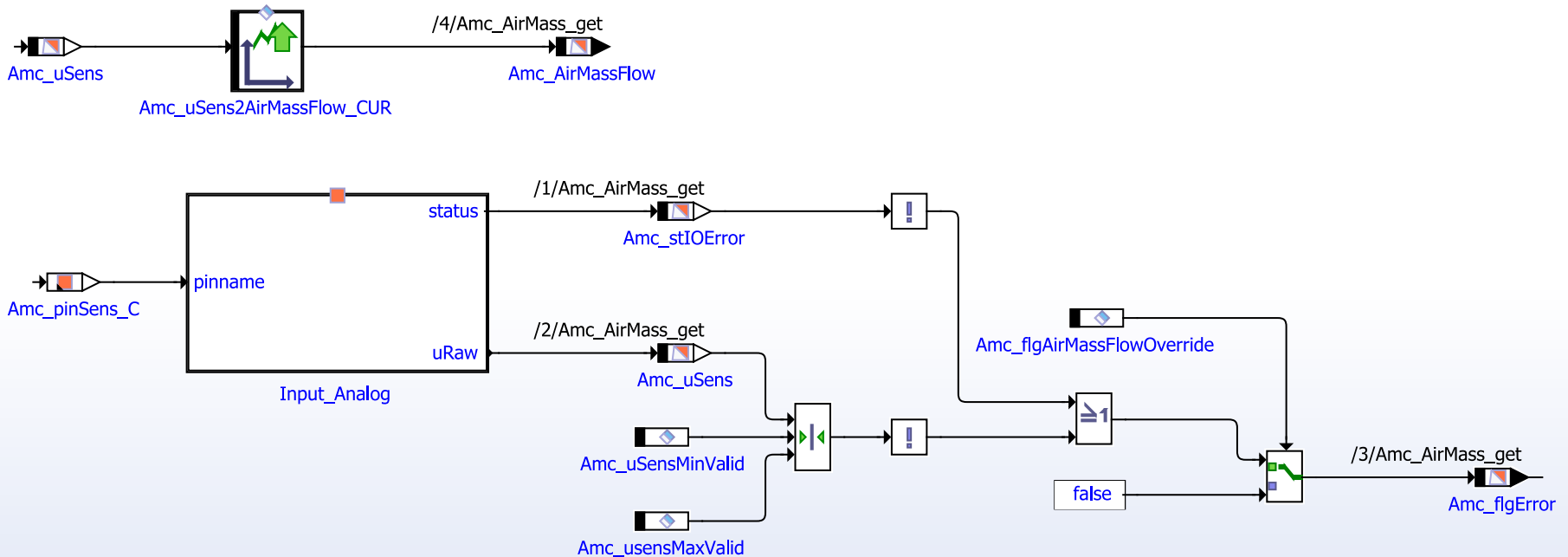


Size- and Port-Aware Horizontal Node Coordinate Assignment

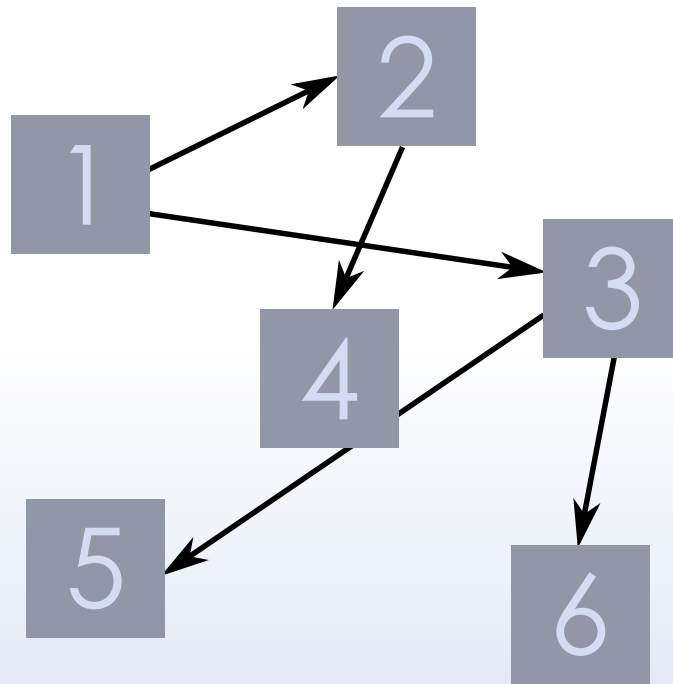
Ulf Rüegg, Christoph Daniel Schulze,
John Julian Carstens, Reinhard von Hanxleden

Kiel University

Size- and Port-Aware Horizontal Node Coordinate Assignment

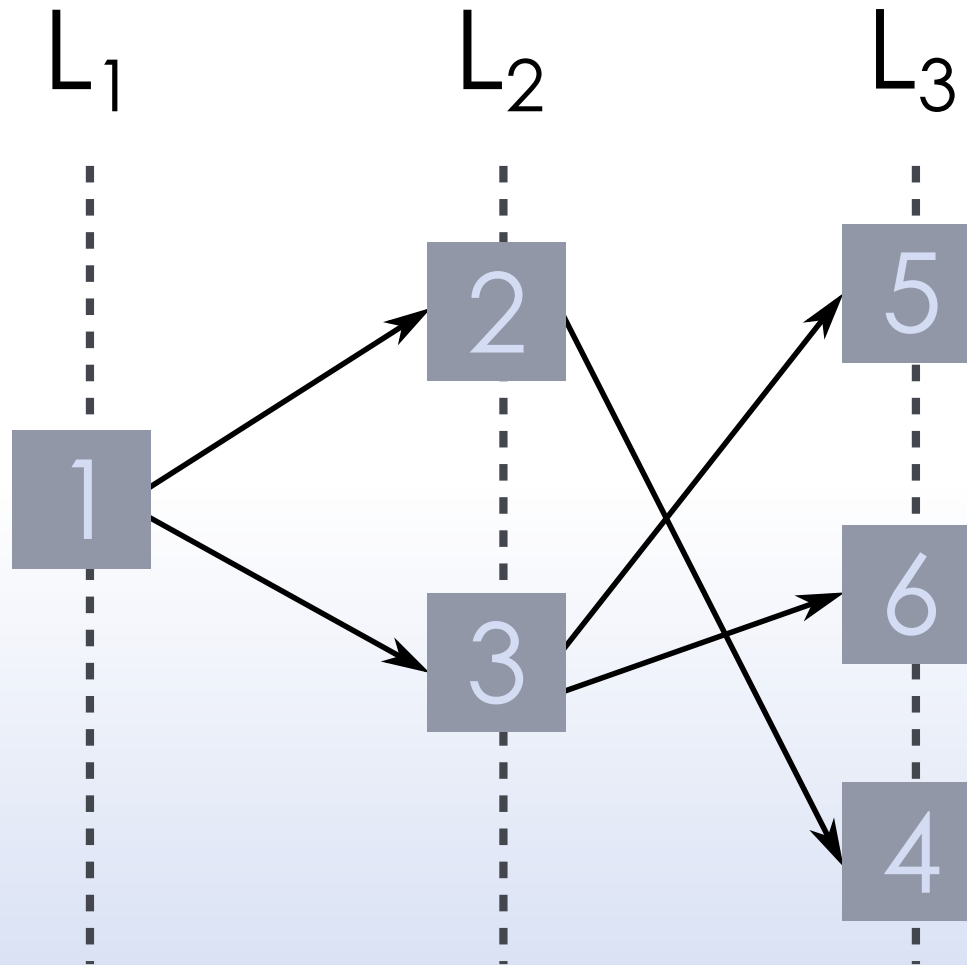


Layer-Based Layout



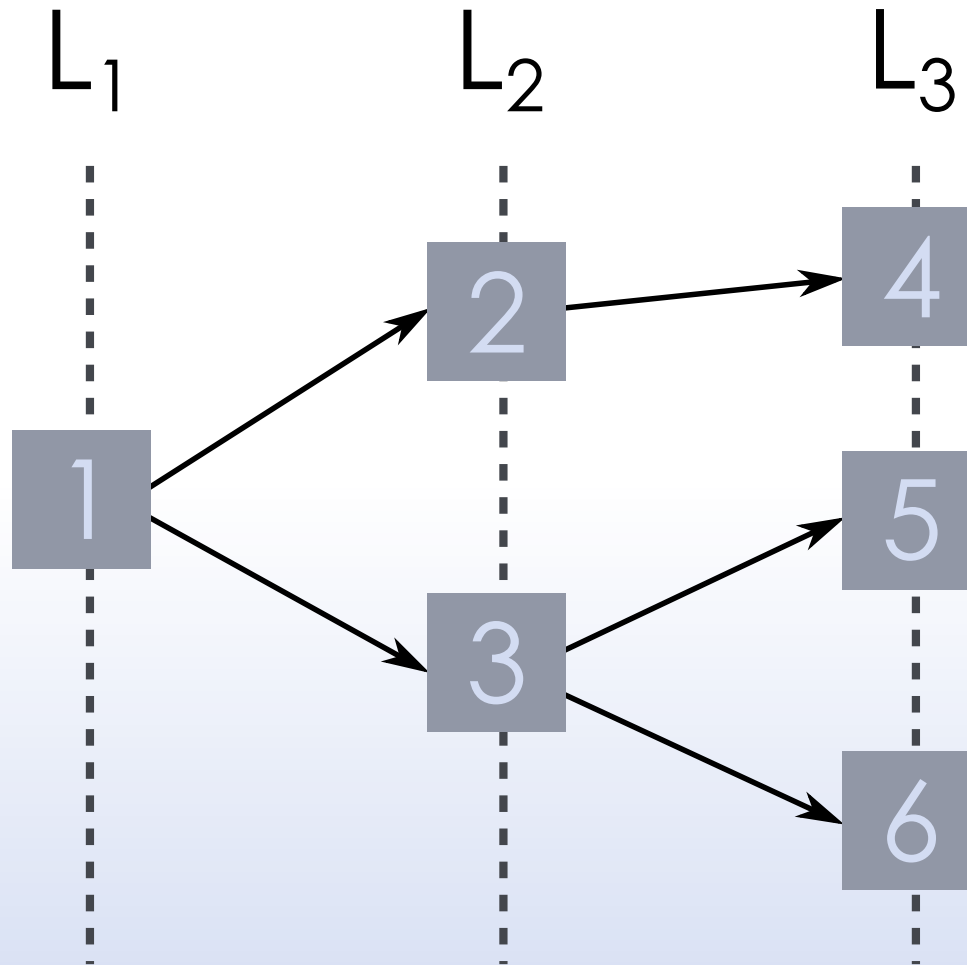
Layer-Based Layout

Layering



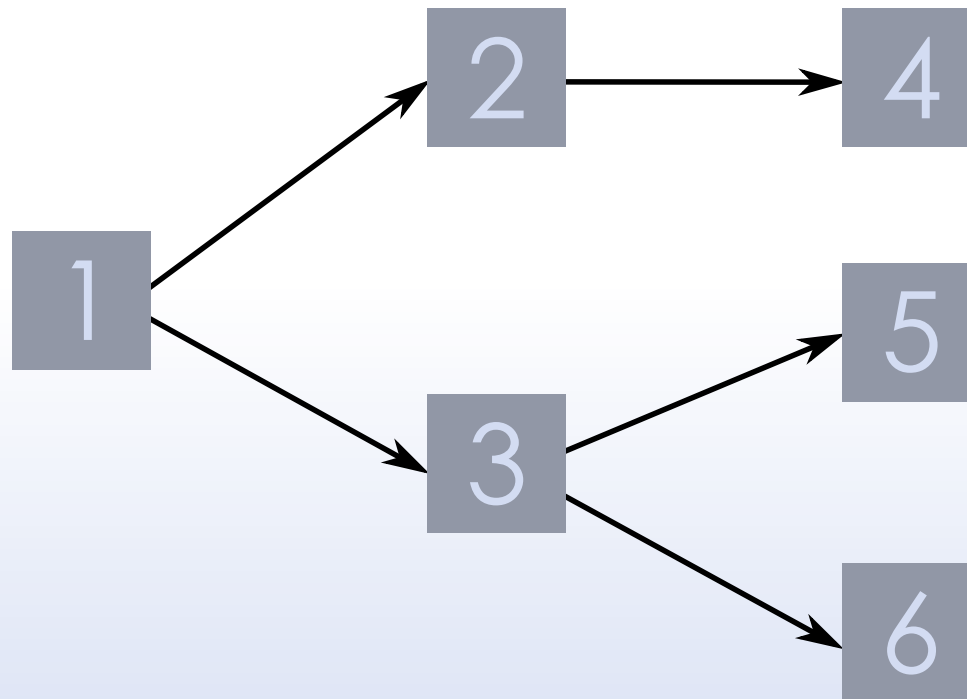
Layer-Based Layout

Crossing Minimization



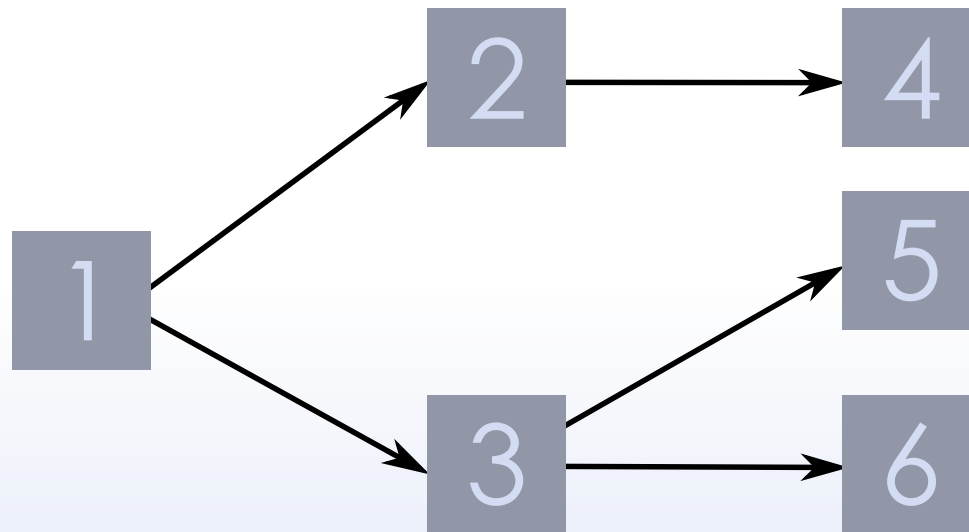
Layer-Based Layout

Coordinate Assignment



Layer-Based Layout

Coordinate Assignment



Node Coordinate Assignment

Sugiyama et al. 1981

Gansner et al. 1993

Eades et al. 1996

Sander et al. 1996

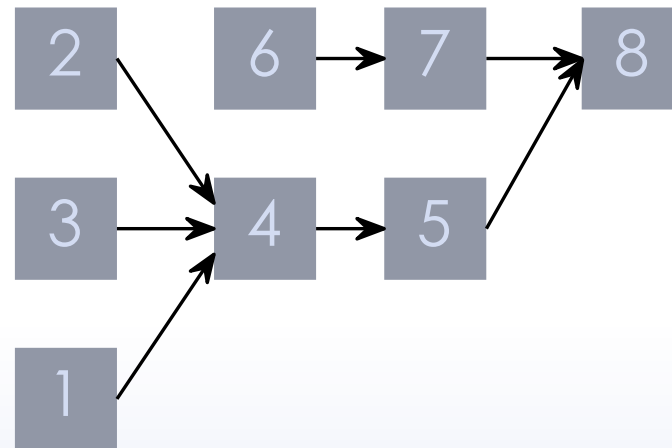
Buchheim et al. 2001

Brandes and Köpf 2002

Summary: Healy and Nikolov 2013

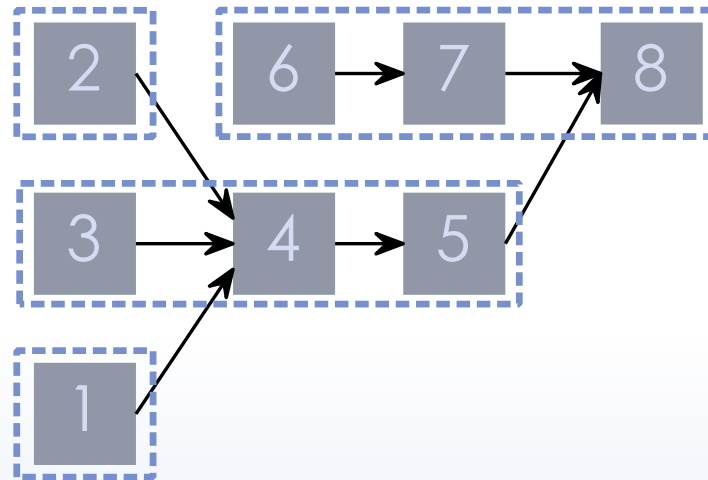
Brandes and Köpf

Alignments a.k.a. Blocks



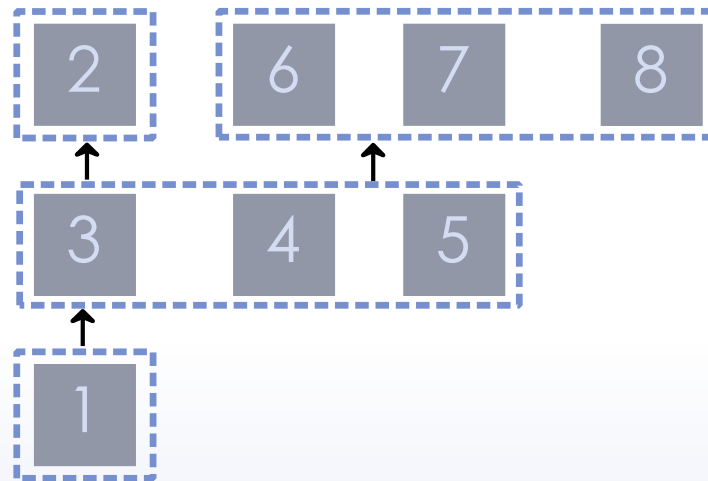
Brandes and Köpf

Alignments a.k.a. Blocks



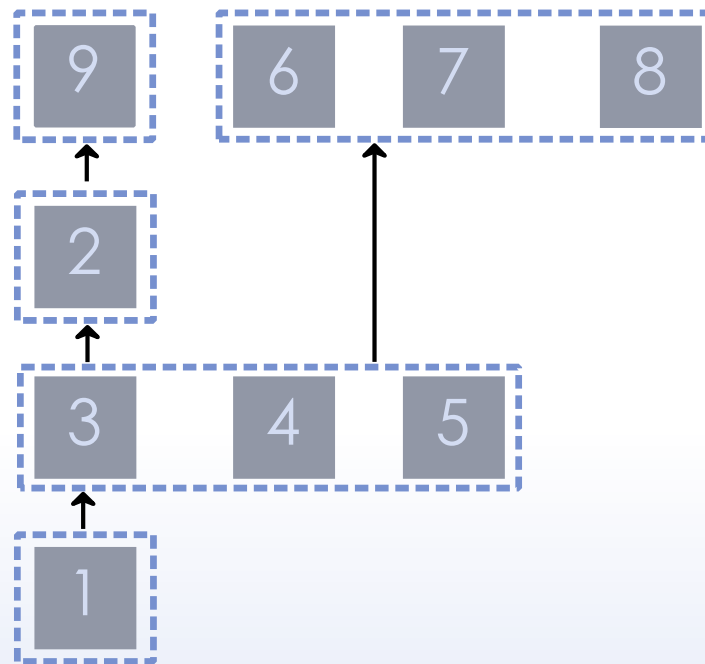
Brandes and Köpf

Compaction



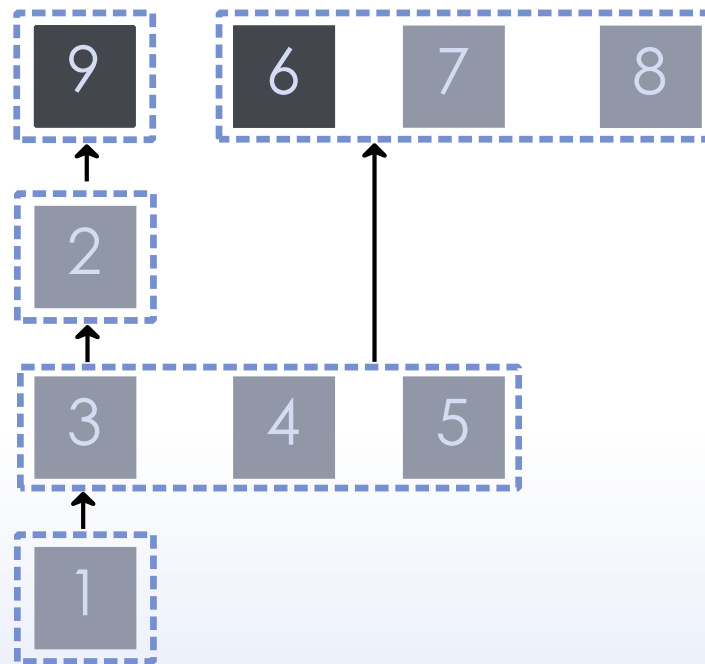
Brandes and Köpf

Compaction



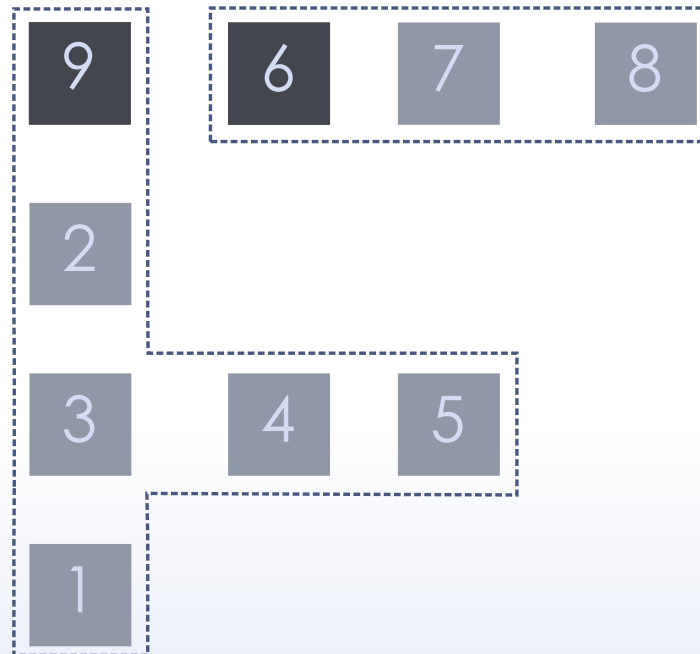
Brandes and Köpf

Compaction



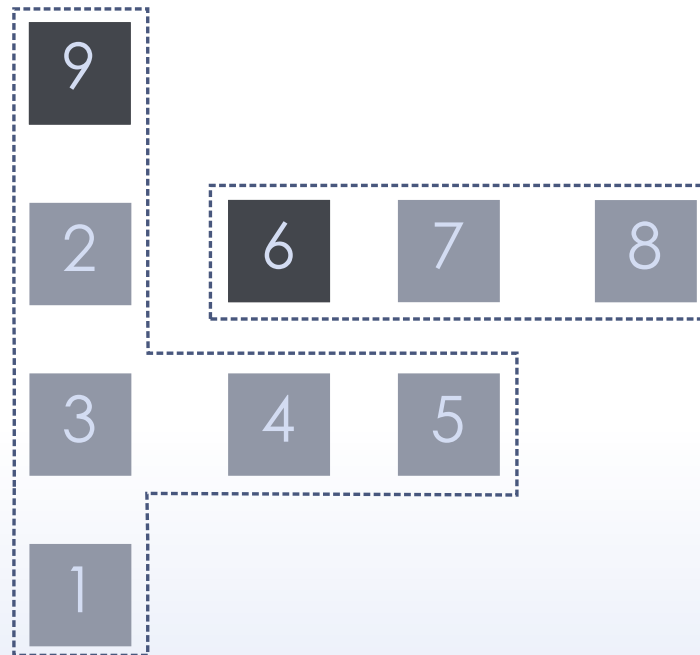
Brandes and Köpf

Compaction



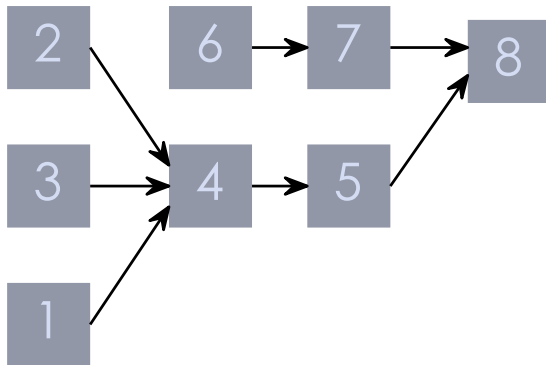
Brandes and Köpf

Compaction



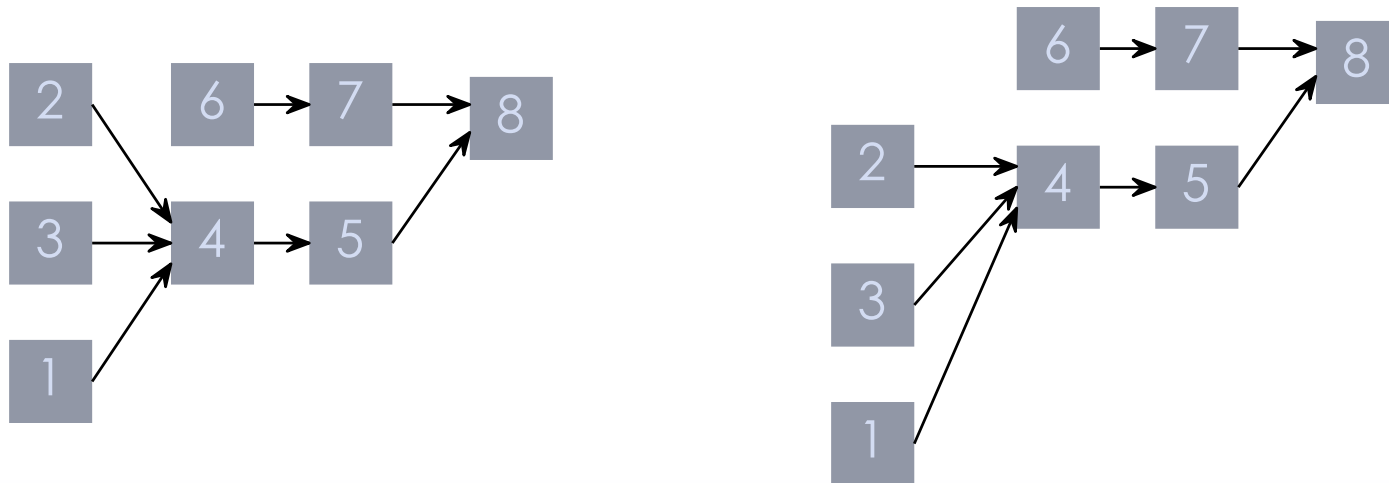
Brandes and Köpf

Balancing



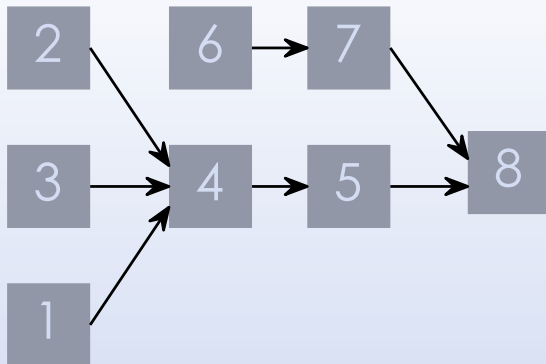
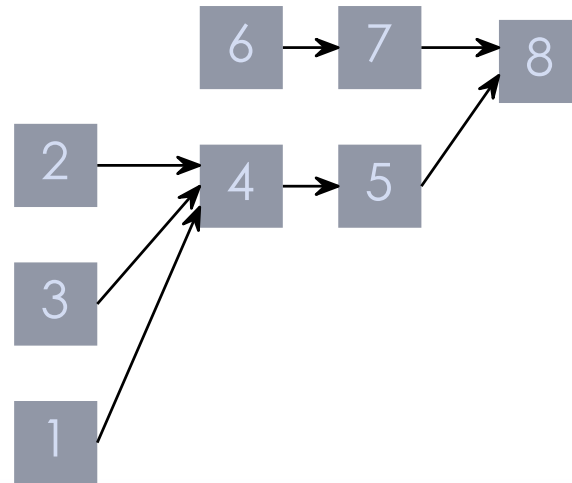
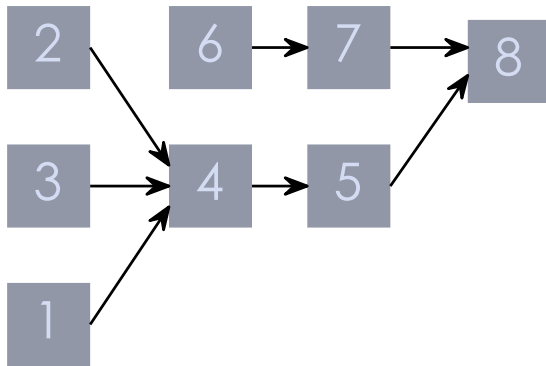
Brandes and Köpf

Balancing



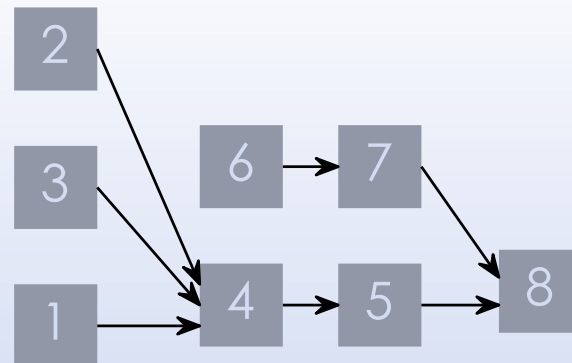
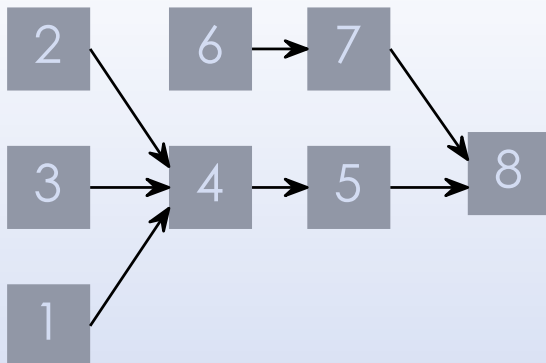
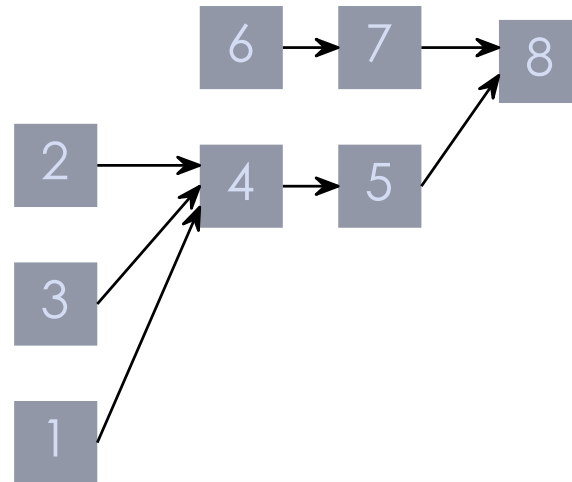
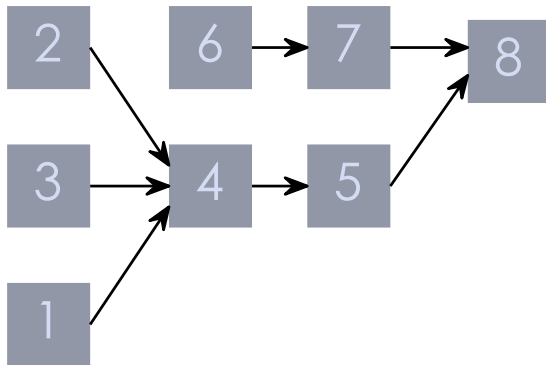
Brandes and Köpf

Balancing



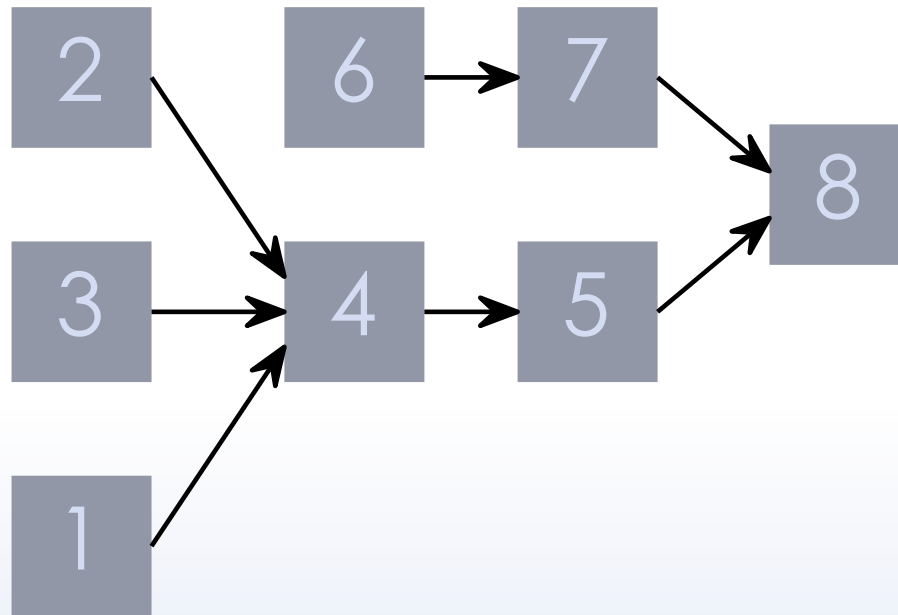
Brandes and Köpf

Balancing



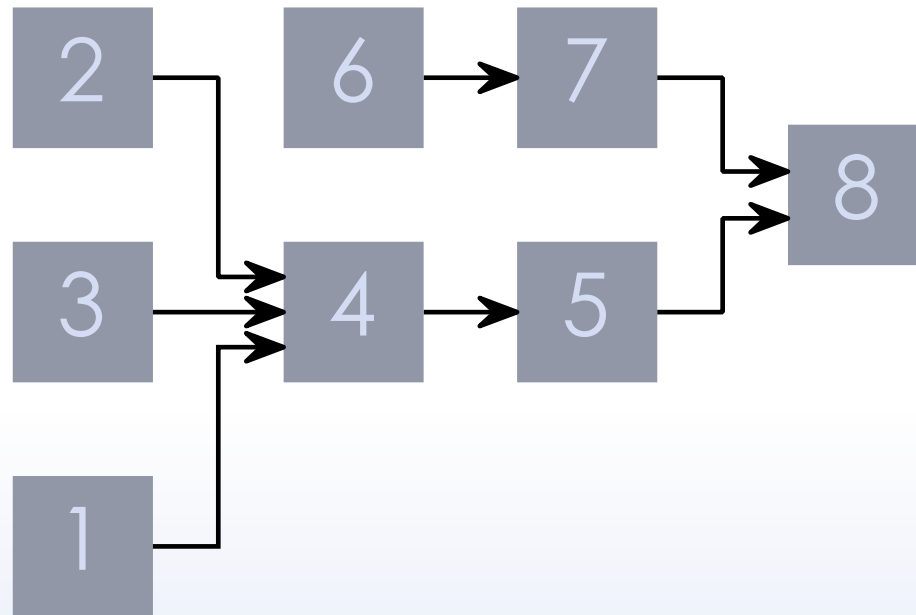
Brandes and Köpf

Balancing



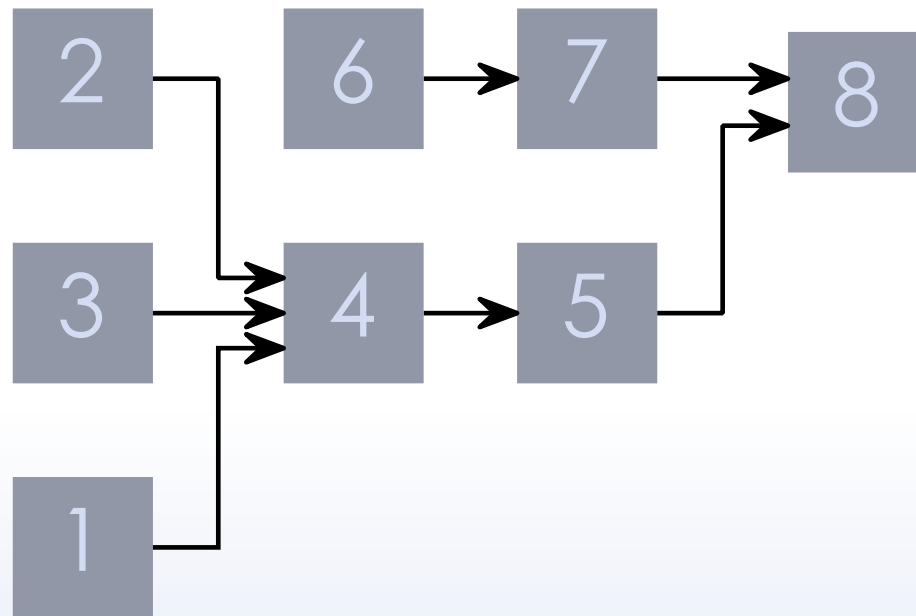
Brandes and Köpf

Orthogonal Edges

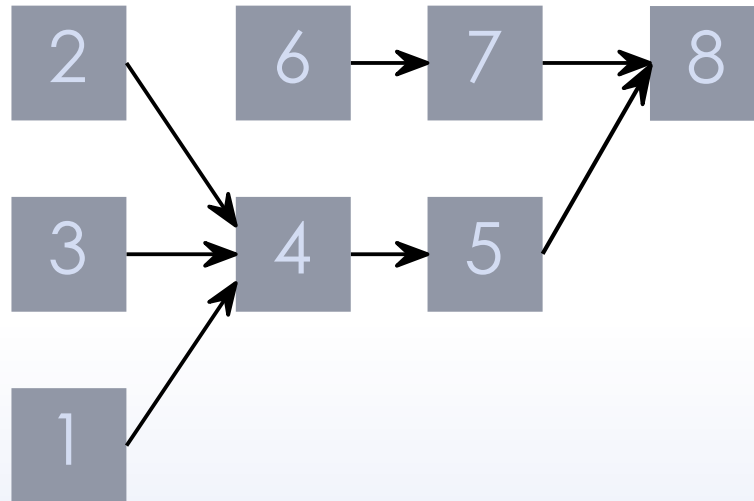


Brandes and Köpf

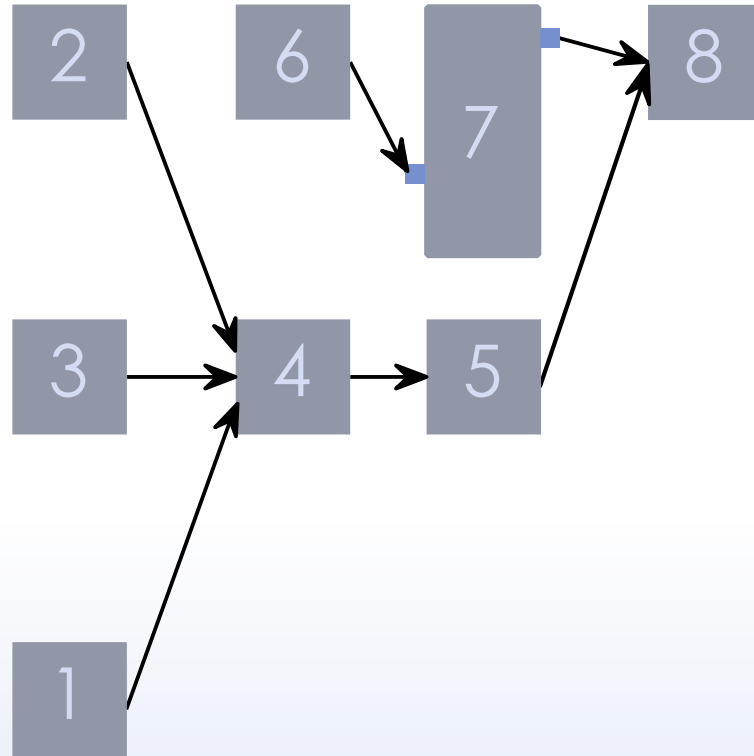
Orthogonal Edges



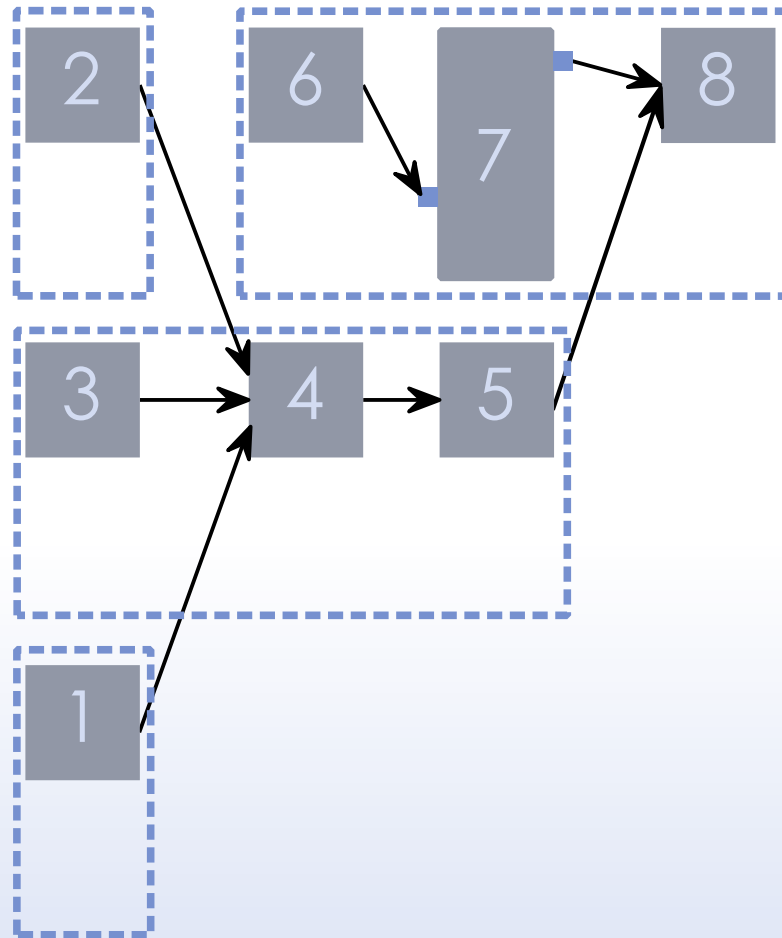
Problem: Size & Ports



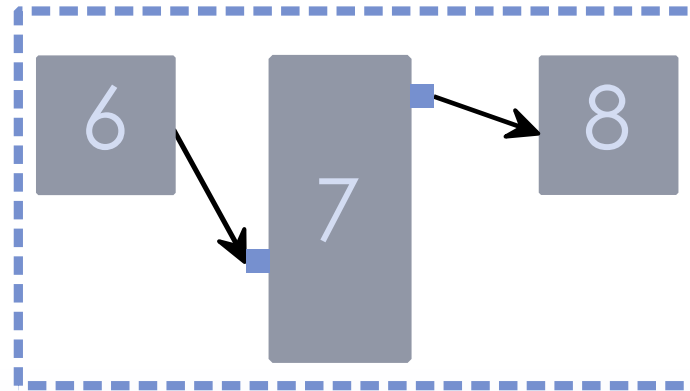
Problem: Size & Ports



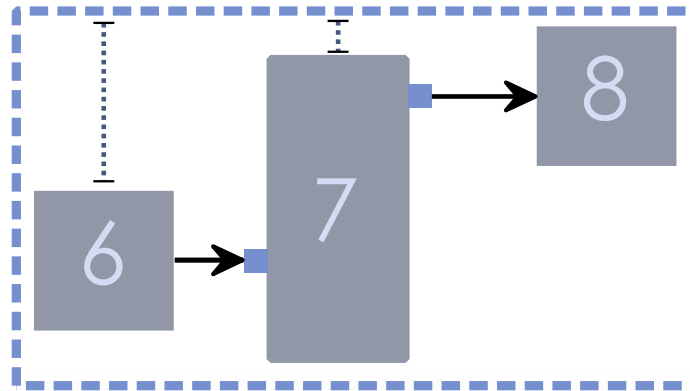
Problem: Size & Ports



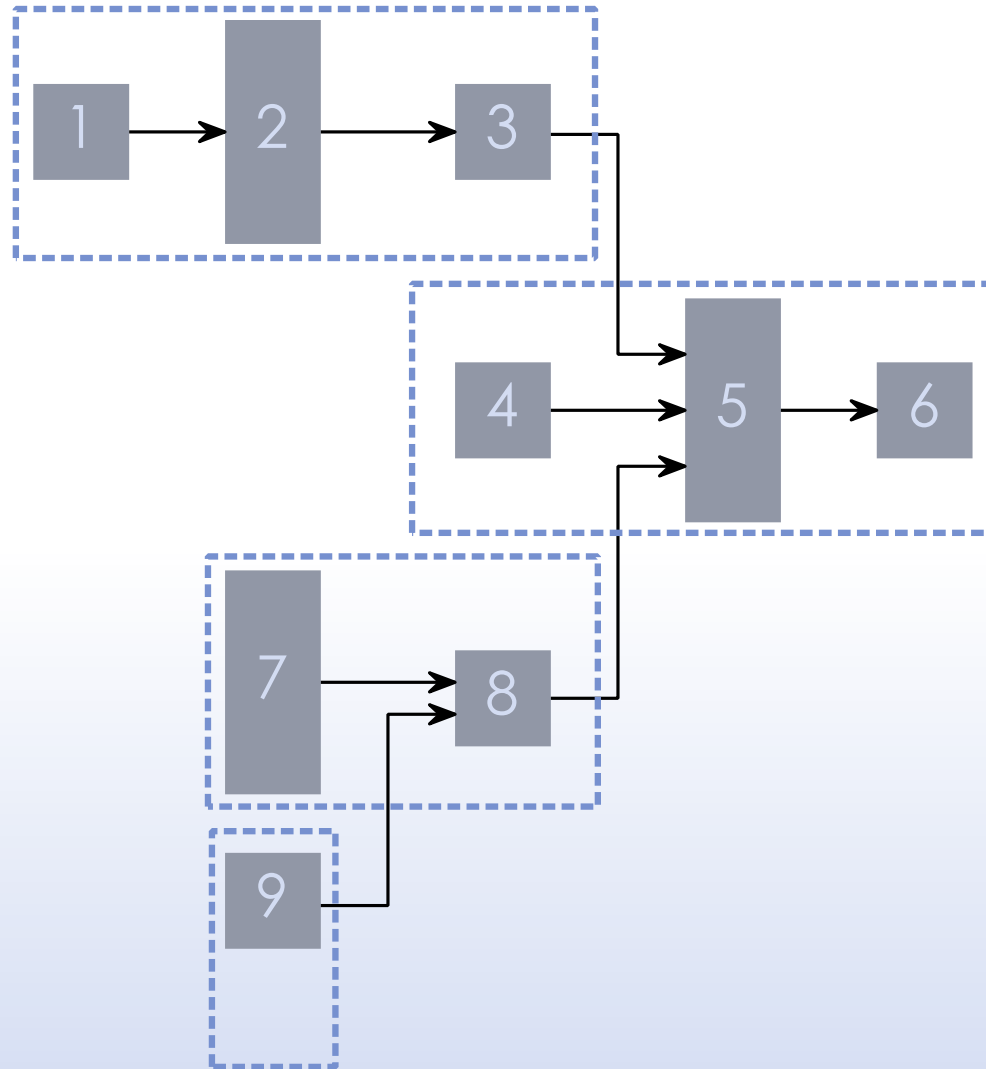
Inner Shift



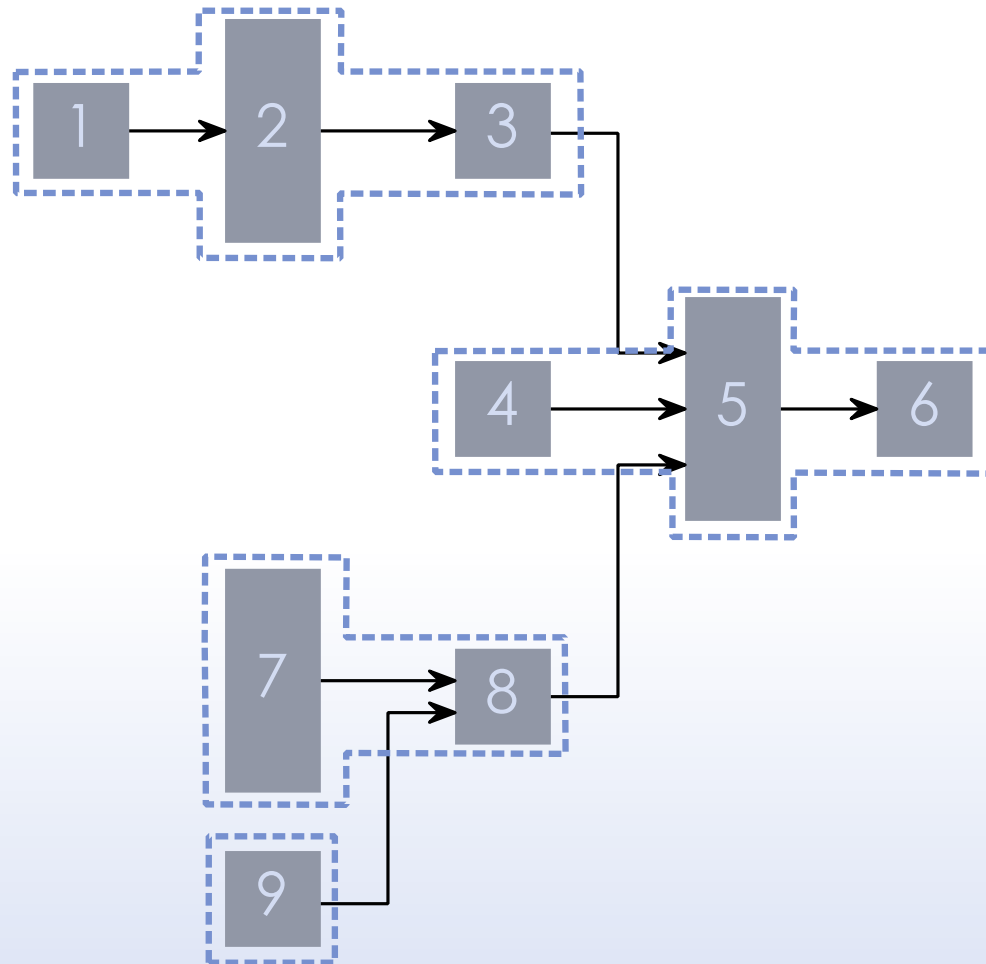
Inner Shift



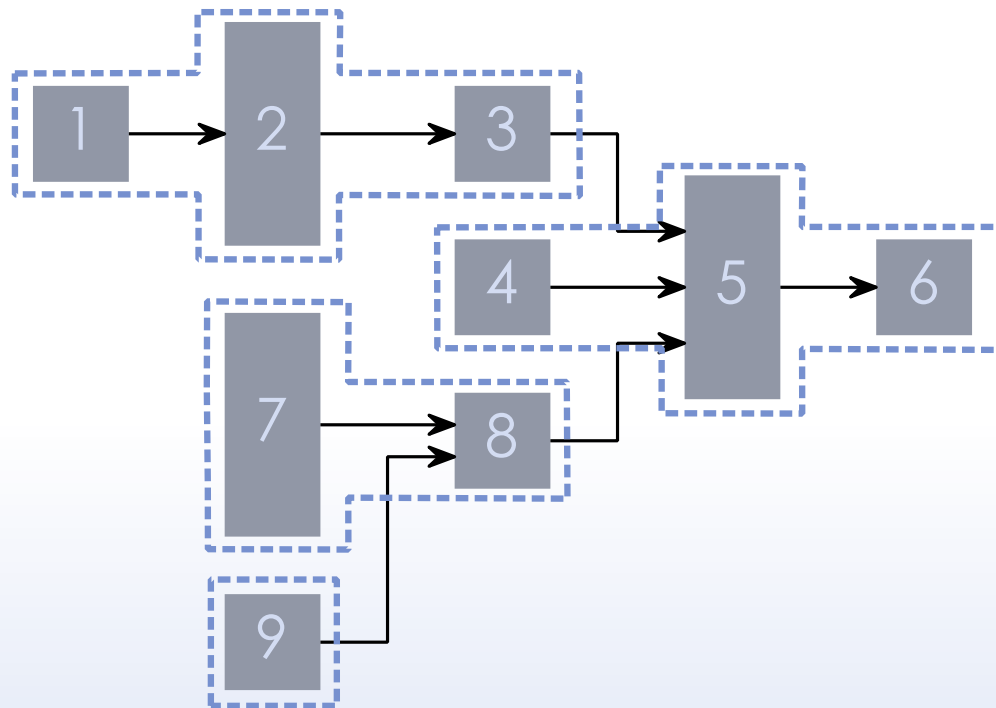
Compaction



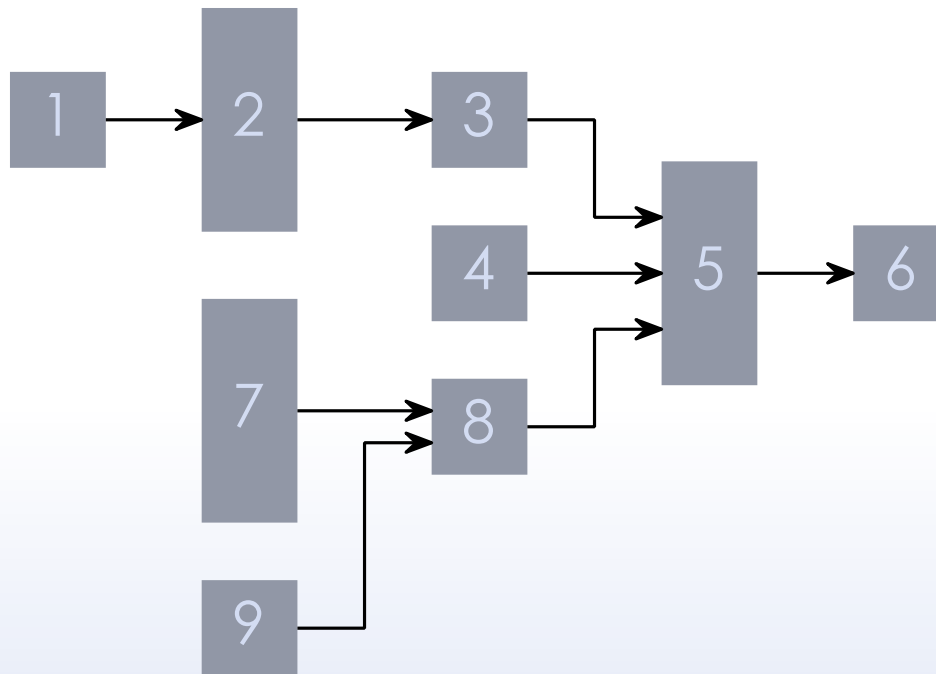
Compaction



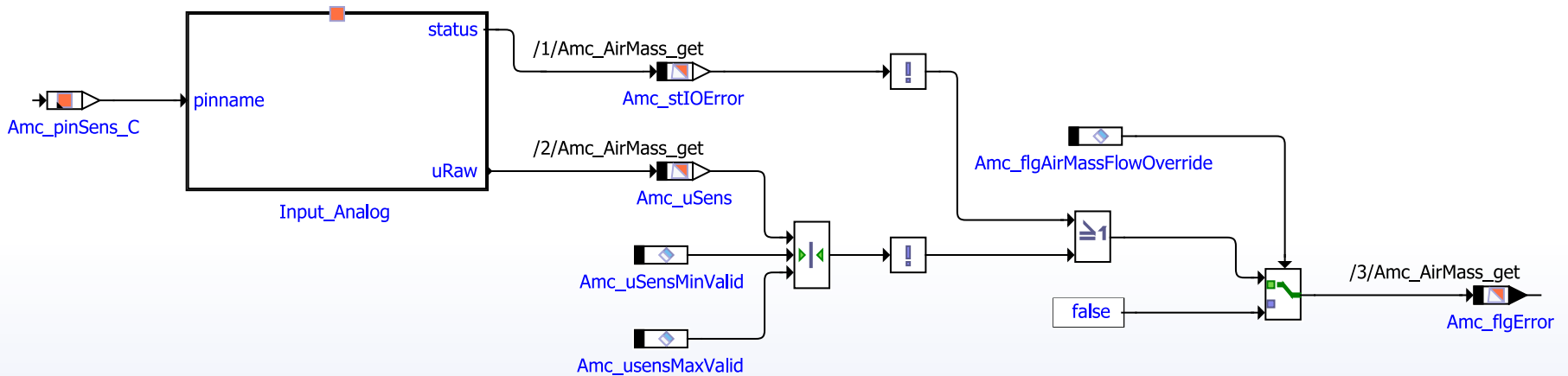
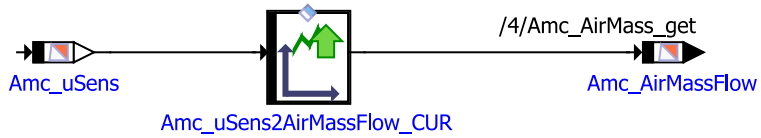
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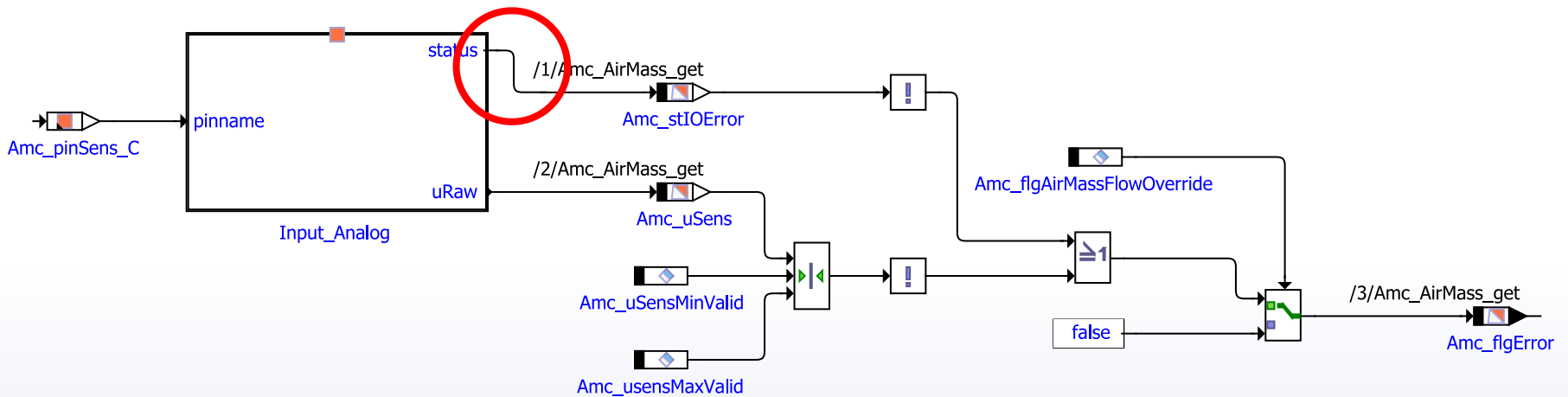
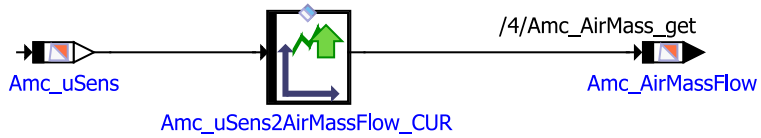
Compaction



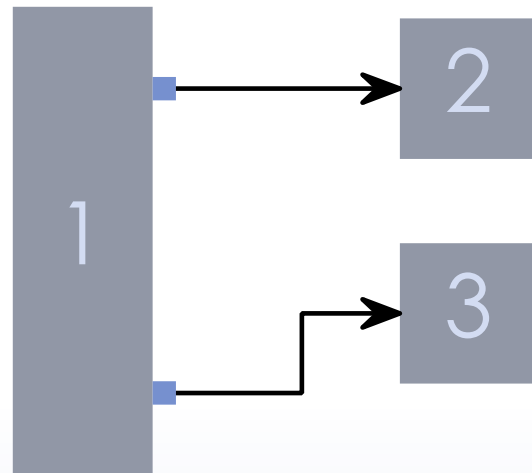
Inner Shift & Individual Spacings



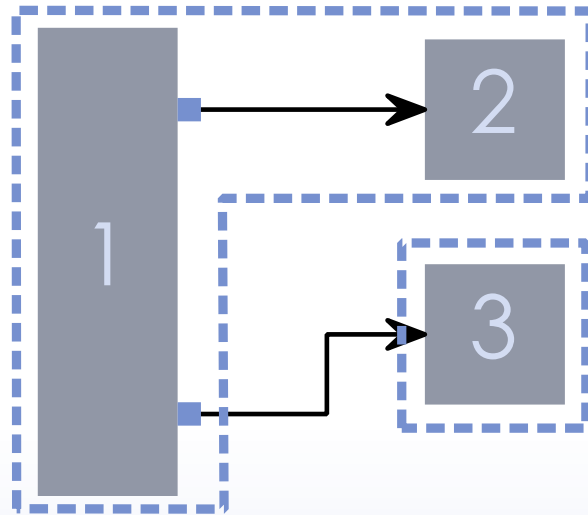
Inner Shift & Individual Spacings



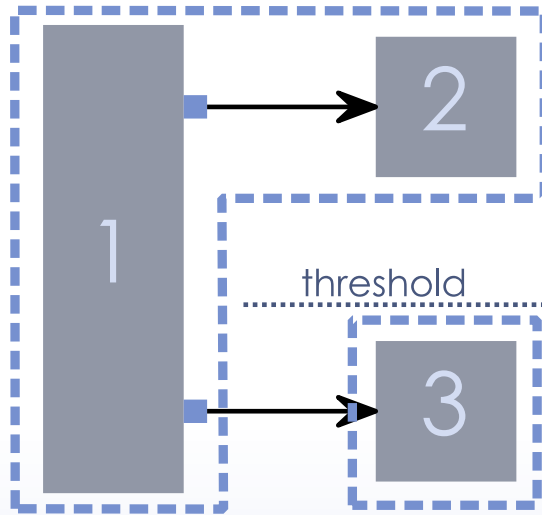
Straightness



Straightness

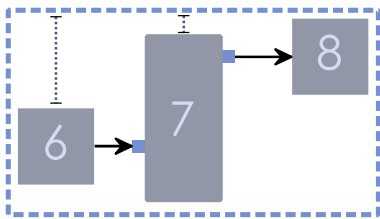


Straightness

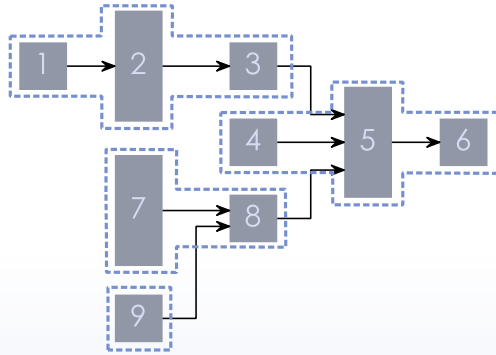


Summary

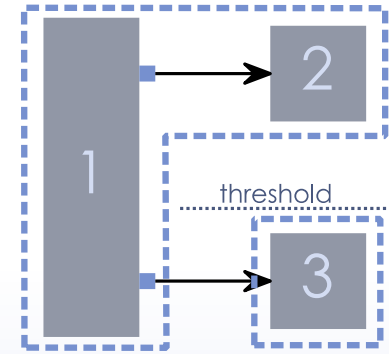
Inner Shift



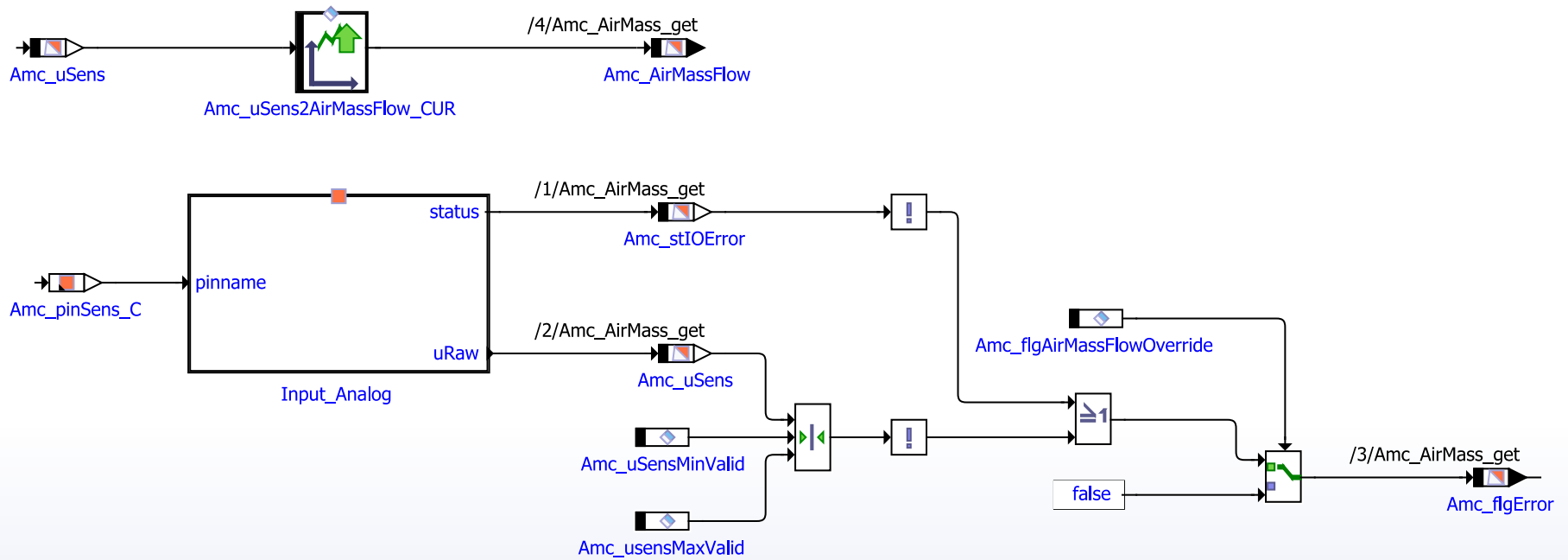
Compaction



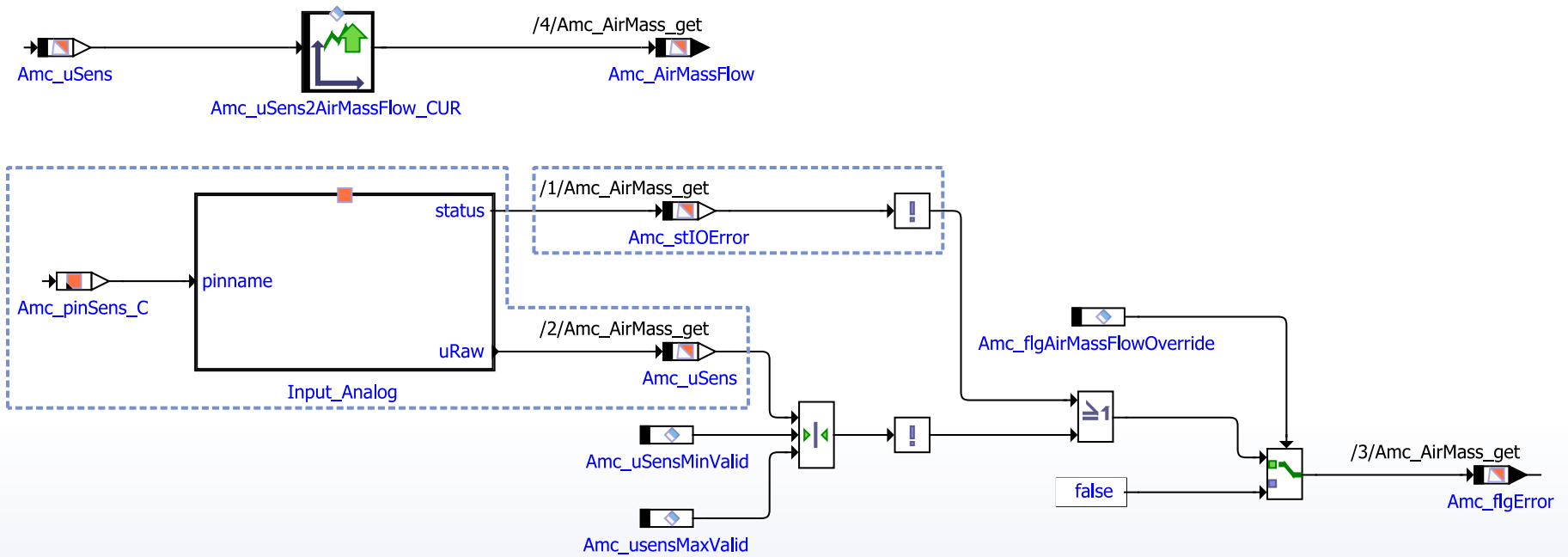
Straightness



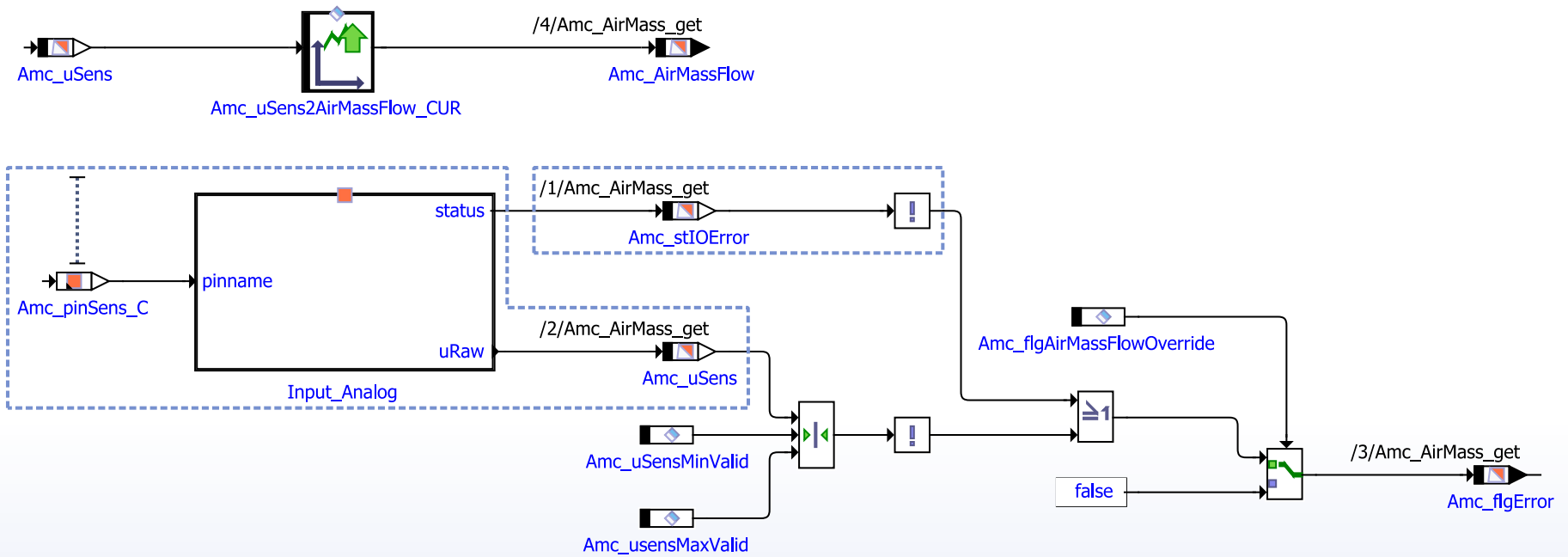
Result



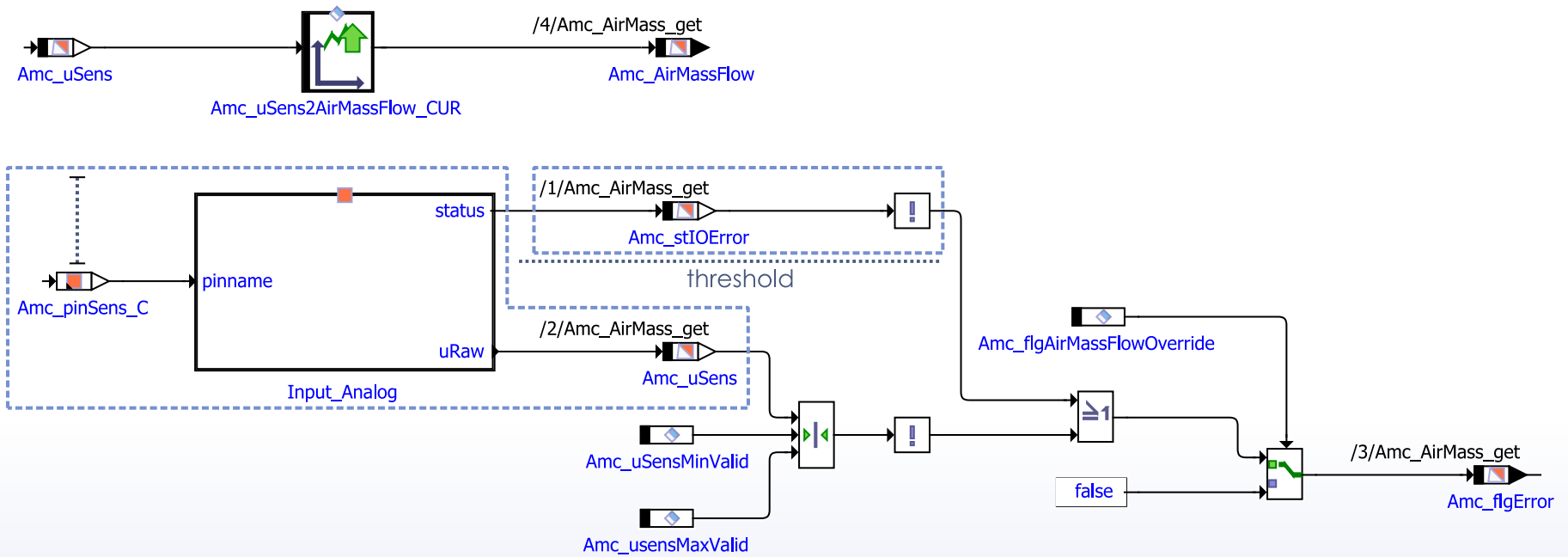
Result



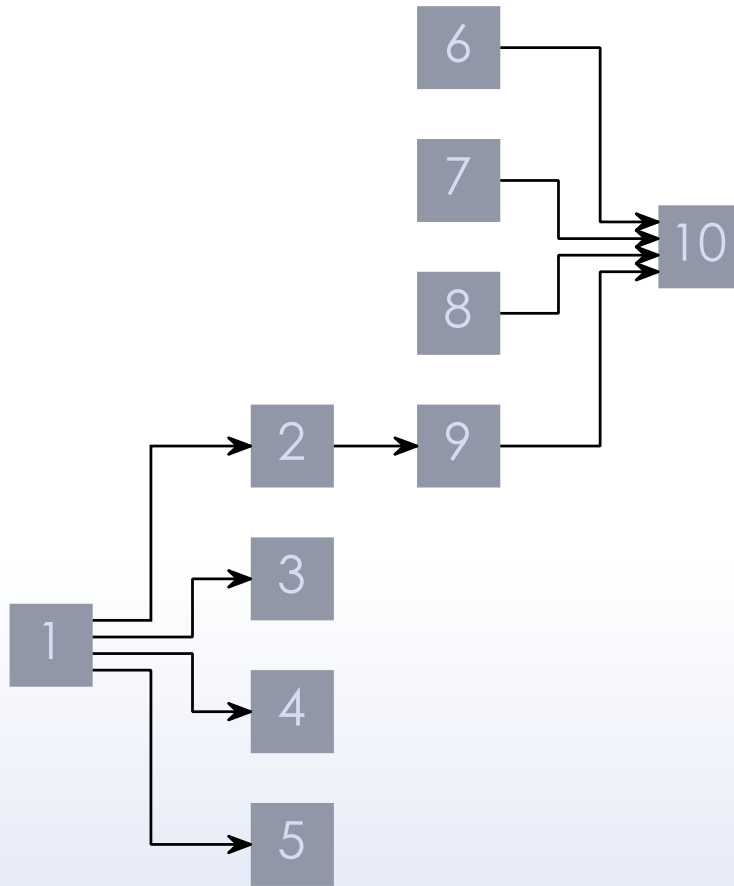
Result



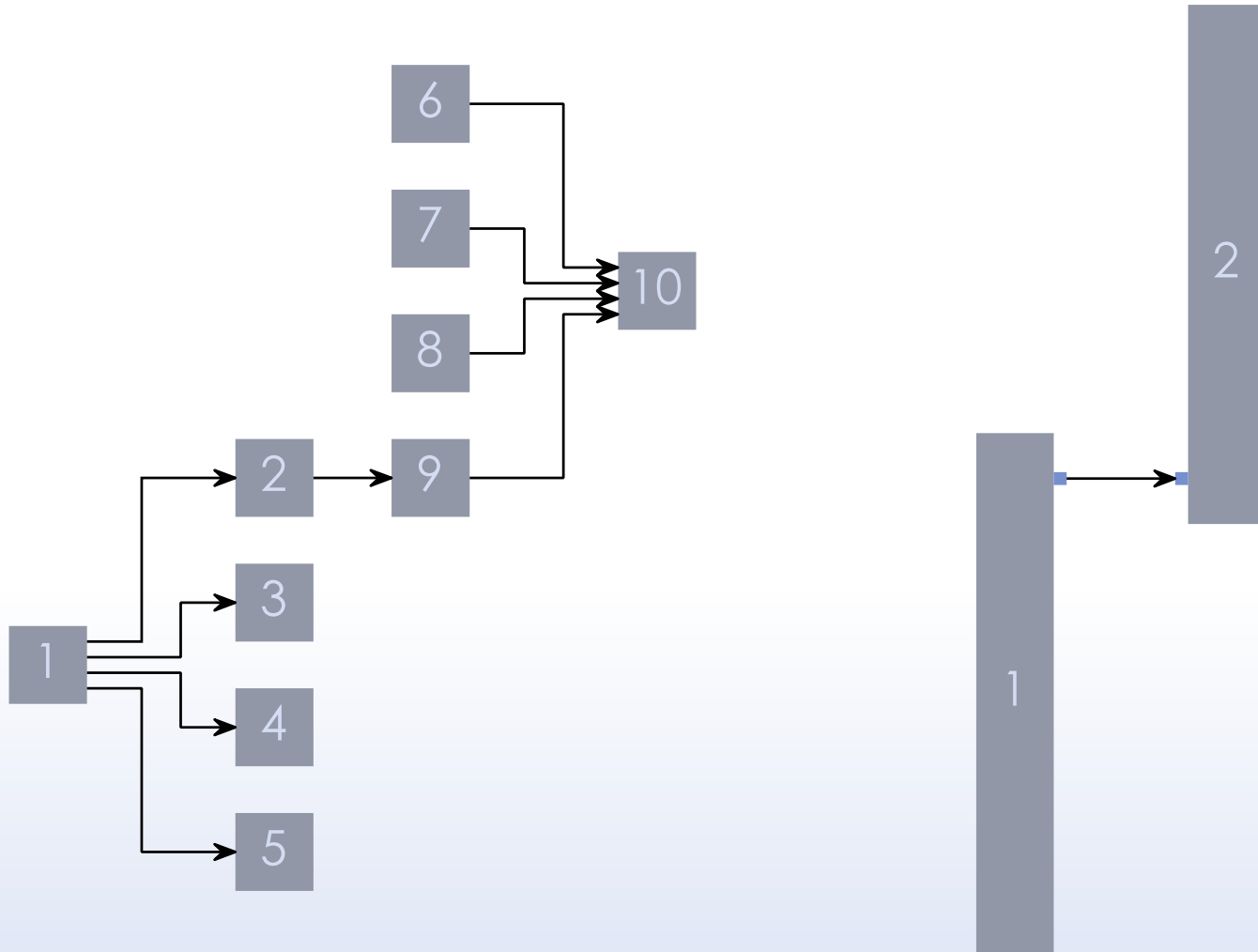
Result



Open Problem



Open Problem





KIELER

The Key to Efficient Modeling

<http://rtsys.informatik.uni-kiel.de/kieler>

<http://github.com/OpenKieler>



ELK

Eclipse Layout Kernel

<http://www.eclipse.org/elk>