Ontology-Based Operators for e-Business Model De- and Reconstruction

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The e\textsuperscript{3}-value ontology for economic value based e-business model design
How to find variations on a found e-business model?

- Deconstruct value model using operators:
  - *Value activity* deconstruction: find ‘smaller’ value activities, which can be assigned to different actors
  - *Value port* deconstruction: find ports with ‘smaller’ value objects
  - *Value interface* deconstruction: split up interfaces with ports > 2 into interfaces with fewer ports
  - Repeat these deconstruction operators a number of times

- Reconstruct value model
  - Reassign newly found value activities to actors

Deconstruction operator 1: Value activity deconstruction

- Can we split a value activity into smaller ones, which each can be assigned to different actors?
- Value interfaces to environment remain invariant.
Value activity deconstruction continued: Outsourcing activities

- Provide online news articles
- Termination
- Fee

Value activity deconstruction continued: Outsourcing activities

- Provide news articles
- Termination
- Fee

Deconstruction operator 2: Value port deconstruction

- Can we split ports/objects into smaller ones, which each can be delivered by different actors?
- Provide news articles
- Internet service provisioning
- Fee

- Provide news articles
- Internet service provisioning
- Fee
- Internet service provisioning
- Hosting
- Access
Deconstruction operator 3: Value interface deconstruction

Access & Hosting via value activity deconstruction

Difference with previous slide?
Reconstruction of business models

- Make value activity configurations: connected value activities without their performing actors;
- Re-identify actors;
- Make alternative value-activity – actor assignments.

<table>
<thead>
<tr>
<th>Value activity</th>
<th>Actor</th>
<th>Reader</th>
<th>Last Mile</th>
<th>Data Runner</th>
<th>Hoster</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read article</td>
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<tr>
<td>Local loop</td>
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<td>x</td>
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<tr>
<td>Long distance</td>
<td>x</td>
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<tr>
<td>Inet access</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Hosting</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>News</td>
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</tbody>
</table>

A reconstructed model

- Provide news articles
- Amsterdam Times
- Handle local loop traffic
- Handle long distance traffic
- Internet hosting provisioning
- Internet hosting access
- Internet access fee
- Interconnection fee
- Termination fee
- Access fee
- Telephone connection
- Telephone fee
- Reader r1
Conclusions

• Study variations on an existing business value model using deconstruction operators;
• Operators are defined on the $e^3$-value ontology, which is used to represent a value model;
• Three operators:
  – Value activity deconstruction operator;
  – Value port deconstruction operator;
  – Value interface deconstruction operator.