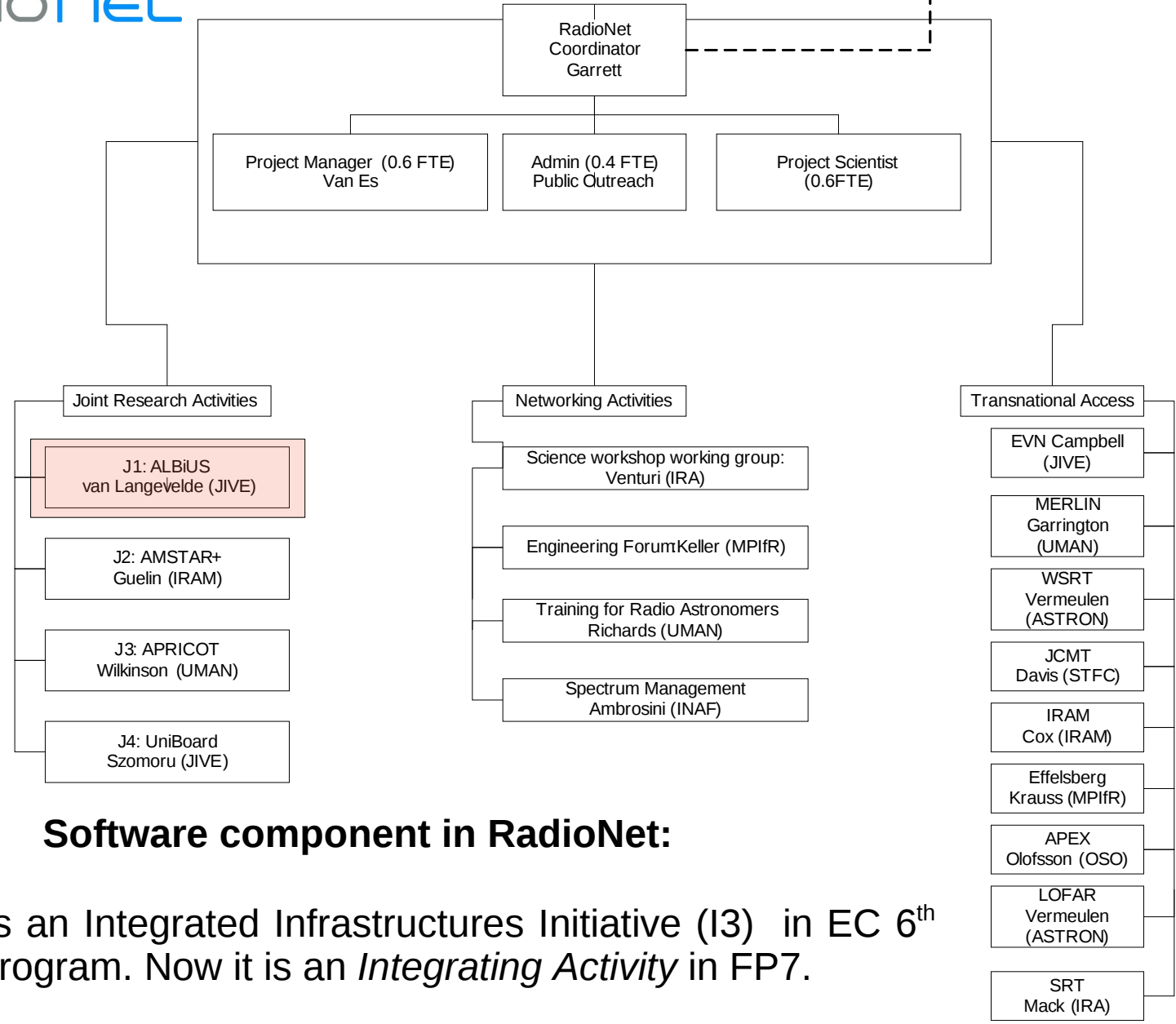




Giuseppe Cimò ' – Joint Institute for VLBI in Europe



Software component in RadioNet:

RadioNet was an Integrated Infrastructures Initiative (I3) in EC 6th Framework Program. Now it is an *Integrating Activity* in FP7.

Software development as Joint Research Activity

ALBiUS:

Advanced Long Baseline interoperable User Software



EC sponsored contribution towards radio astronomy data processing:

- New software systems and Key algorithms for upgraded and new generation RadioNet facilities.
 - Calibration (both in the UV and image plane.)
 - Sky modeling.
 - Astrometry.
 - Make current algorithms and software package to work in a modern distributed computing environment.
 - Transparent *interoperability* among software suites.
 - Quality control.

ASTRON



Bordeaux



Cambridge



ESO



JIVE



Manchester



The University of Manchester

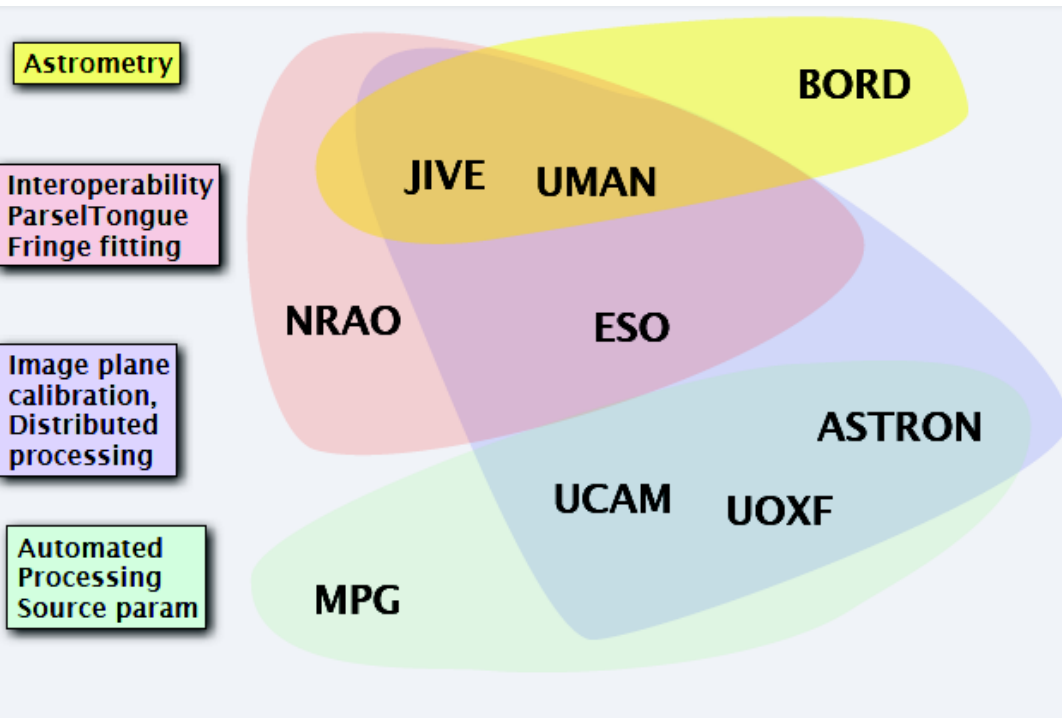


MPIfR



NRAO

Oxford



Where do we come from?

ALBUS (Advanced Long Baseline User Software)

- Budget 948k€, 4 partners, 5 year project.
- Plus 100% matching at each institute.
- Most partners required to hire new staff on project.

- Algorithm evaluation.
- Innovations.
- ParselTongue product



ALBiUS (Advanced Long Baseline interoperable User Software)

- Budget 1000k€, 9 partners, 3 year project.
- Plus 75% of local matching after negotiations.
- Can write hours of staff on this program.
- Started Jan 2009.
- Kick-off on March.
- ...now! → Goals, Tasks, Partners,...



What can we achieve?

- *Interoperability* across quite different range of facilities.
- Important channel for collaborations, meetings and experiences exchanges.
- Training new specialists.
- In some cases, ALBiUS can fund something you already wanted to do.
- *Practical by-product: A way to structure progress, write down results and enforce communication.*

How? (some feedback from the ALBUS experience)

- Frequent short reports!
- Allocating and recruiting the right people:
 - Be flexible with your resource allocations
 - More important than meeting deliverables and original scope
- Communication is hard but easier if you arrange exchanges rather than meetings
- Getting mileage out of software may be difficult. A suggestion:
 - Getting students involved → this provides focus and urgency!

What are our *tasks*?

Make ready the existing algorithms for the era of ALMA, the SKA and its pathfinders.

Make sure that current RadioNet facilities make optimal use of new software.

Task 1: *Interoperability*

Exploit the common Python interface of AIPS, CASA, Miriad.
Data formats, data models, mixing calibration, ParselTongue.

Task 2: *Calibration Algorithms*

Fringe Fitting, needed by new instruments, new software environment.
Image plane calibration, directional dependence and mosaicing.
Calibration in a distributed environment.
Astrometry.

Task 3: *Automated Processing*

Data Quality Control: identify and correct/excise corrupt data.
RFI mitigation.
Source Extraction and Parameterization.

Goal of this meeting → Huib's talk

What are NOT our *tasks*?

ALBiUS is not the global solution to user data processing problems

Much too modest in funding

Distributed software development is hard

The purpose of ALBiUS is originally different.

ALBiUS should not be a bureaucratic nightmare with rigid deliverables to be produced.

But EC requirements on reporting are specific

Not always a bad thing, forces one to take time to review progress

What should be done?

– Deliver the milestones!

(after all it is a contract with the EC)

The accomplished deliverable should be put in the public domain, so astronomers can use them.

– Eligible costs must be produced:

- demonstrate the EC provided man-months,
- make justification for matching man-months,
- produce receipts for traveling.

Note that JRA funds are kept at institutes and take part in the reporting process.

– Reports of meetings, presentations.

– Feedback to the project manager for board meetings and reviews.

– Annual reports and mid-term reports, including presentations and papers that refer to the work done.

How flexible the process can be?

Contract with the EC, signed by RadioNet to produce a stack of deliverables for a contracted price.

Some fraction will be pre-financed the rest when demonstrated made eligible costs.

- Progress with deliverables checked in review exercises run by RadioNet consortium board
- It may be possible to re-assign allocations between partners, but reluctantly and it should not be done too often.
- The tasks laid down in Description of Work
 - are an appendix to the contract
 - are not very specific in the deliverables or the form of software,...
- *Some* freedom on who does what, except the lead partners.

Management tasks:

- Produce the deliverables and making eligible costs.
- Tracking progress.
- Reporting and other requirements.
- Huib van Langevelde & Giuseppe Cimò.

The Management has no control over resources other than through the board.

- It has to do all the bureaucratic work (reporting, finances,...)
- It is Responsible for reporting to the board
- More meetings to go to!

We send *many* emails to the entire team

Please, inform us when you are recruiting.

The Wiki:

<http://www.radionet-eu.org/fp7wiki/doku.php?id=jra:albius>

In the wiki you can:

- find documents and presentations
- announcing meetings,
- find minutes of meetings.
- Complete email list (please, let us know the involved persons at your institute.)

Let us know if you need access to the Wiki.

Wiki will also be used for project reporting

Contact: Aukelien van den Poll at JIVE or me.

Conclusions:

ALBiUS is a Joint Research Activity within the Integrating Activity RadioNet.

ALBiUS is an EC sponsored contribution towards radio astronomy data processing.

- Budget 1M€, 9 partners, 3 year project.

Interoperability across quite different range of facilities.

Tasks: *Interoperability, Calibration Algorithms and Automated Processing.*

It's a contract with the EC: Deliver milestones and write reports.

Please, count hours, collect receipts and start accounting for ALBiUS at your institute.
(Make sure you collect receipts from this trip, You may need a local ALBiUS project number or something similar, according to your local administration.)