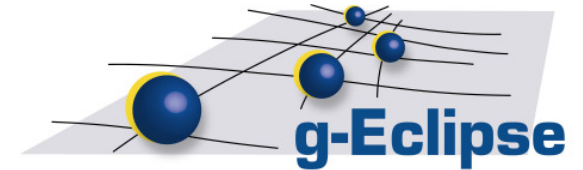


***Access the power of Grid with  
Eclipse***

***Harald Kornmayer (Forschungszentrum Karlsruhe)  
Markus Knauer (Innoopract GmbH)***

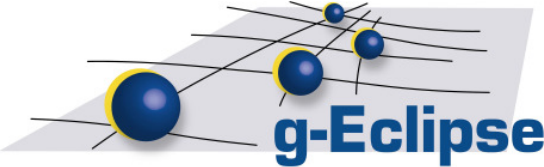
***March 5th, 2007, EclipseCon 2007  
Santa Clara***





## Outline

- Grid Harald Kornmayer
  - e-Science
  - Middleware
  
- g-Eclipse Markus Knauer
  - The idea
  - Functionality
  - Architecture
  - Roadmap and status

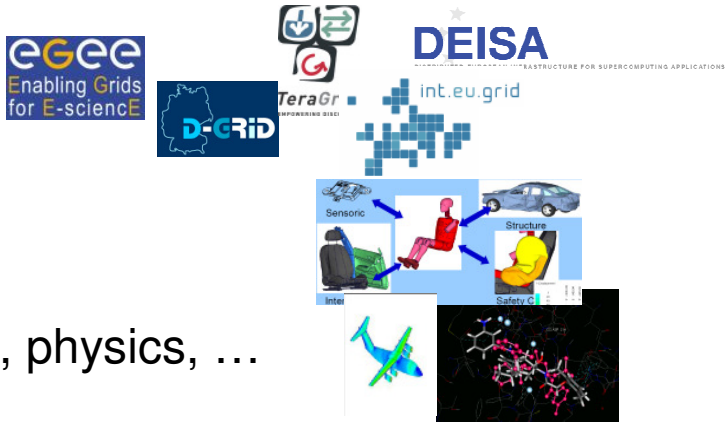


# Grids for e-Science

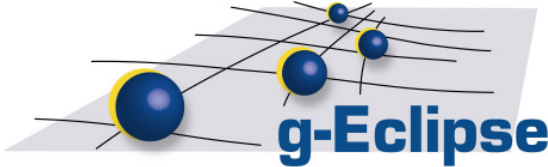
- The meaning of Grids depends ....
  - but we talk about Grids for e-Science
- “To solve together a scientific problem, the distributed resources of scientists can be dynamically and coordinately connected by using fast networks to build a „virtual computing center/ organization” (Ian Foster, Carl Kesselman)

- We see many Grid infrastructures for e-Science emerging!

- On national and international levels
- EGEE, D-Grid, TerraGrid, int.eu.grid, ...

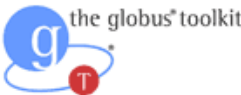
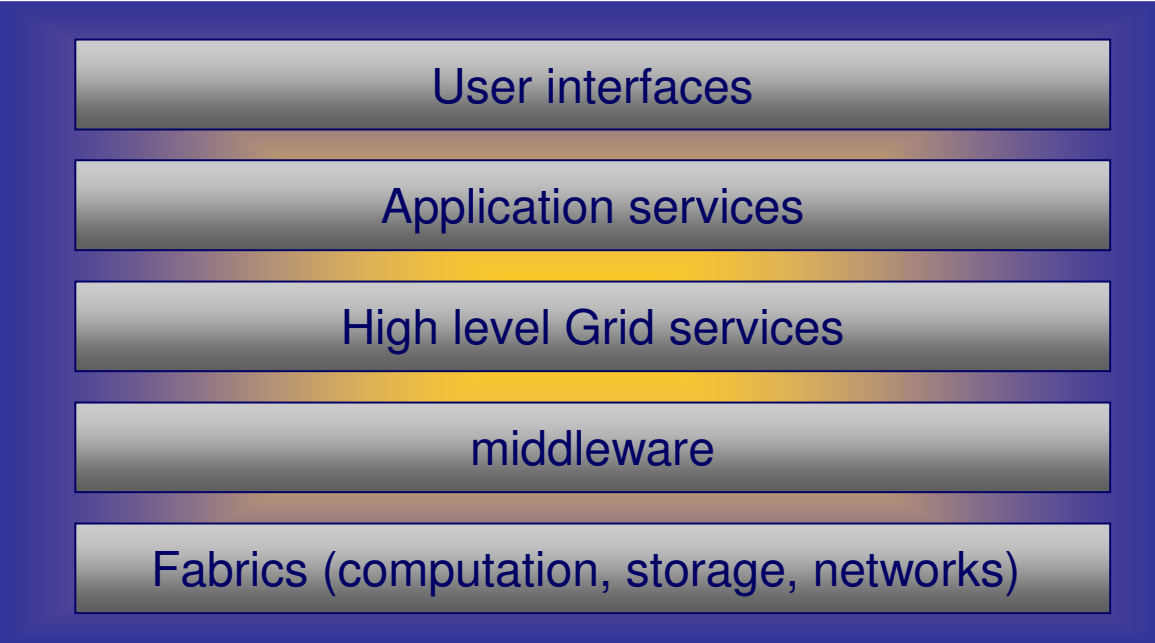


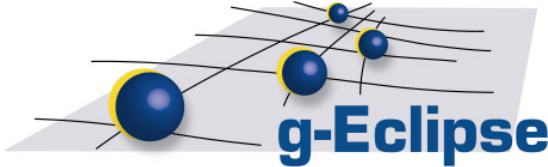
- Many different application domains
  - BioMedical, Financial sector, engineering, physics, ...



# Grid middleware

- Layered approach
- g-Eclipse addresses the top layer of User friendly access
- Different middleware systems exist
  - gLite
  - Globus toolkit
  - UNICORE





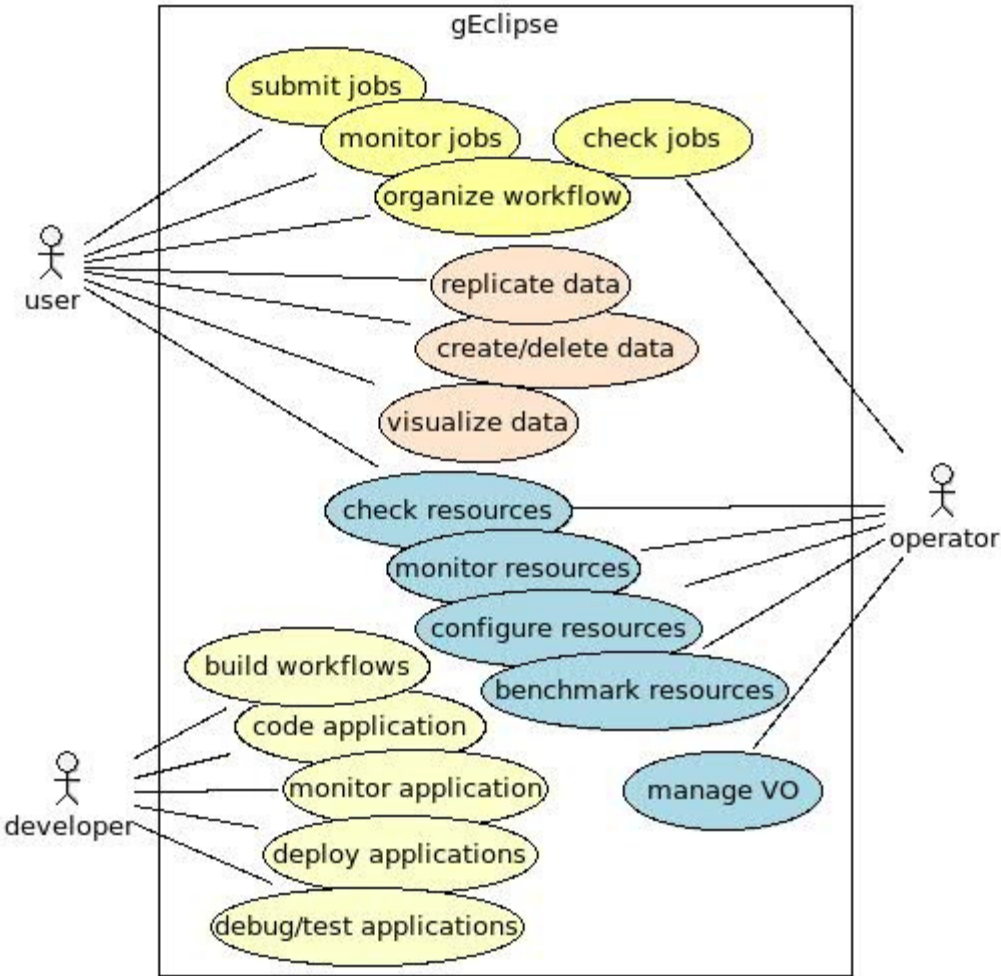
# g-Eclipse – the idea

- Grid infrastructure are complex systems
  - Resources are provided by different administrative domains
  
- Users want easy access to the system
  
- User acts within different roles
  - Grid applications users
  - Grid resources providers and operators
  - Grid application developers
  
- Provide a general UI framework/eco system for the different Grid actors based on a reliable platform
  - use Eclipse and contribute!
  
- Create a project by Grid academics and Eclipse experts
  - Funded by European Commission
  - <http://www.eclipse.org/geclipse> and <http://www.geclipse.eu>

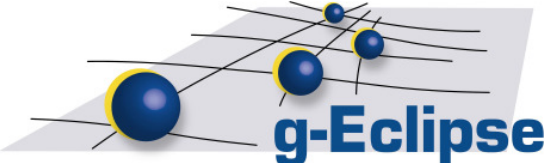


# g-Eclipse - user roles – the big picture

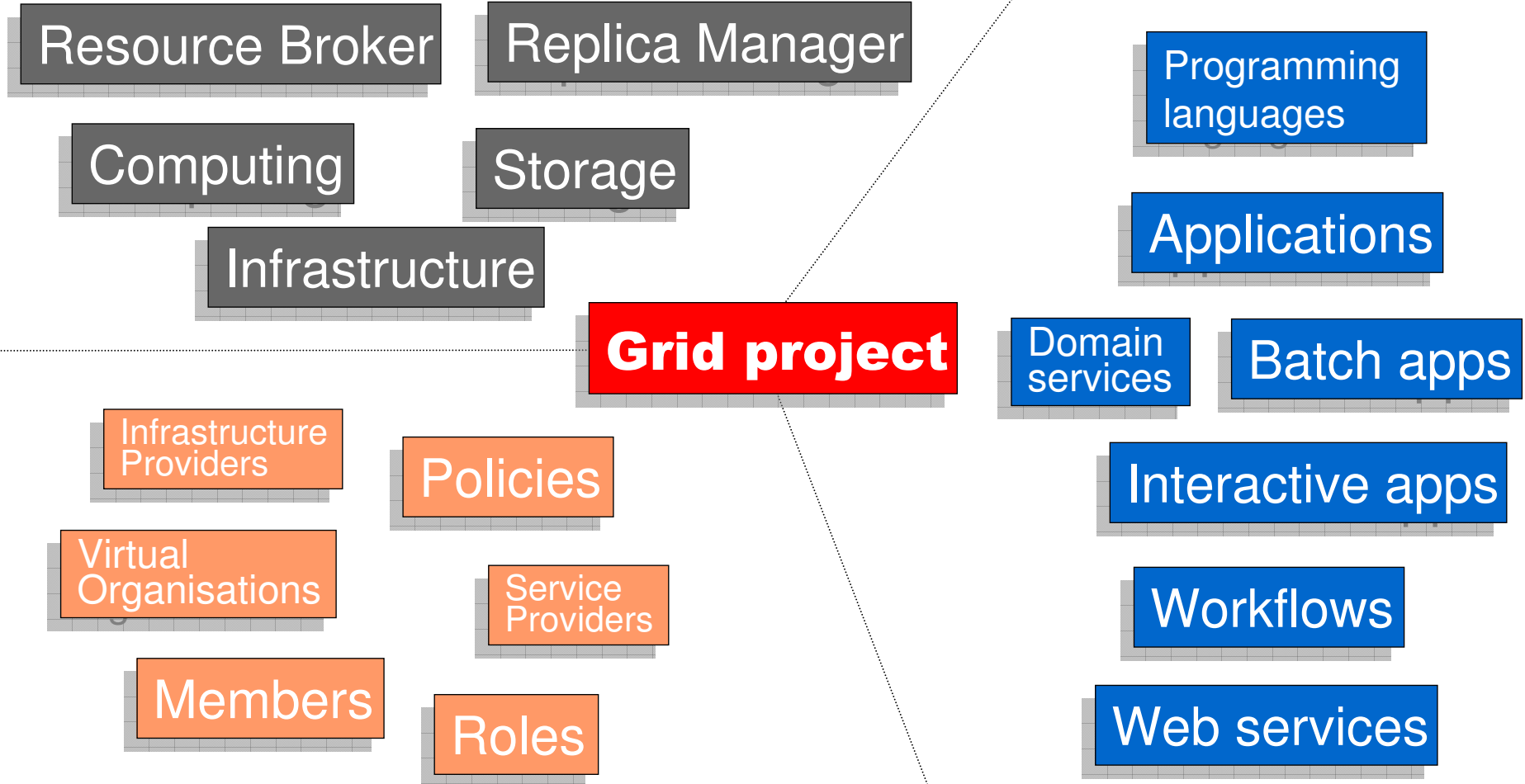
- 3 different roles
  - user
  - operator
  - developer
  
- in general...
  - job management
  - resource management
    - files
    - applications
    - ...

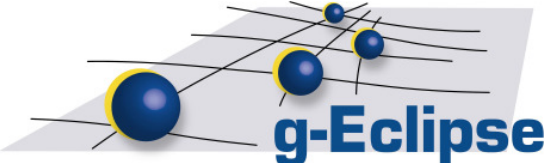


→ integration in Eclipse is complex

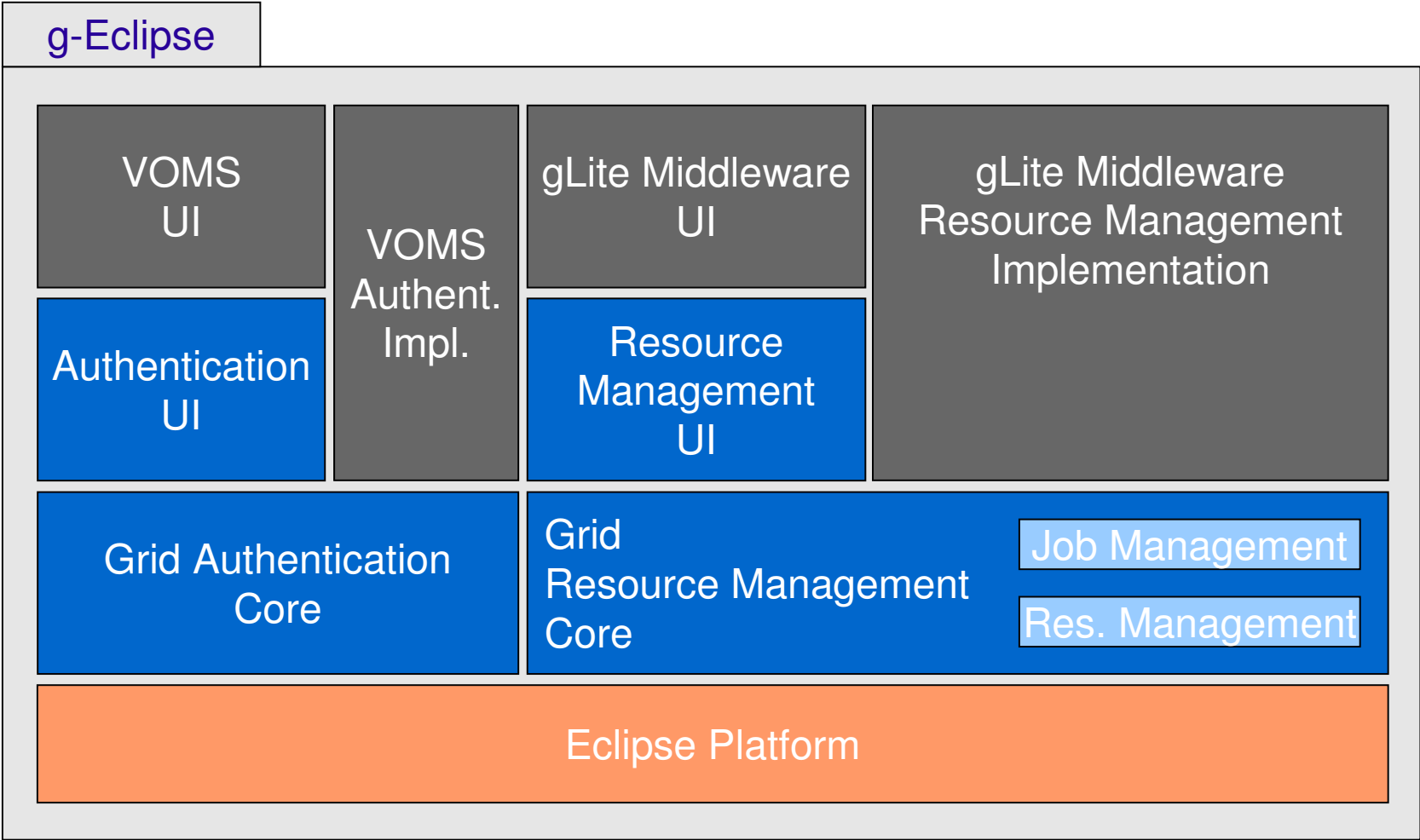


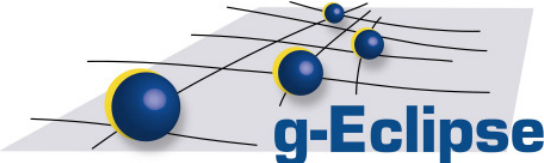
# g-Eclipse – Grid project





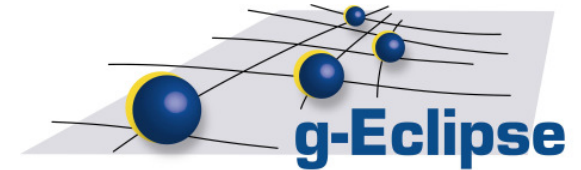
# g-Eclipse – Architecture





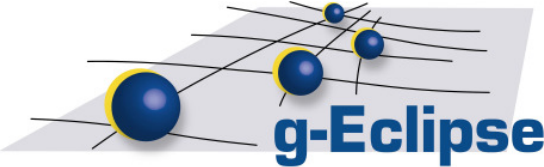
# g-Eclipse – User Interface Contributions



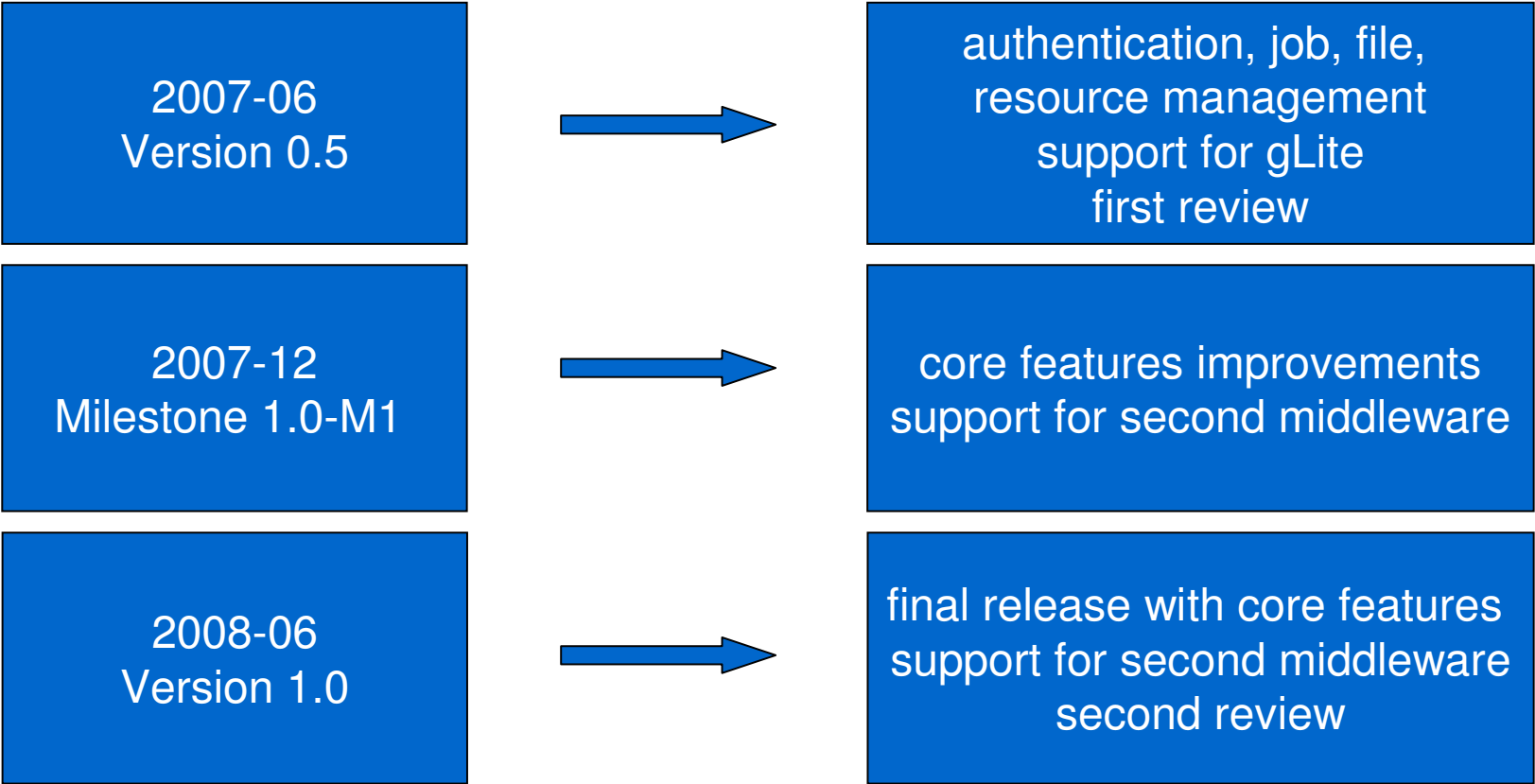


## Status

- g-Eclipse is a Technology project at eclipse.org
  - <http://www.eclipse.org/geclipse>
  - As incubator project g-Eclipse is currently in the IP process; first code contributions available in the subversion repository
- First milestone releases will be available soon
  - Preliminary results available

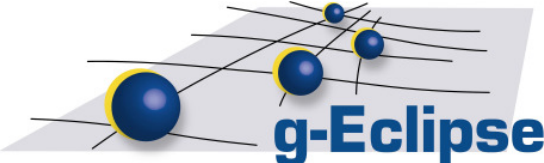


# g-Eclipse – roadmap/milestones

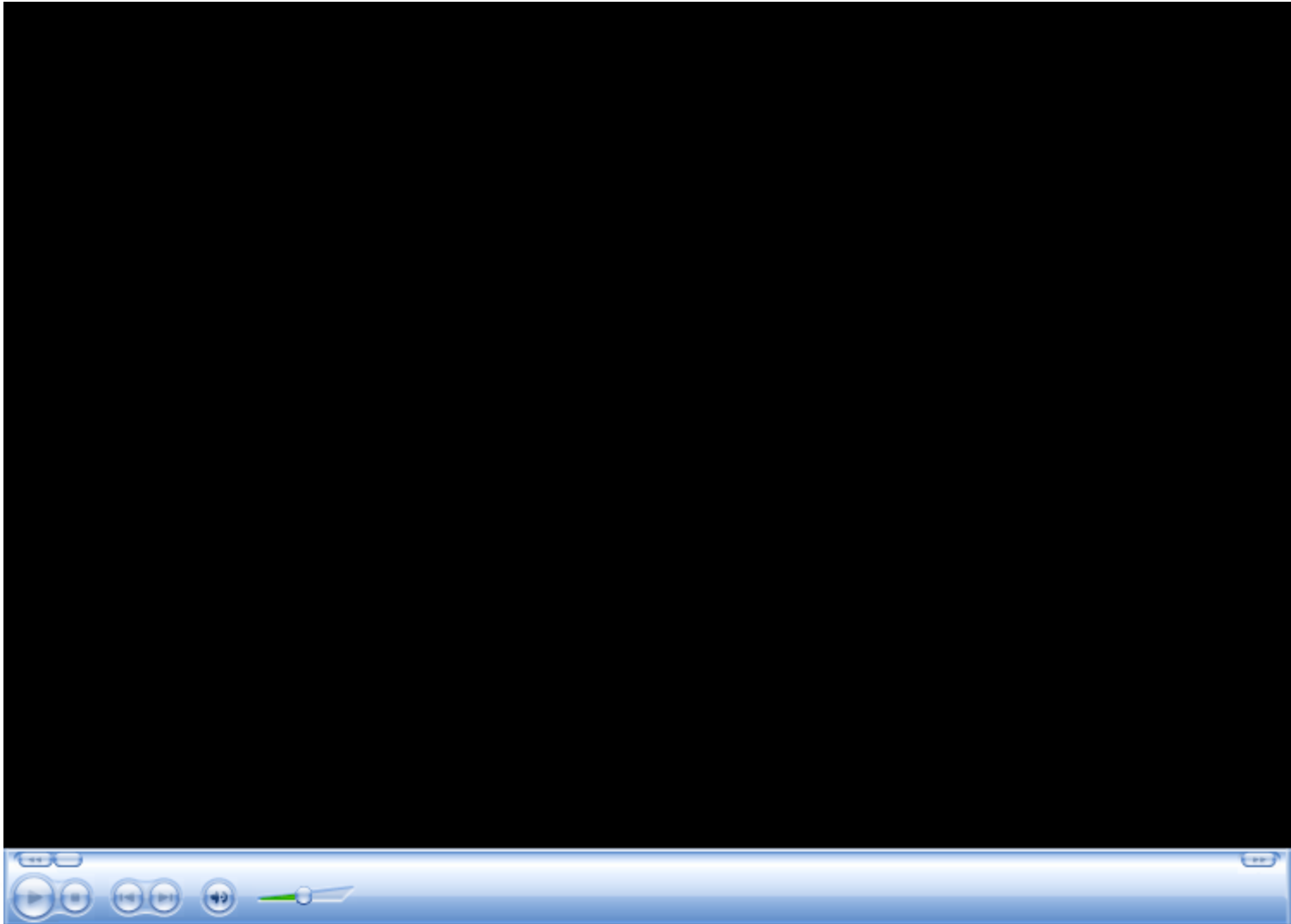


## Where to meet!

- See you at the INNOOPRACT booth!
- Join our BoF  
“Middleware independent access to Grid infrastructures”  
Wednesday, 19:30 | Grand Ballroom F
- Send comments to our newsgroup
  - <news://news.eclipse.org/eclipse.technology.g-eclipse>
- More information at
  - <http://www.geclipse.eu>
  - <http://www.eclipse.org/geclipse>



# g-Eclipse – eye catcher I



If the movie does not start, go to  
[http://www.geclipse.eu/fileadmin/Documents/Pictures/geclipse\\_gvid3-slow.avi](http://www.geclipse.eu/fileadmin/Documents/Pictures/geclipse_gvid3-slow.avi)