

# eInfrastructures: The future of the Information Society



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# Greek IS strategy Objectives

- IS development in Greece as a prerequisite for the convergence of the Greek economy and society (in terms of Competitiveness, standard of living, and quality of life) with EU Average
- The Information Society is above all about Society and Human Networks. It is not only a matter for large firms and top Universities and Research Institutes, but it should reflect the concerns of SMEs, Citizens and society at large
- The strategic choices: diffusion and better use of ICTs in Greek Economy and society
  - Create an educational and research system adapted to the Digital Age
  - Increasing the quantity and quality of electronically provided Government services for the citizens and the business community.
  - Increasing Productivity in the Public Administration
  - Increasing growth, innovation and competitiveness of the business sector
  - Upgrading skills and the creation of new jobs
  - Promoting of the Greek culture and development of Local content
  - Developing of high quality and affordable to all broadband infrastructure and services
  - Narrowing down the digital divides and promote regional development
- The main tools to building the IS in Greece are the IS National strategy and the Operational Programme (2.8bn€) based on the Lisbon Strategy

# Broadband Networking as a prerequisite

- BroadBand is for the Information Society and the knowledge economy what electricity, the rail and High-ways were for the Industrial Age
- Broadband deployment is at the heart of the eEurope 2005 Action Plan
  - **Broadband for the Public Administration, schools, universities, museums, libraries, health centers and broadband for the remote & underdeveloped regions to be achieved by 2005**
- *“Fast, cheap, reliable, secure”* broadband is a prerequisite for advanced **eGov** services for the citizen and the business at local and national level, better education and **eLearning**, development of higher skills through lifelong learning, the promotion of cultural heritage, tourism and new forms of entertainment, **eHealth** and social security services.
- Broadband is also a prerequisite for increased competitiveness and economic growth through the full development of **eBusiness** and distance working

→ **Broadband is a prerequisite for development of the Information Society and the knowledge economy**

# Broadband infrastructures and services deployment and the role Public Policy

- It is widely accepted that in many cases successful deployment of broadband infrastructures and services **for all** require a clear strategy and political commitment
  - To counter **market failures** where:
    - competition fails to provide broadband coverage in particular in remote and underdeveloped regions
    - there is limited interest for the private sector- lack of critical mass
    - Important digital divides occur
  - to **aggregate demand** by using BB services for the public administration needs (G2G) and to provide advanced eGov services and content for citizens and business(G2C, G2B)
  - to create the necessary **regulatory framework** (facilitate **competition**)
  - Ensure security, privacy and Trust

# Broadband Policy measures for Greece

- The Secretariat for Information Society in collaboration with the Ministry of Transport and Communications has established a BroadBand Task Force that already produced a National strategy for BroadBand access [www.broad-band.gr](http://www.broad-band.gr)
- Measures to develop Broadband services through OPIS
  - Total budget 128M€
  - Support demand : WiFi HotSpots, DSL, LMDS (11M €)
- Support supply of Broadband infrastructures through OPIS
  - Total budget 200M€
  - Need to find the right model for deploying broadband infrastructures in order to ensure future proof, high quality and cheap broadband services for all Greece
- Need to consider some regulatory issues in particular regarding wholesale prices (backbone access) in order to ensure competition on broadband services

# Grids: the Driver for the future development of the Information society and knowledge economy

- Culture of sharing beneficial to all
  - Sharing know how
  - Sharing information
  - Sharing resources→ path to development and growth
- Integrating distributed resources allow for synergies and economies of scale
- Relying on the availability of fast networks and high speed broadband access for all, the concept of Grids builds on the idea of sharing resources such as computing power and storage capacity, across frontiers. Thus Grids can become the Driver for the future development of the Information society and knowledge economy
- Grids will give a new meaning to the ERA, boosting research activity through a collaborative **e-Infrastructure** all over Europe, combining existing research networks (GEANT) with distributed resources sharing capabilities
- Grid hide the heterogeneity and complexity of the underlying infrastructure providing a uniform way of accessing, processing and storing data

# Greece and the Grid

- GRNET provides Gigabit connectivity in Greece for over 73 research and education institutions / and GEANT connectivity - [www.grnet.gr](http://www.grnet.gr)
- HellasGrid Task Force created by the Secretariat of Information Society - Ministry of Economy and Finance [www.hellasgrid.gr](http://www.hellasgrid.gr)
  - Leading the Greek efforts towards Grids National strategy and planning as well as the participation of the Greek Academic community to panEuropean efforts - **EGEE**
- Greece through GRNET is leading the efforts to create advanced ICT and Human networks in South Eastern Europe
  - South East European Research and Education Networking (**SEEREN**) [www.seeren.org](http://www.seeren.org)
  - South East European Grid Development Initiative (**SEE-GRID**)
- Encouragement - Familiarisation to Open Source Grid middleware [www.open-source.gr](http://www.open-source.gr)
- Grids will support advanced research applications in areas such as:
  - Meteorology, Earthquake prediction, Bioinformatics,, virtual eLearning and Training environments, Chemical process simulations, Disaster prevention etc

# Greece: still a long way to go...

- Policy initiatives and action lines
  - HellasGrid prepares a policy document for the promotion of Grid technologies in the Information Society strategy
  - Need to develop broadband networks throughout Greece and upgrade local area networks
  - Grid technologies are not yet mature to apply - viable business models are required
  - Need to share best practices and knowledge at the EU- and international level
  - OPIS Funding for Grid – Cluster Computing, only for grid pilot project – Full scale projects under planning
  - Encourage the adoption of a sharing concept
  - Need to adapt applications to the Grid environment



# Concluding remarks

- The Grid is an enabler for equal opportunities in the use of resources - Need to define a policy for sharing resources
- The future of Grids lies in finding a way to serve both e-Science e-Business and e-Government requirements and delivering applications/services to all of them
- Expand grids beyond academic research to include
  - Eg. National resources for export to other countries exactly like electricity
- Through sharing of resources important economies of scale can be achieved
- Computer centers in Schools, Universities, Business and Government as well as home PCs can be integrated into Grids and become always and everywhere available resource through a flexible allocation management scheme

# Expanding the potential of Grids

- Need to develop models to incorporate the power of Grid resource systems into the economy and society at large
  - HomePC Users can become resource providers to consumers ranging from Govt agencies, business, research centers etc, earning money or credit for ISP fees or other exchange.
  - A whole new range of resource brokers can emerge be it public or private, that will manage and allocate them to clients as services
    - means that business, gvt agencies, research centers etc can cut back costs for buying their own processing and storage capacity and just rent it from a provider- great benefits for **SMEs**
  - PC users or companies can also lend their Idle PC capacity to non-for-profit / welfare causes, medical research programs, etc.  
already existing [United Devices Cure for Cancer](#), [Genome@Home](#) )
- Crucial Issues
  - Develop an accounting and billing system for measuring “Grid units” (storage, computing capacity)
  - Many issues to be solved, among which security, privacy, trust etc.