DataTAG – WP4
& GLUE

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PPARC

UNIVERSITEIT VAN AMSTERDAM

EDT - WP4

- **Main Subject:**
  - **Interoperability between EU and US Grids services from DataGrid, GriPhyN, PPDG and in collaboration with iVDGL, for the HEP applications.**
- **Objectives:**
  - **Produce an assessment of interoperability solutions**
  - **Provide test environment to LHC Applications to extend existing use-cases to test interoperability of the grid components**
  - **Provide input to a common Grid LHC architecture**
  - **Plan EU-US Integrated grid deployment**
- Participants(funded fte): **INFN (8fte), PPARC (1fte), UvA (1fte)**

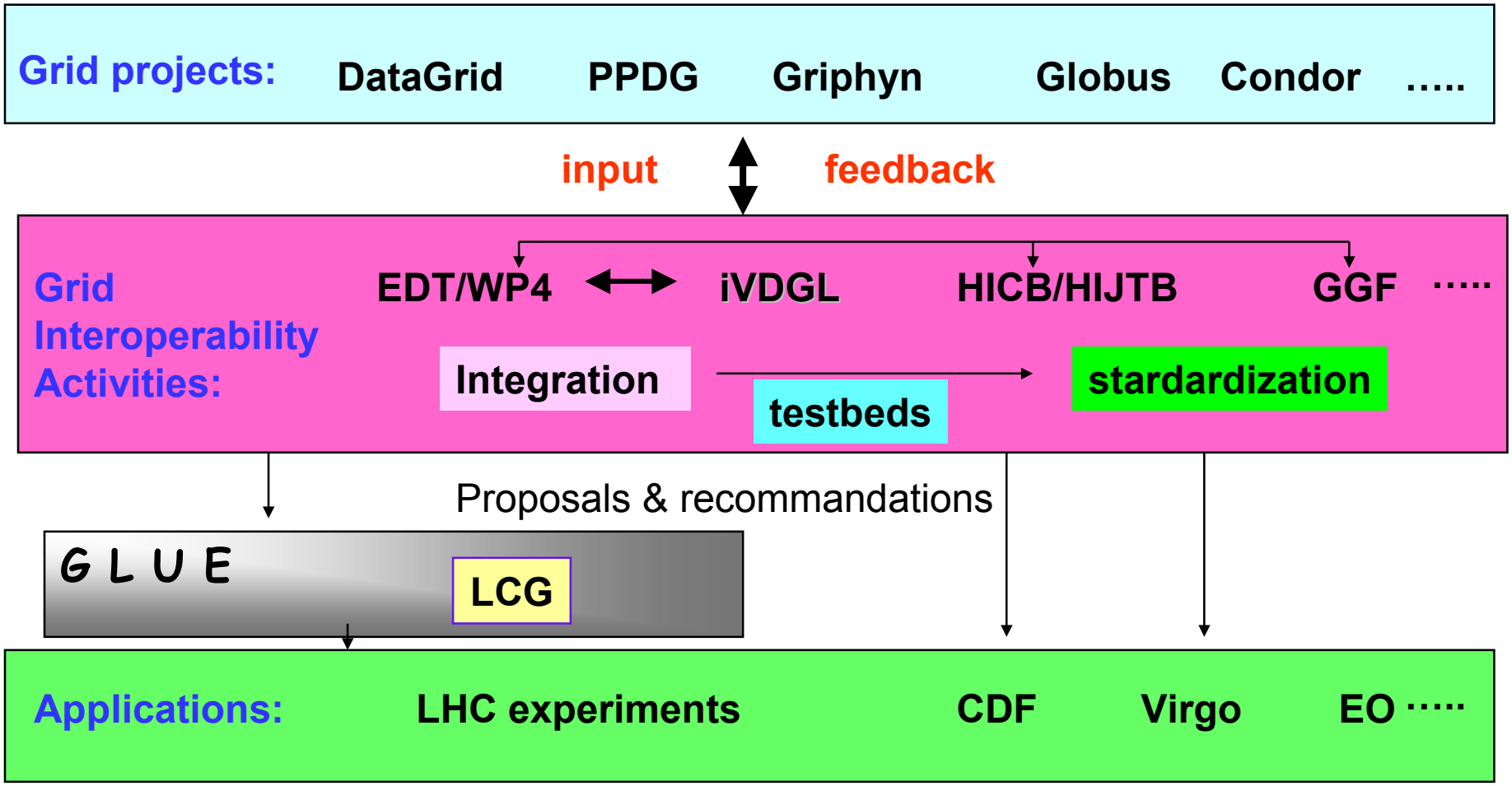
WP4 Tasks

wp managers A.Ghiselli, C.Vistoli

Assuming the same grid basic services (gram,gsi,gris) between the differen grid projects, the main issues are:

- **4.1 resource discovery, coord. C.Vistoli**
- **4.2 security/authorization, coord. R.Cecchini**
- **4.3 interoperability of collective services between EU-US grid domains, coord. F.Donno**
- **4.4 test applications, contact people from each application :**
  - **Atlas L.Perini, CMS C.Grandi, Alice P.Cerello, CDF S.Belforte**

DataTAG/WP4 framework and relationships



EDT/WP4 – iVDGL contacts

- **Security (task 4.1)**
  - R.Cecchini <---> D.Olson
- **Information discovery (task 4.2)**
  - C.Vistoli <----> J.Schopf, B.Tierney
- **Grid Middleware (task 4.3)**
  - F.Donno <----> R.Pordes, R.Cavanaugh

GLUE

(http://www.hicb.org/glue/GLUE-v0.04.doc)

- Grid Laboratory Uniform Environment (GLUE) focus is on interoperability between Grid software projects.
- GLUE is a collaboration of grid projects with effort and management through iVDGL and DataTAG.
- GLUE will report to and get guidance from HICB and JTB.
- GLUE components are finalized to HEP experiments.
- To date partecipating experiments are Alice, Atlas, BaBAR, CDF, CMS, D0, (LHCb?)
- and projects:ApGrid, CrossGrid,DataTAG, DataGrid, GriPhyN, IN2P3, INFN-Grid, iVDGL, LCG, GridPP, PPDG

GLUE program

- **Phase1**
  - Authentication infrastructure
  - Unified service discovery and information infrastructure
  - Test of phase1 infrastructure
- **Phase2**
  - Data movement infrastructure
  - Authorization services
  - Test of phase II
- **Phase3**
  - Computational services
  - Test of the complete computational service

Glue Schedule

- **Feb 2002: test interoperating certificates between US and Europe.** ***Done***
- **May 2002: review of common resource discovery schema.** ***In progress***
- **……**
- **……**

Common schemas for the US and EU Grid projects

work coordinated by J.Schopf, B.Tierney, C.Vistoli
with the collaboration of Globus, PPDG, EDG WP managers
under the ombrella of JTB
summary from the document:

- **A schema refers to a description of objects and attributes needs to describe grid resources and the relationships between the objects**
- **Computing element (CE): one or more similar machines managed by a single scheduler/job queue**
- **Storage Element (SE): any data storage that is registred in a GIS,….**
- **Network Element …….**

Project plan and timeline

DataTAG/WP4 and iVDGL

- **April 7-30**
  - **Define common schema for a CE using GOS. This includes definition of attributes, constant, and relationships between objects. Ensure that the schema maps to LDAP, R-GMA and XML.**
    - ***Collaboration and agreement with EDG WP's***
- **April 15 – May 15**
  - **Identify GLUE testbed hosts, install Globus, get host certifications and configure trusted CA's. Install EDG CE/SE sw in the european part (and possibly US?) part of the glue testbed. There should be at least 2CE's and 1 SE in both EU and US.**
- **May 1 – 30**
  - **Add new CE schema to MDS "information providers" package, add the new CE schema to EDG/MDS "information provider" and write new information provider if necessary. (Write unit tests to test modifications.)**
    - ***EDG agreement on "EDG/CE Information provider"***

Cont.

- **May 1 – 30**
  - Testing the new schema using “Grid Searcher”, a tool for browsing MDS. Need to modify “Grid Searcher” tool to work with the new schema.
- **May 1 – June 30**
  - Modify EDG WP1 Resource Broker and other middleware to use the new schema, and test.
    - *EDG WP involvement*
- **May 1 – 30**
  - Define a schema versioning mechanism to allow easy changes/additions to the schemas in the future.
    - *EDG agreement (more general: how to manage a glue sw product ?)*
- **July 1 – 30**
  - Install R-GMA on GLUE testbed, and test. Configure EDG CE/SE with R-GMA information providers.
    - *EDG involvement, timeframe correct?*

Cont.

- **July 1 – 30**
  - Modify R-GMA equivalent to “Grid Searcher” to work with the new schema (if it does not exist).
- **June 1 – 30**
  - Define common schema for Storage Element in GOS and repeat verification steps
- **July 1 – 30**
  - Define common schema for Network Element in GOS and repeat verification steps
- **August**
  - More testing
- **September**
  - Deploy on EDG testbed 2 (?)
    - *EDG work*

Open questions

- Ownership of glue schemas
- Maintenance of glue schemas
- Ownership (and maintenance) of MDS information providers
- Ownership (and maintenance) R-GMA information providers

Proposal: include C.Vistoli, as EDT/WP4, in EDG WP managers meetings.

DataTag Grid HW Resources

- CE, SE, VO services, glue schema tests and CAS test in Cnaf
- CE, SE in Padova, Milano, Torino
- CE in Trieste and Bologna

iVDGL / DataTAG joint meeting

26 april Chicago, agenda

- 8:30 am DataTAG WP4 -iVDGL collaboration introduction - Ruth/Antonia
- 8:45am GLUE Schema iVDGL status and plans - Jenny
- 8:55am DataTAG support for the common schema tests and DataGrid integration - Cristina
- 9:10 VO grid environment set up and preliminary CAS tests report - Roberto
- 9:40 Short term DataTAG program for experiment grid integration - Flavia
- 10:10 iVDGL Experiment and Laboratory Testbeds - Rob 10:30 Break
- 11:00 Existing Packaging and deployment tools, first comparison and evaluation - Flavia
- 11:15 VDT packaging and installation - Alain - this will have been covered earlier in the week but we will have some datatag people participating by video...? 11:30 Discussion of EDG and VDT commonality, interoperability and next steps in DataTAG, iVDGL collaboration - all