



T-86.5300 Information and Communication Technology Enabled Commerce (ICTEC)

Software-as-a-Service (SaaS)

Introduction to the SaaS concept

Matti Hämäläinen

Department of Computer Science and Engineering
Software Business and Engineering Institute (SoberIT)
Helsinki University of Technology

matti.hamalainen@soberit.hut.fi

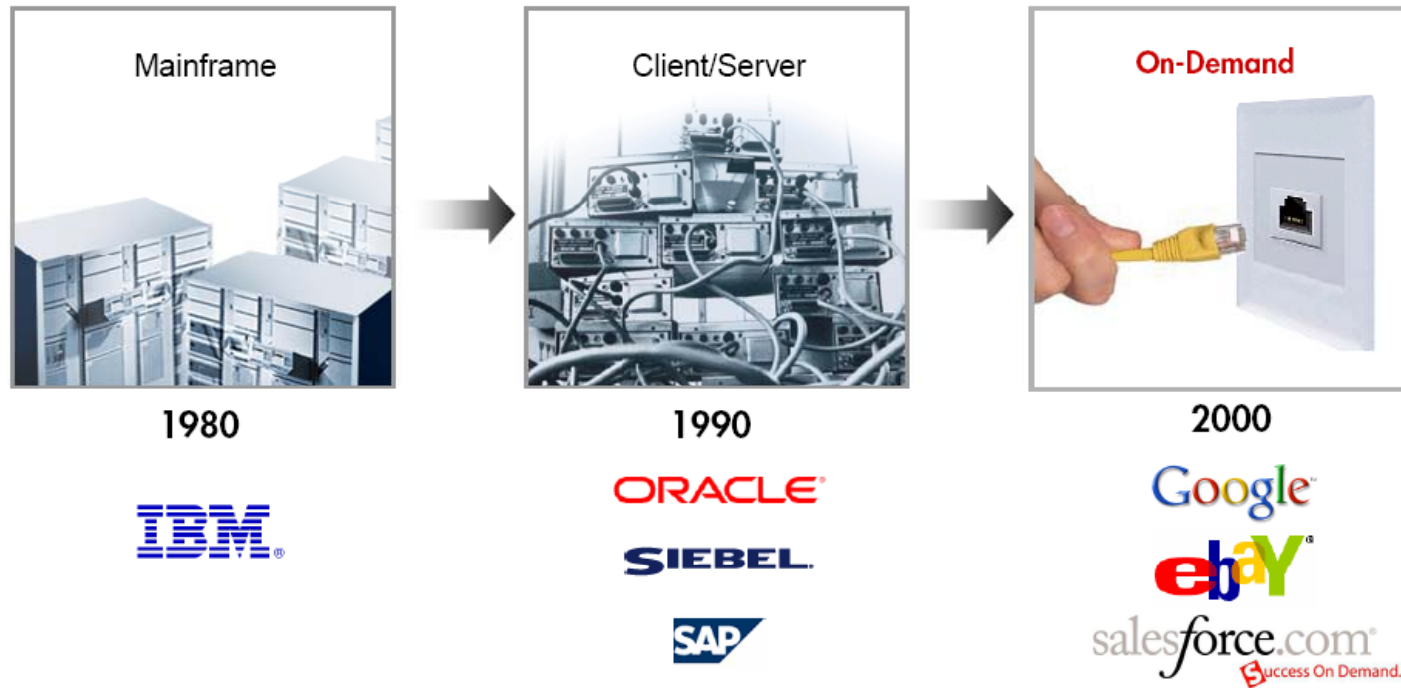


Outline

- SaaS – the next evolution in software (a simpler version was called ASP)
- SaaS evolution
 - the time has come, from consumer to enterprise - everything is going SaaS
- SaaS Business Model – an example
- Characteristics of SaaS
- SaaS Business Models- risks and benefits for a SaaS provider
- Case: Mobile Services using SaaS model
 - Enabling scalable delivery of mobile applications
 - High availability, capacity and security requirements – both challenge and opportunity in SaaS model



SaaS – the next evolution in software



“79% of companies are now purchasing and/or reviewing Software as a Service offerings.”
– IDC Software as a Service Adoption Study, 2005



SaaS evolution – the time has come

The World in 1999

No DSL, Cable Modems, or high speed bandwidth in homes

56K dial-up in hotels

Simple HTML interfaces

No SmartPhones or MP3/MP4 Players

No digital cameras, USB Keys, or Flash Memory

No Google

The World Today (Consumer Platforms)





SaaS evolution – from consumer to enterprise

Q: Why can't business and government applications be as easy as the Consumer Web?

A: (they can...)



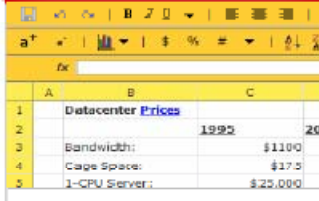
SaaS evolution: everything is going SaaS

Office



<https://www.google.com/hosted>
<http://smallbusiness.yahoo.com/email/>
www.zimbra.com
 many others...

Spreadsheets



www.numsum.com
www.irows.com
 many others...

Word



www.writely.com
www.writeboard.com
www.inetword.com
 many others...

Graphics



www.pxn8.com
www.pixoh.com
 many others...

Database



www.dabledb.com
www.Lazybase.com
www.quickbase.com
 many others...

Document Mgmt



www.buildonline.com
www.blinksale.com
 many others...

Contacts



www.linkedin.com
www.plaxo.com
 many others...

Project Mgmt.



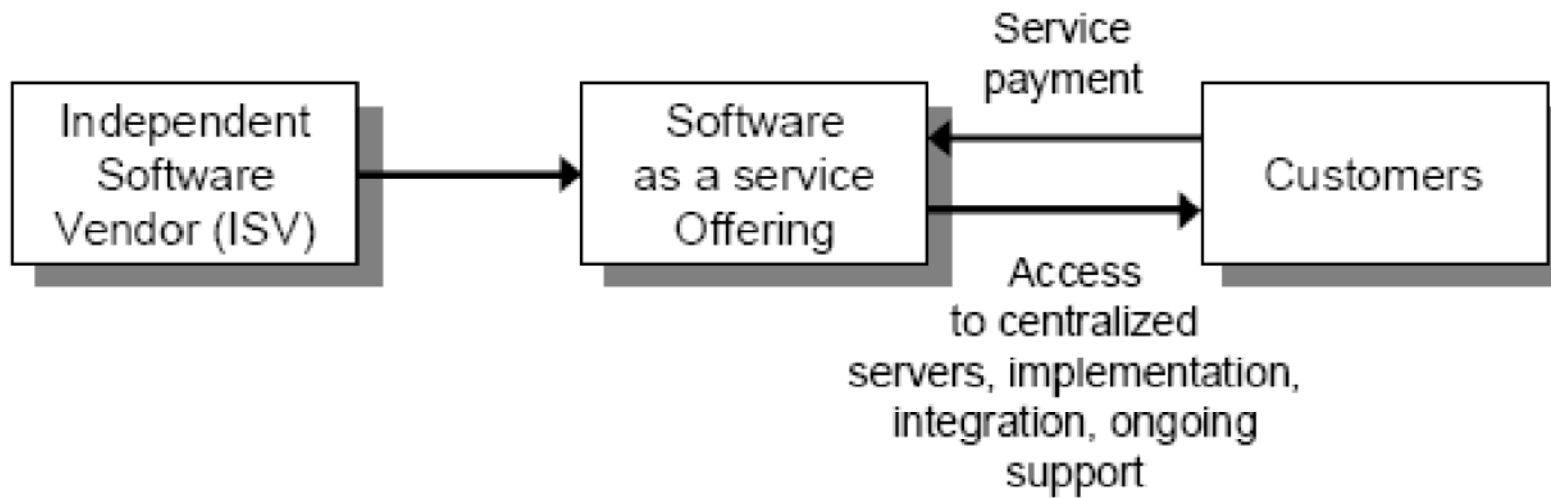
www.basecamp.com
www.iot.com
www.dreamfactory.com
 many others...

“The appeal is obvious: SaaS is quicker, easier and cheaper to deploy than traditional software, which means technology budgets can be focused on providing competitive advantage, rather than maintenance.”

— The Economist, April 20, 2006



SaaS Business Model – an example





Characteristics of SaaS

- For the customer SaaS enables online access to an application over the network (availability anywhere, anytime)
- SaaS application usage is both provided and consumed simultaneously (hence the term "service")
- The customer gains only the access to use the application(s), the ownership of the software is not transferred to the customer (signifying the change of emphasis from owning to using the application)
- The SaaS solution is centrally managed and offered as one-to-many service to the customers (thus providing the benefits of economies of scale)
- The SaaS provider alone is responsible to the customer for the service, even if other stakeholders are involved in creating the service (one party is responsible for the whole service)



SaaS Business Models- risks and benefits for a SaaS provider

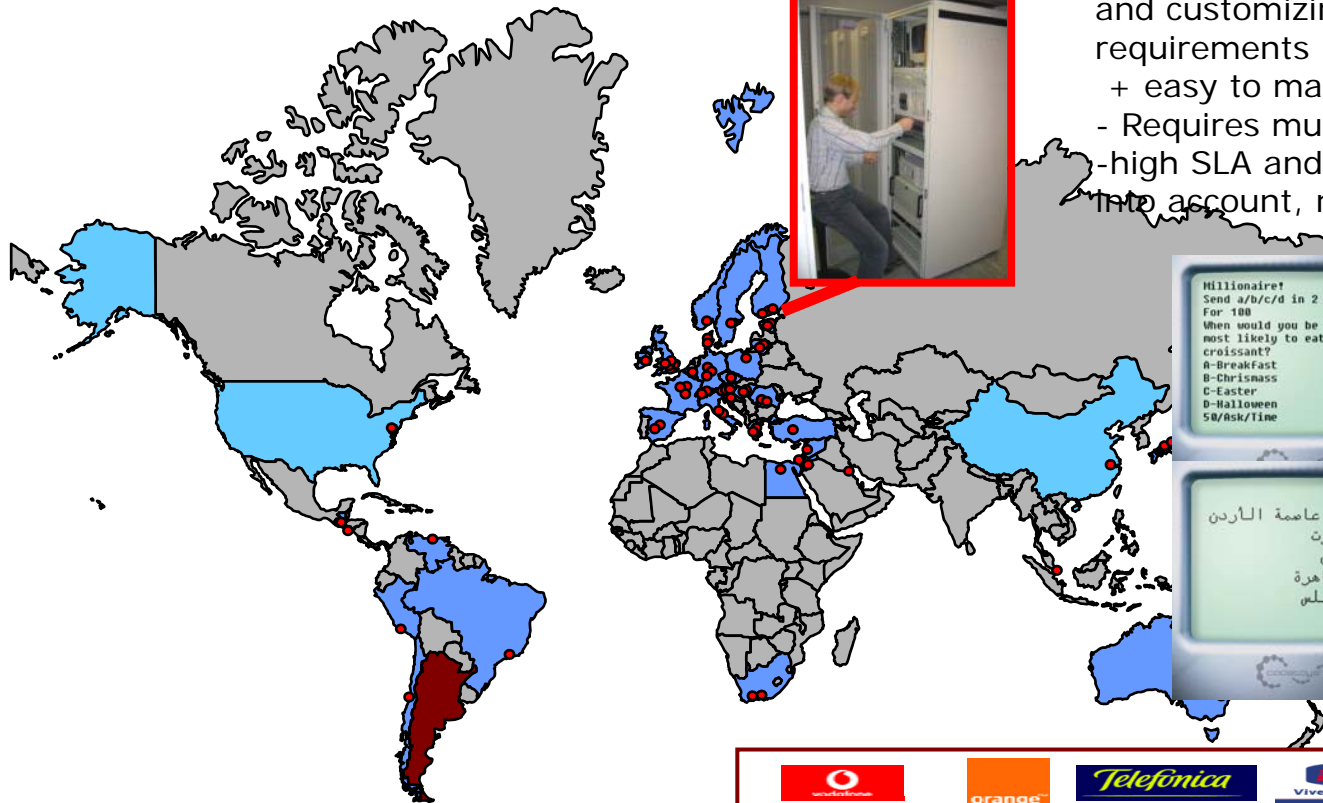
Benefits	Risks
Economies of scale in production and distribution	Hard to manage the (software) supplier network
Predictable cash flow	Initial costs in creating the service
Expands the potential customer base	Performance and scalability put to the test
Shorter sales cycle	Initially reduces the revenues since service revenues are small
Lower version management and maintenance costs	SaaS software customization costs
Integration of products and services into a SaaS offering creates barriers to entry for competitors	Requires commitment to shorter release / upgrade cycle



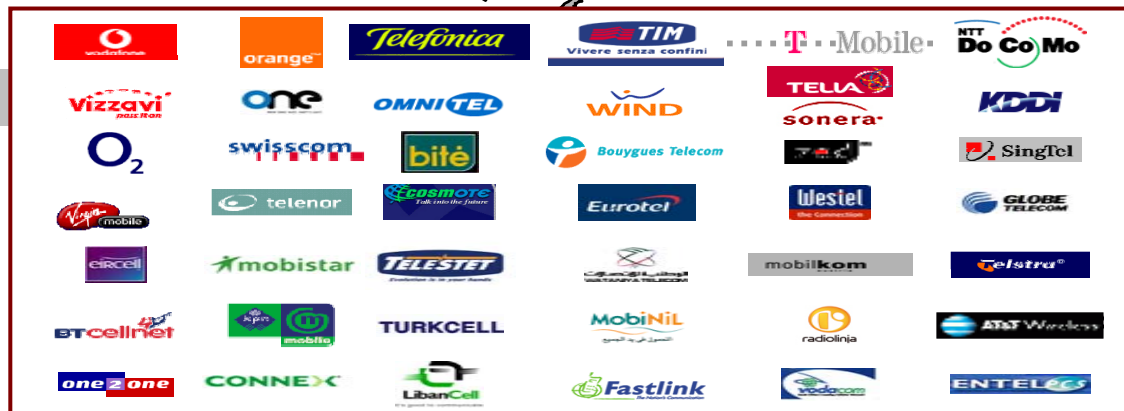
Case: Scalable delivery of mobile applications – how to?

Providing same base service from a single point and customizing it to customer specific & local requirements

- + easy to manage
- Requires multiple integrations
- high SLA and peak requirements must be taken into account, no single point of failure allowed



Region/Country	Number of operators
EUROPE:	43
MEA:	7
ASIA/PACIFIC:	6
LATIN AMERICA:	6
NORTH AMERICA:	1
TOTAL	63



Case: High availability, capacity and security requirements – both challenge and opportunity in SaaS model



www.codetoys.com

Case: Global Rollout of a Leading Game Brand as a Mobile Service

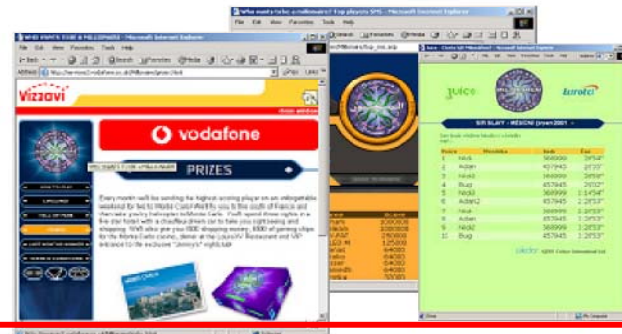


High security, usage tracking and high availability implemented as required due to big monetary prizes.

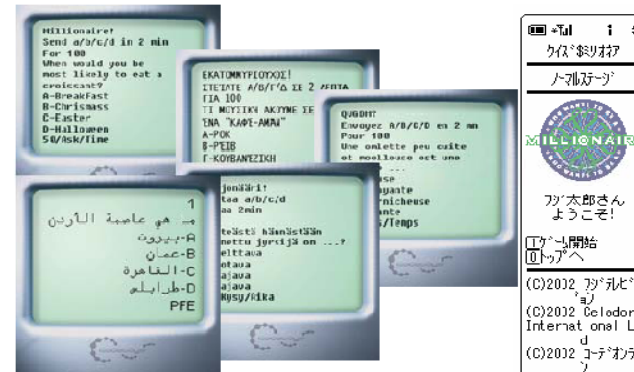
Peak handling of hundreds of messages/second implemented to handle volumes stimulated by TV advertising.



Localized for the various languages and encodings as well as networks as required in a globally available service



High requirements for response times (< 1 s) as competitions are based on the speed of answering.





Thank You!

For more information, please contact:

Prof. Matti Hämäläinen
Helsinki University of Technology (TKK)
Department of Computer Science and Engineering
Laboratory of Software Business and Engineering (SoberIT)
matti.hamalainen@soberit.hut.fi