



Enabling Grids for  
E-science in Europe

[www.eu-egee.org](http://www.eu-egee.org)

*JRA1 Meeting, Oxford, 30 June-2004*

# WMS/Data interaction Interactions and Questions

**Krzysztof Nienartowicz  
Gavin McCance**

**EGEE JRA1 Data Management Cluster**



EGEE is a project funded by the European Union under contract IST-2003-508833

# Interactions: Data/Job Preparation

1. WMS has a job in the queue requiring {X} LFNs
2. WMS/MM decides to schedule a job at site A
3. WMS or MM interacts with the DS to schedule transfer of the files {X} to site A

WMS = Workload Management System  
MM = MatchMaking  
DS = Data Scheduler

# Questions

- What is {X}? LFN or GUID? Or metadata? Or SURL?  
Mixed?
  - whatever we get from application – any of the above, except SURLs
- How does WMS expect to call the DS:  
`transfer({X}, destination(s), ...)` operation?  
Single site destination only?

[ no comments]

Hints passed for exact data placement?

- based on metadata

# Questions

- What does WMS expect as a return value from the transfer operation?
  - Void? Context handle to retrieve status of file transfer?
  
- What errors are the WMS interested in being told about?
  
  
- What is the error handling logic?

# Questions

- Should the operation be synchron / asynchronous? Both?  
For asynchronous, the WMS subsequently needs to poll the DS for the status of the transfers? Does it care about the result? → implies session ID on WMS.
  - Somebody needs to know the status – perhaps not the WMS – security issues: operate in the name of the user using his credentials
  - DAG?
  
- User credentials must be delegated by WMS to DS. [See Olle's mechanism – delegation portType.] Is this OK?
  - Yes.

## After WMS submits job to site

- Does it wait for pre-stage to be complete before running the job? What is the expected semantics? Timeouts, blocking until available, fail, individual policy-based? Other restrictions we should know about?

# Questions: Job Output

- If the job output specified in JDL:
  - How is output produced? Write operation through I/O? Local file creation and then copyAndRegister? Both? We want to do the latter only.
  - What is the responsibility of the job wrapper and what is the responsibility of the DM services?

# Questions: Job Output

- Registration of application specific metadata created by the job – is this specified by the JDL?
- Comment: Job output merging is not something we do.
  - Is this logic exclusively at the application (ARDA) level?
  - Is there any functionality we need to provide (in the middleware) to cover this requirement?