Monthly Report- Nov/Dec 2008

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Project Information

Project Acronym	EXPReS
Project Full Title	Express Production Real-Time e-VLBI Service
Proposal/Contract number	DG-INFSO #026642

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Section 1- Introduction

The end of the year is normally quiet with the holidays and travel consuming a great deal of time. This year is similar, but with a small rush of activity at the end of November as a variety of activities were completed. There are a few items of bad news that are out of the project's control, namely the situation at HartRAO (described below). However, the rest of the project is on track and moving along very well.

Section 2.1 – NA1 Management

The Period 2 financial distribution was begun in November and almost all partners have confirmed receipt. Some partners have a much more complicated system than others and it will take a while before they know the money has indeed been placed into their specific group's account.

The project manager presented slides at ICT 2008 in Lyon, France. The website for the meeting <http://ec.europa.eu/information_society/events/ict/2008/index_en.htm> has details of the event. The session was organized in with assistance from PSNC, an EXPReS partner. The project manager gave an update on the current status of operational e-VLBI from the EXPReS perspective. The session itself was focused on related activities- remote instrumentation and grid processing. Slides should be available on the website sometime soon.

In late December, the Project Manager received news from SURFnet regarding their participation. SURFnet has indicated their continued commitment to the project and all users of advanced networks. However, the overhead of providing audited financial statements outweighed the absolute volumen of funding that was made available to their institute. For this reason, SURFnet has offered to allow their budget to be redistributed inside of the project. This action will be discussed at the Board meeting in January and should be highlighted in the minutes.

The project office is distributing budget summaries in advance of Board Meeting in January. This meeting will be immediately after the IYA opening in Paris. MPIfR indicates that they can indeed find eligible costs for SA2; there will be ramifications to this fact as budgets in P2 were already adjusted across partners under the assumption that MPIfR would have very low claims in SA2.

It is unclear where to place this next item, so it gets enterd as a mangement note. The Project Office received word from partner HartRAO in South Africa recently about major damage to their telescope. Apparently one of the main bearings failed rendering the telescope unmovable. At this point, HartRAO is investigating the problem. The problem is understood to be major and the best case scenario requires the telescope to be

offline for months. The worst case scenario is much less pleasant. At the moment, it seems unlikely that HartRAO will be able to participate in any e-VLBI until the end of the project. We will keep you informed as we learn more.

Section 2.2 – NA2 EVN-NREN

No update

Section 2.3 – NA3 eVSAG

The eVSAG is actively organizing the end of project workshop. The LOC and SOC have been formed and are outlining both schedules and potential speakers. Current discussions include on-site logistics (size of meeting, buses, telescope visit) and announcement (web site, physical poster, email distribution lists, call for proposals, cross-field announcements). The majority of communications is being done via the email group with selected person-to-person telephone calls as necessary.

Section 2.4 – Public Outreach

The International Year of Astronomy will have a kickoff meeting in Paris in January of the New Year. EXPReS will participate with a booth as well as a demonstration of e-VLBI. In preparation, a variety of actions are being initiated, including pre-announcement of the event to local media, preparation of a specific sub-site on the EXPReS web pages (note: site still in preparation <http://www-eu.org/iya2009/>. The EXPReS web site and AJDI are also being prepared for announcements at the time of the kickoff.

The EXPReS display will also be sent to Pars. The wiki has a list of the display's travels. It has been used about a dozen times at a wide variety of meetings in the past year. See the wiki for full details.

Section 3.1 – Production e-VLBI Correlation

On the reliability of e-VLBI, the minutes of the EVN (European VLBI Network) TOG (technical operators group) meeting were recently published. The following news on the stability of e-VLBI was reported:

> Cimo reported on reliability and performance of the EVN. The detailed report is available on the web. The median EVN reliability indicator (ERI*) stays at a high level, 0.85. The ERI* for e-VLBI experiments has improved considerable since 2006 and has now reached 0.95 which includes time lost at the correlator due to restarts being needed, as well as occasional station failures. Thus e-VLBI is already effectively matching the reliability of disk recording.

A copy of the minutes are available via the meeting website <http://www.ira.inaf.it/meetings/evn9/tog/>.

Section 3.2 – Telescope Network Connections

The most significant activity for SA2 was the Effelsberg Connection Event. MPIfR sponsored a small event to celebrate the connection of the Effelsberg dish to high speed networks. Participants from the European Commission, local government, MPIfR, JIVE, and EXPReS participated. The event was announced with a press release (available at <http://www.expres-eu.org/Effelsberg_inauguration.html>) along with additional announcements via EVN mailing list and the AJDI (ASTRON/JIVE Daily Image) <http://www.astron.nl/dailyimage/index.html?main.php?date=20081128>.

Section 4.1 – FABRIC

Inside FABRIC, a handful of small accomplishments signal a great deal of work. Deliverable 77, Data Acquisition Prototype from Metsahovi describes their 4 Gbps data recorder. In fact, working on an affordable, light weight (under the 34 kg magic weight for DHL), disk-based recording system seems counter to the goals of e-VLBI. However, 4 Gbps to disk means that sites that do not have have 10 Gbps network connections (or access to 5x1 Gbps) can participate in future experiments. The system opens the door to a variety of hybrid and unusual configurations that were difficult to imagine before the advent of e-VLBI and fast recording systems.

PSNC has also provided a new code drop for the code that they have been producing, both the workflow management and software routing bundles. The code drop is available from the wiki with a great deal of the documentation written into the code as well as in a variety of emails between the development team (PSCN, JIVE, other collaborators). The PSNC group has provided a non-technical overview of the code and is working on a more useful technical document to accompany the code. As mentioned before, the code continues to evolve and the final documentation will be provided with the last code drop.

The software correlator core group will also post an updated code drop of their work (it should be on the wiki by the time this document is released). The correlator continues to evolve, showing improvements in efficiency as well as accuracy. A version of the correlation code is now part of the real-time checks for production e-VLBI and is proving to be flexible and useful.