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EGEE relating to other grids and policy definition

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Information Society

Enabling Grids for E-sciencE

- **EGEE-NA5**
- **EGEE and e-IRG**
- **EGEE related Projects**
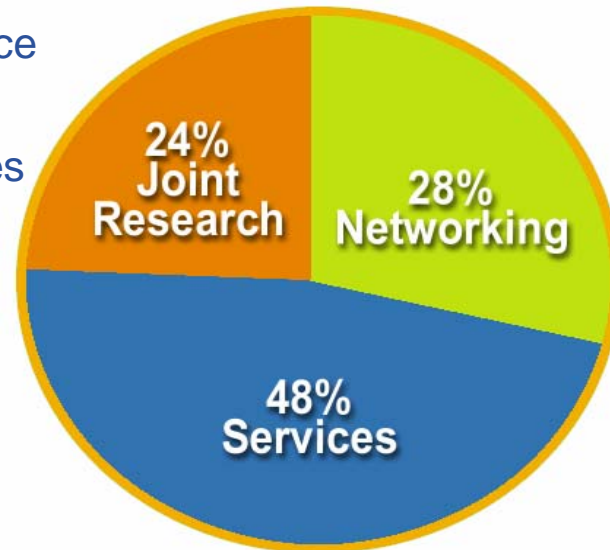
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24% Joint Research

JRA1: Middleware Engineering and Integration

JRA2: Quality Assurance

JRA3: Security

JRA4: Network Services Development

28% Networking

NA1: Management

NA2: Dissemination and Outreach

NA3: User Training and Education

NA4: Application Identification and Support

NA5: Policy and International Cooperation

24% Joint Research — 28% Networking — 48% Services

48% Services

SA1: Grid Operations, Support and Management

SA2: Network Resource Provision

Emphasis in EGEE is on operating a *production Grid* and on supporting the end-users.

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- **NA5= Policy and International Cooperation**
- **Policy**: *Support the creation of a framework for the easy and cost-effective shared use of electronic resources in Europe*
  - *Pursued mainly through a series of policy related White Papers and Roadmap documents*
    - *Under the coordination of the eInfrastructure Reflection Group - www.e-irg.org (external body staffed by national representatives)*
- ***International Cooperation:***
  - *With other projects including "concertation" activities (i.e. coordinating a cluster of related projects – forum of exchanging ideas)*
  - *With other geographical regions (North America, Asia Pacific, Med, Baltic, South America, China)*
  - *With standardisation bodies (GGF et al)*

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- **As far as the policy aspects:**
  - The main purpose is to provide *a forum for exchanging ideas* on policy aspects *and recommending the way forward* through "live documents"
    - Cooperation with eIRG Support Project - **eIRGSP**
      - *Current **White Paper** examples: AAA, Acceptable Usage Policy, User Support, Legal Issues, Interaction of Grid and Networking infrastructures; Future ones: Resource sharing enforced by SLAs : "How much I offer to the Grid and how much I am allowed to use"*
      - *Current **Roadmap** topics (for the next 5-10 years and beyond): Networking, Middleware, Resources (including central supercomputers, sensor grids, etc.), Industry and others.*
    - **EGEE project future** / vision: Follow NREN approach? European Grid Organisation + National Grid Initiatives

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- **As far as the international collaboration aspects:**
  - The main purpose is to provide *a coordinating body of related Grid projects* and a *forum for projects to explore synergies*
    - The "concertation" need will be increased: Many EGEE geographical extensions (EUMEDGRID, BalticGrid, EELA, EUChina, SEEGRID2)
    - Cooperation with the major infrastructure projects (F3 unit) and other related ones: GN2, DEISA, DILIGENT, GRIDCC, etc.
    - Cooperation with the Grid Research (F2 unit) projects (NextGrid, CoreGrid, Akogrimo, etc.)
  - Keep track of *EGEE participation in standardisation* bodies
    - Technical work should come from the other activities
- **NA5 is a horizontal activity!**

- **EGEE2 NA5 has ~7 FTEs in less than 10 partners**
- **Most important issue is good cooperation with other initiatives and projects:**
  - eIRGSP: eIRG Editorial Board Support
    - EGEE has a non-voting seat in the e-IRG
    - E-IRG is considering of introducing Working Groups (Task Forces) with technical and policy directions
      - *Staffing by EGEE should be encouraged and cooperation with EGEE technical activities*
  - Cooperation with other geographical areas
    - Create a board for better coordination if deemed necessary
  - "Concertation" activities: Effort to reuse existing structures and not create other bodies!

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- **List of Tasks:**
  - eInfrastructure Reflection Group support
    - Contribute to eIRG White papers, roadmaps and workshops
  - Roadmap for the next generation Grid Infrastructure **NEW!**
    - Produce an EGEE roadmap deliverable
  - Cooperation with other geographical areas (new areas)
    - US, Asia-Pacific, Baltic, China, Latin America, Mediterranean, South East Europe
  - Concertation activities with other projects
  - Inventory of EGEE participation in Grid standards
    - GGF, OASIS, EGA
  - Participation in major policy setting conferences and workshops
    - SuperComputing and Networking
- *Note:*
  - *Cooperation with other geographical areas is also a concertation activity, but it is considered separately as considered an important objective (EGEE extension to other areas)*
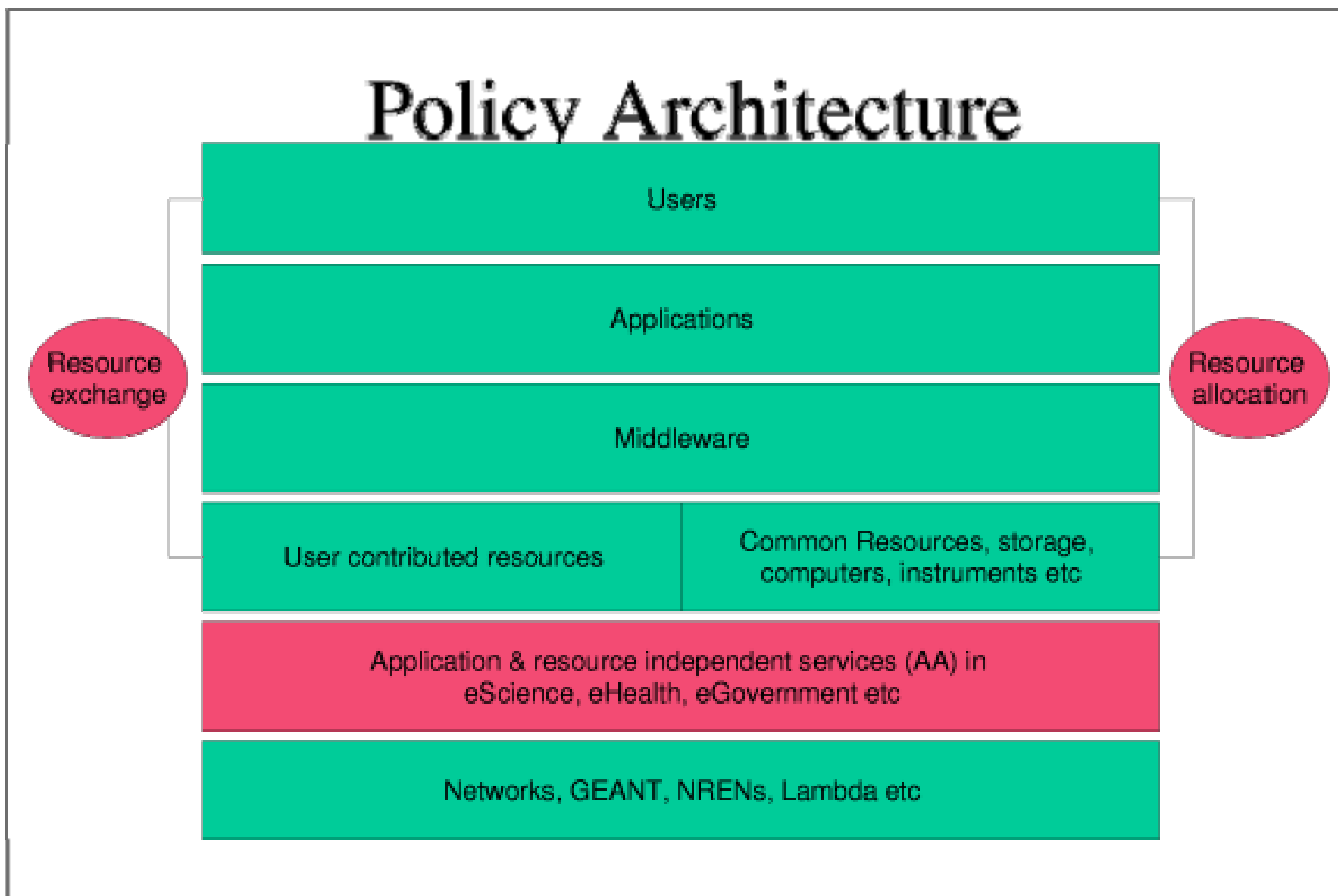
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- **Mission**
  - The main objective of the eIRG is to support on the political, advisory and monitoring level, the creation of a policy and administrative framework for the easy and cost-effective shared use of electronic resources in Europe (focusing on Grid-computing, data storage, and networking resources) across technological, administrative and national domains.
- **Objectives**
  - To identify the fundamental fabric, services and resources needed to enable pan-European e-Science
  - Recommend resource sharing policy guidelines to:
    - National Grid initiatives
    - Regional & European – wide eInfrastructure projects
    - Contribute to International policy fora
    - Give input to other policy drafting bodies e.g. ESFRI, NREN PC etc.
- **Focus first on eScience application user groups (as enablers of novel architectures) but also address wider application domains (e.g. eLearning, eGovernment, eHealth, eCulture, eBusiness, etc.) within the ERIA (European Research and Innovation Area)**
- **Identify, inform and promote GRID awareness among communities who can benefit from sharing resources**
- **Address Governance issues of Grid deployment**
- **Draw upon the experience of the NREN community (Structure, Operations, etc.)**

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Policy Architecture

Users

Applications

Resource exchange

Middleware

Resource allocation

| User contributed resources | Common Resources, storage, computers, instruments etc |

Application & resource independent services (AA) in eScience, eHealth, eGovernment etc

Networks, GEANT, NRENs, Lambda etc

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- **e-IRG White Paper:**
  - http://www.e-irg.org/whitepapers/2005-Luxembourg-pre-accepted.pdf

- **The current White Paper studies a series of areas where policies need to be developed, including AAA (Authentication, Authorization and Accounting), Acceptable Usage Policies (AUPs), User Support, Optical Networking and related Grid Requirements, Middleware, Legal Issues, Advanced Computing Facilities, Storage and Data Services, as well as the role of Industry. In parallel, attempts to tackle issues like Generic vs. Disciplinary Grids, the Governance of the Grid Infrastructure and of the corresponding Middleware are being made.**

- Section 2 demonstrates the importance of the e-IRG during the past couple of years in order to shape the European Research Area.

- Section 3 looks at the issue of "General purpose vs. Disciplinary Grids". This terminology allows a "factorization" of the problem of building Grids for various communities and varying disciplines.

- Section 4 raises the issue of whether the Grid Infrastructure should follow the GEANT-NREN model in the future, i.e. a central co-ordinating body and one national body per country.

- Section 5 analyses both the Authentication & Authorization Infrastructure (AAI) updates and the Accounting novelties.

- Section 6 deals with the Legal Issues in electronic infrastructures.

- Section 7 exemplifies how Network Research is imperative to meet next generation Grid requirements. Integrating evolving optical technologies with e-Science applications and Grid middleware is critical.

- Section 8 continues the Den Haag survey on User Support Policies in a more generic way identifying four main areas of support: education, simple access to a broad range of information, application integration & support, and round the clock support for the users of grid data, computing and networking services.

- Section 9 considers Grid middleware as a fundamental component of e-Infrastructures across the European Research Area. The possibility of establishing a Federated Middleware Institute to ensure the development of a production quality Grid middleware leveraging European as well as national efforts should be investigated.

- Section 10 reports on updates in the Usage Policies area. The new trend is to have a single common Acceptable Usage Policy (AUP), agreed to by all Grid users. This fairly abstract and liberal definition of acceptable use is further qualified in a VO-specific way.

- Section 11 summarizes national large scale supercomputing background and facilities.

- Section 12 covers storage and data services and recommends the establishment of a distributed shared network of European data centres.

- Section 13 pinpoints the role of the EC in supporting Industry in joining the Grid arena.

- Section 14 provides a list of policy roadmap statements per section, gathering the most important future steps, action points and recommendations.

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- **EGEE Strategy for the short/ medium term future:**

  - Consolidation and future core development
    ➔ EGEE II

  - Extensions in **geographical coverage**
    ➔ World-Wide EGEE with other RPs

  - Extensions in **activities and functionality**
    ➔ Support other activities based of EGEE M/W

- **Long term future, beyond 2008-2010:**
  EGEE ➔ International Grid Organization
  (Strategy paper for FP7, in preparation)

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Why are these projects strategic for EGEE?

- **RP (related projects) can finance activities that EGEE cannot support with its own resources and are complementary/important for the project (e.g. training with ICEAGE, dissemination with BELIEF, contribution to SA1/EGEE activity with new extensions)**

- **Linking RPs to EGEE will ensure more critical mass and support for EGEE future EU calls**

- **Encouragement of new application domains to make use of EGEE infrastructure guarantees long term sustainability and persistence**

- **Support of EGEE extension to other countries (South-East Europe and Mediterranean Area, Latin America, Asia, Baltic) increases world-wide coverage**

- **EGEE acted as catalyst and an incubator of related Grid Projects:**
  - 44 projects submitted at the March 17th call
  - 18 made direct or indirect reference to EGEE
  - 11 got approved !

Name	Description	Common partners with EGEE
BalticGrid	EGEE extension to Estonia, Latvia, Lithuania	KTH – PSNC – CERN
EELA	EGEE extension to Brazil, Chile, Cuba, Mexico, Argentina	CSIC – UPV – INFN – CERN – LIP – RED.ES
EUChinaGRID	EGEE extension to China	INFN – CERN – DANTE – GARR – GRNET
EUMedGRID	EGEE extension to Malta, Algeria, Morocco, Egypt, Syria, Tunisia, Turkey	INFN – CERN – DANTE – GARR – GRNET – RED.ES
ISSeG	Site security	CERN – CSSI – FZK – CCLRC
eIRGSP	Policies	CERN – GRNET
ETICS	Repository, Testing	CERN – INFN – UWM
ICEAGE	Repository for Training & Education, Schools on Grid Computing	UEDIN – CERN – KTH – SZTAKI
BELIEF	Digital Library of Grid documentation, organisation of workshops, conferences	UWM
BIOINFOGRID	Biomedical	INFN – CNRS
Health-e-Child	Biomedical – Integration of heterogeneous biomedical information for improved healthcare	CERN

EGEE Extension
in Geographical Coverage

- **Responsible Contacts:**
  - Lennart Johnson (KTH), Per Öster (KTH)
- **Extension of EGEE to Baltic States**
  - Estonia, Latvia, Lithuania
- **Applications:**
  - High-Energy Physics, Bio, Pharmaceutical industry, etc.
- **Activities:**
  - Training/Support
  - Infrastructure Deployment
- **I3, €4M, 30 months**

- **Responsible Contacts:**
  - Jesus Casado (CIEMAT)
- **Extension of EGEE to Latin America**
  - Brazil, Chile, Cuba, Mexico, Argentina
- **Applications:**
  - e-Learning, Biomedical, HEP, Climate
- **Activities:**
  - Infrastructure Deployment
  - Dissemination and Training
- **SSA, €1.7M, 2 years**

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- **Responsible Contacts:**
  - Federico Ruggieri (INFN)
- **Extension of EGEE to Mediterranean area**
  - Malta, Algeria, Morocco, Egypt, Syria, Tunisia, Turkey
- **Applications:**
  - HEP, Biomedical, regional applications
- **Activities:**
  - Infrastructure Deployment
  - Dissemination and Training
- **SSA, €1.5M, 2 years**

- **EUChinaGRID**
  - Federico Ruggieri (INFN)
  - Applications: Cosmic Ray, Never Born Proteins (Biology)
- **Activities:**
  - Infrastructure Deployment
  - Dissemination and Training
- **SSA, €1.3M, 2 years**

EGEE Extension
in activities

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- **ISSeG: Security**

- **BELIEF: Dissemination, Grid Repository**

- **ICEAGE: Training and Education**

- **eIRGSP: Policies Support Programme**

- **ETICS: Testing, Integration, Configuration, Repository**

- **BioInfoGrid: Biomedical**

- **Health-e-Child: Biomedical**

- **Responsible partner:**
  - Silvana Muscella (Metaware/Italy)
- **Activities:**
  - Set up of a DL of Grid documentation
  - Community building (researchers and industries)
  - Organization of brainstorming events, networking workshops, conferences (India and South America)
- **SSA, €1M, 2 + 2 years**

- **International Collaboration to Extend and Advance Grid Education**
- **Responsible Contacts:**
  - Malcolm Atkinson (NeSC)
- **Activities:**
  - ICEAGE Club
  - Repository for Training and Education
  - Schools on Grid Computing
- **SSA, €1.2M, 2 years**

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- **ISSeG:**
  - Francois Fluckiger (CERN)
  - (Site) Security
  - SSA, 2 years

- **eIRGSP:**
  - Patrick Aerts, Michiel Leenaars (NCF/NWO, The Netherlands)
  - Policies (Certification Authorities), EGEE NA5
  - SSA, €1.08M

- **ETICS:**
  - Testing, Integration, Configuration, Repository, Interoperability
  - Alberto DiMeglio/Miron Livny: in planning phase
  - SSA, 2 years

- **BioInfoGrid:**
  - Giorgio Maggi (INFN)
  - Biomedical
  - SSA, 2 years

- **Health-e-Child:**
  - Alok Gupta (Siemens)
  - Biomedical
  - SSA, 2 years