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BUILT ON
eclipse.

MOSKitt UIM

(User Interface Modeling)

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Integración de tecnologías


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P R O S

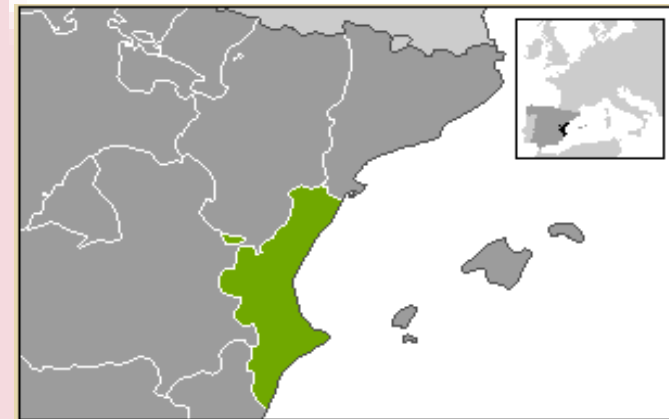
Centro de Investigación en Métodos
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UNIÓN EUROPEA
FONDO EUROPEO DE
DESARROLLO REGIONAL
Una forma de hacer Europa

Project Context

- Leading organization:
 - Conselleria de Infraestructuras y Transporte (CIT) (Infrastructures and Transport Ministry)
 - Comunidad Valenciana Government (Generalitat)
 - http://en.wikipedia.org/wiki/Valencian_Community
 - **2009 Population:** 5.094.675 (10,89% Spain)



Conselleria de Infraestructuras y Transporte (CIT)

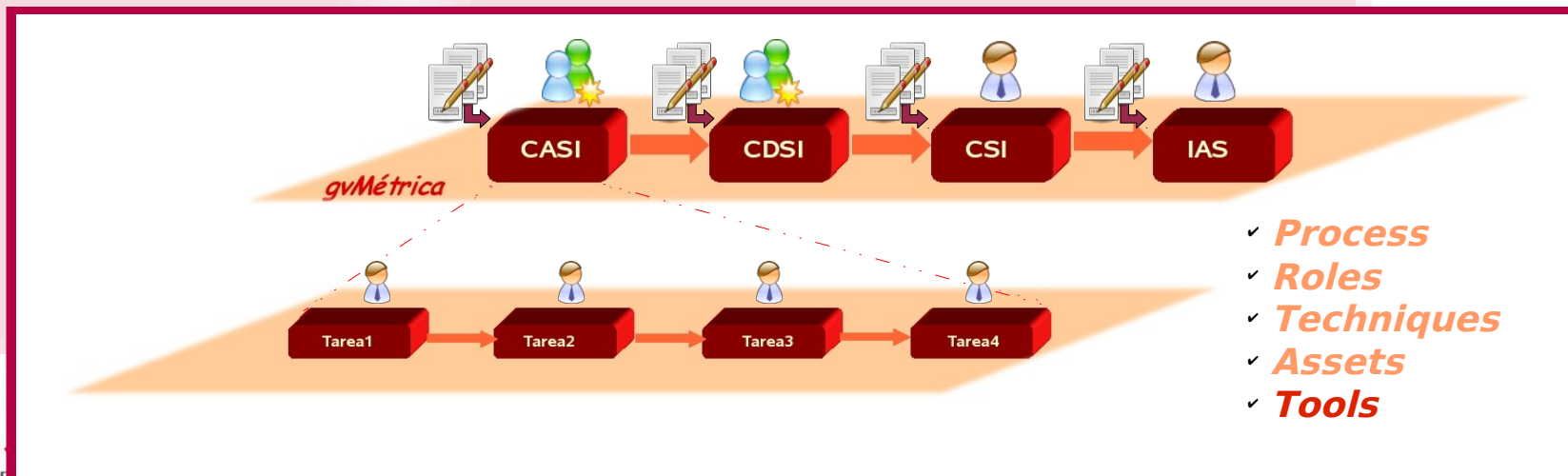
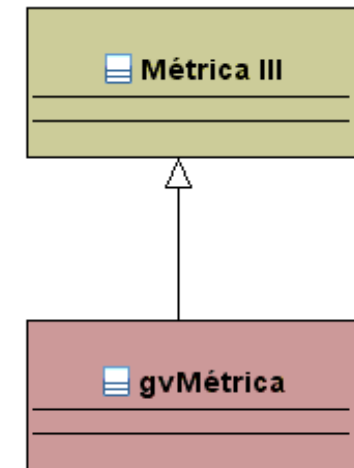


- Main authority in Regional Government of Valencia regarding:
 - Public infrastructures, Transport, Architecture, Airports, Ports, Costs, Energy
- 1.000 staff members
- 1 Central Office (Valencia) and 3 Territorial Offices
- CIT budget is 3.68% of Generalitat Valenciana budget

Applying gvMetrica

- *gvMétrica*: Software Development Method

- How to apply?
 - Templates -> Documents
 - **¿Tools?**



Solution: gvCASE Project

- Free CASE tools survey:
 - April 2006
 - No tools were found which could satisfy most of the organization requirements
- Decision: New free-libre CASE tool
 - Universidad Politécnica de Valencia proposes Eclipse as technological platform
 - gvCASE Project: April 2007
- Renamed to MOSKitt in 2008

Project Participants

University



- Knowledge
- Dissemination
- Application

Public Admin.



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- Leading
- Requirements
- Fundings

Companies

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IVER
TECNOLOGIAS

BULL

open
canarias



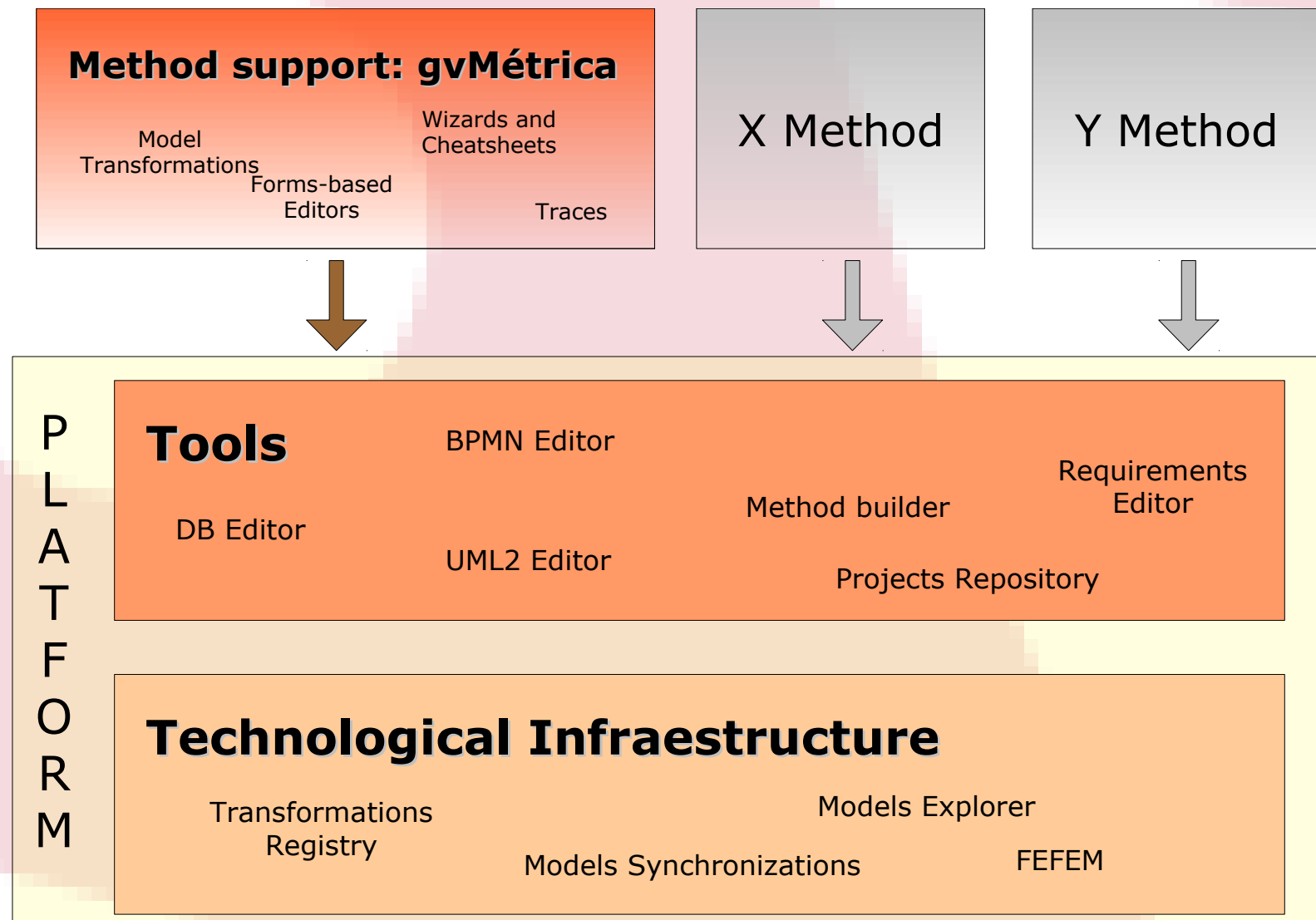
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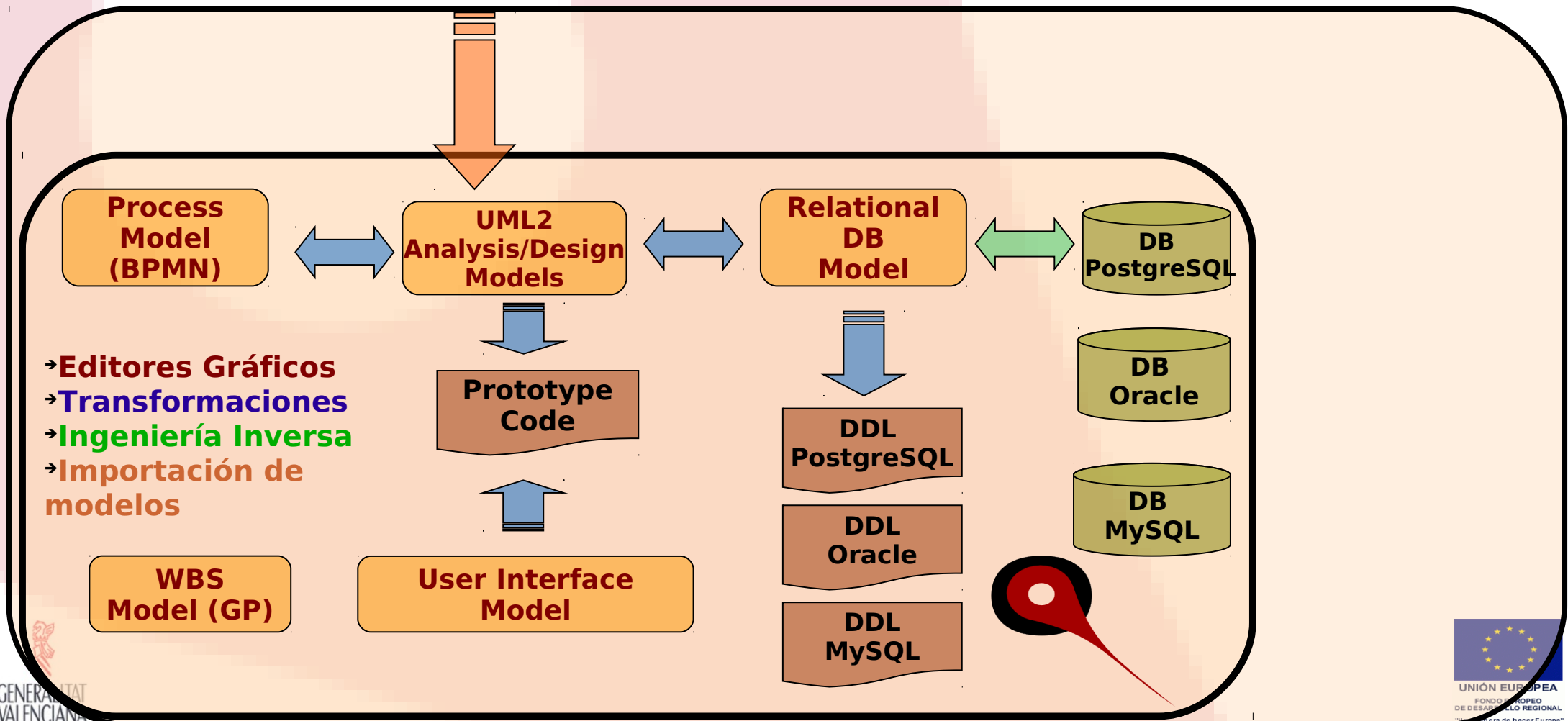
Integranova

- Development
- Sustainability
- Knowledge

What is MOSKitt?



Method Support



UIM Goals

- **Modeling User Interfaces**
 - **Technology Independent**
- **Integrated into Development Method**
 - **Linked to data models (UML2, DB, ECore, ...)**
 - **Generated from other models (if necessary and possible)**
- **Adaptable to Organizations**
 - **Define and Apply UI Patterns**
- **Multiple Purposes**
 - **Code generation**
 - **Implementation guidance**
 - **Analysis Documentation**

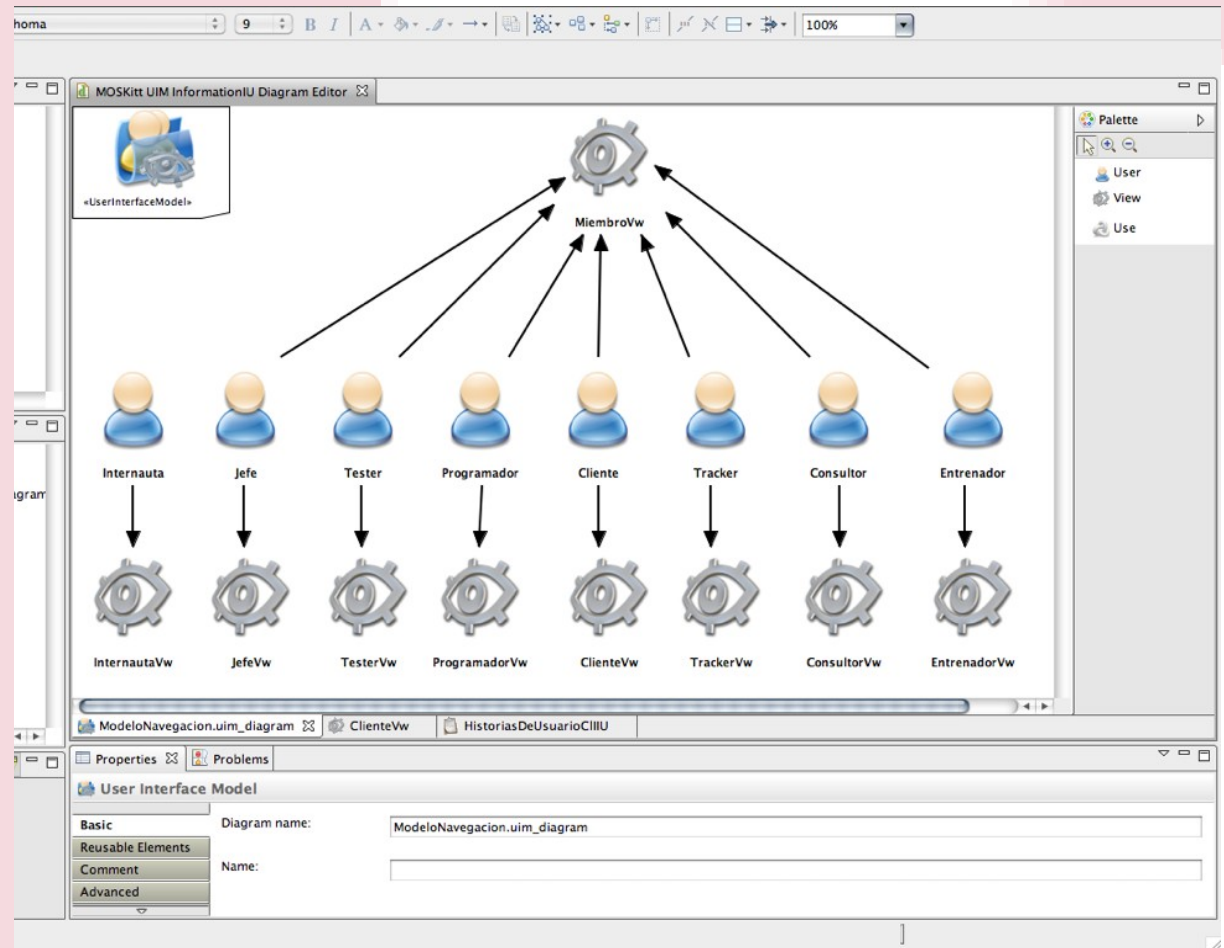
UIM Language (I)

- Views

- parts of the overall user interface

- Users

- can access to one or several Views



UIM Language (II)

- Interaction Units

- an interaction between the system and the user

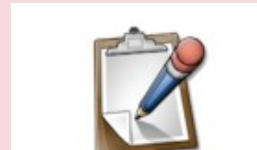
- Kinds of IUs

- Information IU
- Editable Information IU
- Operation IU
- Navigation IU
- Selection IU
- Composite IUs
- Pattern IUs

Basic IUs



«Information IU»



«EditableInformation IU»



«Navigation IU»



«Operation IU»



«Selection IU»



«External IU»



«Package IU»

IU Composition



«Composed IU»



«Pattern IU»

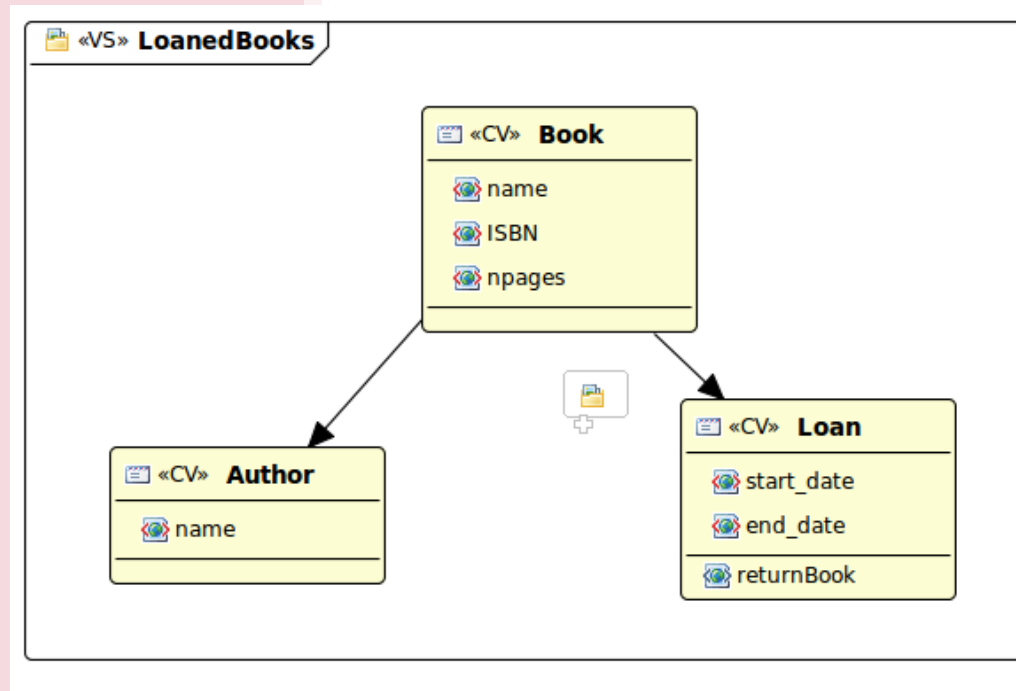
UIM Language (III)

- Information IUs

- **Data Model View**

- **Additional UI Properties:**

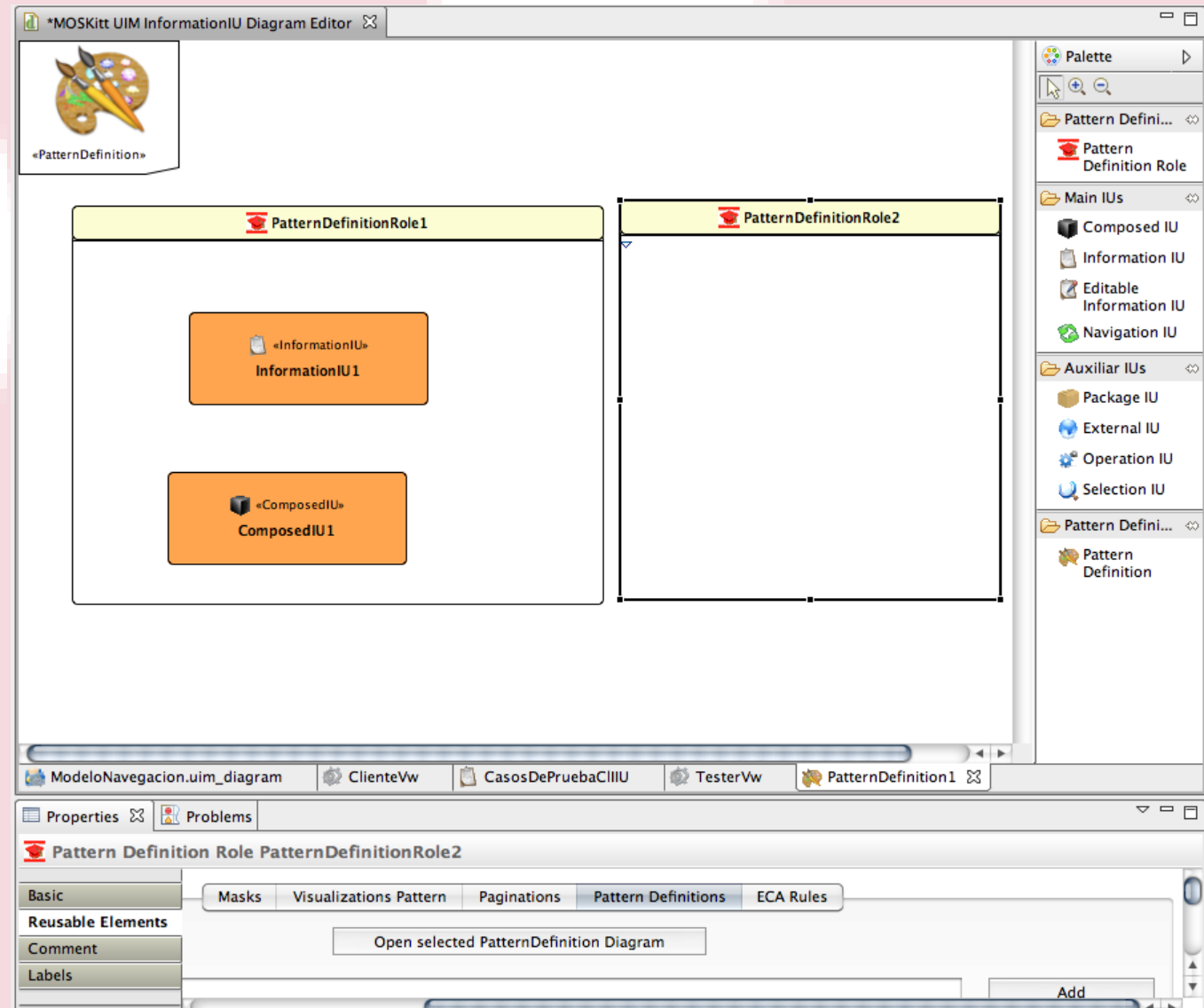
- Ordering
- Filtering
- Masks
- Triggers



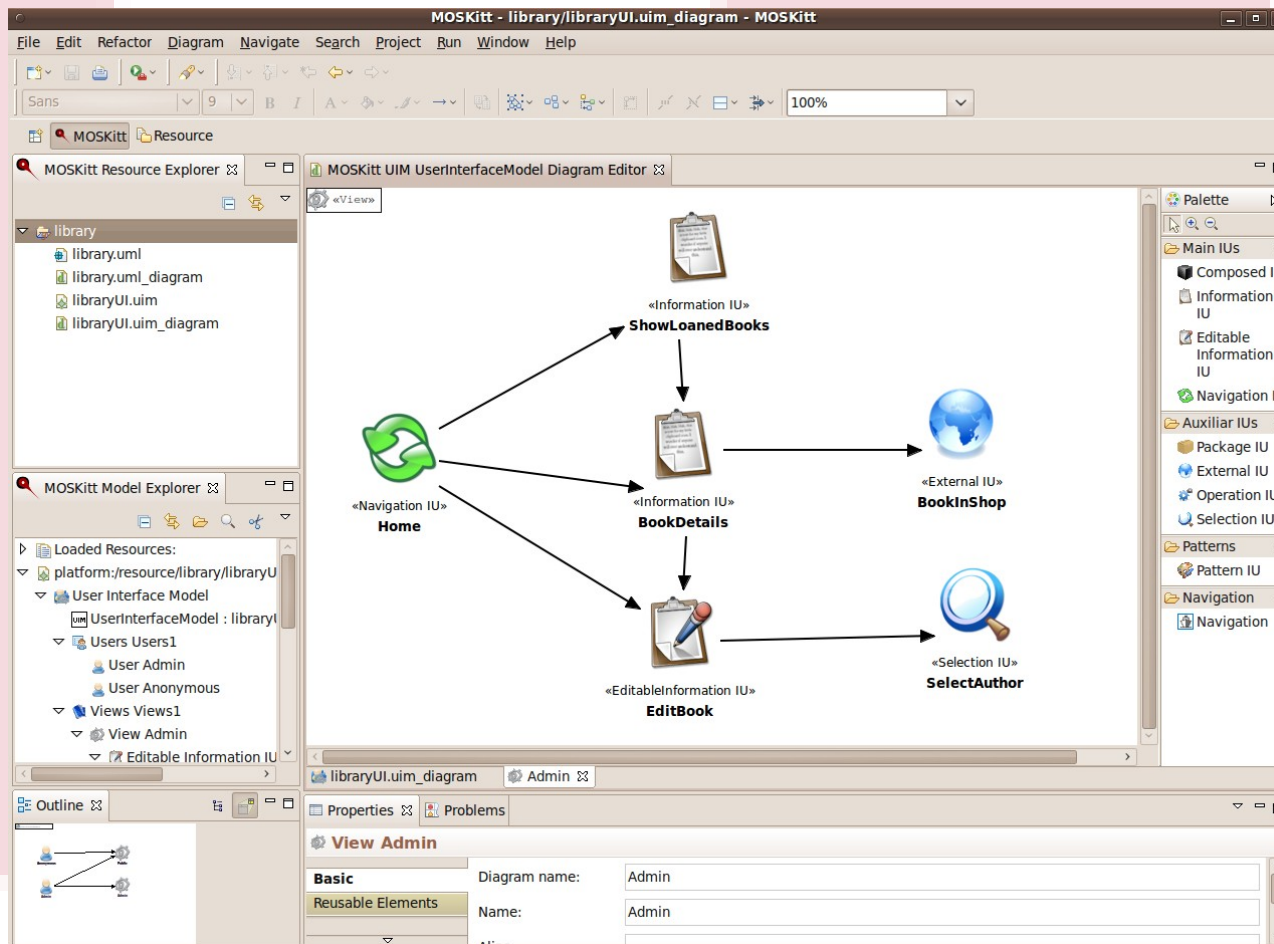
UIM Language (IV)

● Patterns

- **Predefined model pieces**
- **Roles**
- **Defined as model elements → reusable**

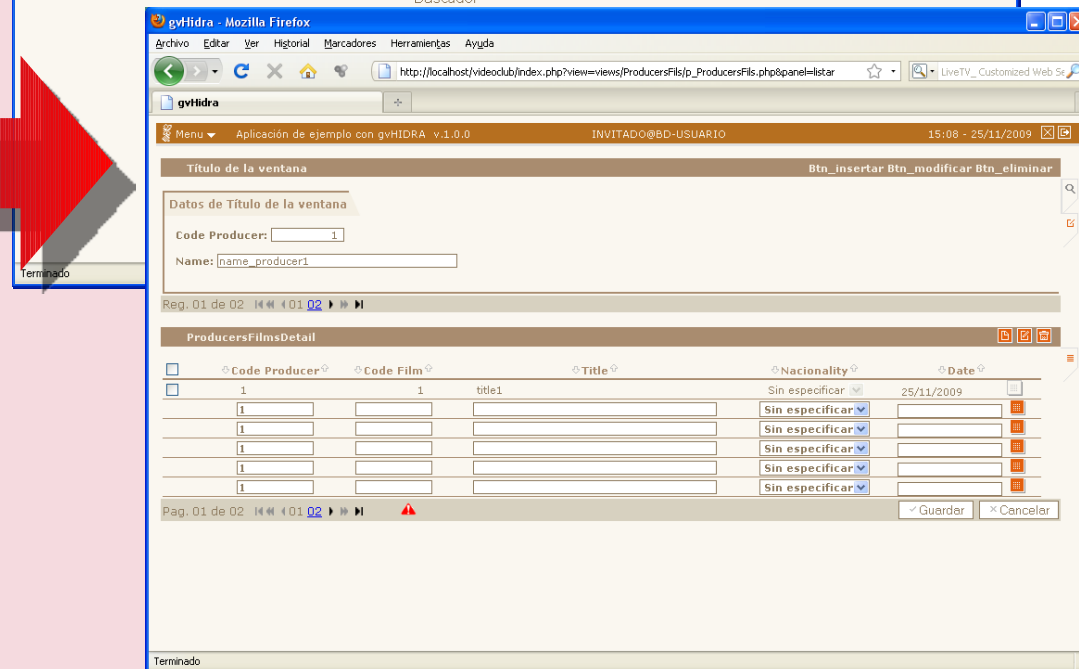
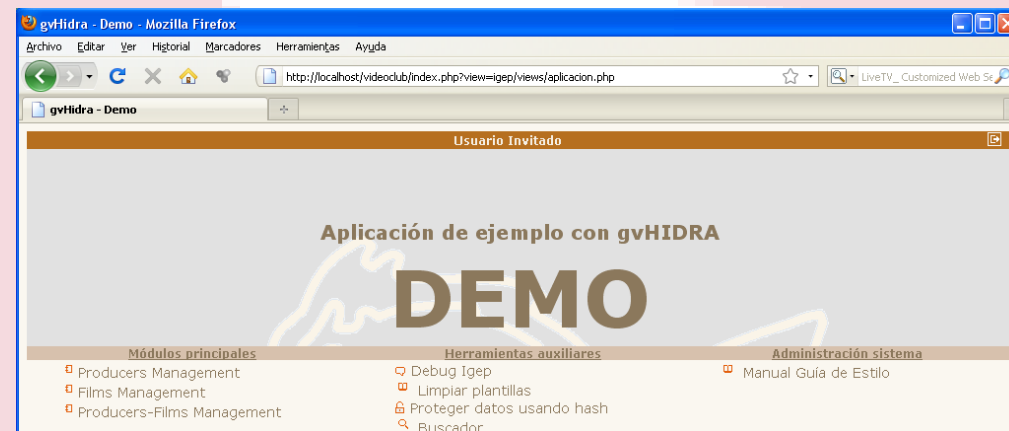
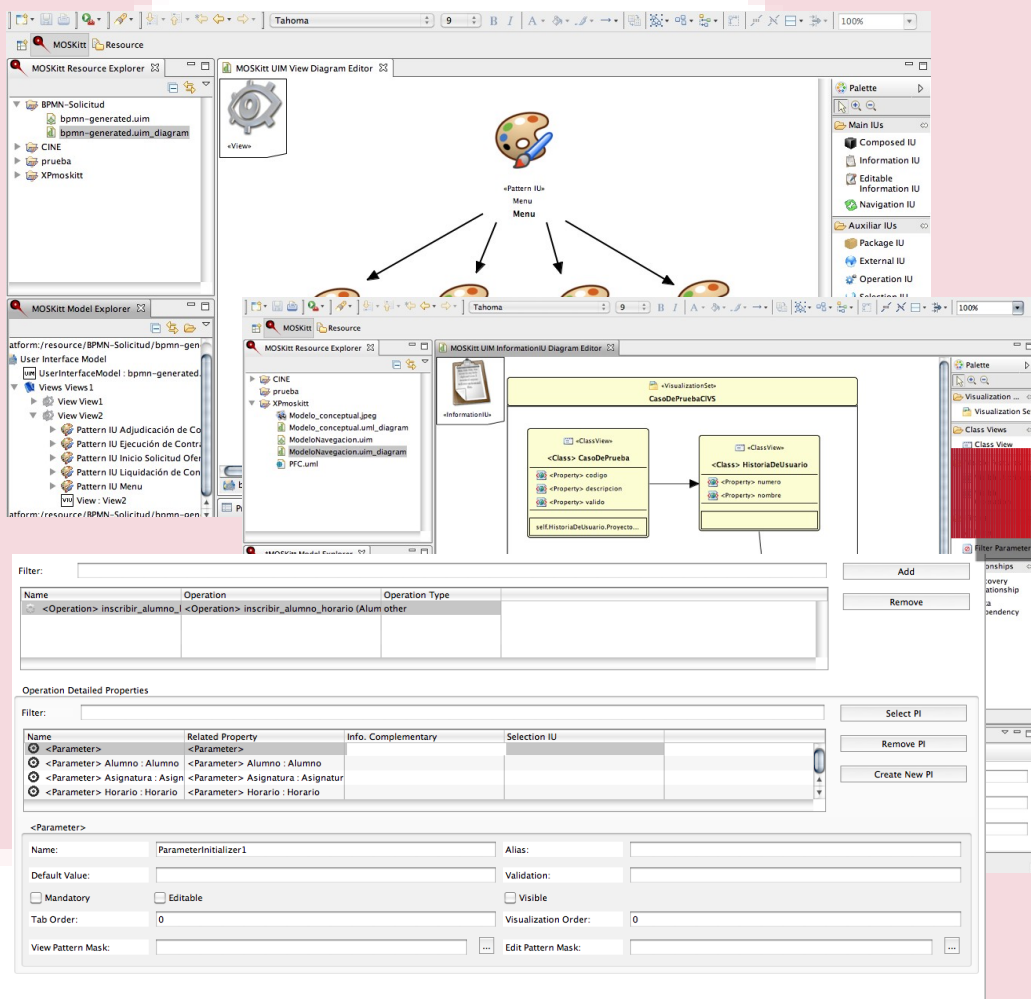


Tool Support



- Eclipse-based
 - Ecore MM
 - GMF-based editor
- MOSKitt
 - Model explorer
 - Multi-diagram
 - Validations
 - Property sheets

UIM → PHP/gvHIDRA



Ongoing Works

The screenshot displays a web browser interface with several widgets and search tools. At the top, there are navigation links for 'Web', 'Image', 'Videos', 'Maps', 'Books', 'Translate', and 'Gmail more...'. The main search area features the 'iGoogle' logo, a search bar with the text 'How to use MOSKitt Sketcher', and buttons for 'Google Search' and 'I'm Feeling Lucky'. Below the search bar, there are links for 'Advanced Search' and 'Language Tools', and a note that 'Google.es is offered in: español, català'. A small image of a puppy is visible on the left side of the search bar.

Below the search bar, there are several widgets:

- Mail Widget:** Includes links for 'Inbox' and 'Compose Mail', an 'Actions...' dropdown, and a list of mail folders: 'First Mail', 'Second Mail', 'Third Mail', 'Fourth Mail', and 'Fifth Mail'.
- Dictionary Widget:** Shows a dropdown menu for 'Diccionario:' set to 'Español-Ingles', a search input field with the text 'dibujar', and a 'Buscar' button.
- Weather Widget:** Displays a weekly forecast for 'Martes', 'Miércoles', 'Jueves', 'Viernes', and 'Sábado' with corresponding weather icons.
- Translator Widget:** Features a search bar with the text 'Necesito saber cómo usar MOSKitt Sketcher', dropdown menus for 'Spanish' and 'English', and a 'Translate' button.
- Search Widget:** Includes a search bar with the text 'Palabra: dibujar', a dropdown menu for 'Búsqueda:' set to 'Aproximada', and a 'Buscar' button.

At the bottom of the page, there are links for 'Translate Homepage' and 'Dictionary Homepage', and a footer with the text 'Datos: Aemet.es Añadir Localidad'.

- Sketcher
 - **Linked with UIM**
 - **Abstract widgets**
 - **Technology independent**

- Model Transformations
 - **BPMN → UIM**
 - **DB → UIM**
 - **UIM → PHP/gvHIDRA**
 - **UIM → Java/gvNIX**

Conclusions

- **MOSKitt UIM**
 - **End User + Research + Industry**
- **Tools Support**
 - **Eclipse Based**
 - **Free/Libre (EPL)**
- **In Practice in CIT**
 - **Continuous Feedback**
 - **Practical Experiences**
- **Taking part in UsiXML project**

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