

MoKi and the ProDe project

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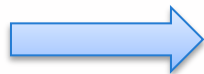
Joint work with:

Gaetano Calabrese, Chiara Ghidini, Nahid Mahbub, Luciano Serafini

It is a **Modeling Tool**;

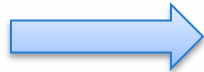
Supports the **integrated modeling of knowledge**:

Static aspects (e.g. the organizational structure, the products, the documents, ...)



Ontology

Dynamic aspects (e.g. the procedures, the activities...)



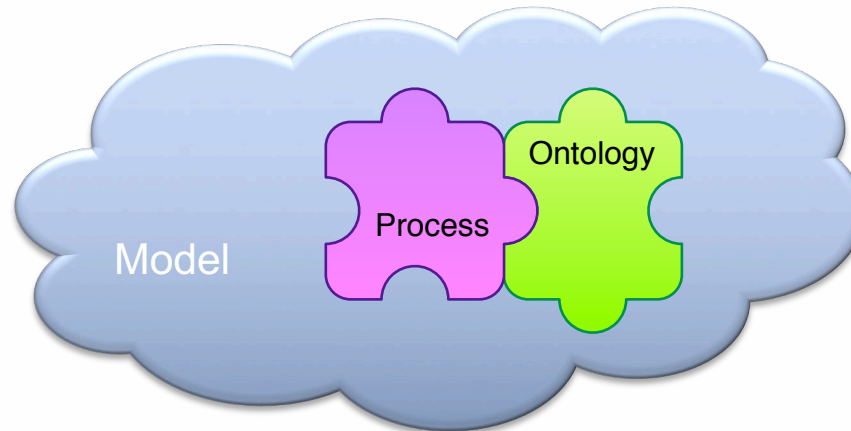
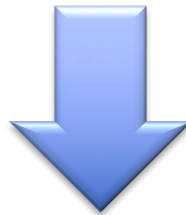
Process Model

Fosters the **collaboration** between domain experts and knowledge engineers.



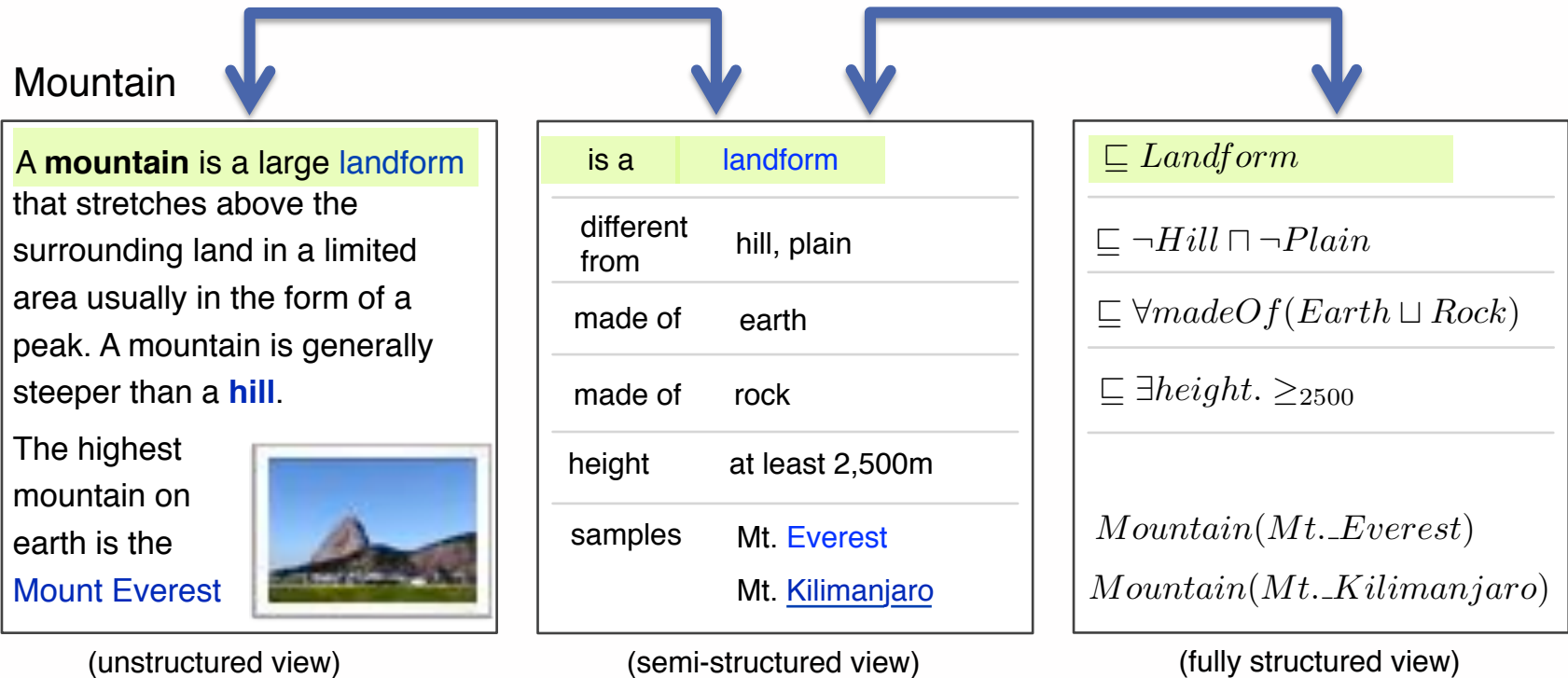
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The research vision - architecture

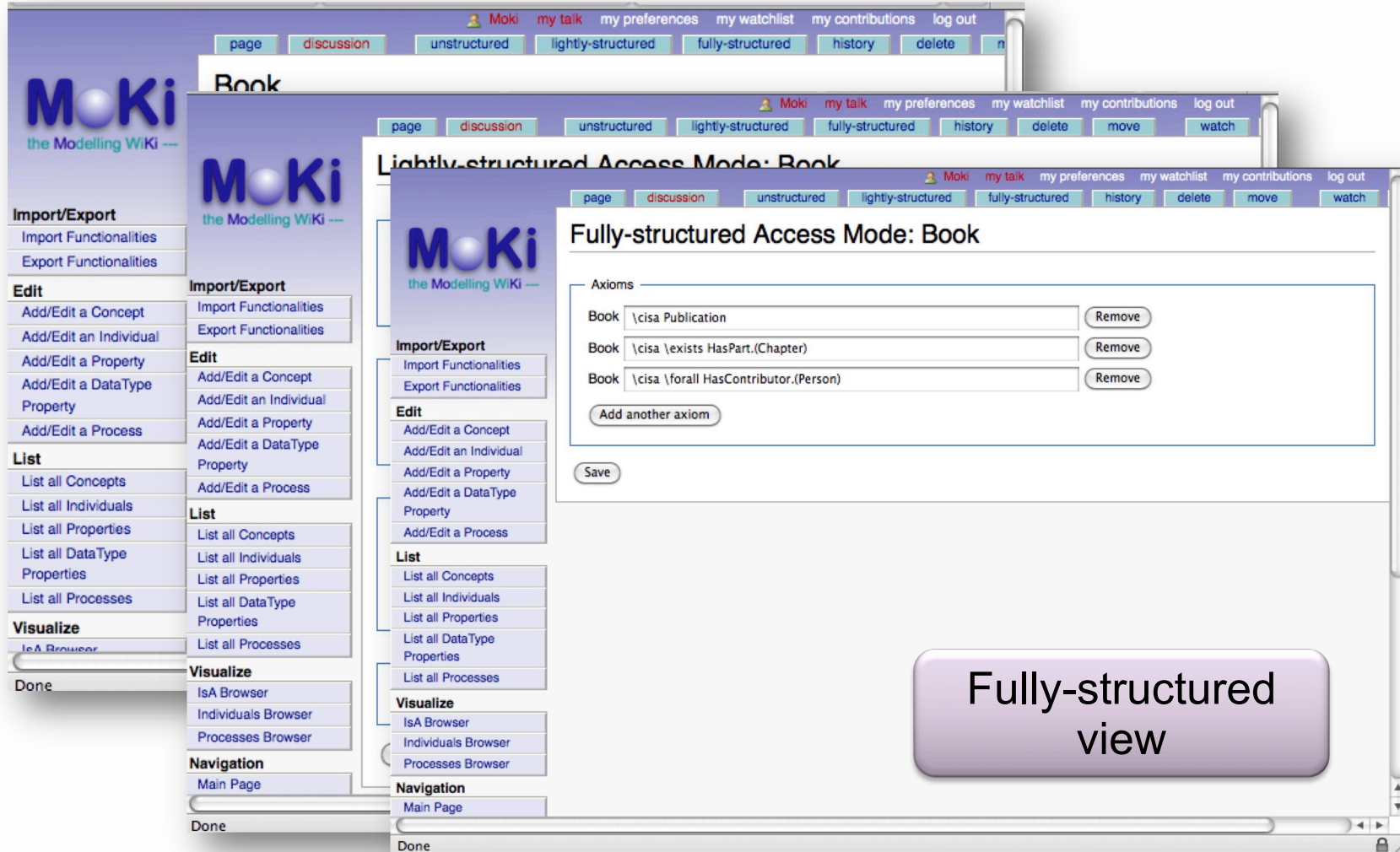


An architecture for collaborative conceptual modeling

Collaborative modeling in a wiki



Different views for different roles



The screenshot displays the Moki web application interface, showing different views for a 'Book' entity. The interface is organized into several sections:

- Navigation:** A top bar with tabs for 'page', 'discussion', 'unstructured', 'lightly-structured', 'fully-structured', 'history', 'delete', 'move', and 'watch'. A user profile 'Moki' is visible with links for 'my talk', 'my preferences', 'my watchlist', 'my contributions', and 'log out'.
- Entity View:** The main content area shows the 'Book' entity in 'Fully-structured Access Mode'. It lists axioms:
 - Book \backslash cisa Publication (Remove)
 - Book \backslash cisa \backslash exists HasPart.(Chapter) (Remove)
 - Book \backslash cisa \backslash forall HasContributor.(Person) (Remove)
 There is an 'Add another axiom' button and a 'Save' button at the bottom.
- Sidebars:** On the left, there are three vertical menus:
 - Import/Export:** Import Functionalities, Export Functionalities.
 - Edit:** Add/Edit a Concept, Add/Edit an Individual, Add/Edit a Property, Add/Edit a DataType Property, Add/Edit a Process.
 - List:** List all Concepts, List all Individuals, List all Properties, List all DataType Properties, List all Processes.
 - Visualize:** IsA Browser.
- Footer:** A 'Done' button is located at the bottom left of the interface.

Fully-structured
view

Different views for different roles

The image displays three overlapping browser windows from the Moki platform, illustrating different access modes for the 'Hospital Administration' page. Each window has a top navigation bar with tabs for 'page', 'discussion', 'unstructured', 'lightly-structured', 'fully-structured', 'history', 'delete', 'move', and 'unwatch'. The user 'Moki' is logged in, with links for 'my talk', 'my preferences', 'my watchlist', 'my contributions', and 'log out'.

- Top Window (Standard View):** Titled 'Hospital Administration', it shows a standard text-based page layout with a left sidebar containing navigation and editing options.
- Middle Window (Lightly-structured Access Mode):** Titled 'Lightly-structured Access Mode: Hospital Administration', it displays a simplified version of the page with a reduced sidebar.
- Bottom Window (Fully-structured Access Mode):** Titled 'Fully-structured Access Mode: Hospital Administration', it shows a complex graphical process flow diagram. The diagram includes nodes such as 'Patient request admission to hospital', 'Access Medical History database', 'Access Insurance records', 'Adequate facilities and funding', 'Refer to other hospitals', 'Reserve Room for Patient', 'Check in Patient', 'Alert consulting Doctor', and 'Update Hospital Admission Records'. A 'Policy of access' box is also visible, connected to the 'Access Insurance records' node.

The left sidebar of the windows contains the following sections:

- Import/Export:** Import Functionalities, Export Functionalities
- Edit:** Add/Edit a Concept, Add/Edit an Individual, Add/Edit a Property, Add/Edit a DataType Property, Add/Edit a Process
- List:** List all Concepts, List all Individuals, List all Properties, List all DataType Properties, List all Processes
- Visualize:** IsA Browser, Individuals Browser, Processes Browser
- Navigation:** Main Page

Further features

Policy of access

Access Insurance records

Adequate facilities and funding

Integrat process

MOKi the Modelling WIKI

Browser IsA

- Expand all
- Collapse all
- Expand selected sub-hierarchy
- Collapse selected sub-hierarchy
- Thing
 - AcademicStaff
 - FBKReseracher
 - FacultyMember
 - AssistantProfessor
 - AssociateProfessor
 - ExchangeProfessor
 - FullProfessor
 - HonoraryProfessor
 - ProfessorEmeritus
 - ResearchScientist
 - VisitingProfessor
 - Lecturer

Extract new concepts from textual resources

(Powered by Kx - a Keyphrase eXtraction system)

Files

Upload a new file:

Show uploaded files

Configure and Run

Language: Domain:

Percentage of relevant concepts to return:

Take multiword expressions that occur at least:

- 2 times in a document
- 8 times in the corpus

Maximum length of multiword expressions:

Prefer key-concepts occuring early in the text:

Prefer specific key-phrases:

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 29th 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 (APOSDLE 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)
 - build 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:

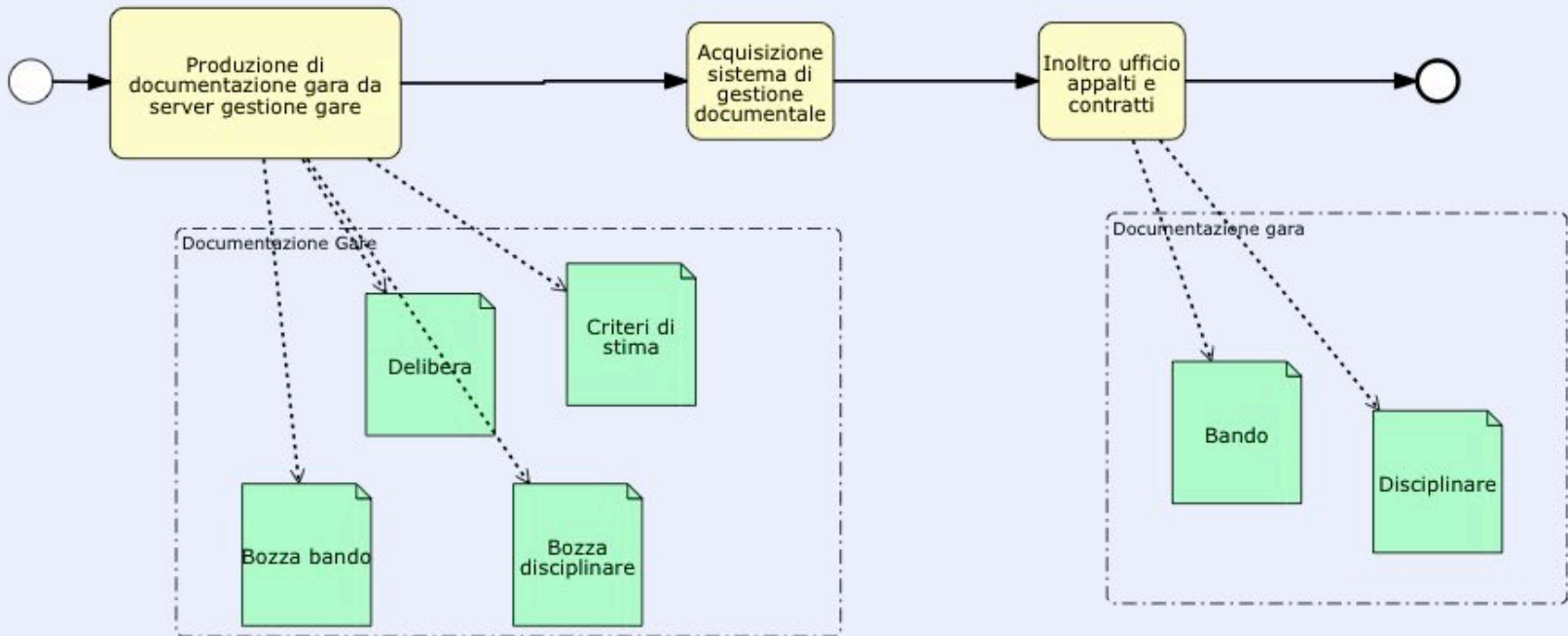
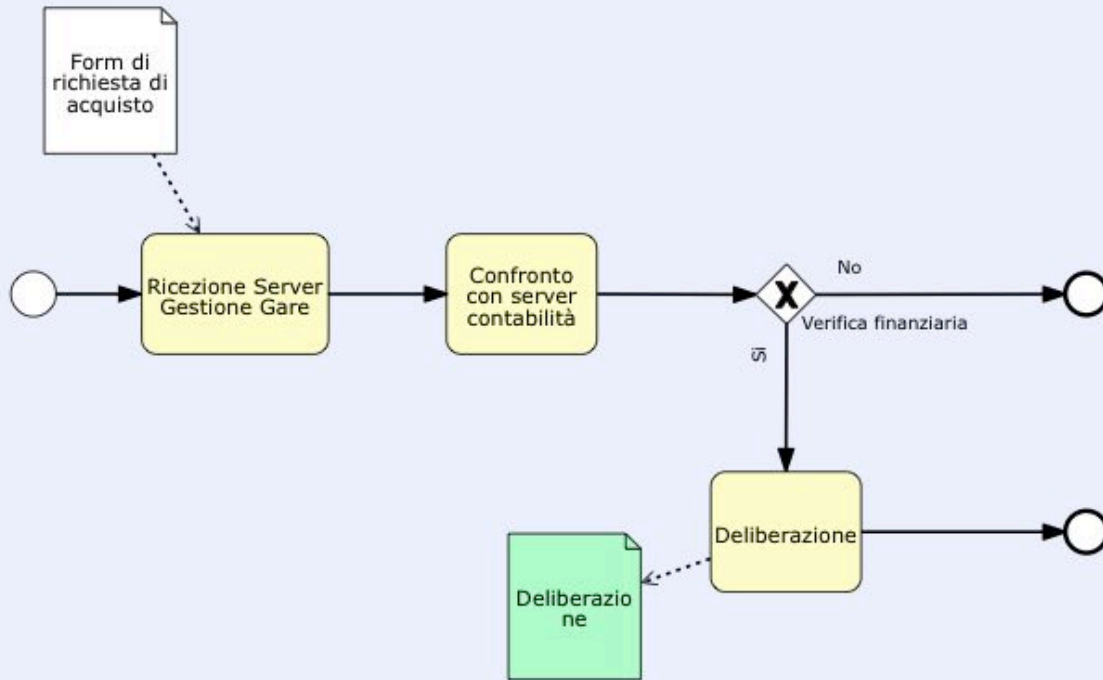
for a public administration agency, to be able to replace paper documents with digital versions

Why dematerializing?

To reduce expensive inefficiencies;

Goal:

Define **a reference model** for the dematerialization of public administrations;



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.

	Processes	Documents	Attributes	Document descriptions
Puglia	33	17	7	5
Liguria	38	36	2	35
Trentino	35	24	3	8
Emilia-Romagna	47	55	2	21
Liguria	0	26	0	0

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=v3xKXlY21-U>