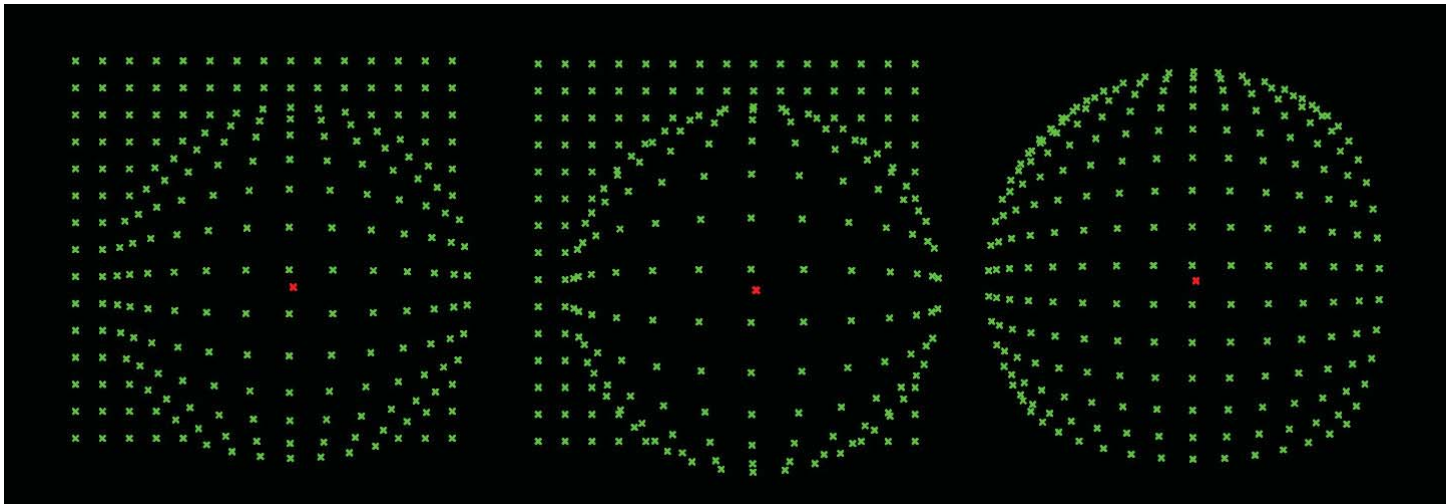
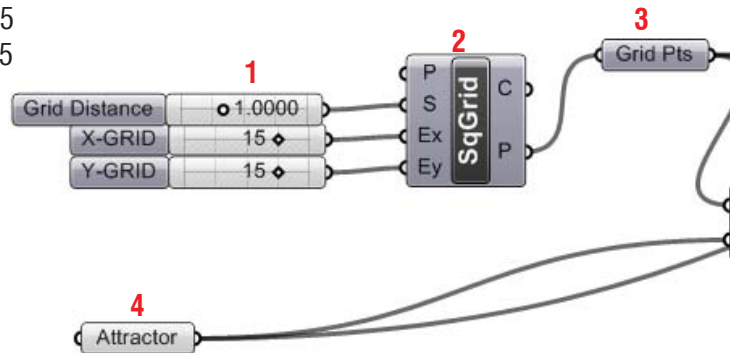


1_2 POINT EXPANSION 1



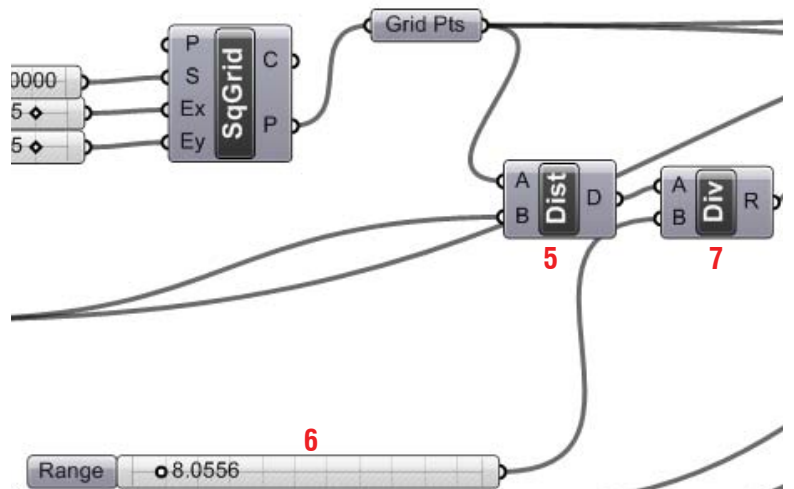
Step1 : Setting up the Point Grid

1. **Slider** x 3 (Params/Special/Number Slider)
 - "Grid Distance" : Floating point, Lower limit=0, Upper limit=3.0, Value=1.0
 - "X-GRID" : Integers, Lower limit=0, Upper limit=20, Value=15
 - "Y-GRID" : Integers, Lower limit=0, Upper limit=20, Value=15
2. **SqGrid** (Vector/Grid/SqGrid)
 - P : default
 - S : "Grid Distance"
 - Ex : "X-GRID"
 - Ey : "Y-GRID"
3. **Point** (Params/Geometry/Point) : "Grid Pts"
 - SqGrid(P)
4. **Point** (Params/Geometry/Point) : "Attractor"
 - Draw one point in Rhino scene
 - Right-click and select 'Set one Point' and select the point in Rhino scene



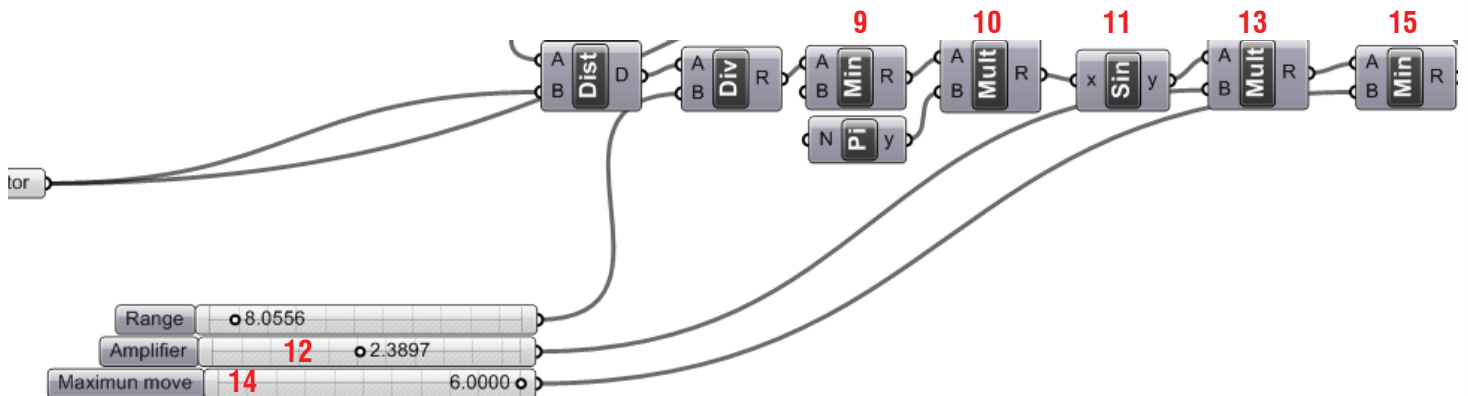
Step2 : Setting up Distance Parameter

5. **Dist** (Vector/Point/Distance)
 - A : Point("Grid Pts")
 - B : Point("Attractor")
6. **Slider** (Params/Special/Number Slider)
 - "Range" : Floating point, Lower limit=0, Upper limit=50, Value=8.05
7. **Div** (Scalar/Operator/Division)
 - A : Dist(D)
 - B : Slider("Range")



Step3 : Geometry Deformation Fuction

* $y = A \cos (B \pi x)$ (*y:output, x:parameter, A:amplifier, B:range*)



9. **Min** (Scalar/Util/Minimum)

- A : *Div(R)*

- B : Right Click and set Number : 1.0

* *The reason to set this component is to limit the deformation value within 0~π on Sine function graph*



10. **Mult** (Scalar/Operator/Multiply)

- A : *Min(R)*

- B : *Pi(y)*

11. **Sin** (Scalar/Trig/Sine)

- x : *Mult(R)*

12. **Slider** (Params/Special/Number Slider)

- "Amplifier" : Floating point,

Lower limit=0, Upper limit=5, Value=2.38

13. **Mult** (Scalar/Operator/Multiply)

- A : *Sine(R)*

- B : *Slider ("Amplifier")*

14. **Slider** (Params/Special/Number Slider)

- "Maximum Move" : Floating point,

Lower limit=0, Upper limit=6.0, Value=6.0

15. **Min** (Scalar/Util/Minimum)

- A : *Mult(R)*

- B : *Slider ("Maximum Move")*

* *This is for preventing from overflow of point movements*

Step4 : Points Movement

16. **Vec2Pt** (Vector/Vector/Vector 2Pt)

- A : *Point("Attractor")*

- B : *Point("Grid Pts")*

* *This is the opposite direction of '1.1 Point Concentration'*

17. **Amp** (Vector/Vector/Amplitude)

- V : *Vec2Pt(V)*

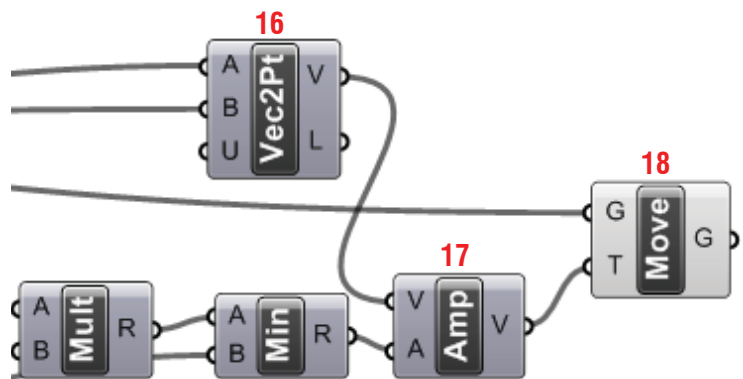
- A : *Min(R)*

18. **Move** (Xform/Euclidian/Move)

- G : *Point("Grid Pts")*

- T : *Amp(V)*

- The End -



Appendix

- Definition map

