MoKi and the ProDe project

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It is a **Modeling Tool**;

Supports the **integrated modeling of knowledge**:
- Static aspects (e.g. the organizational structure, the products, the documents, ...)
  - Ontology
- Dynamic aspects (e.g., the procedures, the activities...)
  - Process Model

Fosters the **collaboration** between domain experts and knowledge engineers.
The research vision - architecture

Modelling tool: MoKi

Model

Ontology

Process

Domain expert

Knowledge Engineer

Domain expert

Knowledge Engineer
An architecture for collaborative conceptual modeling

Collaborative modeling in a wiki

Mountain

A **mountain** is a large **landform** that stretches above the surrounding land in a limited area usually in the form of a peak. A mountain is generally steeper than a **hill**.

The highest mountain on earth is the **Mount Everest**.

- **Unstructured view**
- **Semi-structured view**
- **Fully structured view**

<table>
<thead>
<tr>
<th>is a</th>
<th>landform</th>
</tr>
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<tbody>
<tr>
<td>different from</td>
<td>hill, plain</td>
</tr>
<tr>
<td>made of</td>
<td>earth</td>
</tr>
<tr>
<td>made of</td>
<td>rock</td>
</tr>
<tr>
<td>height</td>
<td>at least 2,500m</td>
</tr>
<tr>
<td>samples</td>
<td>Mt. Everest</td>
</tr>
</tbody>
</table>

- $\subseteq \text{Landform}$
- $\subseteq \neg \text{Hill} \cap \neg \text{Plain}$
- $\subseteq \forall \text{madeOf(Earth \sqcup \text{Rock})}$
- $\subseteq \exists \text{height.} \geq 2500$

Mountain(Mt._Everest)
Mountain(Mt._Kilimanjaro)
Different views for different roles

- Unstructured view
- Semi-structured view
- Fully-structured view

Fully-structured view
Different views for different roles
Further features

- Integrated process and ontology
- Graphical editing
- Term extraction
MoKi Details

It is an extension of **MediaWiki** (e.g. Wikipedia) (GPLv2+)
- Supports collaborative editing;
- Only a web-browser is required on the client side;
- Platform independent (needs at least Apache, MySQL, Php)
- Basic versioning facilities.

**Released Open Source** on the 29\textsuperscript{th} July 2010;
License: **GPL2** (due to reuse of other GPL2 code);

\(~210\) downloads from the release;
\(~5\) unique access per day (web-site).
Usages of MoKi

**Previous Usages:**

4 companies + 3 universities (APOSDELE EU project)
build integrated model of a domain;

FAO (Organic.Edunet EU project)
build/revise ontology of organic agriculture;

Some summer schools and university courses
tool for conceptual modeling;

**Current Usages:**

FBK (eOnco project / eHealth)
“organizational” processes in real medical domain;

FBK (PESCaDO EU project)
built an environmental ontology

Italian company
modeling email marketing domain;

**Trentino PA and Informatica Trentina (ProDe project)**
model processes for analysis/revision and
dematerialization.
The ProDe project

Italian interregional project;
Involves some regions and autonomous provinces;

**Dematerialization:**
for a public administration agency, to be able to replace paper documents with digital versions

Why dematerializing?
To reduce expensive inefficiencies;

Goal:
Define a reference model for the dematerialization of public administrations;
Diagramma di flusso:

1. **Ricezione Server Gestione Gare**
2. **Confronto con server contabilità**
3. **Verifica finanziaria**
   - **No**
   - **Deliberazione**
4. **Produzione di documentazione gara da server gestione gare**
5. **Acquisizione sistema di gestione documentale**
6. **Inoltrò ufficio appalti e contratti**

**Documentazione Gara**:
- **Delibera**
- **Criteri di stima**
- **Bozza bando**
- **Bozza disciplinare**

**Documentazione gara**:
- **Bando**
- **Disciplinare**
The usage in the ProDe project

Currently used by 5 (out of 7) Italian regions in ProDe: Puglia, Liguria 1, Trentino, Emilia Romagna, Liguria 2.

Decision to use MoKi based on:
Ability to store wiki based and formal content;
Ability to represent integrated processes and ontologies;
Easy to use;
Collaborative features;
On-line repository of knowledge.
(First) Data on usage

Usage has started after an info day on MoKi on February 2nd.
Medium size models produced in around 2 weeks.

<table>
<thead>
<tr>
<th></th>
<th>Processes</th>
<th>Documents</th>
<th>Attributes</th>
<th>Document descriptions</th>
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<tr>
<td>Puglia</td>
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<td>17</td>
<td>7</td>
<td>5</td>
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<tr>
<td>Liguria</td>
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<td>36</td>
<td>2</td>
<td>35</td>
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<td>Trentino</td>
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<td>8</td>
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<tr>
<td>Liguria</td>
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<td>26</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
MoKi & Prode: Resources

MoKi WebSite: http://moki.fbk.eu
On-line demos, downloads, documentation, news, support...

ProDe WebSite: http://www.progettoprode.it/

Spotlights:
ComunicazioneFBK's YouTube Channel:
http://www.youtube.com/user/ComunicazioneFBK

• MoKi: http://www.youtube.com/watch?v=S0AM6FZysu0

• ProDe: http://www.youtube.com/watch?v=v3xKXIY21-U