



# **Session on e-Infrastructure Services - summary -**

**e-IRG Workshop  
13-14 October 2010, Brussels, Belgium**

**Chair:**

**Lajos Balint**

**NIIF/Hungarnet, Hungary**



## Overview of IaaS by keeping some recent developments in mind

- global high speed **network** + e2e + federation + SOA + virtualisation
- handling wide variety of **services and users** – the UK example
- optimising / harmonising the **service portfolios** – DK and Nordunet
- widening of the exploitation: users **beyond R&E** – the HU attempt

# Presentations:

## **Vasilis Maglaris:**

**"e-Infrastructures as a Service - the Role of the NRENs and GÉANT"**

## **David Wallom:**

**"e-Infrastructure services - meeting diverse demands"**

## **Martin Bech:**

**"e-Infrastructure service portfolios - a systematic approach"**

## **Imre Szeberenyi:**

**"e-Infrastructure services for R&E and beyond"**

# Thematic overview:

- **Vasilis:**
  - Distinct role of networking in e-Infrastructures and in **servicing e-Science**
  - FI cloud + federation + virtualisation aspects in **integrating & sharing resources**
- **David:**
  - Wide **variety of eRI services** (grid, HPC, storage, data, collaboration, VRC)
  - Delivery to **varied user communities**
- **Martin:**
  - **Classification** and characterisation of e-Infrastructure services
  - International **harmonisation** of service provision - a systematic approach
- **Imre:**
  - e-Infrastructure services for research and education – **SOA and virtualisation**
  - Offering similar services to communities **beyond the R&E sector**

- **Vasilis --- Chair of the NREN PC --- also one of the founders of eIRG**

## Background:

- **GÉANT is big: 40 M€/yr, 37 NRENS, 3000+ campuses, 40M users**
- **Global coverage**

## Key messages:

- **NRENS and GÉANT: user communities need stable environments**
- **Challenges: campuses ... LHC, ITER**
- **Provision of integrated services needs provisioning of virtual environments**
- **Virtualised environments need special services**  
**(“connect on demand” and “create virtual slices”) services**
- **Different slices needed**  
**(data center slice, router slice, NREN slice, GÉANT slice, ...)**
- **Necessity of collaboration across e-Infrastructure components**  
**(networks, grids, ...)**

# Highlights from David:

- **David --- Chair of the NGS / UK:**

**Background:**

- **NGS: rich experiences wrt. variety of services and users**
- **Major service classes: compute - access – support - specialist services**
- **All currently available middleware exploited**
- **Full spectrum of disciplines covered**

**Key messages:**

- **Direct involvement of users (universities, institutes) in eRI governance**
- **Sponsorship (donation of resources) by major users**
- **Specialist services for specific providers / users (portals, Centres, ...)**
- **Friendliness of access / support / training / outreach / collaborations**
- **Costs (SW licensing ...)**
- **Importance of all users is the basic rule.**

- **Martin --- Chair of TERENA TF-MSP :**

**Background:**

- **DK NREN service portfolio: currently 29 services**
- **Harmonisation within NORDUnet**

**Key messages:**

- **Research networks = mother of all e-Infrastructures**
- **Availability, features, and costs of services to be well known**
- **European map of NREN service portfolios under preparation**
- **Harmonisation and disclosure of best practices needed**
- **Inter-NREN service exchange: requires clarification (tenders, contracts, financing)**
- **Clearinghouse aspects (NORDUnet, DANTE, TERENA ...)**
- **Additional necessities: Federated AAI, IPR arrangements, business model**

# Highlights from Imre:

- **Imre --- Co-Chair of the NGI in HU:**

**Background:**

- **Largest technical university, considerable IT curricula (academic usage + distribution of eRI services)**
- **Contacts to communities beyond R&E**

**Key messages:**

- **e-Infrastructure = environment for academic and industrial R&E (collective power of scientific facilities is shared, federated, and exploited)**
- **eRI to be extended to Domain Specific (discipline oriented) Infrastructures (Network + HPC + Grid & Cloud facilities + Digital Repositories + DSI)**
- **Heterogeneity of e-Infrastructures necessitates the SOA concept**
- **Workflow and process efficiency assumes Virtualization**
- **Communities beyond R&E: e-Government, e-Health, ... (similar needs)**
- **Opportunities of exploiting R&E results / experiences – mutual benefits**

# Highlights from the discussion:

- **DISCUSSION** [short and limited because of shortened time-slot of the session]
  - David and Lajos on standardisation  
(necessity – difficulties – opportunities)
  - Frank van Lersel and David on the role of users / disciplines in standards  
(involvement of users is the key)
  - Vasilis and David on difficulty with specific requirements in harmonisation  
(open standards and friendly interfaces help – also in case of VMs)
  - Ivan Maric and David on cooperating with commercial providers  
(just starting – but preparations seem to be promising at NGS)
  - Business model issue couldn't be discussed ...

# Conclusion:

- **Selected key matters**

- **Stability and sustainability of the infrastructure is a must**
- **Users in the focal point (govern, standards, feedback, IaaS, ...)**
- **Standardisation is a must (open standards, easily adaptable)**
- **Friendliness of access, support, training, customisation needed**
- **Virtualisation (up to environments, communities) is the next wave**
- **Special services (portals, centres) for specific users / providers / projects**
- **Pan-European co-operation (also shared service portfolio) to be extended**
- **Proven governance model of GÉANT exploitable also in other areas**
- **Close co-operation between eRI segments is indispensable**
- **eRI business model to be developed (who pays for what – and beyond)**
- **PPP and communities beyond R&E (special rules to be applied)**
- **eRI should not just serve but also stimulate high end research (innovation)**

# Next step:

- **Direct use of the session results follows soon:**
  - Input to the next edition of the e-IRG White Paper
- **Later comments / suggestions welcome:**
  - Send them to <balint@niif.hu>

# Overall feedback channel:

**e-IRG secretariat**

**[www.e-irg.eu](http://www.e-irg.eu)**

**[www.e-irg.eu/support](http://www.e-irg.eu/support)**

**[secretariat@e-irg.eu](mailto:secretariat@e-irg.eu)**



**Session notes were recorded by Panos any Fotis – thanks to them for that.**