Summary

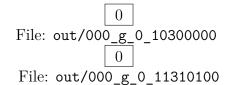
October 16, 2019

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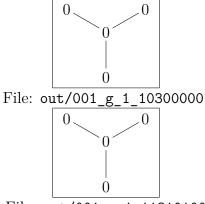
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# 0.1 Loaded Graphs

#### 0.1.1 Goal



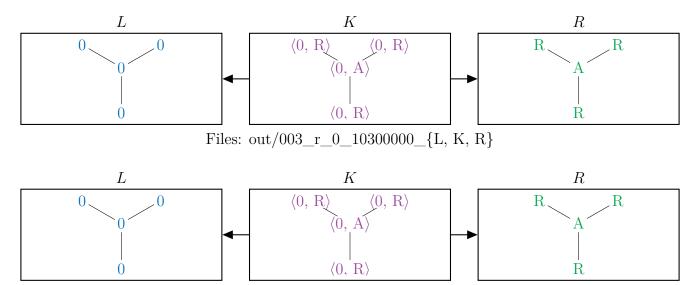
#### 0.1.2 Start



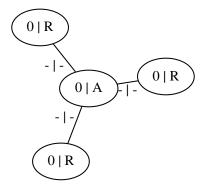
File: out/001\_g\_1\_11310100

### 0.2 Loaded Rules

#### 0.2.1 Mark for conversion



Files:  $out/004_r_0_11300100_{L, K, R}$ 



File: out/005\_r\_0\_combined

$$|\{e \in \text{outEdges}(0)\}| = 3$$

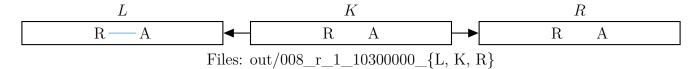
$$|\{e \in \text{outEdges}(0) \mid \text{label}(\text{target}(e)) \in \{\text{`0'}\}\} \}| = 3$$

$$|\{e \in \text{outEdges}(1) \mid \text{label}(\text{target}(e)) \in \{\text{`R', `A'}\}\} \}| = 0$$

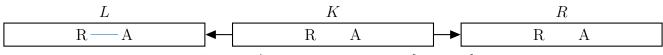
$$|\{e \in \text{outEdges}(2) \mid \text{label}(\text{target}(e)) \in \{\text{`R', `A'}\}\} \}| = 0$$

$$|\{e \in \text{outEdges}(3) \mid \text{label}(\text{target}(e)) \in \{\text{`R', `A'}\}\} \}| = 0$$

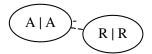
#### 0.2.2 RemoveSingleR



 $|\cdot| = 0$ 



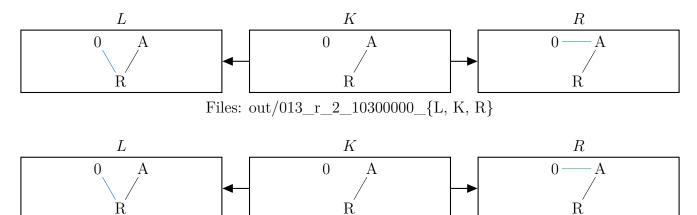
Files:  $out/009_r_1_11300100_{L, K, R}$ 



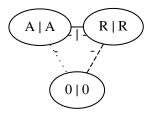
File:  $out/010_r_1$ \_combined

$$\begin{aligned} |\{e \in \text{outEdges}(1) \mid \\ \text{label}(\text{target}(e)) \in \{\text{`0'}, \text{`R'}\} \\ \}| = 0 \end{aligned}$$

#### 0.2.3 reattachExternalEdge

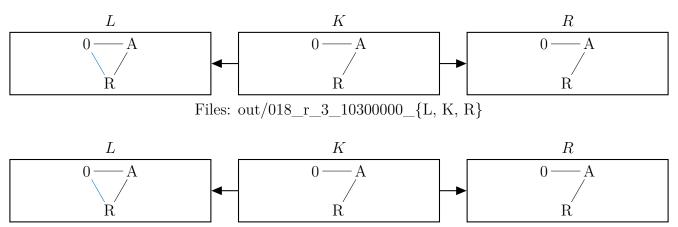


Files:  $out/014\_r\_2\_11300100\_\{L, K, R\}$ 

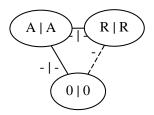


File: out/015\_r\_2\_combined

#### 0.2.4 removeAlreadyAttached

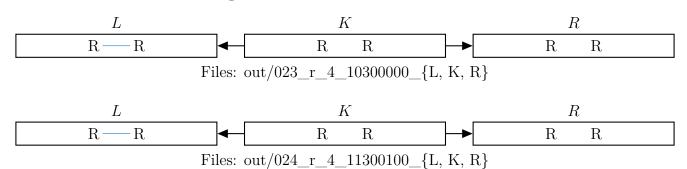


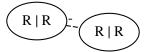
Files: out/019\_r\_3\_11300100\_{L, K, R}



File: out/020\_r\_3\_combined

#### ${\bf 0.2.5} \quad {\bf remove Inter REdge}$

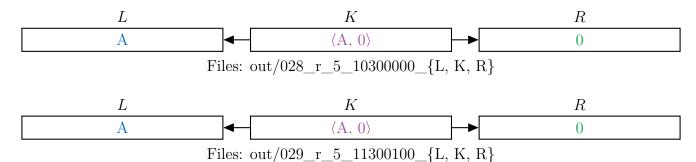




File: out/025\_r\_4\_combined

$$\begin{split} |\{e \in \mathrm{outEdges}(0) \mid \\ & \mathrm{label}(\mathrm{target}(e)) \in \{\text{`A'}, \text{`0'}\} \\ \}| &= 0 \\ \\ |\{e \in \mathrm{outEdges}(1) \mid \\ & \mathrm{label}(\mathrm{target}(e)) \in \{\text{`A'}, \text{`0'}\} \\ \}| &= 0 \end{split}$$

#### ${\bf 0.2.6} \quad {\bf unmark Collapsed Node}$

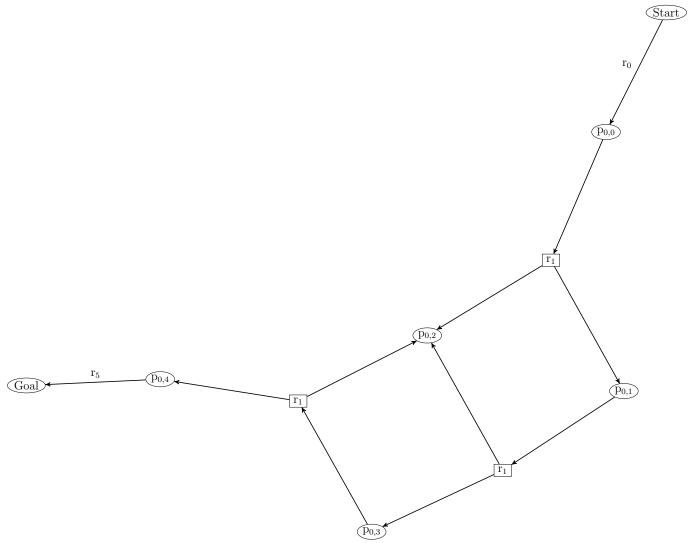


(A | 0)

File:  $out/030\_r\_5\_combined$ 

$$\begin{aligned} |\{e \in \text{outEdges}(0) \mid \\ \text{label}(\text{target}(e)) \in \{\text{`R'}\} \\ \}| = 0 \end{aligned}$$

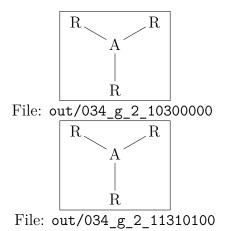
### 0.2.7 DG Hyper, dg\_0



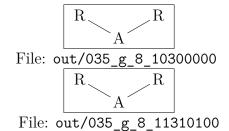
File: out/033\_dg\_0\_10100

# 0.3 Product Graphs

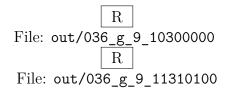
# $0.3.1 p_{0.0}$



 $0.3.2 p_{0.1}$ 



 $0.3.3 p_{0.2}$ 



 $0.3.4 p_{0.3}$ 

$$\begin{array}{c|c} \hline R & \hline & A \\ \hline \text{File: out/037\_g\_14\_10300000} \\ \hline & R & \hline & A \\ \hline \text{File: out/037\_g\_14\_11310100} \\ \end{array}$$

 $0.3.5 p_{0.4}$ 

### 0.4 Flow Solutions, id 0