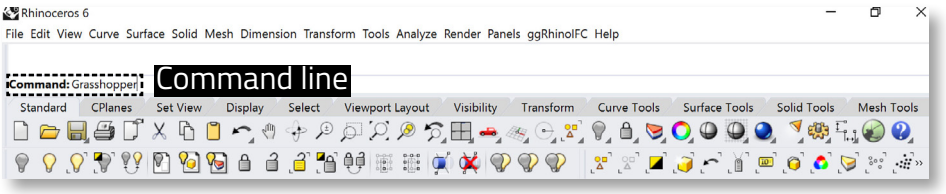
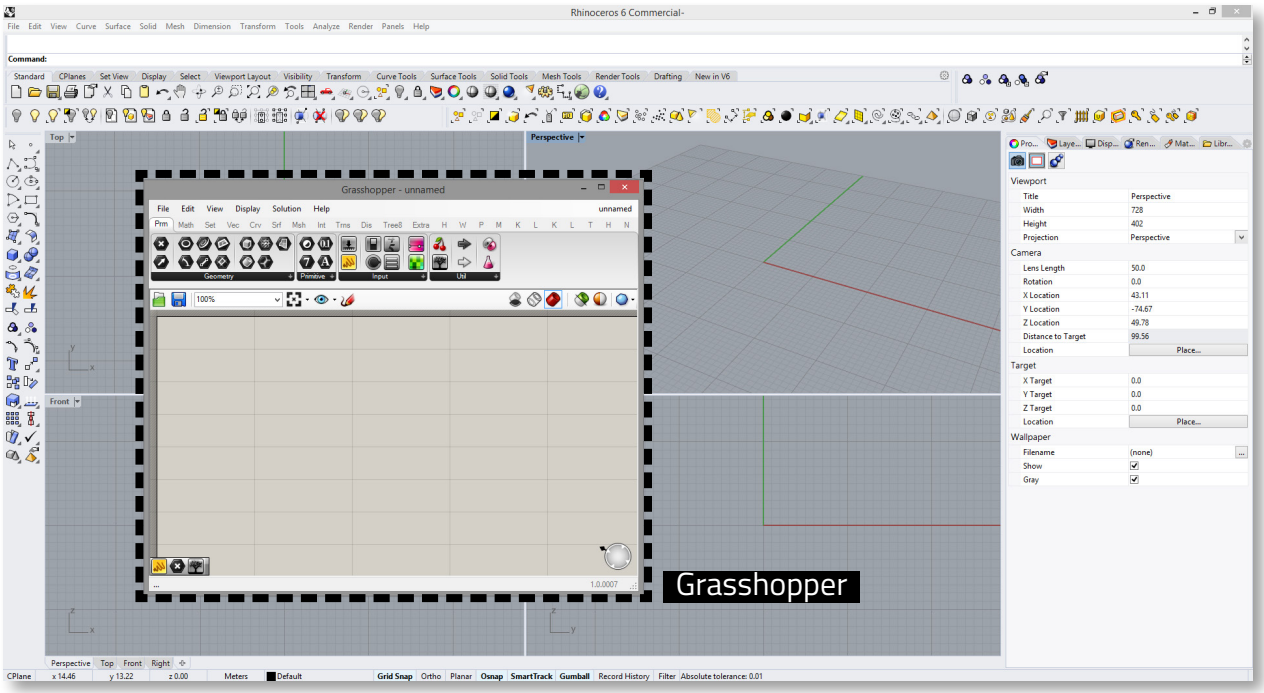
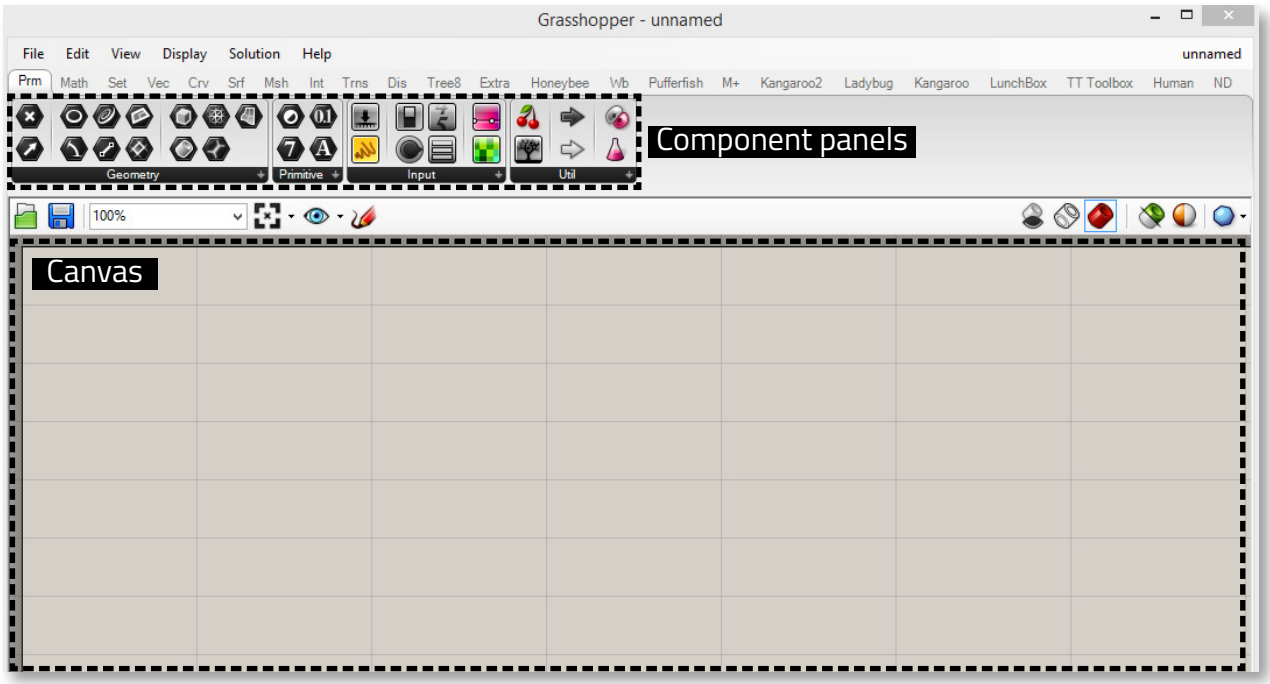
opening Grasshopper

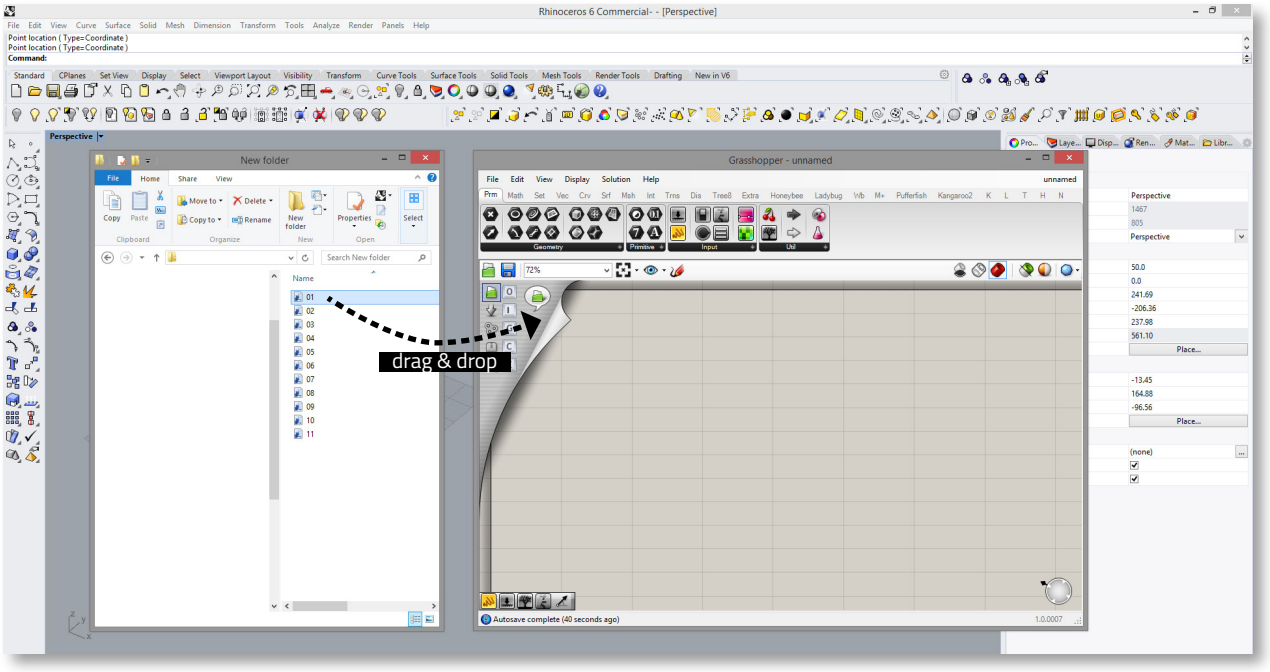




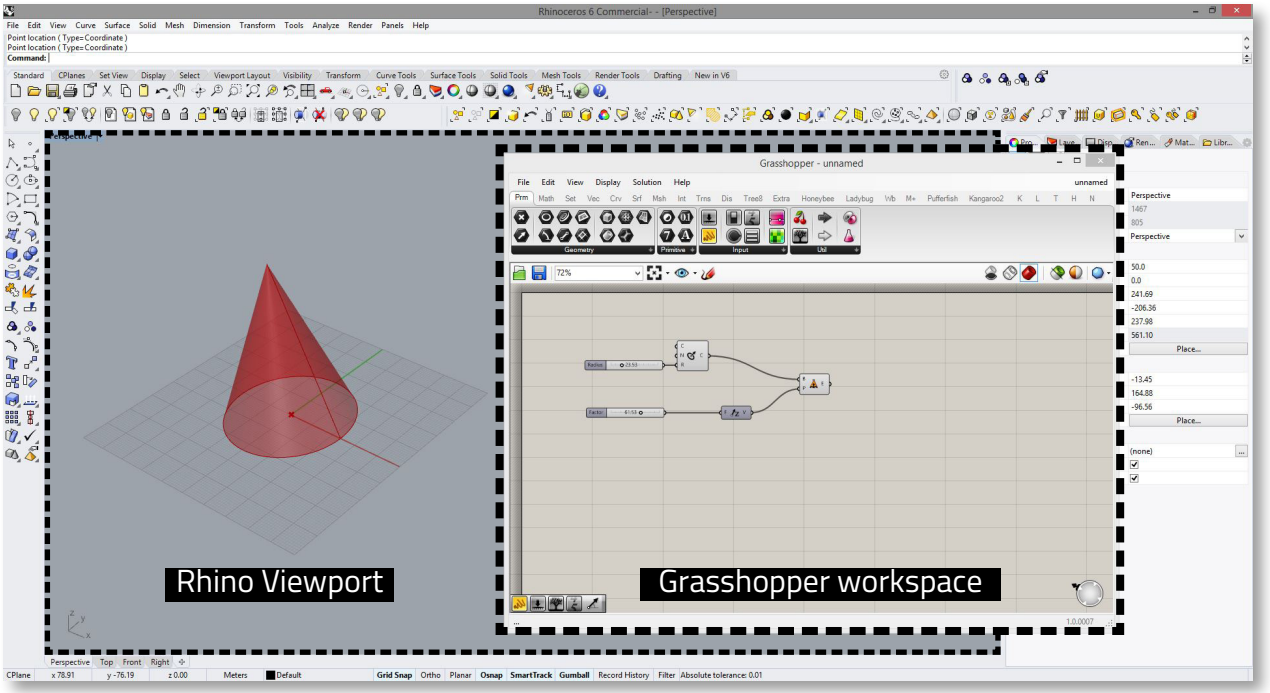
Grasshopper interface



adding file into grasshopper

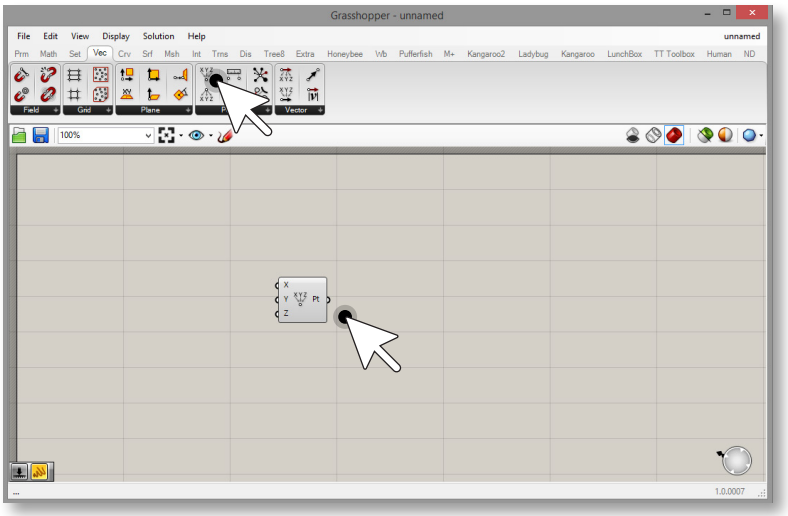


Grasshopper to Rhino



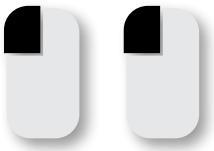
Unlike a Rhino document, a Grasshopper definition does not contain any actual objects or geometry. Instead, a Grasshopper definition represents a set of rules & instructions for how Rhino can automate tasks.

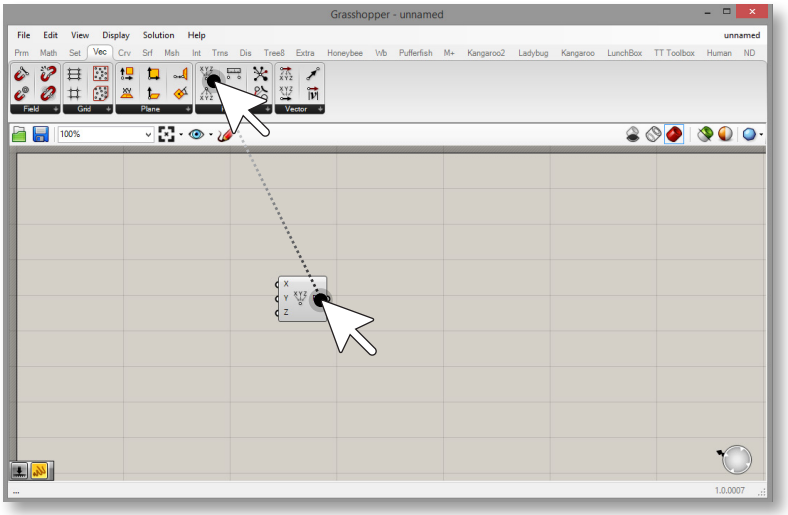
adding components



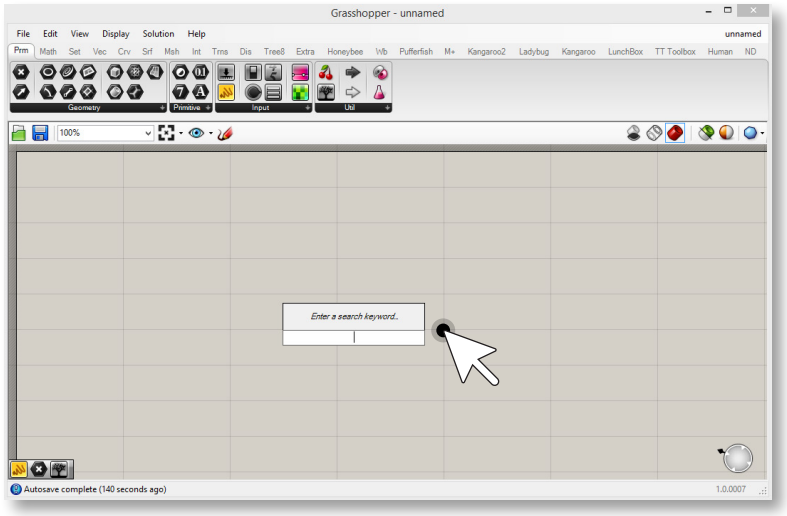
1. left mouse button click on the component in the panel

2. left mouse button click canvas to place the selected component





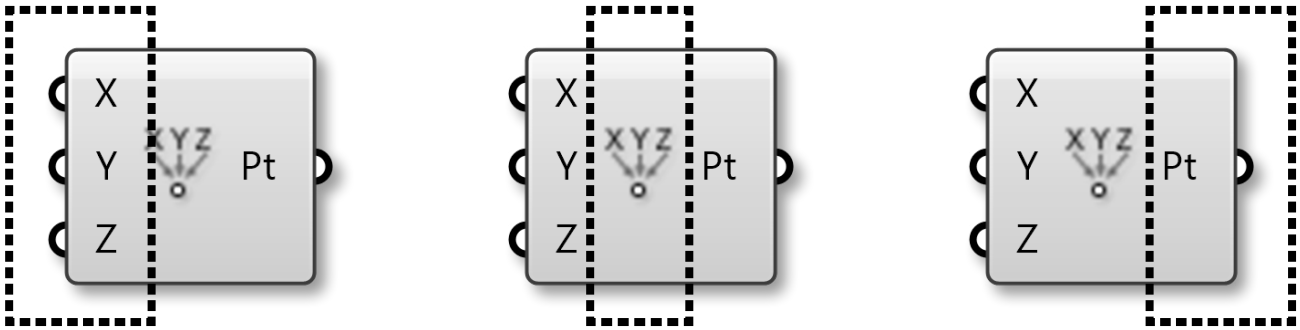
left mouse button drag component from panel to canvas



1. left mouse button double click

2. type component name

3. enter



input

component name

output

correct status

component contains correct data
(geometry is red in the viewport)

hidden

geometry output from the component
is not visible in the viewport

disabled

component does not output any data
component does not perform any action

selected

geometry is green in the viewport

warning

component contains no data

error

components contains wrong data

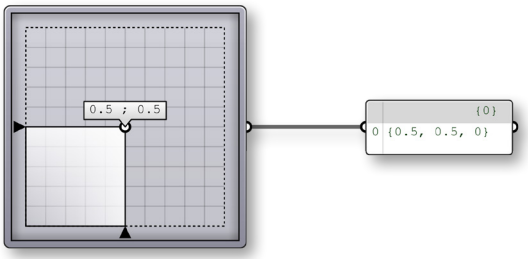
inputs

number slider

digit scroller

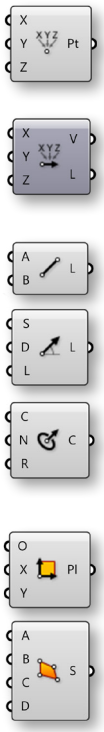
control knob

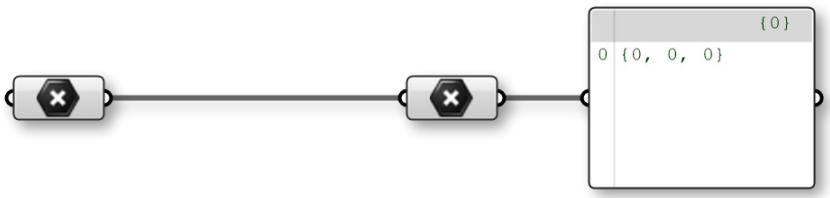
2D slider



parameters

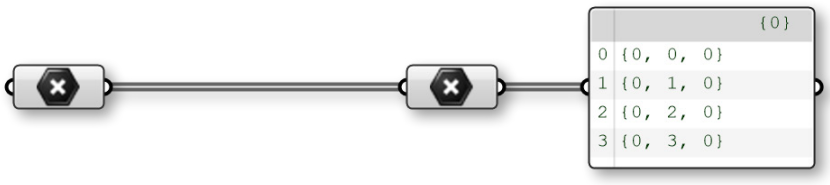
components





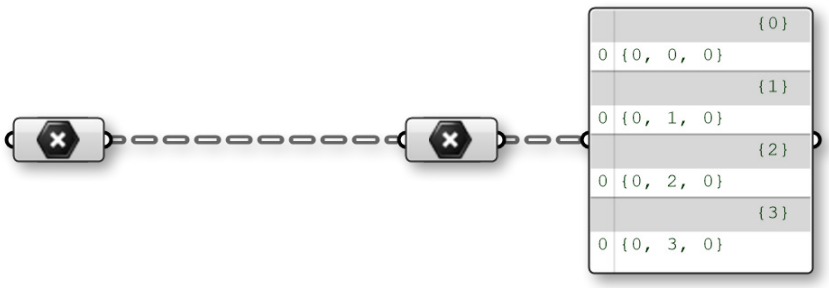
single value

the wire transfers a copy of a single value



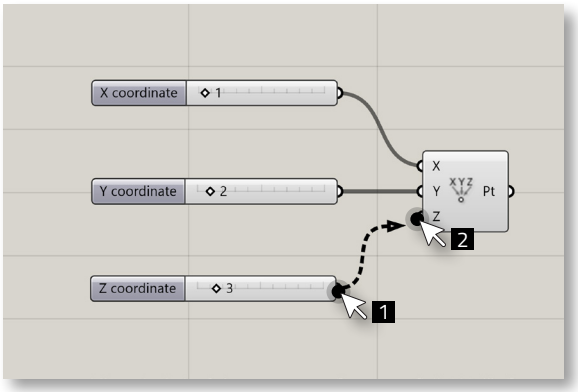
list

the wire transfers a copy of a list of values of the same data type



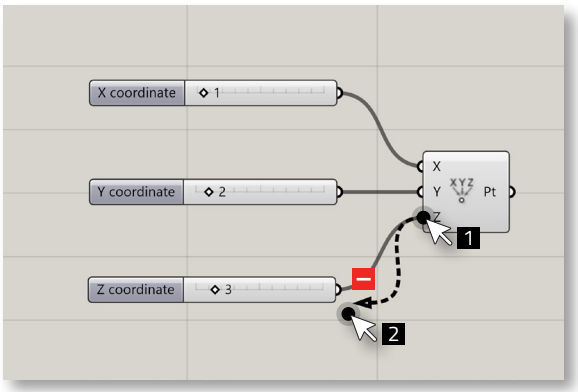
data tree

the wire transfers a copy of a data tree (list of lists) of values of the same data type



plug a wire

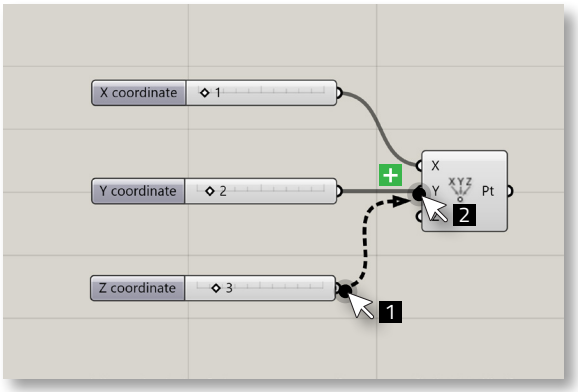
left mouse button drag



unplug a wire

CTRL + left mouse button drag

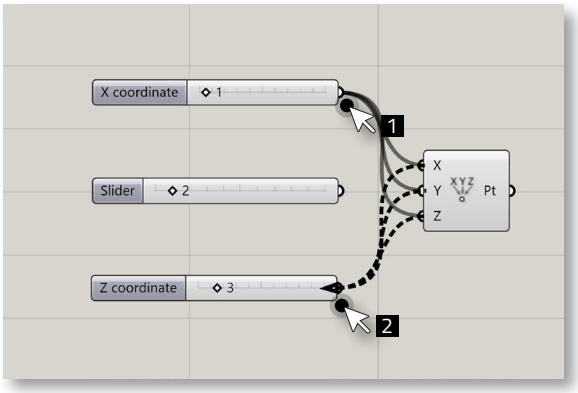
CTRL +



add a wire

SHIFT + left mouse button drag

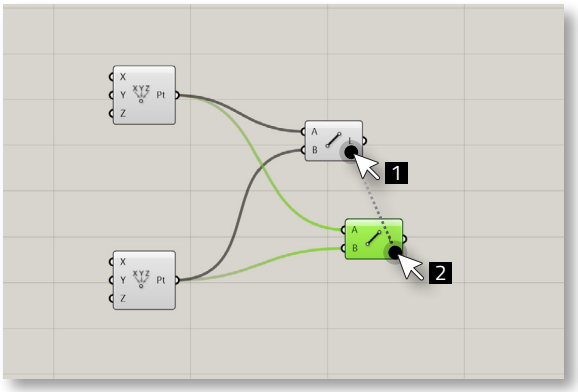
SHIFT +



re-plug a wire(s)

CTRL + SHIFT + left mouse button drag

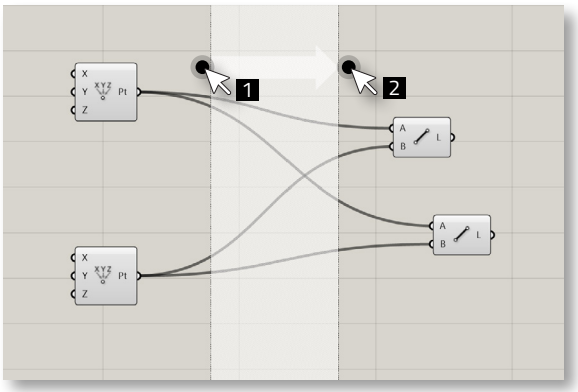
CTRL + SHIFT +



copy a component with wires

left mouse button drag & tap ALT

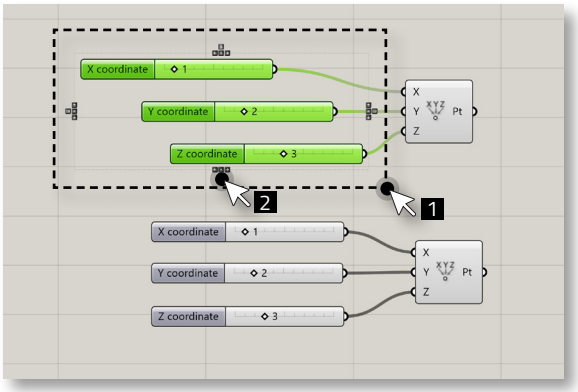
& tap ALT



make a horizontal space

ALT + left mouse button drag

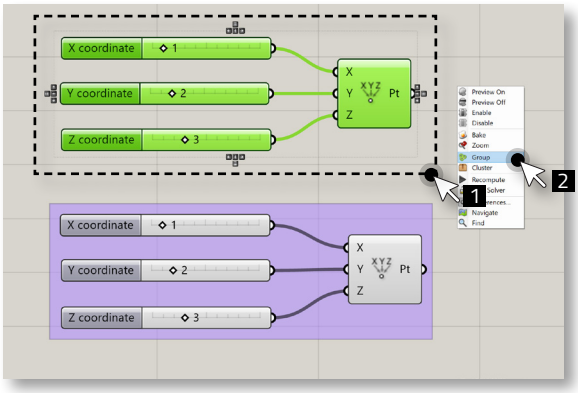
ALT + 



aligning a components

1. select multiple components at the same time by left button mouse drag

2. left button mouse click on the type of align which you want to get, found in the dashed outline



grouping a components

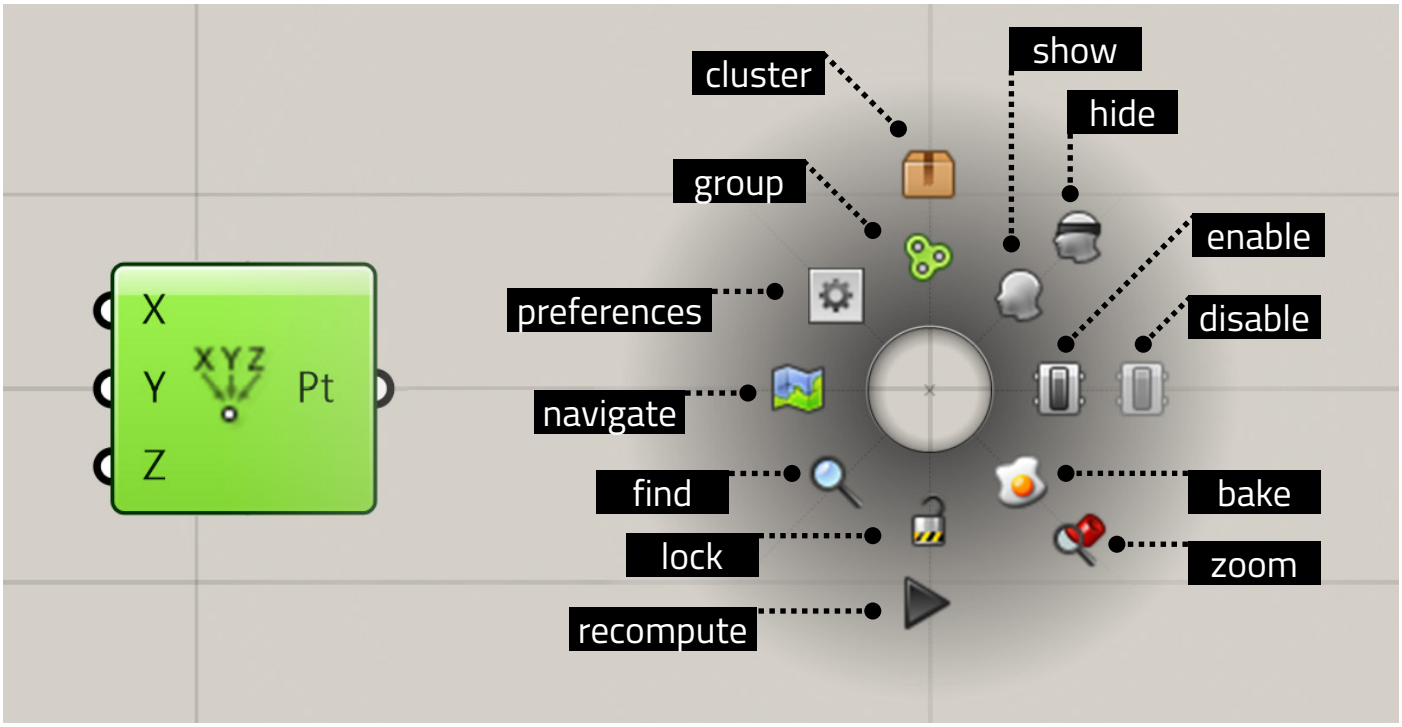
1. select multiple components at the same time by left button mouse drag

2. right button mouse click anywhere on the canvas

3. left mouse button click on the Group

context menu

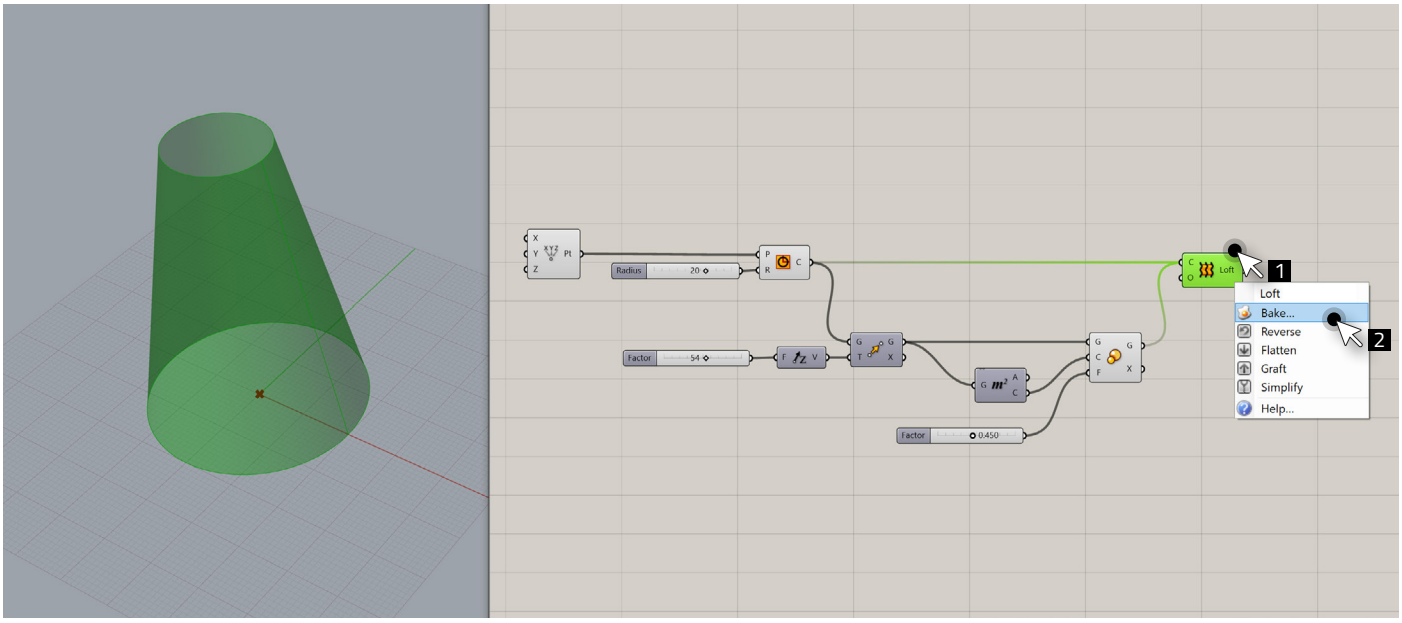
middle mouse button click / space bar



baking geometry

1. left mouse button click on the component which you want to export in Rhino

2. right mouse button click on the empty space in the canvas and choose “Bake” button



In order to work with (select, edit, transform, etc.) geometry in Rhino that was created in Grasshopper, you must “bake” it. Baking instantiates new geometry into the Rhino document based on the current state of the Grasshopper graph. It will no longer be responsive to the changes in your definition.