

Enabling Project-Centred Learning through Flexible Processes: The Cooper Experience

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Collaborative Open Environment for Project Centered Learning

Enabling Project-Centred Learning through Flexible Processes: The Cooper Experience

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Project-Centred Learning through Flexible Processes in Cooper

Goals:

- Support end users to self-organize processes in a CSCL environment
 - Flexible process support
 - Well-organized work
 - Well-understood work

Results:

- Paradigm for management of dynamic processes in a workflow-based system
- Cooper platform implementing dynamic processes



Project-Centred Learning through Flexible Processes in Cooper

Flexible process support:

-Learners in distributed project teams require support for:

Organization

Communication

Reviewing and assessment

Resource management

-Adaptation to:

Learner' preferences

Learner' prior knowledge

Learner' evolution



Project-Centred Learning through Flexible Processes in Cooper

Paradigm:

-Atomic Activities

Analyzed from reoccurring activities in project work

Library of building blocks for processes

The screenshot displays the Cooper web application interface. At the top, there is a navigation bar with the Alta Scuola Politecnica logo and a list of menu items: process management, channels, overdue activities, activities monitoring, and repository. A 'Log out' link is also present. Below the navigation bar, the main content area is titled '>Process Management'. On the left, there is a sidebar with a 'process management' section containing links for 'processes list', 'new process from scratch', 'prova student tutors', 'new process template', and 'new process from template'. The main area is titled 'new activity' and contains a form with the following fields: 'Activity Type:' (a dropdown menu currently showing 'No selection'), 'Description:', and 'Deadline:'. A list of activity types is displayed in a scrollable area, with 'Teamwork planning:Assign Roles' selected. To the right of the list are two buttons: 'ASSIGN TO SINGLE USER' and 'ASSIGN TO GROUP OF USERS'. At the bottom of the page, there are technical specifications: 'HTML 4.01', 'CSS', and 'WCI-AAA'. The footer text reads 'Alta Scuola Politecnica Web Community'.



Project-Centred Learning through Flexible Processes in Cooper

Atomic Activities:

Planning

- Assign role
- Define task
- Assign task
- Define milestone

Resource management

- Publish resource
- Acquire resource
- Recommend resource

Communication

- Create/manage VOIP Call
- Create/manage Chat
- Create/manage application sharing

Review and Assess

- Define assessment criteria
- Define performance indicators
 - Plan assessment
- Create review report



Project-Centred Learning through Flexible Processes in Cooper

Constructing Processes (1 of 2):

-Shared activities

Multiple actors: AND/OR/XOR operator is used

-Activity composition

Multiple activities joined together in:

-Sequence of activities 1 to n

-Blocks of activities in random order, divided by synchronization gateways that SPLIT or JOIN



Project-Centred Learning through Flexible Processes in Cooper

Constructing Processes (2 of 2):

-Data flow of document resources

Single activity: resource created/accessed by single activity

Process: resource created/accessed by all activities in a process

Group of activities: resource visible only to selected set of activities

-Modifying processes (only not started)

Activities: replace activity

Users: re-assign different user to activity

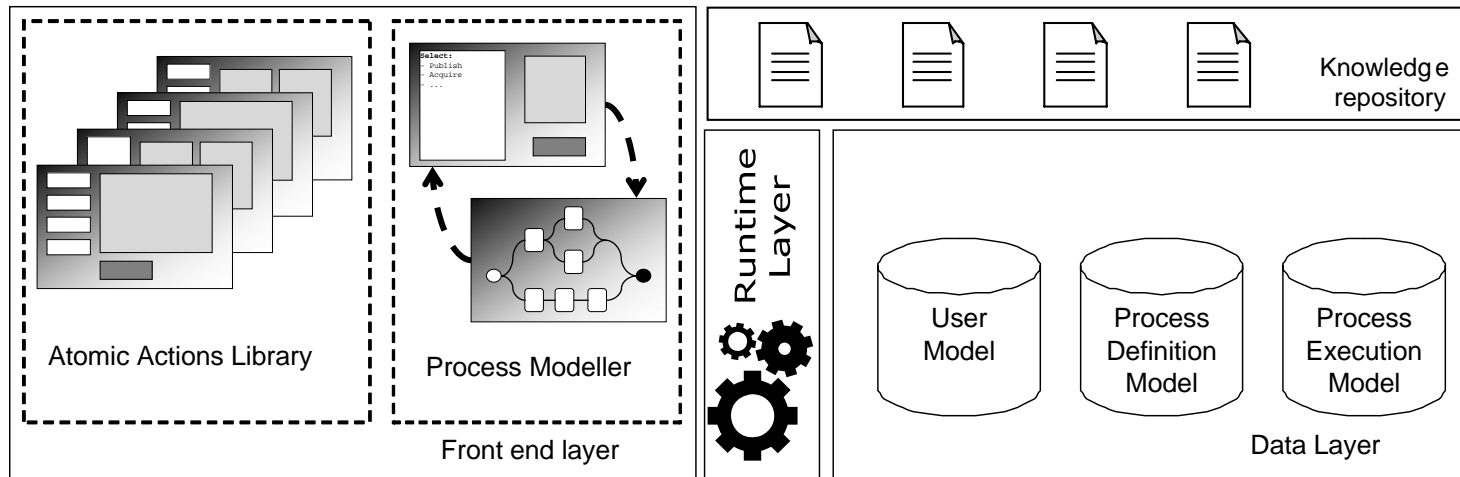
Activity composition: delete, add activities between existing activities

Data flow: removal/addition of resources



Project-Centred Learning through Flexible Processes in Cooper

System overview:



Data layer

-Models of the User, Process definitions, Process execution

Run time layer

-Computing and serving pages to define processes, control execution

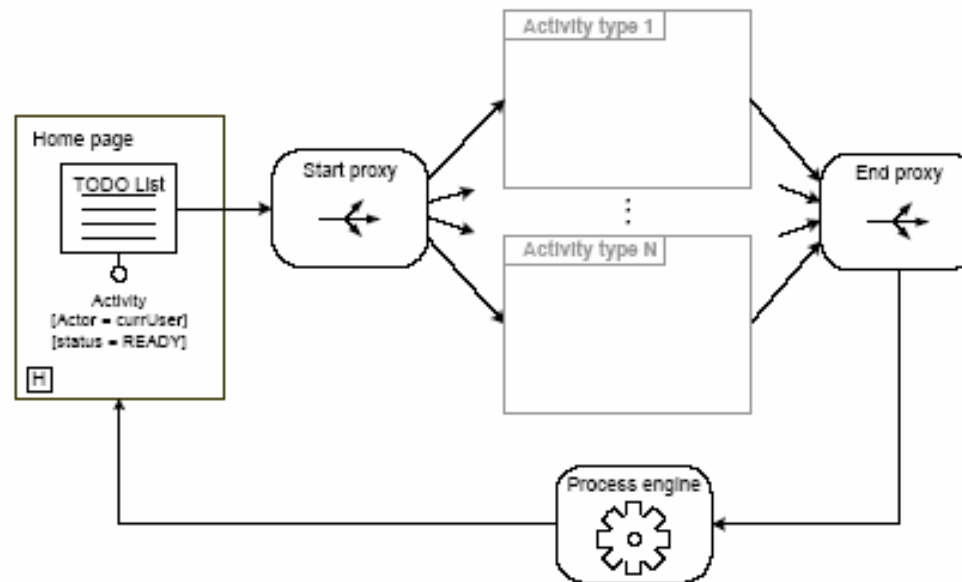
Front end layer

-Web pages for definition/modification of processes



Project-Centred Learning through Flexible Processes in Cooper

Results for the User:



Project-Centred Learning through Flexible Processes in Cooper

Conclusions:

- Framework is usefull in academic/industrial training for support of team-based project learning
- Atomic activity paradigm might be used to analyse dynamic processes in other domains as well
- Web page based definition of (nested) processes is cumbersome: a visual composer is developed.

