

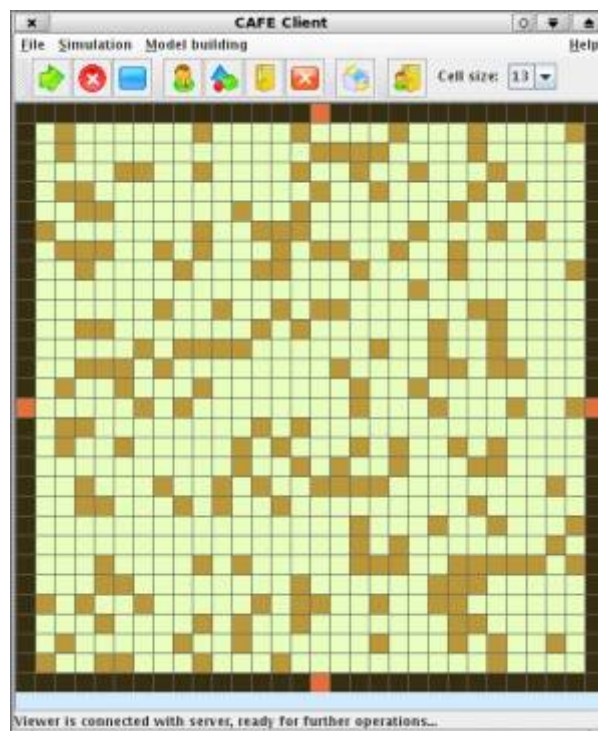
Open Smart Meter

Actually this is a project proposal. The idea is to establish a project of open smart meter based on open design and open software principles. Everyone could participate in this project. The project management has been entrusted to the project board.

See the presentation (in Polish): [Open Smart Meter - Idea](#)

Cafe

Cafe - which means: Cellular Automata Framework Environment. The aim of this project is to create a Java based CA modeling tool which allows to create and simulate various kinds of asynchronous, nonhomogenous cellular automata. The automata built this way will be used to simulation of pedestrians behaviors (*MNiSW grant: N N516 228735*), and to modeling robots behavior. In the robotic approach CA is treated as another kind of knowledge used by so-called *Intelligent Control System*. Screen of the Cafe's early version can be viewed below.



- K. Kułakowski, J. W k as, P. Topa (2010) **Simulation environment for modeling pedestrian dynamics**. In *Intelligent Information Systems : new approaches*. Publishing House of University of Podlasie. [BibTeX](#)

RAT

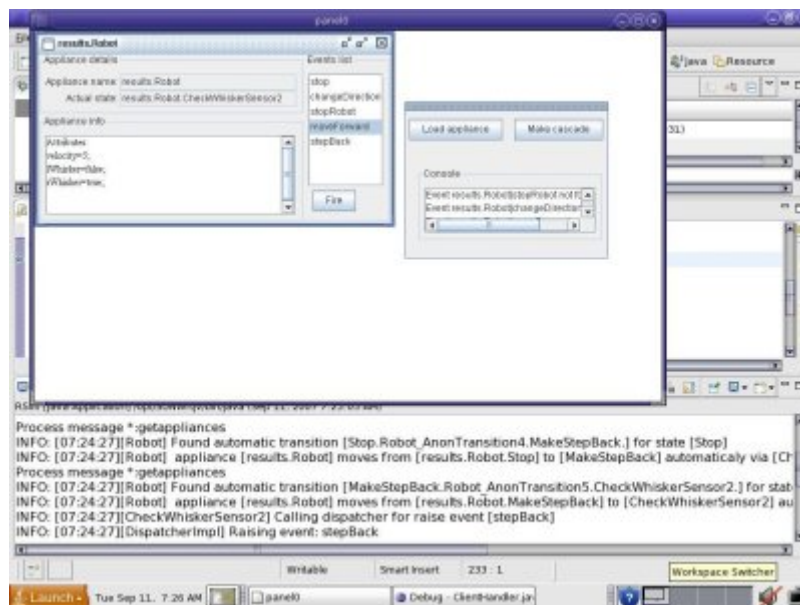
Proposed approach to executable modeling of ractive systems consist of two elements: UML editor

and Reactive Appliance Toolkit. There is no limitation to one specific kind of UML editor. Every editor could be used if satisfy following requirements: at least metamodel 1.4, XML support, stereotypes and profiles, class diagram, statechart diagram, activity diagram.

In order to use Reactive Appliance Toolkit standard Java 1 and some implementation of RealTime Java (e.g. Jamaica VM 2) should be installed. Reactive Appliance Toolkit consist of three components:

- API library
- Code generator
- Management console

A console for the robot control case study is shown below:



- K. Kulakowski, M. Kostrzewa (Sept 2008) **Rapid prototyping of real-time reactive systems.** In *Proceedings of International Conference on Signals and Electronic Systems, 2008. ICSES '08.* . pp. 381-384. [doi](#) [BibTeX](#)
- Konrad Kułakowski, Marek Kostrzewa (2007) **Modelowanie Systemów Czasu Rzeczywistego w UML.** In *Seminarium wyjazdowe KA w Lublinie.* [BibTeX](#)
- M. Kostrzewa, K. Kułakowski (2006) **A practical approach to the modelling, visualising and executing of reactive systems.** In *MIXed DESign of integrated circuits and systems.* [BibTeX](#)

HeKate

HeKatE means Hybrid Knowledge Engineering. It is the research project regards Software Engineering based on Knowledge Engineering. The scope of the project includes but it is not limited to Knowledge Representation, Processing and Visualization methods. More information is available on project [web page](#)

- K. Kułakowski, G. J. Nalepa (2008) **Using UML State Diagrams for Visual Modeling of Business Rules.** In *proceedings of IMCSIT* [BibTeX](#)

- K. Kułakowski, J. W k as, M. Szpyrka (2008) **Dynamiczny model 'swiata w sterowaniu autonomicznym robotem mobilnym**. *Automatyka* [BibTeX](#)
- K. Kułakowski, J. W k as, M. Szpyrka (2008) **Architektura autonomicznego robota mobilnego z dynamicznym modelem 'swiata**. *Automatyka* [BibTeX](#)

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