



Interactive Real time Multimedia Applications on Service Oriented Infrastructures

*Objective ICT-2007.1.2: Service and Software
Architectures, Infrastructures and Engineering*

Launch Event of FP7 Call1 Projects,
March 2008, Brussels

Theodora Varvarigou

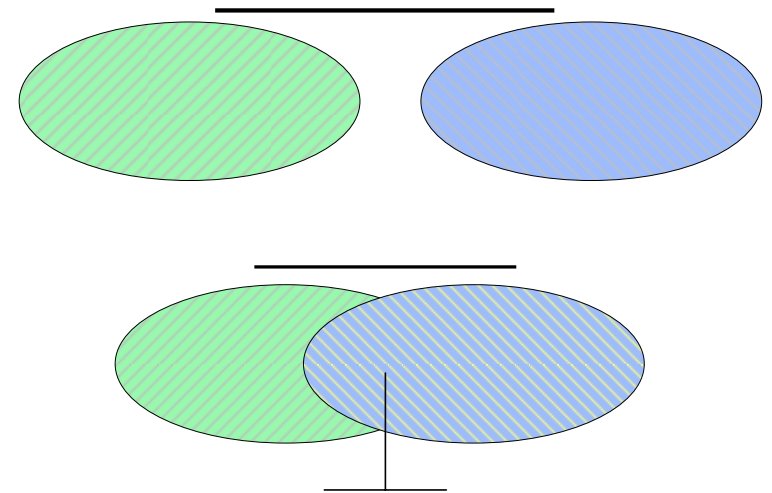
NTUA Professor

IRMOS Technical Coordinator

dora@telecom.ntua.gr

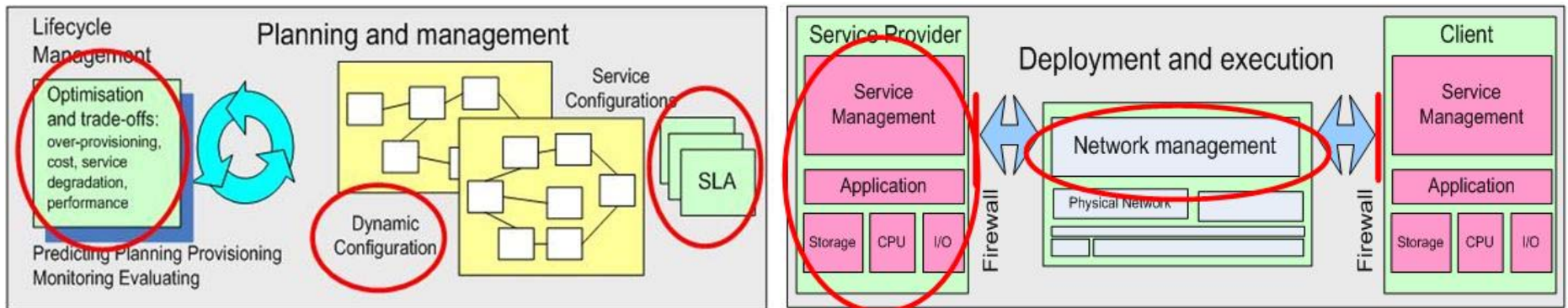
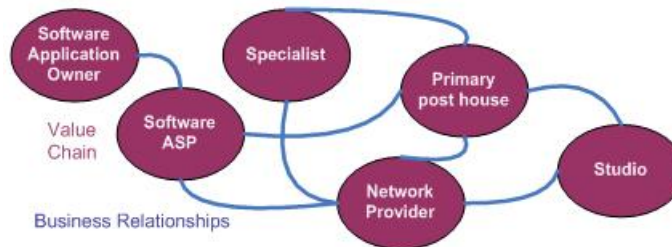
Problem Statement

- Today's Service Oriented Infrastructures (SOIs) lack Real Time (RT) capabilities.
- The problems:
 - SOIs are not dynamically configurable and adaptable to RT requirements.
 - Timing and interactions issues are not thoroughly studied and formally expressed in SOIs.
 - Web Services lack of RT attributes.
 - Network awareness and control is not integrated in the application services logic.



Main Objective

- Design, develop and validate a **Service Oriented Infrastructure** which will allow the adoption of interactive real-time applications, and especially multimedia applications, enabling their rich set of attributes (from time-constrained operation to dynamic service control and adaptation) and their efficient integration into the infrastructure.



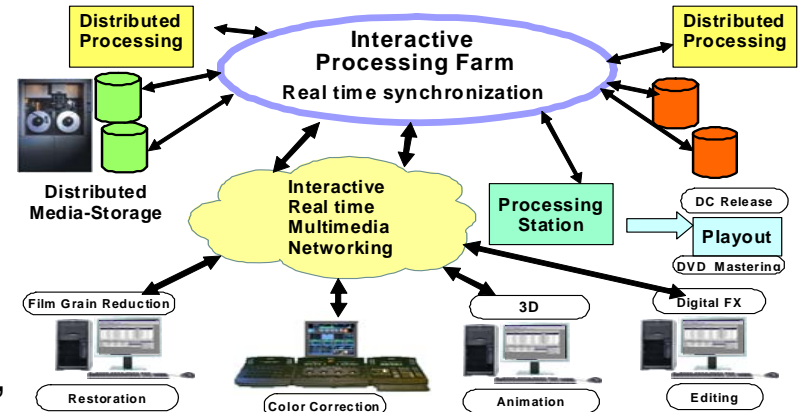
Innovation Aspects

- ❑ A **platform of services** that enables **real-time** interaction between people and applications.
- ❑ An **intelligent network infrastructure** that not just manages the network bandwidth, but also takes into account several QoS aspects like delay and jitter, when network paths for a service have to be selected and enables automated SLA negotiation and monitoring.
- ❑ An **integrated optimisation approach** at various levels from inter-organisation business processes and SLAs to intelligent networking and virtualisation techniques that enable real-time interaction and concurrency at all points of value chains that span organisational boundaries.
- ❑ Software tools and associated **modelling environments** to enable real-time interactive applications to be written to target the IRMOS framework.
- ❑ **Specification languages** that unify various parameters and characteristics used to describe real-time applications on SOIs, and allow value chain participants to collaborate in the design, deployment and execution of networks of services.

End Results

□ The IRMOS platform

- Facilitates real-time interactive applications over SOIs.
- Spans organizational boundaries.
- Enables new business and technology solutions.
- Motivates SMEs in advancing their business models and gain market accessibility.
- Accompanied by best practices and “how to” documentation.



□ Demonstration of the IRMOS functionality in three different application areas

- Collaborative Digital Film Postproduction.
- Virtual and Augmented Reality.
- Interactive collaborative e-learning.

□ Active dissemination through publications, targeted industrial workshops, conferences and active standardization efforts.

□ Exploitation of the project results in the multimedia sector and beyond with special focus on SMEs.



March 2011 Launch Event of FP7 Call 1 Projects, Brussels



Thank you!

Further Information

<http://www.irmosproject.eu>

The research leading to these results has received funding from the EC Seventh Framework Programme FP7/2007-2011 under grant agreement n° 214777