JUMPING JIVE: WP8

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WP8

Work package number	8		**Start Date or Starting Event**				
Work package title	Global VLBI interfaces						
Participant number	1	3	10				
Short name of participant	JIVE	OSO	TUM				
Person/months per participant:	36	4	24				
Start month	3			**End month**	45		

Objectives

In order to support the globalisation of VLBI it will be necessary to update tools and methods that allow the telescopes to be addressed in a uniform way. This work package will take charge of scheduling and monitoring tools, adapting and modernising them as needed, while taking care to continue to adhere to international standards and requirements.

Task 8.1: Re-factoring of legacy scheduling software (JIVE)

- SCHED: written in the early eighties (FORTRAN)
- Provides a common, generalized user interface for scheduling VLBI
  - Uses observing parameters, source and frequency setup catalogues
  - Result: VEX file, international standard
  - Used by several VLBI networks around the world
- No formal support of SCHED (!!)

- Re-factor existing code rather than re-write from scratch
- Re-write well-defined bits of functionality as individual modules in a modern language
- Keep “gold standard” available throughout the process
  - Enabling an incremental replacement of the original code base.
  - Static parts of the code that do not need frequent modifications will be kept as they are
  - Work towards modernized version of SCHED, far easier to adapt and maintain

- First step: set up global SCHED forum of experts/developers/expert users
  - Keeping different needs of different VLBI networks in mind

Task 8.2: Remote access and monitoring (TUM)

- e-VLBI brought a considerable improvement in the communications between stations and correlator
- However, during recorded sessions no real central overview of the network
  - Will grow in importance for global VLBI

- In NEXPReS, a remote control and monitoring system was developed and deployed at a number of geodetic stations.
- Evaluate this product and other existing monitoring systems
  - Geodesy, mm-VLBI
  - Find a common ground in order to ensure interoperability
  - Adapt existing software for integration into a central infrastructure
  - Set up web-based access techniques

- Result: central, web-based monitoring system, usable for both astronomical and geodetic VLBI
  - Continuously monitor and assess the status of the VLBI network
  - Enable automated warnings in case of failures
  - Provide the information needed to continuously improve the performance of the network

Deliverables

Deliverables

D8.1: setting up of SCHED re-factoring forum - month 3

D8.2: document detailing what functionality of SCHED will be re-written, and method to be followed, based partly on input from SRFF - month 8

D8.3: re-factored SCHED - month 36

D8.4: evaluation of different monitoring software packages - month 4

D8.5: integration of existing software into central infrastructure - month 12

D8.6: completed monitoring system, deployed at JIVE and at Geodetic Obs. Wettzell - month 24