

Constructing domain-specific design tools with a visual language meta-tool



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Pounamu: Maori word for greenstone jade, used by Maori to produce tools, and objects of beauty, such as jewellery.



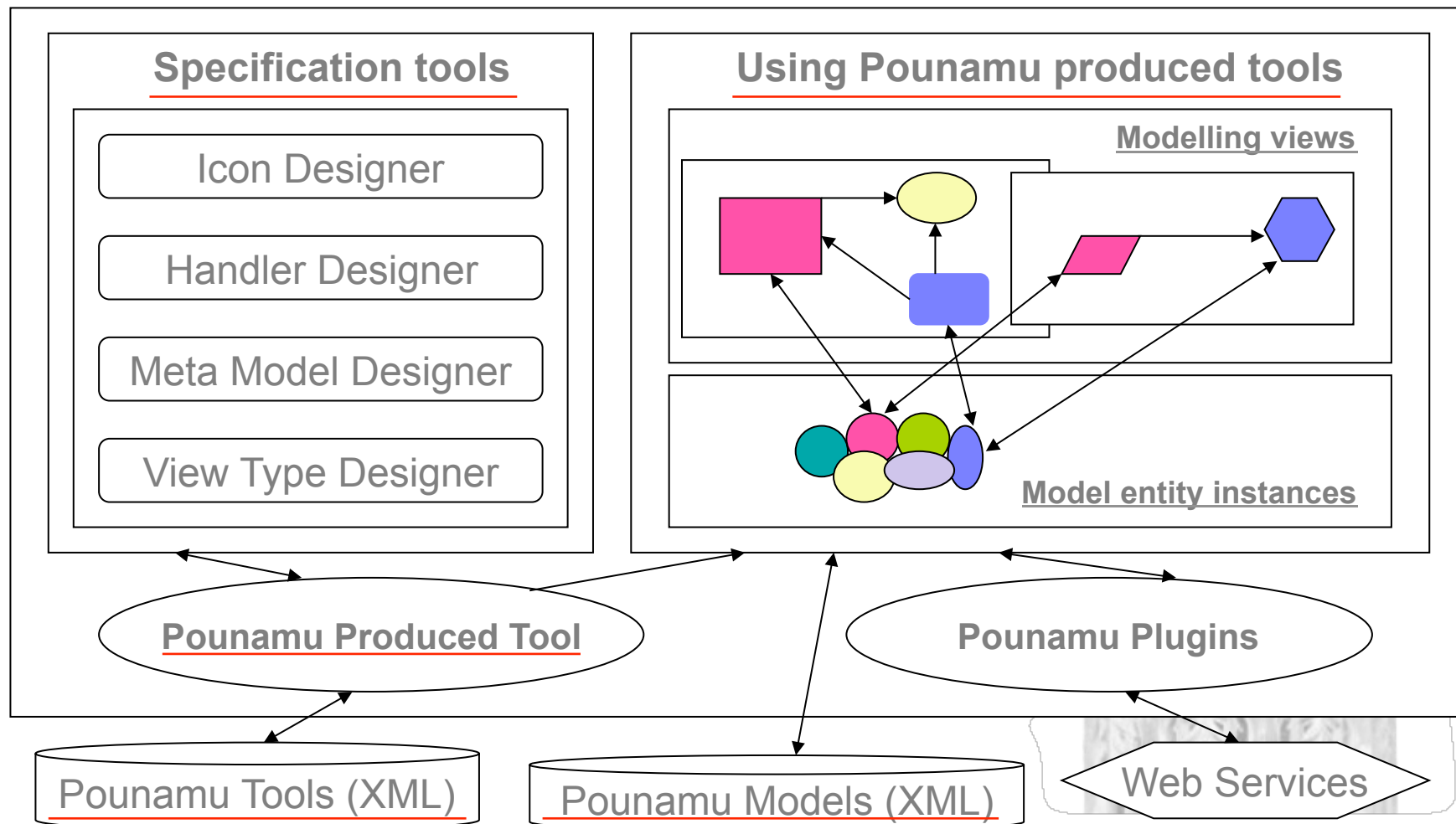
Introduction



- Pounamu Overview
- Pounamu In Action
- Pounamu As Groupware
- Examples
- Future Work



Pounamu Overview



Pounamu In Action



- Meta Model Designer

Pounamu: Model real world cases with your own tool

Manager Tree | Tool Icons

meta model view 0

EntityClass

name:String:key
attribute:MultiLinesText:nonkey
method:MultiLinesText:nonkey

Aggregation

startlabel:MultiLinesText:nonkey
endlabel:MultiLinesText:nonkey

property panel

metamodel prop | visual prop

name
EntityClass

property

The current attributes list

name:String:key
attribute:MultiLinesText:nonkey
method:MultiLinesText:nonkey

up top down

Add or delete attribute here

attribute name

Pounamu In Action



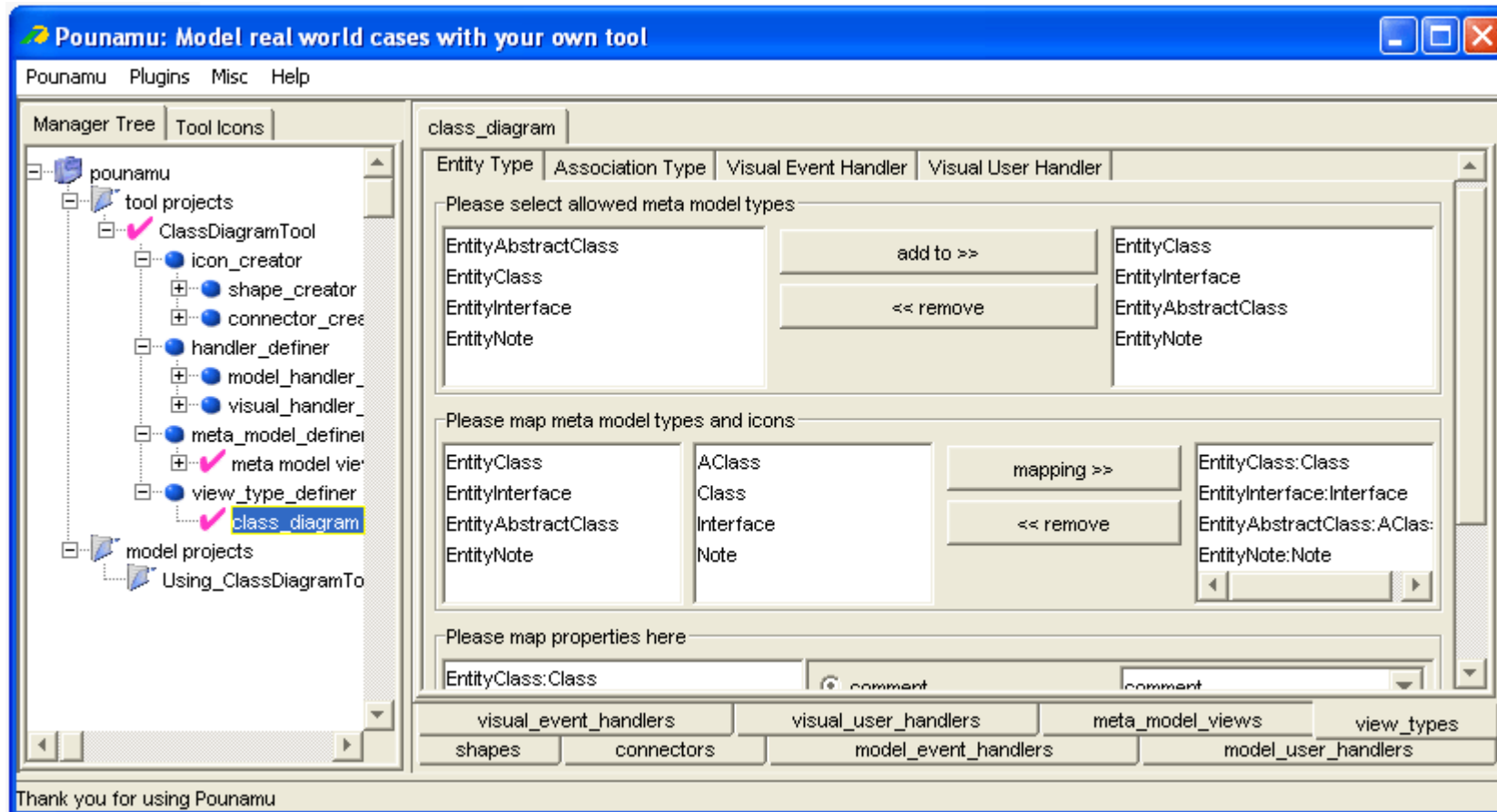
- **Visual Notation Designer – For Shapes & Connectors**

The screenshot displays the Pounamu Visual Notation Designer interface. The main window, titled "Pounamu: Model real world cases with your own tool", shows a "Manager Tree" on the left with a tree view of tool projects. The central canvas displays a "Class" shape with fields for "name", "attribute", and "method". A "property panel" is open on the right, showing a form to specify properties for the selected shape. Below the main window, a smaller view shows a "Manager Tree" with a tree view of tool projects, including "Navigability", "NoteLink", "Refinement", and "Relation". A blue arrow points from the main window to the smaller view.

Pounamu In Action



- View Type Designer



Pounamu In Action



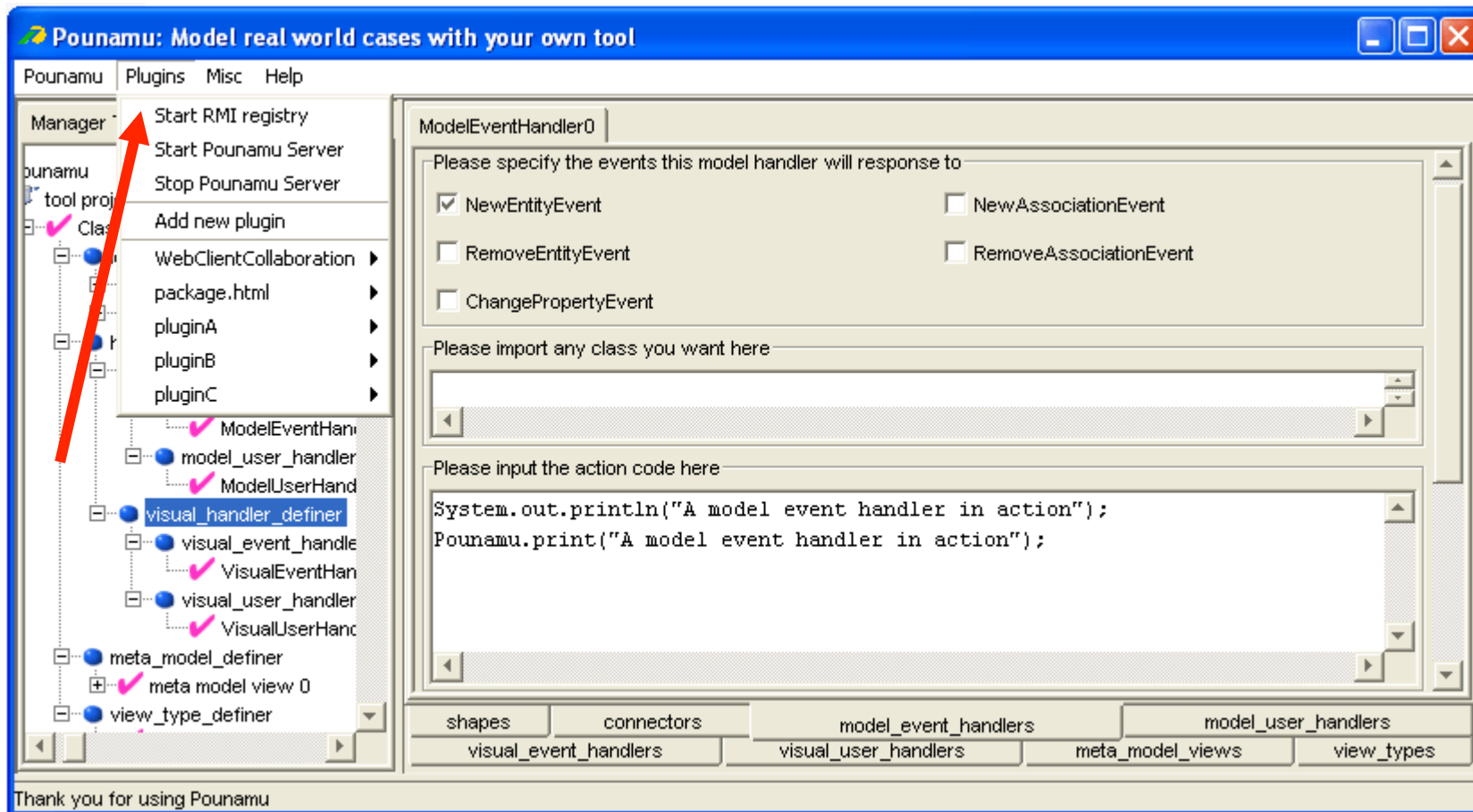
- Using a Pounamu defined tool

The screenshot displays the Pounamu software interface. The main window is titled "Pounamu: Model real world cases with your own tool". It features a menu bar with "Pounamu", "Plugins", "Misc", and "Help". On the left, a "Manager Tree" shows a project structure with "class_diagram_0" selected. The central workspace, titled "class_diagram_0", shows a UML class diagram. It includes a "Person" class with attributes "name" and method "getName()", an "Interface" named "Emailable" with method "getEmailAddress()", and a "Student" class with attribute "id" and method "getID()". The "Student" class inherits from "Person" and implements the "Emailable" interface. On the right, a "property panel" is open, showing "model props" and "visual props" tabs. Under "Visible model props", there are fields for "name:String" (containing "Student"), "attribute:MultiLinesText" (containing "id"), and "method:MultiLinesText" (containing "getID ()"). Under "Invisible model props", there is an empty field. At the bottom of the main window, a status bar reads "Thank you for using Pounamu".

Pounamu Extension



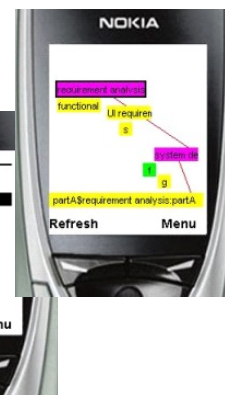
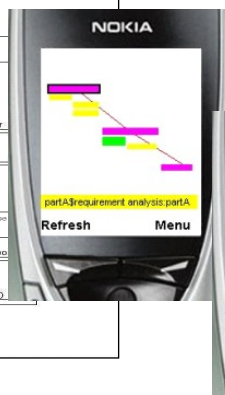
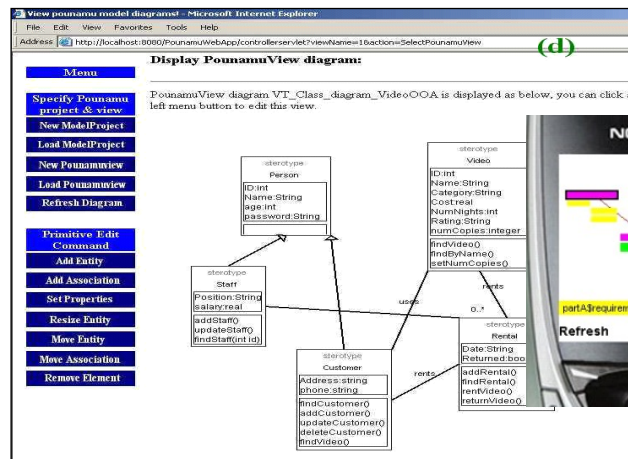
- Pounamu handler designer & plug-in interface



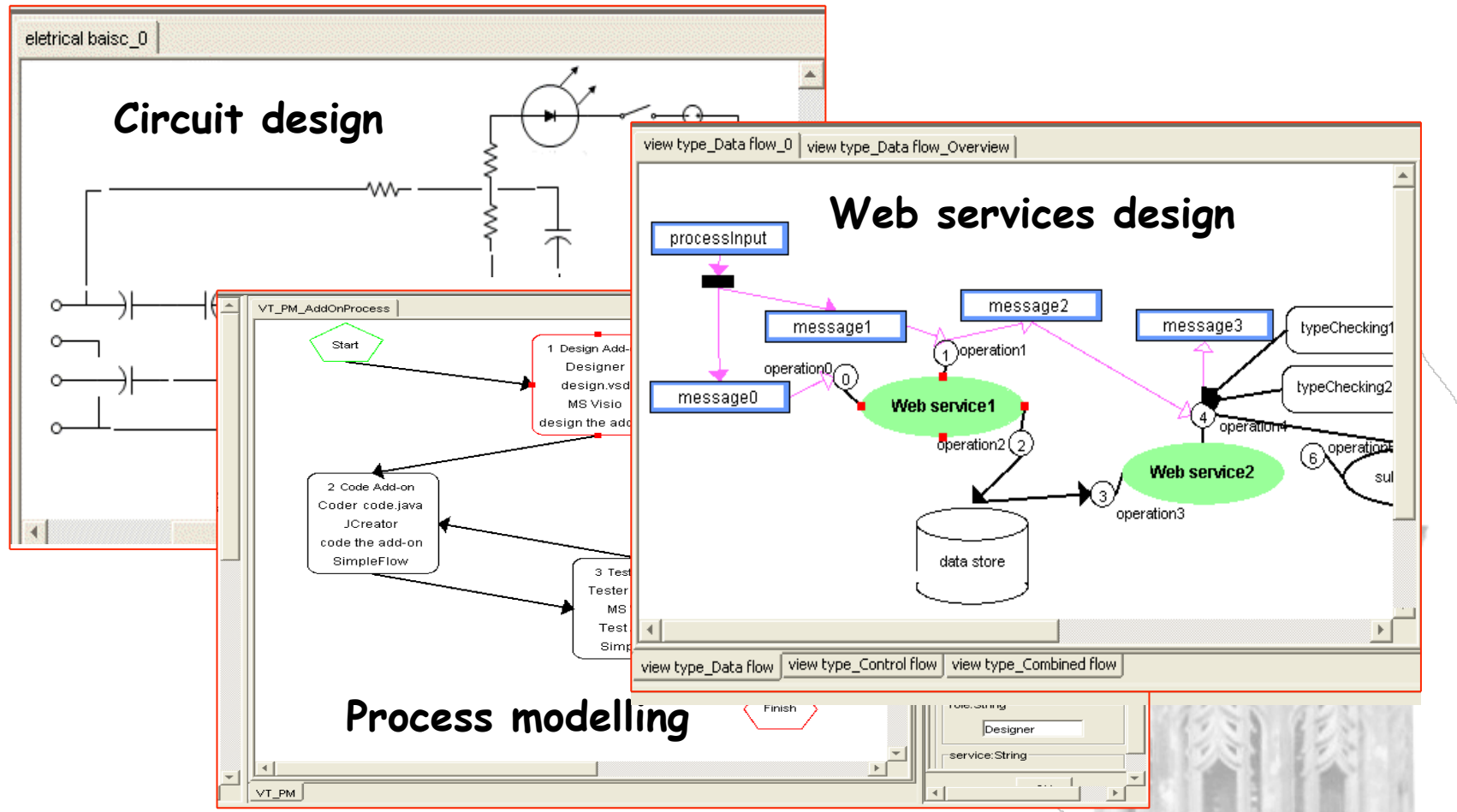
Pounamu As Groupware



- Peer-to-peer collaborative editing
- Web-based thin-client editing
- Editing by mobile PDA and phone



Examples



Future Work



- The incorporation of generic sketch and voice interfaces.
- The development of a tool to visually specify event handlers.
- CSCW capability.
- Turn Pounamu into a plug-in for e.g. MSOffice or Eclipse.



References

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