



Value Based Requirements Creation for Electronic Commerce Applications

Jaap Gordijn (*contact*)

Hans Akkermans

Hans van Vliet

Vrije Universiteit, Amsterdam, The Netherlands

Email: gordijn@cs.vu.nl

Web: <http://www.cs.vu.nl/~gordijn>



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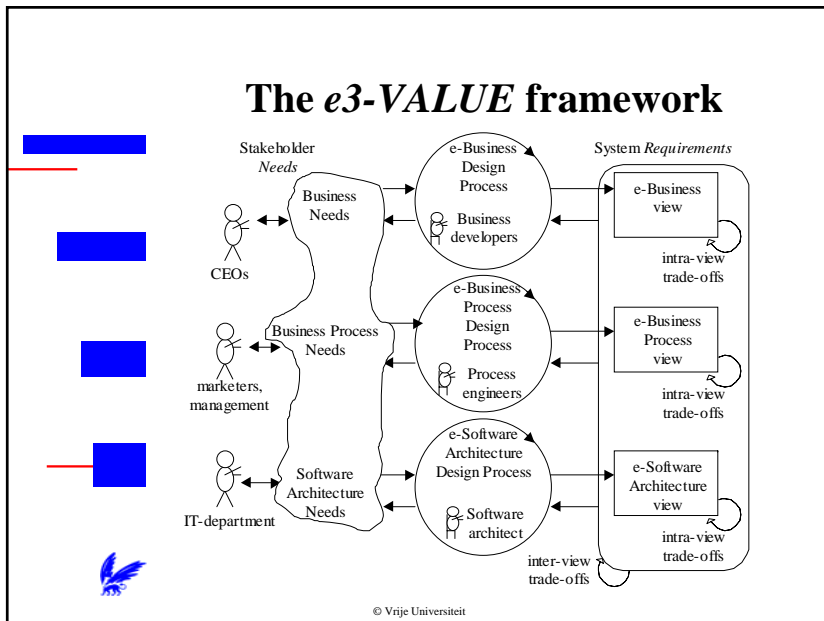


Requirements *creation* instead of requirements *elicitation*

- Normally, stakeholders have tacit knowledge on systems requirements, allowing for requirements *elicitation* techniques;
- However, for e-business applications, this knowledge is an important subject of ‘design’ too caused by:
 - The novel nature of e-business;
 - Fast developing, enabling, technology;
- Therefore, e-business requirements are mostly unknown, disallowing requirements *elicitation* techniques;
- Consequently, the development of these requirements is much better seen as a requirements *creation* process;
- Our *e3-value* framework supports this process by:
 - Business model core concepts;
 - A practical seven-step approach.

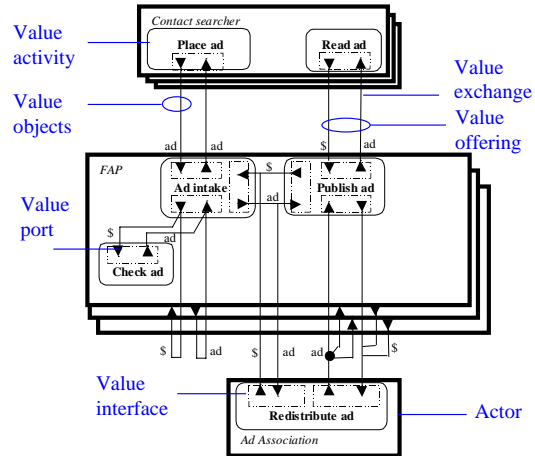


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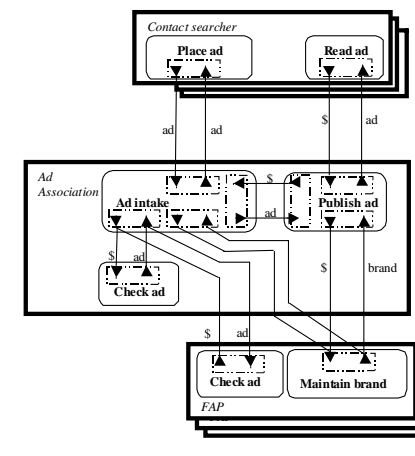


- ### The business case: a free ad service
- The Ad Association coordinates over 150 free ad papers (FAPs);
 - FAPs are local, independent organizations;
 - Most ads have a local scope, contact ads have a world-wide scope;
 - Their question: how should an Internet based application for world-wide contacts ads look alike?
 - No existing 'distributed' contact ad service yet.;
 - Two variants:
 - A FAP centred business model;
 - An Ad Association centred business model.
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Core concepts in a FAP centred business model



Core concepts in an Ad Association centred business model



Early analysis of trade-offs between business models

- **FAP centred:**
 - FAP performs most activities;
 - FAP (stays) in control;
 - FAP adds most value;
- **Ad Association centred:**
 - Ad Association performs most activities;
 - Ad Association becomes in control: **shift in power;**
 - Ad Association adds most value.



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Consequences for software architecture

- **Important consequences for the software architecture can now be tracked down:**

FAP centred	Ad Association centred
Redistribution component	Brand accounting component
Web server, database server, application components and high quality Internet Access for <i>each</i> FAP	Web server, database server, application components and high quality Internet Access <i>only</i> for Ad Association
<i>Each</i> FAP must be capable of handling payments	<i>Only</i> Ad Association must be capable of handling payments



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A seven step approach

Step 1: identification of the actors/stakeholders;

Step 2: identification of business scenarios;

Step 3: identification of value activities;

Step 4: for each value activity: identification of value ports with value objects, and grouping in value interfaces;

Step 5: allocation of value activities to the actors, including sensible alternative ways to do this;

Step 6: analysis of tradeoffs occurring in alternative business models ensuing from the first five steps;

Step 7: tracking down the associated implications for requirements on the information systems architecture and business processes.



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Conclusions

• Requirements engineering for e-business applications needs a first step of requirements creation;

• Our *e³-VALUE* core concepts and seven step approach offers guidance in this creation process;

• With our approach, it is possible to:

▪ Identify and analyse business model trade-offs in an early stage;

▪ Identify high level software architecture implications in an early stage.



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