



Spanish e-Science Network

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**IBERGRID 1st Iberian Grid Infrastructure Conference
Santiago de Compostela (Spain) May 14 – 16, 2007**

Background

- **The White Book of e-Science (<http://www.fecyt.es/e-ciencia/libroblanco.htm>)**
- **E-Science activities in Spain: Astronomy and Space, Biomedicine, Material Engineering, Earth Science, Physics, Computational Chemistry, etc.**
- **The National Research Network (RedIRIS) and the Connection to the European Network GEANT as the Basic Communication Infrastructure**
- **IrisGrid and the Spanish Tematic Network in Grid Middleware**
- **Participation of the Spanish Research Centres in Projects and Initiatives as EGEE, DEISA, EELA, LHC, the BSC-National Supercomputing Network, etc.**
- **Need of a Global Coordination of all the Activities, Development of Common Tools and Easy Access to the Research Resources: To Promote the Creation of the Spanish e-Science Network.**



Spanish e-Science Network

Objectives

- **To Promote and Coordinate the Development of the e-Science in Spain.**
- **To Become the National Speaker for e-Science in the European framework.**
- **To coordinate the Spanish e-Infrastructures from the point of view of required investments, management, operation and user support.**
- **To foster the Cooperation with other Programs and Projects.**
- **To promote the Collaboration with Portugal (IberGrid) and other Countries in the e-Science Context.**
- **To transfer the Network results, and to train people.**



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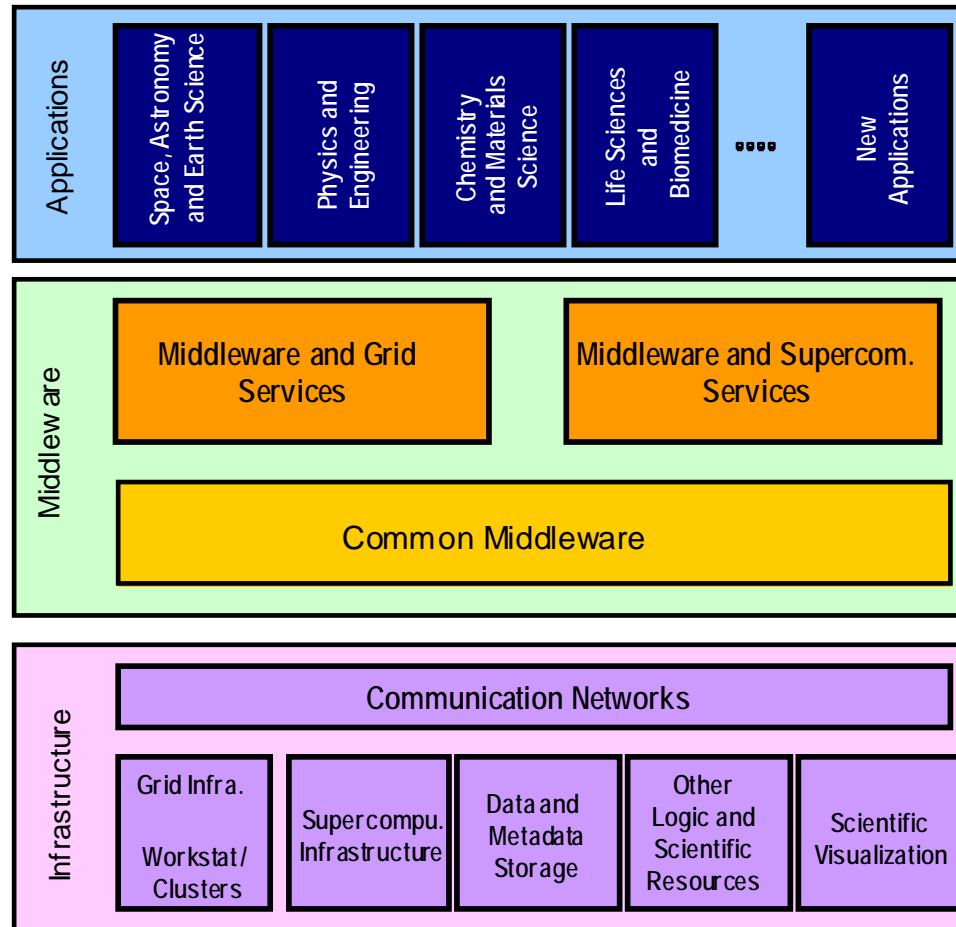
Structure

- **Infrastructure**
 - Resource Centres
 - Provide resources
 - *Computational, Storage, Networking, etc.*
 - Agree a QoS for resources provision
 - Management Centres
 - Provide Core Resources
 - *CA, Catalogue Services, Global Directory of Resources, etc.*
 - Guarantee an appropriate QoS
 - *Monitoring Resources and Infrastructure Service*
- **Users and Applications**
 - Organized in VOs
 - Creation and Usage of applications



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e-Science Components



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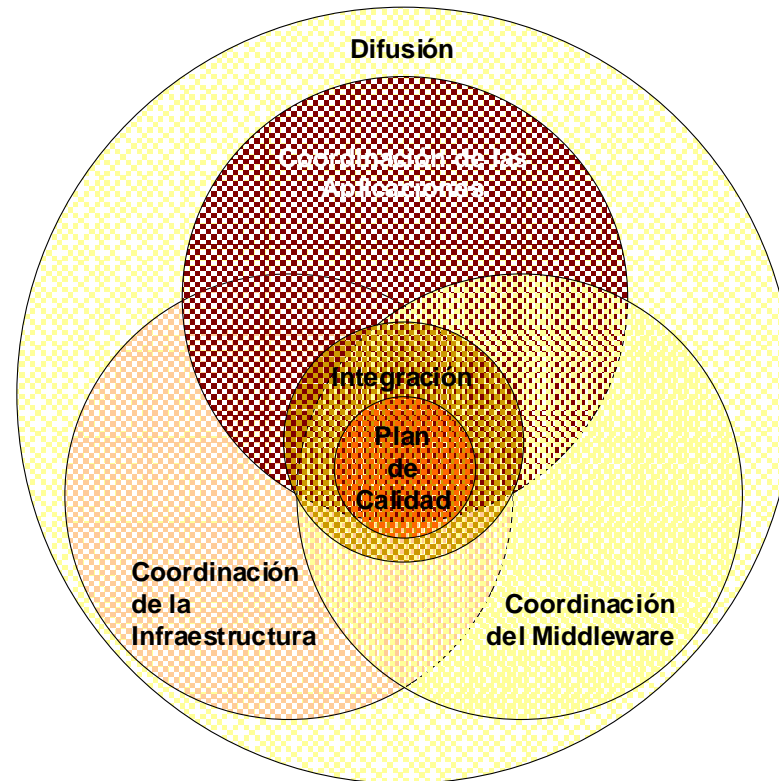
Organization

- **The Coordination is Needed at Four Levels:**
 - Human Network.
 - Infrastructure Operation.
 - Applications Development and Deployment.
 - New Middleware Developments.
- **This Model is Reinforced with the Integration Activities, the Dissemination Activities and the Quality Plan.**



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Organization Model



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Global Coordination

- **Committees and Rules for Participating.**
- **Start-up and Maintenance of Collaborative Tools (Web, Wiki, Document Repositories, etc.).**
- **Definition of a Quality Plan.**
- **Representation of the Network.**



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Coordination of Infrastructure

- ***Resource Centres:***
 - Agreement on Common Policies:
 - Security Models, Interfaces for Accessing the Resources, Quality of Service, etc.
- ***Management Centres:***
 - Agreement with the Resources Centres for the Deployment of Common Services:
 - Global Management, Certification, Resource Monitoring, Accounting System, etc.



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Coordination of Middleware

- ***Improvement and Development of Components in Coordination with Applications***
 - Evolve Middleware according to the requirements of the Applications
- ***Establish a Quality Assurance plan for Middleware***
 - New Components must Follows a Process of Test, Validation, Certification and Integration.
- ***Representation in Technical Forums, Standardization Committees and Projects***
- ***Management of a Middleware Development Platform***

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Aragorn; 10/05/2007

Coordination of Applications

- **Application Areas Organized in VOs, Coordinating the Development and Deployment of Applications.**
- **Coordination among the Different Application Areas for Resource Negotiation.**
- **Feedback the Infrastructure and Middleware Areas.**

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Integration Activities

- **Integration:**
 - Consolidation in the Infrastructure of the Middleware Components.
- **Training:**
 - Preparation of Training Material and Courses for Users and Developers.
 - Setup and Maintenance of a Testbed Infrastructure for Training Purposes.
- **Dissemination:**
 - Attract new Users, Members and Applications.
 - Connection with Industry.
 - Transference of Knowledge, Best Practices and Tools.
- **Quality Plan:**
 - Establish plans for the integration of new communities and users.
 - Metrics Definition.
 - Monitoring of Results.



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Committees (I)

- **Coordination Committee**

- Components

- Scientific Coordinator of the Network
- Coordinators of the e-Science Areas
- Governmental Representatives (MEC)

- Tasks

- Analyze the requirements of e-Science Areas and ensure interactivity among them
- Define Quality plans, Technology Transfer plans, etc.



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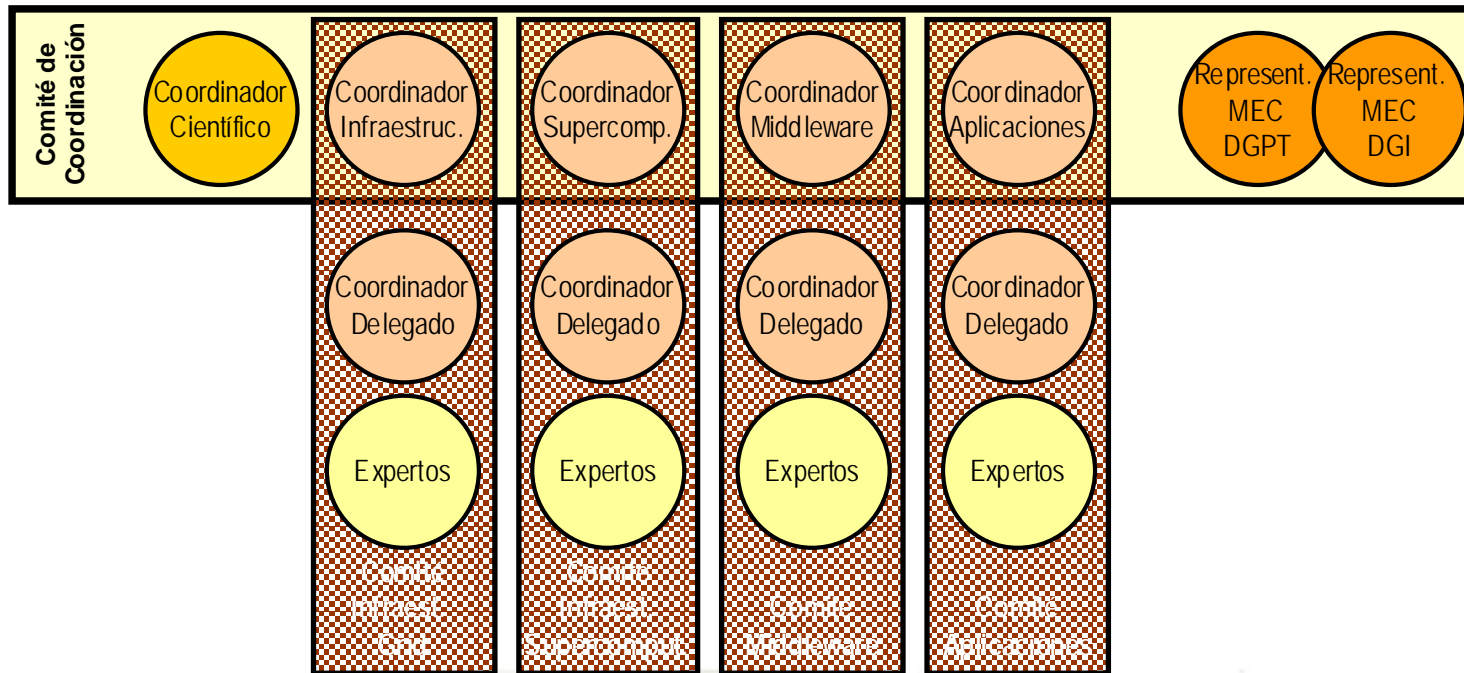
Committees (II)

- **e-Science Areas Committees**
 - Components (each area)
 - Coordinator
 - Deputy Coordinator
 - Experts in the specific Area
 - Areas
 - Applications
 - *Identify and migrate applications and incorporate new users*
 - *Manage VOs*
 - Middleware
 - *Analyze Requirements of the Applications*
 - *Coordinate middleware developments*
 - Supercomputing Infrastructure
 - *Coordinate supercomputing resource centres*
 - *Support optimization and parallelization tasks*
 - Grid Infrastructure
 - *Deploy and monitorize resources, and Incorporate new centres*
 - *Technical support for enabling applications for Grid.*

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Global Coordination

- **Structure:**



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- **Complementary Action Proposal to the MEC-DGPT Convocatory**
 - Call for letters of expression of interest to participate in a given activity of the proposal, including a description of expertise.
 - A letter template will be distributed through the IrisGrid and Grid Middleware lists
 - Budget limited to Coordination purposes

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