# **LSDMA AHM Karlsruhe 2016**

**DLCL Neuroscience - Report André Giesler (absent)** 





# **DLCL Neuroscience Team and Tasks**



- André Giesler
- Myriam Czekala (part-time)

 André takes part at the JARA HPC Symposium today (4<sup>th</sup> and 5<sup>th</sup> October) presenting provenance paper submission

## **3D-PLI Workflow**

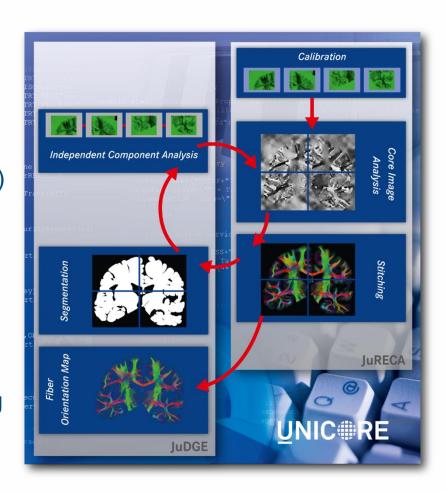


### Activities

 3D-PLI UNICORE workflow has been shifted from the URC representation to the UNICORE Portal (allows execution with parameters, no workflow editing)

## Goals

- Integration in the Human Brain Project infrastructure (HBP Collaboratory)
- Linking UNICORE provenance mechanism with HBP provenance infrastructure (using W3C-PROV interoperability)



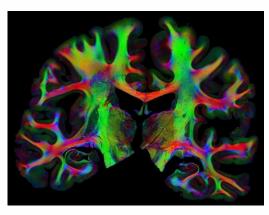
## **3D-PLI Workflow**



#### Publications

Bücker, O.; Köhnen, S.; Huynh, A. M.; Tabbi, G.; Lührs, A.; Giesler, A.; Hagemeier, B.; Amunts, K.; Lippert, T.; Axer, M. "Automation and parallelization of a 3D Polarized Light Imaging workflow"

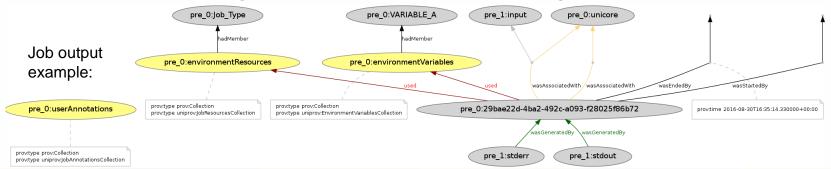
22nd Annual Meeting of the Organization for Human Brain Mapping (OHBM), Genf, Switzerland, 26 Jun 2016 - 30 Jun 2016



# **UniProv – Provenance Management System**



- Ongoing developments
  - Extended W3C-PROV to take into account specific UNICORE features (job parameters, branches, loops, etc....)
  - Provenance model now based on three OWL2 encoded ontologies (standard PROV-O, PROVONE for workflow extension, and own UniProv extension)
  - Serialization of provenance data realized with Apache Jena Ontology API
  - Finished: PROV encoded tracking of single UNICORE Jobs
  - Focused on workflow level provenance mapping (sophisticated)
- Provenance storage concept relies on neo4j graph database



# **UniProv – Provenance Management System**



#### Publications:

- Rejected (re-submission at later state of project welcomed): A. Giesler,
  M. Czekala, B. Hagemeier, R. Grunzke. UniProv: A flexible Provenance
  Tracking System for UNICORE, Theory and Practice of Provenance
  2016 (TaPP'16), McLean
- Abstract accepted, presentation at conference: A. Giesler, M. Czekala,
  B. Hagemeier, R. Grunzke. UniProv: Reproducible Science in
  Workflows, JARA HPC Symposium 2016 (JHPCS'16), Aachen





Thank you for your attention!