBE should stay in Europe. Ef: eventually DBBC3, Ef has NRAO RDBE, not useful for this.
  - observing mode: for time being, R2DBE in most simple configuration, no subbands, no PFB, no nothing, all of BW in one chunk. Firmware still not done.
  - subbands eventually 64MHz, or 62.5 (depending on ALMA)
  - scan length at 1 mm ~400 seconds
  - duty cycle ~50%, may become a bit better but not for the first few years.
  - amount of data needed: at 1mm, 30 seconds worst case (?), full 512 MHz. No real calibrators, all sources are kind of. Sometimes no fringes at all.
  - connectivity: Pico 100Mbps, PdB catastrophe, Apex sends modules to ALMA...
- \*\*action Arpad: ask Remo about connectivity to all stations

Consensus that the less equipment we add, the better, and the less we mess with "standard" software, the better.

- flexbuff mode writing (works on Mark6): 6Gbps on XFS, 10Gbps on EXT4. But in Haystack mode, 10Gbps on XFS. XFS provides much faster reformat. New version of XFS supposedly faster. Check? \*\*action Harro. Disk packs must be compatible.
- Haystack-type recording: hard to find data, no indexing. Ask Haystack to add this? Alternatively, use FUSE (developed by Jan Wagner). Is this fast?
- snippets of data: copy to SSD, keep in memory?

dynamic scheduling

Agreement that it is more or less done, no doubt needs some modifications. FS is everywhere, except ALMA. Remotectl would be great, but nothing happening. \*\*action Arpad, talk to Alexander.

contact with Haystack

- Roger first. \*\*action Arpad, talk to Roger