NEXPReS eVSAG Face-to-Face meeting

Date: November 4th 2011
Venue: Real Observatorio de Madrid (@IGN, Spain)

Attendants:

Present: Francisco "Paco" Colomer (IGN, Chair), Huib van Langevelde (JIVE), Tom Muxlow (JBO), Bob Campbell (JIVE), Richard Porcas (MPIfR), Miguel Ángel Pérez-Torres (IAA), Jean-Francois Desmurs (IGN), Antonis Polatidis (JIVE).

By EVO: John Conway (OSO), Charles Yun (JIVE), Mark Kettenis (JIVE), Arpad Szomoru (JIVE), Zsolt Paragi (JIVE), Paul Boven (JIVE), Marcelo Giroletti (IRA), Valeriu Tudose (JIVE), Rob Beswick (JBO).

Agenda:

- 9:00 - Introduction to NEXPReS (Huib) + Discussion by all
    - Access to real-time diagnostics
    - Policies for (re)correlation of cached data
    - Flexible adoption of observing schedules
    - Impact on current session system
- 10:00 - NEXPReS WP7 demo (Conway*). Discussion on how (if) to optimize response to variable sources/triggers and ToOs (all)
- 10:30 – Coffee break
- 11:00 - Status on availability of telescope bandwidths (Colomer*)
- Status/statistics on number of past sessions/observations using eVLBI vs disk recording (Porcas*)
- Status on future scheduled eVLBI sessions (Paragi*)
- Status on proposals requesting eVLBI (Muxlow*)
- 11:30 - Science covered by eVLBI. Anything missing? (all)
- Revision (if needed) of call for proposals + dynamical/adaptative scheduling + pipeline analysis
- (Large) monitoring projects (all)
- Global eVLBI (all)
- Capability and usefulness of simultaneous e-VLBI + disk recording observations (all)
- 12:30 – AOB
- 13:00 – Adjourn

* Note: see documents posted on eVSAG wiki page.

Minutes:

Paco Colomer welcomes the eVSAG members to Madrid, and opens the F2F meeting after connecting with the other participants who attend by videoconference using EVO.

Huib Jan van Langevelde (JIVE Director, and coordinator of NEXPReS) gives a introduction to the project (the presentation file is available at the eVSAG wiki page, see below). To note:

- eVLBI / NEXPReS gives access to real-time diagnostics.
- "Correlate in real time what you can, later what you need".
- Goal to do all VLBI by e-VLBI.
- Challenges:
  - not all telescopes are connected.
  - need of multiple passes correlation; (re)correlation of cached data at software correlator.
- Slow increase of demand. But more time needs commitment of telescopes.
- Flexibility of array improves: implementing bandwidth on demand, possible to adapt schedules to observing conditions, react to triggers, etc. This will bring new science.

Action item 1: It is agreed to produce an inventory of e-VLBI telescopes available at each frequency, and current/expected connectivity bandwidth. (Colomer)

Action item 2: Investigate the user demand on e-VLBI at the next EVN Users' meeting (Bordeaux, October 9-12 2012). (Muxlow)

Next, John Conway presents (by EVO) the achievements in NEXPReS WP7 (the presentation file is available at the eVSAG wiki page), which aims to prototype an automated observing+correlating e-VLBI system. A demo is planned in april/may 2012 at one frequency only. It may become an operational system for the EVN, through the EVN PC. One benefit would be to react better to transient events; HvL asks about the property of the data if centrally organized by the EVN. Paragi states the better chance for triggered events to be observed in this scenario, by changing from a non-critical project.

Richard Porcas (EVN scheduler) shows the eVLBI statistics (the presentation file is available at the eVSAG wiki page) and present e-VLBI procedures. Now it is easy to change to/from disk and e-VLBI. A total of 44 e-VLBI runs (529 hours, 50% efficiency) have been performed in 2007-2011. All e-VLBI projects approved have been scheduled; a total of 7 triggers (out of 36 potential) have been observed. Now disk-based and e-VLBI proposals need to be written/submitted independently since the NorthStar tool is not ready to combine in the same proposal.

Action item 3: Investigate changes in NorthStar proposal tool to allow combination of disk-based and e-VLBI observations in a single proposal. (Campbell)

Tom Muxlow (EVN PC Chair) describes the EVN proposal trends. There is a 2x oversubscription. The telescopes in China are very important, but not properly connected for e-VLBI. Some large monitoring proposals request several sessions (up to 5) that are accomodated in the current 10 e-VLBI special days per year.

A discussion follows. Global e-VLBI is still difficult; NRAO has regular (3/wk) observations between Pietown and Mauna Kea. But China and Russia need to be added, since longer baselines need to be connected. e-Shipping could easy this problem; Mk5 units at JIVE could allow 2 correlators running at the same time (the hardware correlator for the higher bit rates).

Regarding the possibility to increase the number of EVN sessions, the EVN CBD and TOG could take it into consideration based on the needs of users (by AI#2). Currently the session number and dates are set at the EVN CBD spring session (next in May 2012 @ Bonn).

Next meeting of eVSAG will be organized using EVO. A new computer setup needs to be installed to make the participation of remote members fluent and adequate.

Action item 4: Prepare an adequate computer setup to be used at the next eVSAG meeting by EVO. (Colomer)

Summary of Action Items:

Action item 1: It is agreed to produce an inventory of e-VLBI telescopes available at each frequency, and current/expected connectivity bandwidth. (Colomer)

Action item 2: Investigate the user demand on e-VLBI at the next EVN Users' meeting (Bordeaux, October 9-12 2012). (Muxlow)

Action item 3: Investigate changes in NorthStar proposal tool to allow combination of disk-based and e-VLBI observations in a single proposal. (Campbell)

Action item 4: Prepare an adequate computer setup to be used at the next eVSAG meeting by EVO. (Colomer)

Useful documents:

Wiki page: http://www.jive.nl/nexpres/doku.php?id=nexpres:evsag_meeting_1

- Agenda
- Slides on introduction by Huib van Langevelde.
- Notes on NEXPReS WP7 demo.
- EVN observing statistics (from EVN Scheduler, Richard Porcas)
- Trends on proposals submitted (May 2011).
- Current e-VLBI proposal pressure (Muxlow).
- Connectivity status.
- Present e-VLBI procedures
- Other useful information (from WP4: communications).

• Call for proposals: http://www.ira.inaf.it/evn_doc/call.txt
• eVLBI scheduled sessions: http://www.evlbi.org/evlbi/e-vlbi_status.html
• Notes on NEXPReS WP7 demo (see wiki)