Value creation, value flows and liability over virtual resources

The Societal and Business Application Perspective

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Agenda

- Position statements:
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  - Artur Nowakowski, Verax Systems
  - Jasper Lentjes, Business Innovation Manager, Vlastuin Group
  - Sergio Gusmeroli, Corporate Research Director, TXT e-Solutions SpA

- Discussion
Session Motivation

- Research from the FInES domain suggests that an increasing number of enterprise centric services will be commoditized and factorized in the Internet of the Future as a set of Utility Services …
- Preliminary results from the ongoing research on service infrastructures indicate that technical, social and business innovation is increasingly intertwined …
- For SaaS application in ecosystems and enterprises, a number of business, technological and legal issues have been identified …
- The question as regards the (Future) Internet as a Universal Business System for Enterprises and SMEs in particular has been raised leading to the proposition of considering different forms of innovation through the lenses of business innovation, with potential ramifications of how to go about conceptualising, architecting, developing, testing and ultimately implementing technical architectures and enterprise systems. Moreover, again from a business perspective, such endeavours need to account for continuous innovation of business models and the underlying value models upon which the specific business models premised…
Evolution of Service Paradigms

- IT Plug: Fixed costs, Dedicated resources, Product oriented.
- IT Switch: Variable costs, Shared resources, Service oriented.
- IT Tap: Marginal cost “close to” 0.0, Value based dynamic pricing, Service infrastructure as utility, Service federated.
- IT Store: Ecosystem pricing, relationship led rather than cost based, Utility service infrastructure as (generative) platform, Making new needs: co-design, co-creation, co-development, co-consumption.

Source: Man-Sze Li / FP7 COIN IP
Evolution of Business Models

A wide spectrum of scenarios for the future of businesses on the Internet, e.g.

- Utility business models and Web enterprises (Rappa, 2004)
- “IT doesn’t matter” and the “Big Switch” (Carr, 2003, 2004, 2008)
- “Open Business Models” (Chesbrough, 2007)
- The “generative” argument (Zittrain, 2008)
- The business models of “free” (Andreson, 2009)
- A new framework for the evolution of specific technologies (Arthur, 2009)
- The rise and fall of “information empire” (Wu, 2010)
- The “Apple / i-xxx” ecosystem (2009 onwards)
## Values - Assets

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<th></th>
<th>Entities</th>
<th>Worlds</th>
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<tr>
<td></td>
<td>People</td>
<td>Things</td>
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<td>Value Creation (inputs)</td>
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<td>Value Distribution (flows)</td>
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<td>Value Consumption (outputs)</td>
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### Drivers / Factors

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<th>Culture &amp; Social Norms</th>
<th>Structures (intra- &amp; inter-): Market / Organisation / Community</th>
<th>Regulations</th>
<th>Technology</th>
<th>Volatility &amp; Risk</th>
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### Knowledge

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Interoperability Service Utility - ISU
Source: Enterprise Interoperability Research Roadmap, 2006

- Delivery of IT as services
- Interoperability as a
  - utility-like capability for enterprises
  - a public good
- ISU as a basic infrastructure that supports
  - information exchange between knowledge sources, software applications and Web services
  - a new generation of self-* services and e-business services
  - connection between islands of interoperability
  - especially SMEs and start-up companies
- ISU is independent of, rather than an extension to, EI solutions on the market

Conceptual View of the ISU

Collaborating Innovation Ecosystems
Collaborating Enterprises
Value-added and proprietary IT services
ISU
Web
Internet
Telecommunications
Utility Services

Necessity: it has to work and it needs to be (near) universal

- Cheap and near universal access
- Seamless Quality of Service across multiple providers
- Well understood, regulated and monitored service properties
- Potentially high internal complexity, but limited external configurability/heterogeneity
- Well-defined and standardised interfaces for utility usage and control
- Ease of use
**Principle of service infrastructures**

- Services are universally accessible
- Services are interoperable
- Services are provided on non-discriminatory terms
- Service ecosystems are interconnected and interconnectable on non-discriminatory terms
- Choice of services and service level is up to the consumer/user (not the provider)
- Services can be consumed or otherwise used/re-used without restrictions, and without prior permission from the provider
- The service model is many-to-many and end-to-end
- Services are affordable
Key Questions

- Assuming that the existence of utility based service infrastructure(s) is(are) a precondition for realising the Future Internet as a “Universal Business System”, who is/are going to develop and maintain such infrastructure(s), and according to what principles and interests?
- How to preserve the neutrality of the Internet of Services and the open competition among Added Value service providers, while providing basic Utility Services as a public good?
- Is the commoditization of certain basic services a necessary pre-condition for stimulating entrepreneurship and innovation?
- What would be the optimal governance model for the service infrastructure(s)?
- What are the technical ramifications for architectural development?
- How could SaaS be exploited towards utility-based service infrastructure?
- Which are the software categories better and worse matching the SaaS distribution model? The suggested criteria to assess software suitability: business criticality, need for security assurance, legal requirements, usage patterns, data storage, software specificity.
Expected Session Outcome & Follow-up

- Starting from the perspective of and requirements for business innovation, and taking into account service platform developments vis-à-vis the motivation for and vision of the ISU, to pave the ground for Architectures for FI Enterprise Systems – FInES Arch. Explore: implications of new notions of enterprise for FI Arch; architectural properties of enterprise systems leveraging FI technologies
Links & Communications Channels

- FIA Poznan
  http://www.fi-poznan.eu

- FIA Enterprise Wiki
  (full documentation of enterprise activity in FIA)
  http://services.future-internet.eu/index.php/Enterprises

- FIA Enterprise Blog
  http://fiaenterprise.wordpress.com/

- FIA Enterprise Twitter
  http://twitter.com/FIAEnt
Communications channel

- FIA Enterprise Wiki
- FIA Enterprise Blog
  - http://fiaenterprise.wordpress.com/
- FIA Enterprise Twitter
  - http://twitter.com/FIAEnt
- FIA Ghent webpage
  - http://fi-ghent.fi-week.eu/