

Activités Grid et Peer-to-Peer

financés par la Commission européenne

- **Introduction**
- **Activités 5^{me} PCRD**
- **Projets 6^{me} PCRD**
- **Conclusion**



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GRID Definition

The term “the Grid” refers to a network-based computing infrastructure providing security, resource access, and other services that enable controlled and coordinated sharing of resources among “virtual organisations” formed dynamically by individuals and institutions with common interest.

I. Foster and C. Kesselman, eds, The Grid, 1999



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GRID and P2P

- **What are GRIDs - Concepts**
 - Enable Communities to share resources (compute power, data, storage)
 - Enable new Applications by the coordinated use of geographically distributed resources
 - Persistent infrastructure for Computing
 - The Internet as a Computing Platform
 - Original Motivation: high-end science and engineering
- **What is Peer-to-Peer (P2P) - Concepts**
 - Computers (PCs) in a P2P network share resources directly (bypassing a central server)
 - Distributed Computing, File sharing, Instant messaging, Enterprise Collaboration, People-to-People
 - Original Motivation: Distributed Computation, Sharing, Business



Politique de recherche

- **5^{me} PCRD – Programme IST (1999-2002)**
 - Réseaux de recherche (RN1) - Technologie et applications expérimentales (RN2)
- **ETAN Report DG RTD (1999)**
 - Transforming European Science through Information and Communication Technologies
- **eEurope Action Plan – Lisbon Summit**
 - Un accès Internet rapide pour les chercheurs et les étudiants
 - Le Conseil européen de Lisbonne a demandé: la création d'un réseau transeuropéen à très haut débit
 - Stimuler la technologie du «World Wide Grid»



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Objectifs:

- **Promouvoir et encourager le développement, le déploiement, l'expérimentation et l'intégration de la "Grille" (GRID) dans l'ensemble de la Communauté (recherche et industrie) pour en faire un instrument de la compétitivité européenne en matière de recherche, d'industrie et de commerce.**
- **Coopérer avec et soutenir les initiatives dans les États Membres**



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Activités de consultation

- **Grid Workshop 22-23 Juin 2000**
 - Mise à jour du programme de travail 2001
 - Actions transversales - mécanisme d'intégration (Cross Programme Action - CPA)
 - Les systèmes en grille (GRIDs) : banc de tests, déploiement et technologies (CPA9)
- **eScience Workshop - DG RTD Juin 2000**
- **ISTAG (IST Advisory Group)**
 - “Ambient Intelligence”



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Projets GRID 1999-2000 (RN2)

Year/Call	Name	Funding M€	Duration Partners	Activity
1999/2	EuroGrid	2,065	36 / 10	Metacomp Bio/Meteo
2000/3	Damien	1,230	30 / 5	Metacomp code coupling
2000/3	DataGrid	9,872	36 / 21	Data LHC

Ligne d'action: réseaux de recherche



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Projets Grid 2001 - CPA9

Year/Call	Name	Funding M€	Duration Partners	Activity
2001/6	GridLab	7,266	36 / 11	Applic./Toolkit Simulation
2001/6	GRIA	1,993	30 / 5	Testbed/ E2E QoS
2001/6	GRIP	1,325	24 / 5	Bio/Meteo Unicore/Globus
2001/6	DataTAG	5,786	24 / 4	Interop. /US l-switching



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Projets Grid 2001 - CPA9

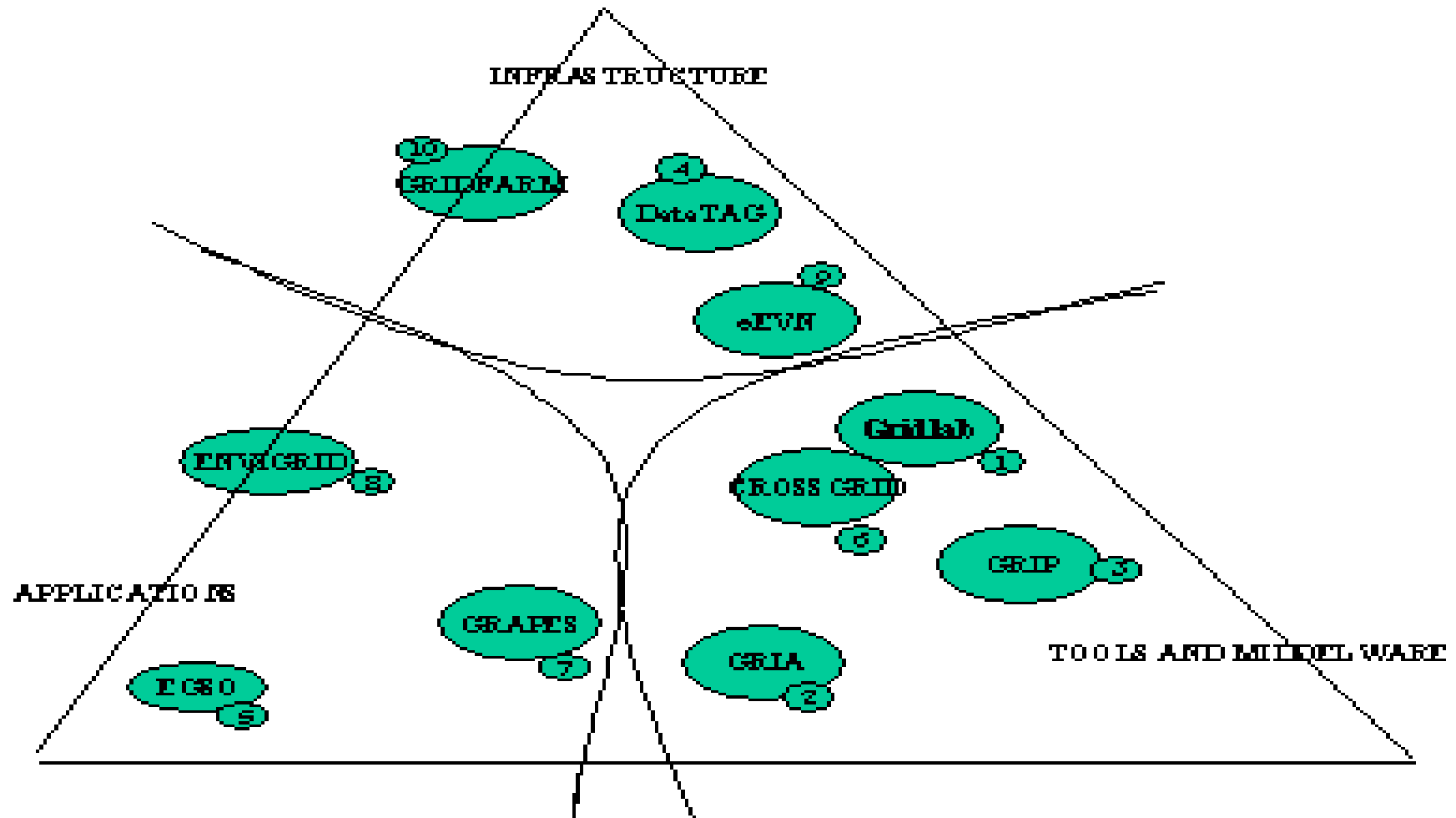
Year/Call	Name	Funding M€	Duration Partners	Activity
2001/6	EGSO	3,432	36 / 10	Solar Data Centres
2001/6	CrossGrid	6,492	36 / 23	Links with DataGrid - NAS Medical Apps
2001/7	GridStart	1,499	36 / 9	Clustering of EU Grid Projects



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Grid Project Space (Call6)



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Projets GRID 2002

- **Technologies du GRID et leurs applications**
- **Les technologies et applications du GRID visées couvrent une ou plusieurs des couches suivantes:**
 - Les GRIDs de calcul
 - Les GRIDs d'information
 - Les GRIDs de connaissance
 - Le Peer-to-Peer



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Projets Grid 2002

- **Les technologies du GRID sont à interpréter au sens large et couvrent les technologies de l'informatique pair-à-pair (P2P)**



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Projets GRID – Call8

- **Délais de soumission des propositions: 21.02.02**
 - Beaucoup des propositions
 - Large couverture
 - Évaluation (11-16 mars 2002)
 - Negotiation April 2002
 - Contracts



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GRID – 6^{me} PCRD

- **Programme Consultation Meeting**
 - Large-scale Distributed Systems and Platforms, including GRID-based Systems
 - Brussels, 10 – 11 April 2001
- **Internal Reflection Group**
 - Complex Problem Solving including GRID and Research Networking Infrastructures
 - Préparation WP2003



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IP – Objective driven

- **Integration**

- All elements of technology chain to attain high-impact goals
- Different type of activities:
 - RTD, technology transfer, training, dissemination, demonstration...
- Global funding involving public & private funds

- **Size**

- The necessary size to attain its goals

- **Participation**

- 3 legal entities at least (2 from MSs)
- minimum can be changed in the WP
- supports industry-academia collaboration including SMEs



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NoE - Exploratory research

- **“Virtual” centre of excellence**
 - brings together the research effort on a particular topic
 - a clearly identified “joint programme of activity”
 - established or emerging fields
- **Size**
 - Several MEuro funding per year for the “Integrated effort”
 - Support to different types of activities:
 - RTD, training, transfer, mobility...
- **Participants**
 - Minimum 3: Universities, Research Labs, Industrial Labs
 - Special Measures planned for SME’s



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Art. 169 - Member States Initiative

- **At the initiative of the member states**
- **Support to “national” programmes jointly executed according to article 169**
- **Joint or co-ordinated calls for proposals**
- **EC funding used to support the jointly executed programmes**



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Conclusion

- **For Information**

- **IST Programme**

- <http://www.cordis.lu/ist>

- **eEurope**

- http://europa.eu.int/comm/information_society/eeurope

- **6me PCRD**

- <http://europa.eu.int/comm/research/nfp.html>

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Expert Candidature:

<http://www.cordis.lu/expert-candidature/home.html>



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