



Minutes of Meeting, 22-03-2006

FABRIC Minutes of meeting

Date 22 March 2006
Subject Fabric kick-off
Location JIVE, Dwingeloo, the Netherlands
Participants See table participants
Author Ruud Oerlemans, JIVE

Agenda

- 10.30 Introduction & Tour of JIVE (Van Langevelde)
- 11.30 Coffee/Tea
- 12.00 Welcome and logistics (Van Langevelde)
- 12.15 Overview and management of EXPReS (Garrett)
- 12.45 Lunch/Buffer
- 13.00 FABRIC Management and guidelines (Van Langevelde)
 - Web pages, time-sheets, reporting
- 13.30 FABRIC overall project plan (Van Langevelde)
- 14.00 Expertise and ambitions Metsahovi (Mujunen)
- 14.20 Expertise and ambitions JBO (Spencer)
- 14.40 Expertise and ambitions Onsala (Conway)
- 15.00 Expertise and ambitions MPIfR (Alef)
- 15.20 Tea Break
- 15.40 Expertise and ambitions ASTRON (Maat)
- 16.00 Expertise and ambitions PNSC (Meyer)
- 16.20 Expertise and ambitions JIVE (Oerlemans/Pogrebenko)
- 16.40 Discussion work packages data acquisition
 - Timing and resources
 - Shape of the deliverables
 - Interfaces
- 17.35 Discussion work packages distributed correlation
 - Timing and resources
 - Shape of deliverables
 - Interfaces
- 18.30 Dinner
- 19.00 Discussion on implementation plans by institute
- 20.00 Wrap up, action items, future meetings, reporting etc.
- 20.30 End



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1 Welcome and logistics (Van Langevelde)

Huib welcomes all participants at 11:59. All participants introduce themselves.

Project leader (PL): Huib-Jan van Langevelde, langevelde@jive.nl

Project secretary: Diana van Dijk, expressecretary@jive.nl

Project website: www.jive.nl/dokuwiki

Ruud Oerlemans will take notes of the meeting. All today's presentations will be put on the project website and be part of these minutes. This is a preliminary website because a suitable webmaster still has to be hired.

2 FABRIC Management and guidelines (Van Langevelde)

Huib emphasizes that FABRIC is a Research and Development project. It is very important that the deliverables like prototypes, demonstrations, minutes, reports etc. are delivered according to schedule.

The meeting targets are to outline the work packages and define the interfaces.

- WP1-Scalable connectivity
- WP2-Distributed correlation

The following issues were discussed and emphasized:

- produce **deliverables** on track
- keep track of **expenses** (man hours, receipts, etc.)
- the institutes are responsible for their own **matching funds**. Local auditing procedures should be followed
- make concise **reports** and documents preferably with pictures. Nibert Meijer asks if templates are available. Huib van Langevelde: experience with previous projects showed nobody used it or in the wrong way, so concentrate on contents and in time delivery. Document will be cast in a standard format in a central place. **Action HL**: check if EU prescribes document format.
- how often should there be a **management meeting**. Once a year but the next one in 6 months.
- **technical meetings** should be more frequently and bilateral. Institutes are responsible to take the initiative.
- role of the **PL**: Consult PL when appointing new staff and spending more than 5000 Euro
- Share problems, have open **communication**. Communicate using a mail exploder. **Action RO**: set-up exploder.
- **Office supplies** usually can not be paid from the project budget.
- The issue of **hardware costs** was discussed. Various depreciation schemes are used by the partners. One common possibility is that only part of the hardware is paid from the project budget if the depreciation period is longer.
- **Risks** are: hiring the right people and finding the matching manpower. Putting in science is difficult
- **Reports, nobody wants to write them but the EU wants them in time!**
- **Action HL**: Digital version of the **contract** on the web.
- **FABRIC logo**: it was decided to adopt the logo from Huib van Langevelde's presentation as the FABRIC logo for now.



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More issues can be found in the Huib van Langevelde's management on the project website.

3 Overview and management of EXPReS (Garrett)

See presentation on the project website.

4 FABRIC overall project plan (Van Langevelde)

Huib van Lnagevelde outlines the major components of the project:

1. Scalable connectivity
 - 1.1. Data acquisition
 - 1.2. Broadband data path
2. Distributed correlation.
 - 2.1. Grid resource allocation
 - 2.2. Software correlation.

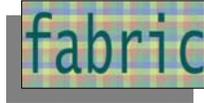
Huib van Langevelde emphasizes again the importance of in time delivery of the deliverables. Software, reports and prototypes are the more easy type of deliverables. However already in month 7 a demonstration (DJ1.7) is due producing e-VLBI fringes using PC-EVN which seems to be a bit of a challenge. This item was discussed most during the meeting. The EU representative asked for this early demonstration.

Further details can be found in Huib van Langevelde's project plan on the project website.

5 The "Expertise and Ambitions" presentations

Some highlights of the presentations are summarized here:

- MRO by Ari Mujunen. MRO's expertise is the field of developing high speed data acquisition systems using as much as possible commercial of the shelf (COTS) components. Especially the emerging technologies have the interest of MRO.
- JBO by Ralph Spencer. JBO has a wide and long experience with all aspects of VLBI. JBO is involved in the Broad band data path (1.2) work packages: protocols, interface to e-Merlin processor. The work of the ESLEA (Exploitation of Switched Light paths for E-science Applications) project fits nicely with FABRIC 1.2.1. Current staff is assigned to FABRIC but doing other things and new staff has to be hired.
- OSO by John Conway. OSO is especially worried about the early demo DJ1.7 in month 7. How to get the necessary equipment and people in place. Therefore it is very important OSO, MRO and JBO establish a close contact and agree on what can be realised on such short notice. MRO promised to provide the necessary knowledge and equipment
- MPIfR by Walter Alef. MPIfR is responsible for WP1.3 Data acquisition and control. Deliverables are due in month 18 and 23. MRO has to provide MPIfR with the relevant documents.
- ASTRON by Peter Maat. ASTRON is currently developing and building LOFAR (LOw Frequency ARray). It has lots of experience with WAN technology and using COTS equipment to set up the WAN for the antenna stations in the Netherlands. Connecting LOFAR to more remote antenna sites will be realised through



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National Research and Education Networks (NREN). ASTRON shows interest in the workpackages 1.2.1, 1.2.3, 2.1.1, 2.1.2 and 2.1.3

- PSNC by Norbert Meijer. PSNC is the supercomputing and networking centre in Poland involved in many European R&D projects. PSNC want to exploit its experience with Vlab (Virtual Laboratory) to run the software correlator on the Grid. JIVE has to deliver the software correlator.
- JIVE by Ruud Oerlemans. JIVE is the EVN Mk4 correlator operator. Currently the institute is working towards an operational e-VLBI network. It has experience with ultra narrow band correlation in the Huygens project and developed a prototype broad band with software correlator out of it. This experience will be used in the work packages 2.2.1, 2.2.2, 2.2.3 and 2.2.4

For further details please consult the "Expertise and Ambitions" presentations of the majority of the participating institutes.

6 Discussion.

Huib van Langevelde has divided the discussion into a data acquisition part and a distributed computing part. A lively discussion emerged in which amongst others the following topics were addressed:

- ❖ Demo e-VLBI fringes using PC-EVN in month 7. Seems to be the most difficult short term target. Do what is possible within the short time frame. MRO can provide the necessary hardware. Close contact between MRO and OSO is necessary
- ❖ Some kind of data description should be available, e.g. in the form of a header in the data file.
- ❖ Distributed computing. What is the most efficient topology? How to distribute, time slicing and/or frequency slicing. Avoid retransmission of data or transmitting the same data to more than one compute site.
- ❖ Most participants objected grid computing as a real time solution for doing VLBI. Mainly because grid computing is currently batch oriented. However FABRIC is a R&D project, investigating the possibilities and shortcomings of distributed computing for VLBI.
- ❖ The following grid related items were discussed:
 - How to allocate grid resources. NM from PSNC says brokers and schedulers take care of this
 - The priority of a real time application like e-VLBI versus a batch application.
- ❖ JC from OSO says Mk5 is not optimized for e-VLBI whereas PC-EVN offers more opportunities to play with.
- ❖ Mike Garrett emphasizes again that the EXPReS project is aimed at doing research for the future.

Formulated goals for the institutes to work on the next months can be found in the Discussion chapter on the project website.

7 Concluding remarks

A next general FABRIC meeting should be in 6 months. A possible option is to combine a visit to the EVN symposium in Torun (25-29 September 2006) with a FABRIC meeting in Poznan. This option of course has to be discussed with PSNC.



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Participants

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