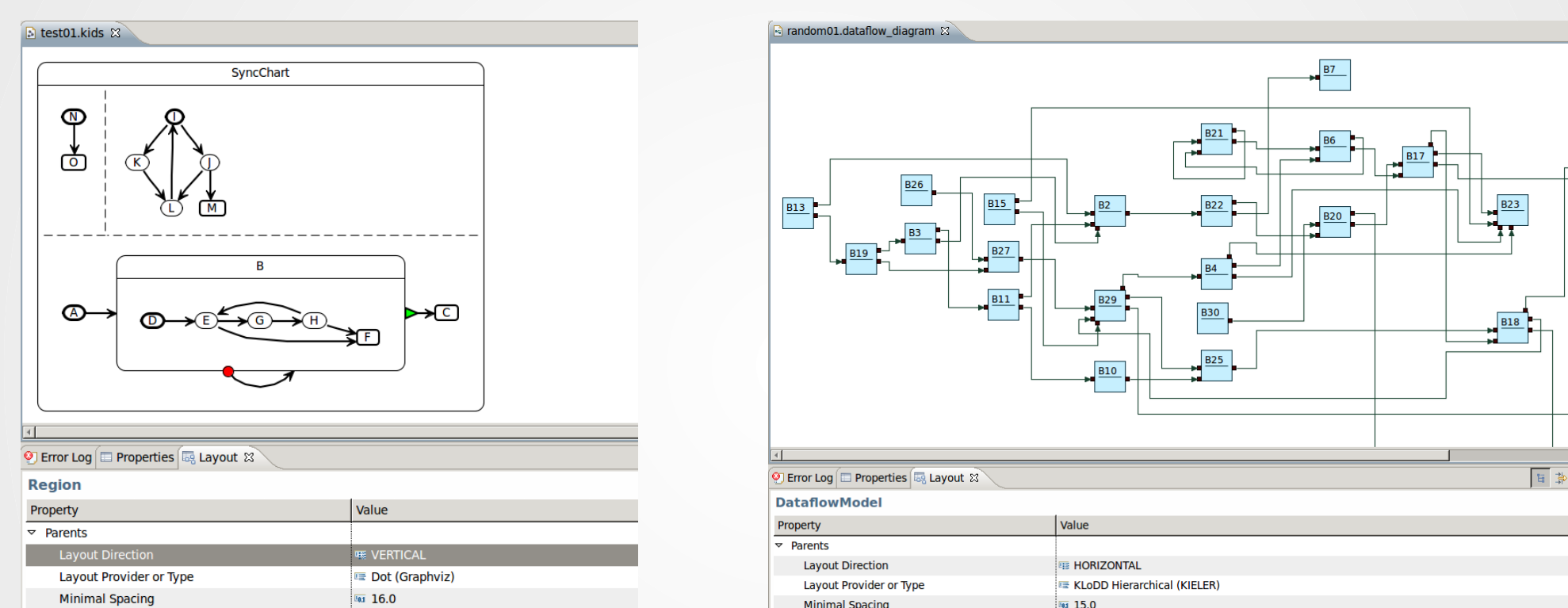


# KIELER

## Enhancing Graphical Modeling in Eclipse

### Automatic Layout

KIML – KIELER Infrastructure for Meta Layout [2]



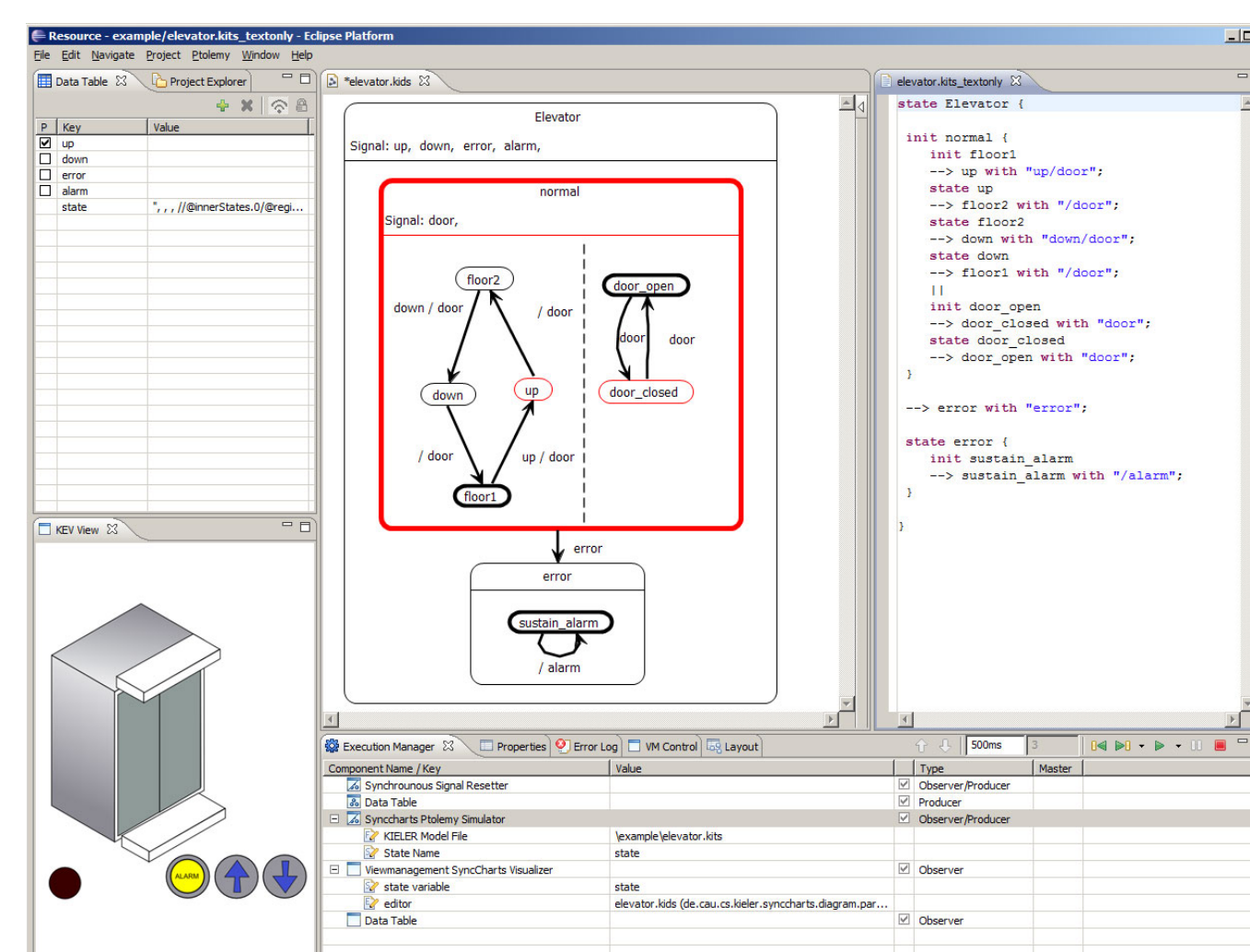
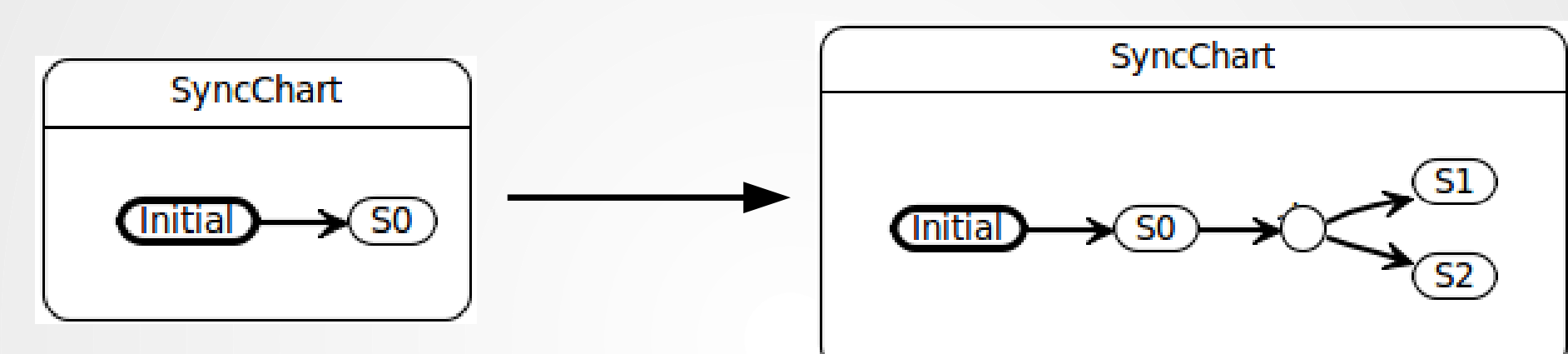
Layout of a SyncChart diagram

Layout of a data flow diagram

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

### Structure Based Editing

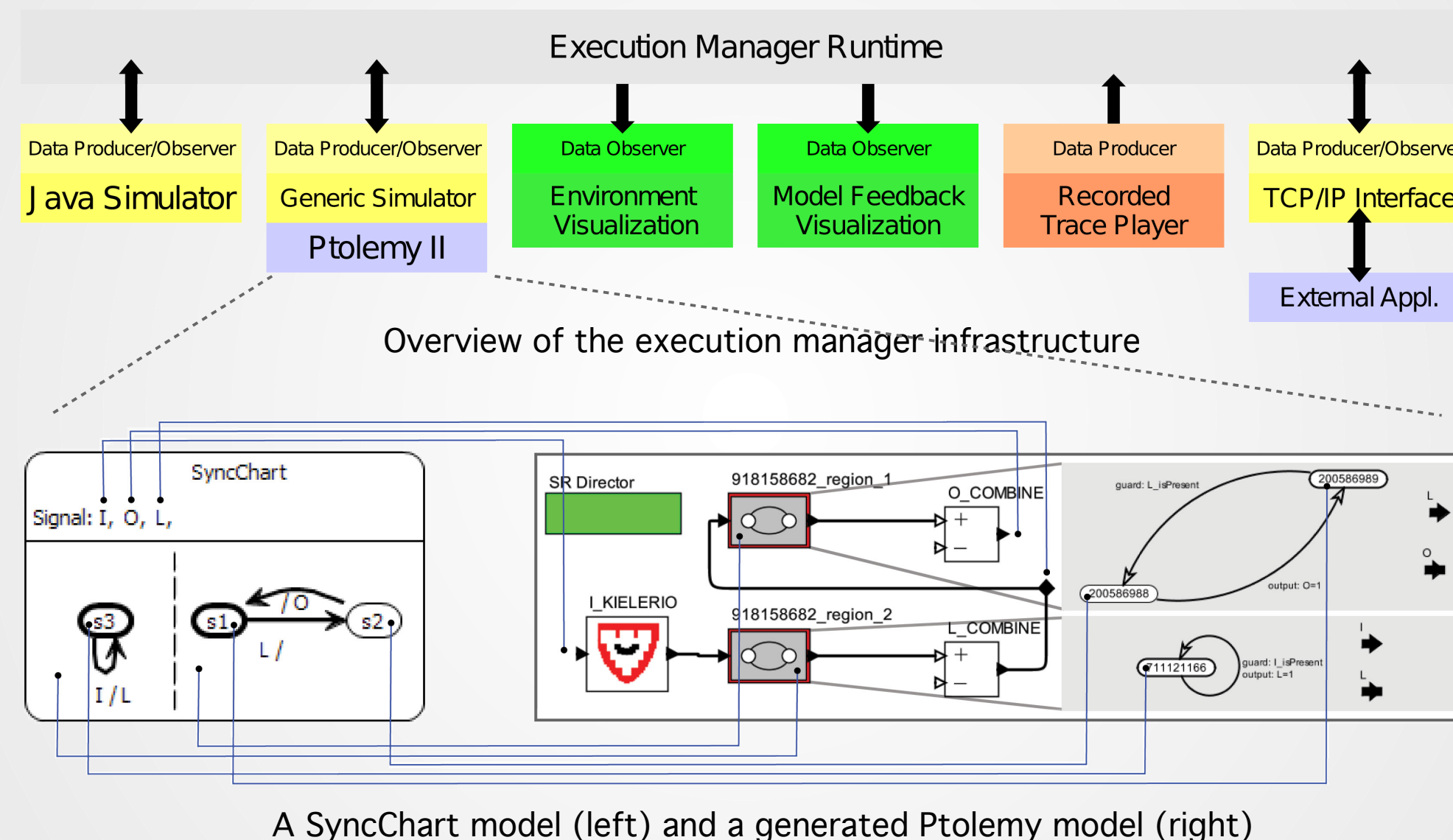
KSBaSE – KIELER Structure Based Editing



KIELER – Kiel Integrated Environment for Layout Eclipse RichClient [1]

### Model Execution

KIEM – KIELER Execution Manager

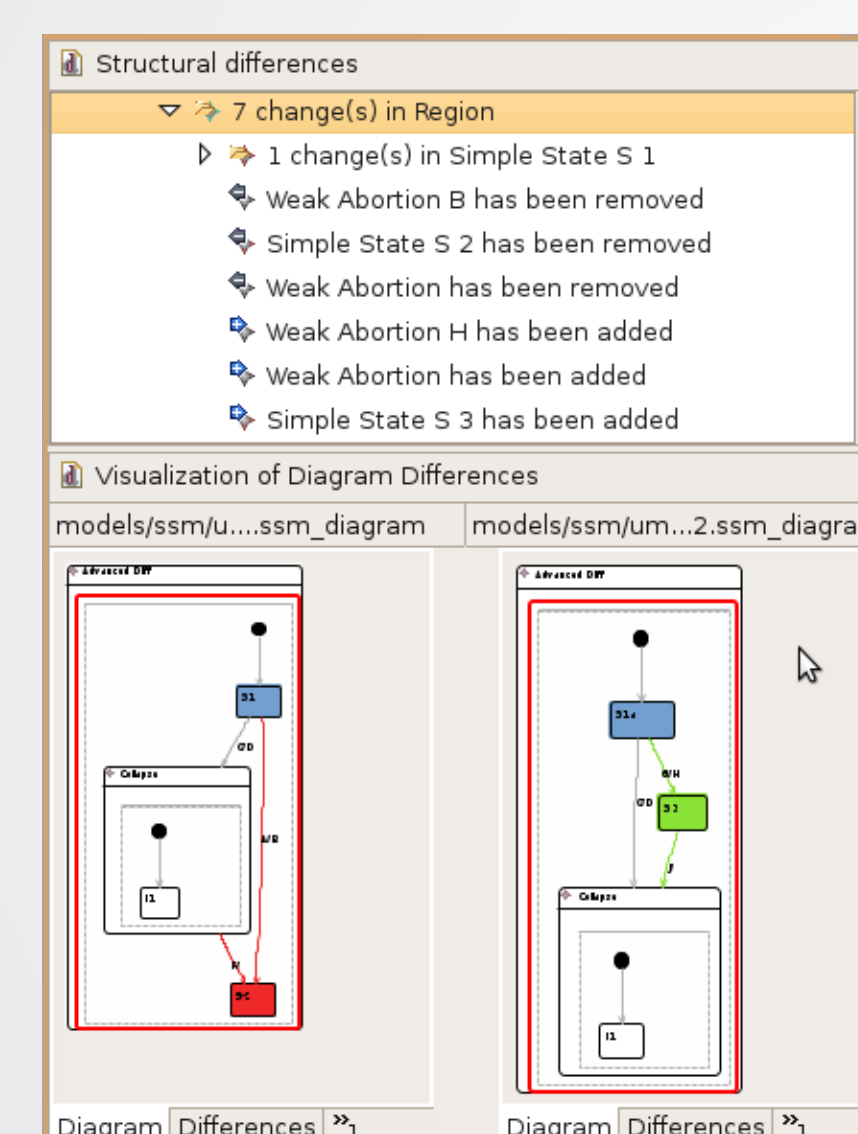


A SyncChart model (left) and a generated Ptolemy model (right)

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

### 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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[1] Hauke Fuhrmann and Reinhard von Hanxleden. On the Pragmatics of Model-Based Design. Technical Report 0913, Christian-Albrechts-Universität zu Kiel, Department of Computer Science, May 2009.

[2] Miro Spönemann, Hauke Fuhrmann, Reinhard von Hanxleden, and Petra Mutzel. Port Constraints in Hierarchical Layout of Data Flow Diagrams. In *Proceedings of the 17th International Symposium on Graph Drawing (GD'09)*, LNCS, Chicago, September 2009.

[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.