A community based metaphor supporting EUD within communities

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Organizational context

• Users need to negotiate their behavior within more or less consolidated communities
  ▫ That might be hosted by wider organizations
  ▫ That might be autonomous

• to reach their goals, mission
Technological context

• Several applications are available in the open source domain
  ▫ Sometimes not robust
  ▫ Often poorly documented
  ▫ But in a positive trend
• Services are available
• Avoid reinventing the wheel
EUD has to face the need of integration

• Offering approaches other than mutual control
  ▫ Too much software oriented
  ▫ Too rigid

• Offering friendly metaphors

• The cooperation metaphor:
  something users have experience of
  ▫ A lot of studies on cooperation
The cooperation metaphor

- Cooperation among actors and technologies
- Coordination
- Awareness
The CASMAS cooperation model

• Entities stand proxy for actors, applications, devices
• CIS for coordination
• Awareness spaces

• Entities to define different integration behaviors for the same application

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The CASMAS environment

- A rule based language (implemented in Drools)
## The CASMAS language

<table>
<thead>
<tr>
<th>Domain/Device/App.</th>
<th>Conditions</th>
<th>Functions</th>
<th>Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEP.</td>
<td>deadline</td>
<td>inform, create deadline</td>
<td><em>All rules (- “last rule”)</em></td>
</tr>
<tr>
<td>Device/App. DEP.</td>
<td></td>
<td></td>
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<tr>
<td>Domain/Device/App. INDEP. CASMAS</td>
<td>show, move “last rule”</td>
<td>send SMS</td>
<td>DMS upload, download</td>
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<td>assert-a-fact, update-a-space, post a request, copy</td>
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<tr>
<td></td>
<td>assert, retract, modify, ...</td>
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</tbody>
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Next steps

• Encouraging initial experiments
  ▫ To be continued
• Assisted learning process

• A visual integration environment
  ▫ Supporting the metaphor
• A richer rule editor
  ▫ Layered structure
• A support for rule validation and simulation
  ▫ Explicit rules dependencies
  ▫ Mimicking entities cooperative behaviors (?)