



ICT 2008 Networking Session

## **Towards a Future Internet of Services**

25 November 2008

Lyon

[http://ec.europa.eu/information\\_society/events/cf/item-display.cfm?id=585](http://ec.europa.eu/information_society/events/cf/item-display.cfm?id=585)

### **Session Notes**

This document, the slides presented at the session and additional information are available at

<http://services.future-internet.eu/index.php/ICT08>

Joint Chairs: Man-Sze Li, IC Focus  
John Domingue, The Open University and STI International

EC Contact: Michel Lacroix

Participants: Over 100 participants

### **Position Statements / Presentations**

- Introduction  
John Domingue, The Open University and STI International
- Global service delivery platform for the future internet: What is it and how to use it for innovation?  
Stefano De Panfilis, Engineering
- Management and Service-aware Networking Architectures (MANA) in Future Internets  
Alex Galis, University College London
- Trust and Identity in Future Internet  
Nick Wainright, HP Labs
- FISE and FISO  
Mike Boniface, IT Innovation
- Towards a Future Internet of Services  
Werner Mohr, Nokia Siemens Networks
- Services your way  
Hendrik Berndt, DOCOMO Euro-Labs

### **Open Discussion**

*Question from the audience: What are the respective roles of government and private enterprises in building (service) platforms? How does the development of multi-core (processors) feature(s) in the services discussion?*

Comments from the speakers (in relation to the first question; the second question was generally felt to be outside the scope of the workshop):

- It is a shared concern between both.
- Infrastructure level projects are needed for certain services, e.g. for identity infrastructure services. Open source may be appropriate for some elements of these projects.
- Market players cannot afford to finance infrastructure projects on their own, in which case they need help from government. Infrastructure projects do not typically generate enough business.

- Government should set the rules which enable commercial players to operate, e.g. Garlik is a commercial service that helps people take control of their personal information and protect themselves against identity theft and financial fraud.

*Question from the audience: Is the Internet of Services about what players like Amazon offers. Are there specific requirements for Europe?*

Comments from the speakers:

- We need a coherent narrative for Europe.
- The IoS is crucial for the competitiveness of Europe.

*Question from the audience: What are the functionalities needed to propose and compose services? We need functionalities that are context aware and support the role of context. These apply for example to service discovery, selection and composition. Also, service registry will prevail in future. How to handle (data) confidentiality in future?*

Comments from the speakers:

- Semantics are the answer.
- Operators need to help customers to find the answer to these questions through, e.g., usage patterns, which are likely to number millions.
- In a world of numerous choices, how much choice can we deal with? Consumers need help in understanding the choices with which they are confronted.
- It is important to note that there will be no single global delivery platform, and no single service registry.
- Ultimately, the market is the owner of the services. Consumers exercise their choices through the market. We should not assume uniformity of services – “not everything can satisfy everyone”.

*Question from the audience: What happens to “clouds”?*

Comments from the speakers:

- Grids are dead; long live grids in the form of clouds.
- The FP7 RESERVOIR IP is addressing interworking between clouds. It is concerned with the integration of different classes of services; not just computational, but also resources.
- Interoperability and virtualisation are among the key requirements for clouds.

*Question from the audience: What is the business behind user generated content? What is the business model? the revenue model?*

Comments from the speakers:

- The Internet is about connecting people and collaboration. The IoS is about connecting people to services. In the view of HP, everything is (potentially) a service.
- There is a distinction between business models and technology models. Business models are not really connected to technologies per se. Technologies

are enablers. The real challenge is to leverage technologies that allow the economy to develop, by providing flexibility (to develop business models) and facilitating access (to services).

- We must foster an environment that enables flexibility of business models. We need to pay attention to what has changed and how to change. Why do we think that consumers are *not* willing to pay for services?
- Consumers are willing to pay a premium for those services that really meet their needs, e.g. parents are prepared to pay for good security services for online protection of their children.
- Software as a service is still a problem, notably in the area of licensing. Change takes time and is not always easy. There is a negative side to industries grappling with (new) business models, e.g. the music industry is decimated.
- Business models are an issue for the market and the market actors. Government intervention to control business models can create harm.

*Additional comments from the audience:*

*The IoS should have sufficient flexibility for people with accessibility problems.*

*Service design is critical.*

## **Conclusions and Next Steps**

A straw poll of the audience indicated that about half were participants of EC supported research projects and about half of these were already involved in the activities of the Future Internet Assembly (FIA).

The audience were encouraged to take part in the forthcoming FIA in Madrid on 9 and 10 December, where the discussions would continue.

The importance of a coherent European narrative and a common European vision for the IoS (in due course) was underlined.

Notes taken by Man-Sze Li