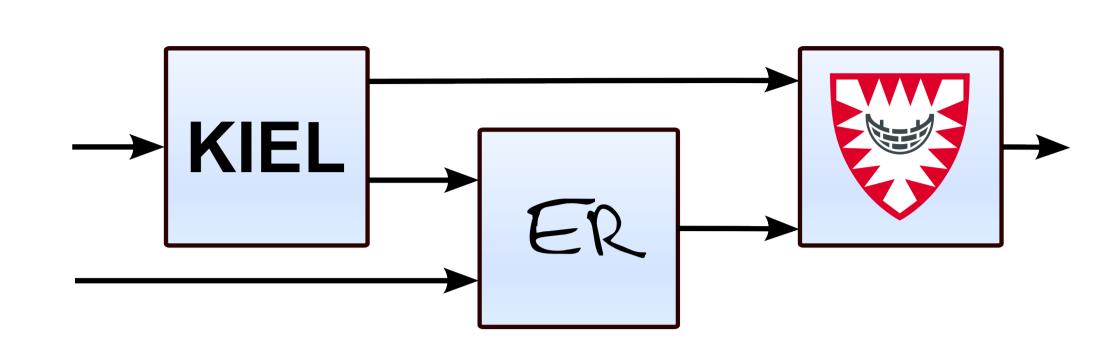


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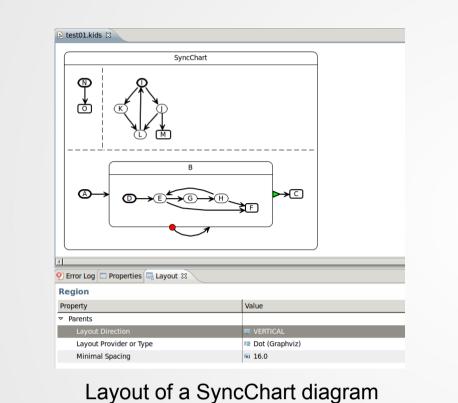


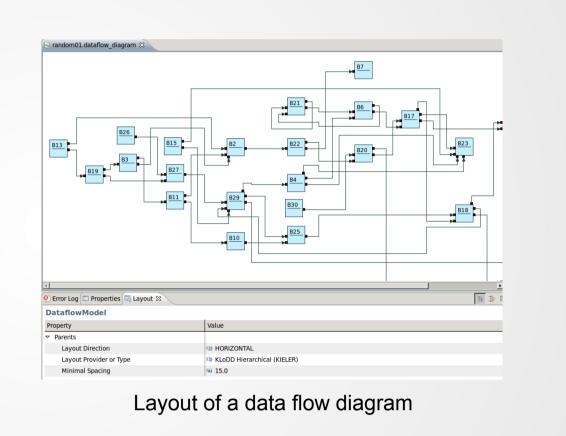
Kiel Integrated Environment for Layout

Edipse Rich Client

Automatic Layout

KIML – KIELER Infrastructure for Meta Layout [2]





- Automatic layout of GMF diagrams
- Generic interface for layout algorithms
- Flexible configuration of layout options by the user

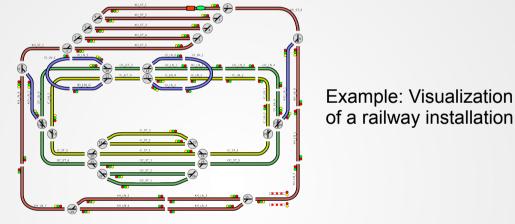
Textual Editing

- Synchronization of graphical models with textual representations
- Connect textual editors created with Xtext to **GMF** editors
- Transformation of the Esterel language to SyncCharts

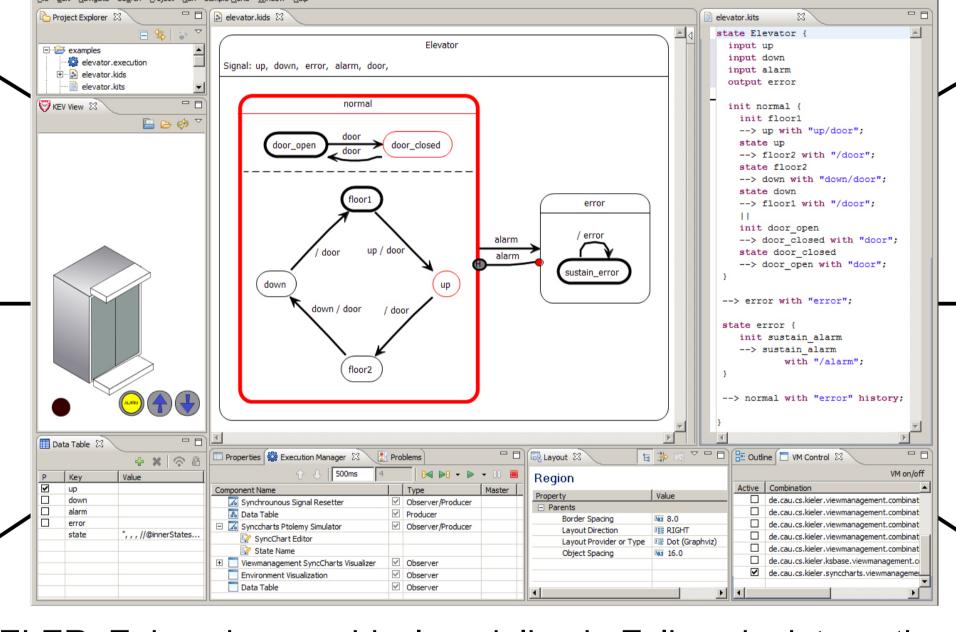
Structure Based Editing KSBasE – KIELER Structure Based Editing SyncChart S Add Choice Improve editing of graphical models by using model transformations

for arbitrary operations Generic interface for GMF diagram editors

Environment Visualization



- SVG based rendering of arbitrary environments for simulation
- Specification of animations
- GUI for testing and demonstration of behavioral models



KIELER: Enhancing graphical modeling in Eclipse by integrating into existing frameworks such as EMF, GMF, and TMF [1]

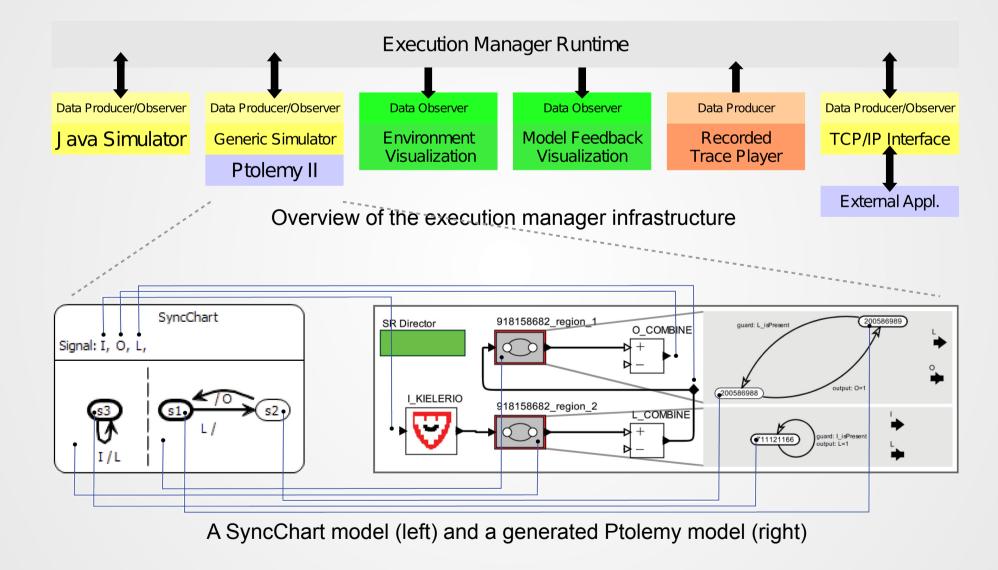
View Management

Focus and context: the active states of a SyncChart are fully shown, while other states are collapsed

- Dynamically create and layout graphical views of the model
- Arbitrary conditions can trigger different visual effects

Model Execution

KIEM – KIELER Execution Manager

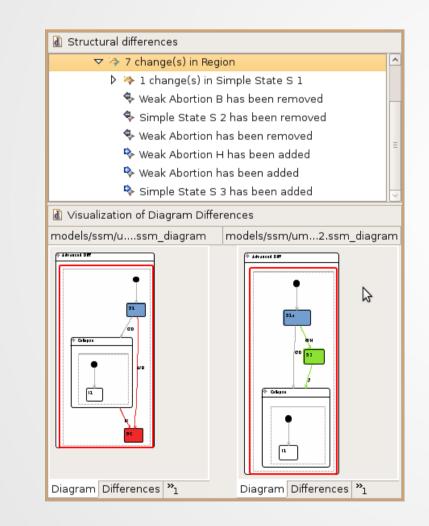


The semantic domain of Ptolemy is used as a possible simulation backend for KIEM.

Code Generation

- Generate code with **Xpand**
- Connect executable
- code to KIEM Examples:
- SyncCharts in C [4]
- Dataflow to Lustre

Model Comparison KiViK – KIELER Visual Komparison [3]



- Visualizes differences in two versions of a model graphically
- Integrates into standard Eclipse GMF and comparison mechanisms
- Employs EMF Compare project as
- differencing engine Employs automatic layout and
- automatic zooming and scrolling for navigation

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Further Information:

http://www.informatik.uni-kiel.de/rtsys/kieler

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- layout of data flow diagrams. In Proceedings of the 17th International Symposium on Graph Drawing (GD'09), LNCS,
- [3] Arne Schipper, Hauke Fuhrmann, and Reinhard von Hanxleden. Visual comparison of graphical models. In Proceedings of the Fourth IEEE International Workshop UML and AADL, held in conjunction with the 14th International Conference on Engineering of Complex Computer Systems (ICECCS'09), Potsdam, Germany, 2009. [4] Reinhard von Hanxleden. SyncCharts in C—a proposal for light-weight, deterministic concurrency. In *Proceedings* of the International Conference on Embedded Software (EMSOFT'09), Grenoble, France, October 2009.