

# **UvA-DARE** (Digital Academic Repository)

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# **Machinations Overview**

## Resource Connections

Resource connections dictate how resources flow between nodes.















flow of resources

flow with a rate of 1

flow with a rate of 3

random flow rate

flow rate

multiplayer strategy based flow based flow skill based multiplayer

Label Types Examples Format flow rate: 0; 2; 3; 0.5; 1.3

D6; 2D5; D3-D2; 3\*D4; 50% random flow rate: Dx; yDx; x% intervals: 1/4; 2/2; D6/3; D3/(D6+2) all resources: all draw randomly: draw1; draw2; draw5

### Connections

State connections indicate the effects of state and state changes on other elements in the diagram. The state of a node is determined by the number of resources on it.

#### **Label Modifiers**



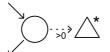
Label Modifiers change the value of labels of resource connections or other state connections.

#### **Node Modifiers**



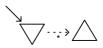
Node Modifiers change the number of resources on nodes.

#### Activators



Activators activate or deactivate nodes.

#### **Triggers**



Triggers activate nodes once when all their inputs are satisfied. An input is satisfied when it has delivered the ammount of resources as indicated by its flow rate

Label Types	Format	Examples	Applicable to
modifiers:	+; -; +x; -x; +x%	+; -; +2; -0.3; +5%; -2%	value modifiers; node modifiers
interval modifiers:	+xi; -xi	+2i; -1i	value modifiers
probabilities:	x%; x	20%; 3	triggers after a gate
conditions:	==x; !=x; <x; <="x;">x; &gt;=x;</x;>	==0; !=2; >=4;	activators; triggers after a gate
range (condition):	x-y	2-5; 4-7	activators; triggers after a gate
trigger marker:	*	*	triggers

# Nodes

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Nodes represent game elements that take part in the production, distribution and consumption of resources. Nodes can fire. Firing nodes pull resources according to the flow rates of their input resource connections. A node without inputs will push resources according to the flow rate of its outputs instead.

Pool

Gate

Pools pull and accumulate resources.

Gates pull and imme-

diately redistribute

Drain

Drains pull and consume resources.

Converter

Converters pull and consume resources to produce and push other resources.



Sources produce and push resources.



Traders cause resources to change ownership.

### **Activation Modes**

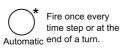
resources.

The activation mode of a node determines when it fires.

Passive

Fire only when in response to an activated trigger.

Fire in response to a player action (Fires Interactive when clicked).



Starting Action

#### Pull and Push Modes

By default, nodes pull as many resources as are available, up to its inputs' flow rates. This behavior can be changed:



The node only pulls resources when all resources as specified by its inputs' flow rates are available.



The node pushes resources according to its outputs' flow rates. Nodes with only outputs push by default (and have no marker).

### Gate Types





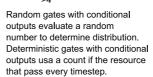








gate







State connection outputs from a gate are always triggers. Gates can be used to generate probable or conditional triggers.

## Other Elements

Gates with probable outputs

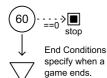
their respective probability.

distribute resources based on

Percentages can be lower than

resource might be destroyed.

100%, in which case the passing





Artificial Players are used to simulate player activity.



