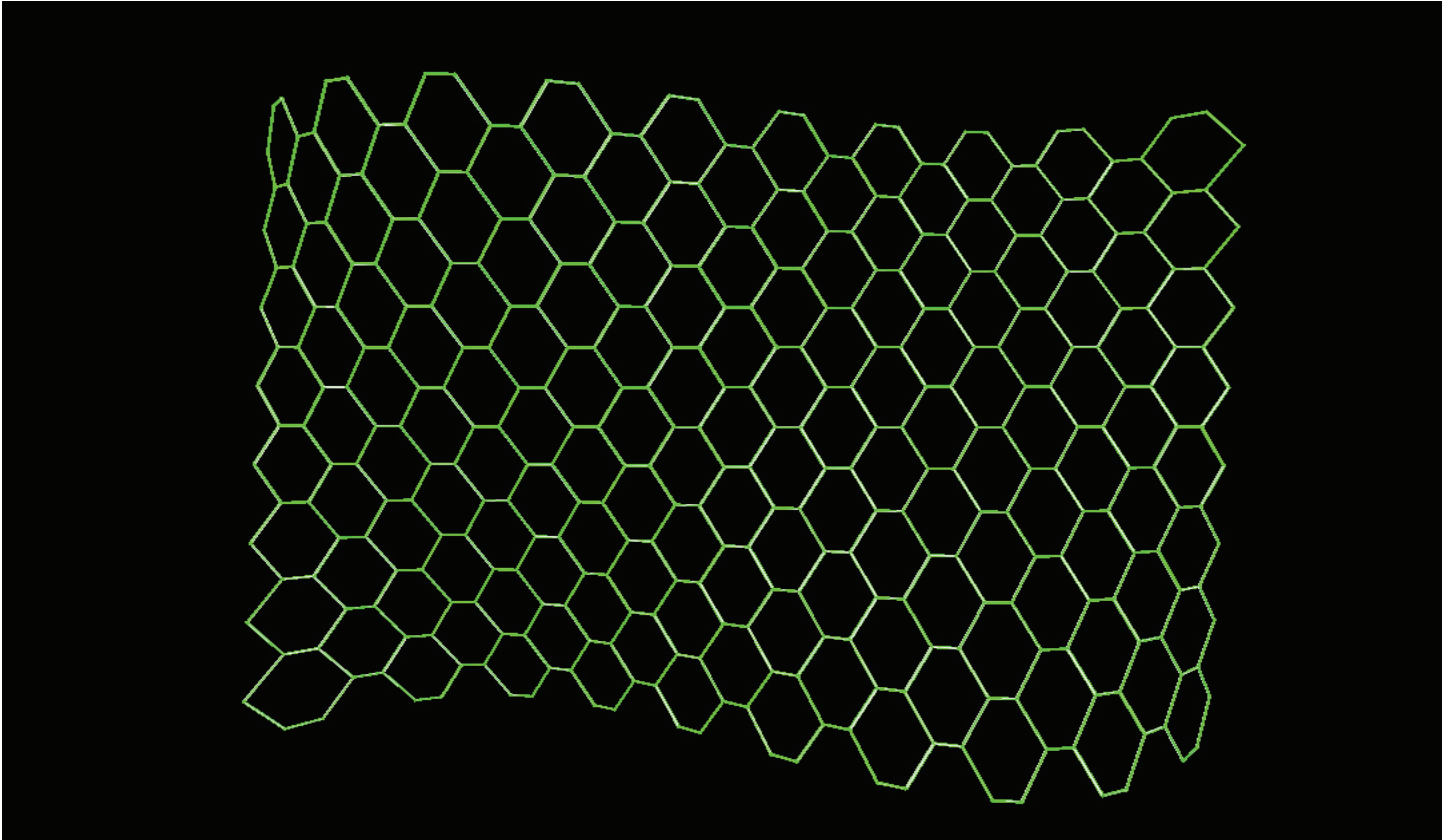
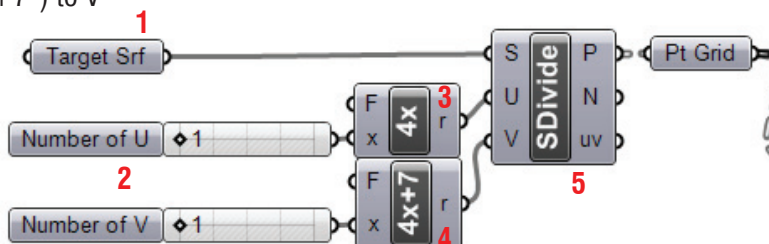
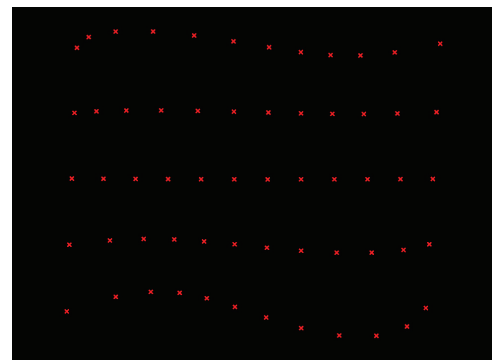
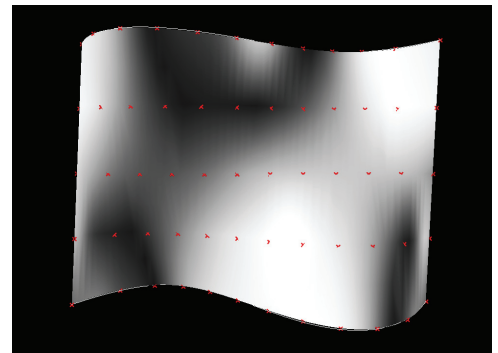


### 3\_4 HEXAGONAL CONNECTION



#### Step1 : Points from Surface

1. **Surface** (Params/Geometry/Surface) : "Target Srf"
  - Draw one free surface in Rhino scene
  - Right Click and Set one surface : click the target surface in Rhino scene
2. **Slider** x 2 (Params/Special/Number Slider)
  - "Number of U" : Integers, Lower limit=0, Upper limit=30, Value=1
  - "Number of V" : Integers, Lower limit=0, Upper limit=30, Value=1
3. **F1** (Logic/Script/F1)
  - F :  $4*x$  (\* This is to get this sequence: 4, 8, 12, 16, 20, ....)
  - x : *Slider*("Number of U") to x
4. **F1** (Logic/Script/F1)
  - F :  $4*x + 7$  (\* This is to get this sequence: 11, 15, 19, 23, ....)
  - x : *Slider*("Number of V") to x
5. **SDivide** (Surface/Util/Divide Surface)
  - S : **Surface**("Target Srf") to S
  - U : **F1**("4x") to U
  - V : **F1**("4x+7") to V



**Step2 : Grouping Points**

6. **Point** (Params/Geometry/Point)

- "Pt Grid" : *SDivide*(P)

7. **Param Viewer** (Params/Special/Param Viewer)

- *Point*("Pts Grid")

\* Grouping Point Group A and Group B

8. **Cull** (Logic/Sets/Cull Pattern)

- L : *Param Viewer*

- P : Manage Boolean Collection -> "True / False"

9. **Shift** (Logic/List/Shift List) x 2

- L : *Cull* (L)

- S : 1 (Integer) for Group A / -1 (integer) for Group B

10. **Branch** (Logic/Tree/Tree Branch) x 2

- T : *Point*("Pts Grid") for each

- P : *Shift* (L) for each

11. **Cull** (Logic/Sets/Cull Pattern) x 2

- L : *Branch* (B) for each

- P : Manage Boolean Collection -> "False/True/True/False" for both

12. **Cull** (Logic/Sets/Cull Pattern) x 2

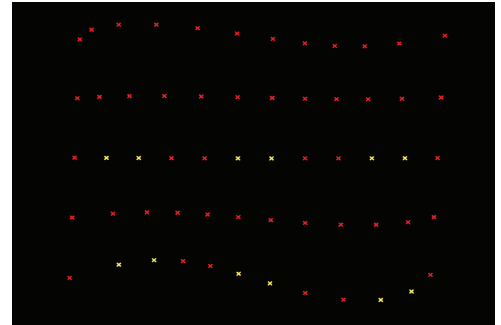
- L : 11. *Cull* x 2

- P : Manage Boolean Collection -> "True / False" for each

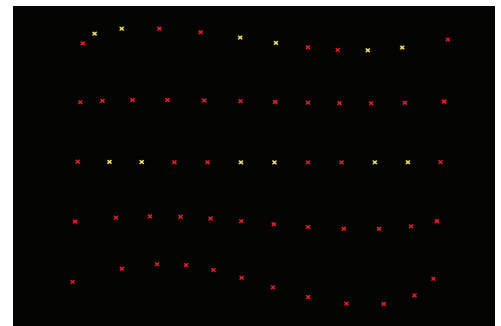
13. **Cull** (Logic/Sets/Cull Pattern) x 2

- L : 11. *Cull* x 2

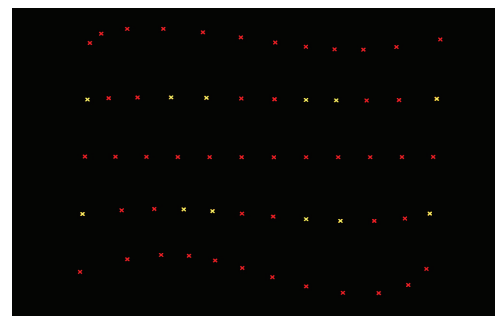
- P : Manage Boolean Collection -> "False / True" for each



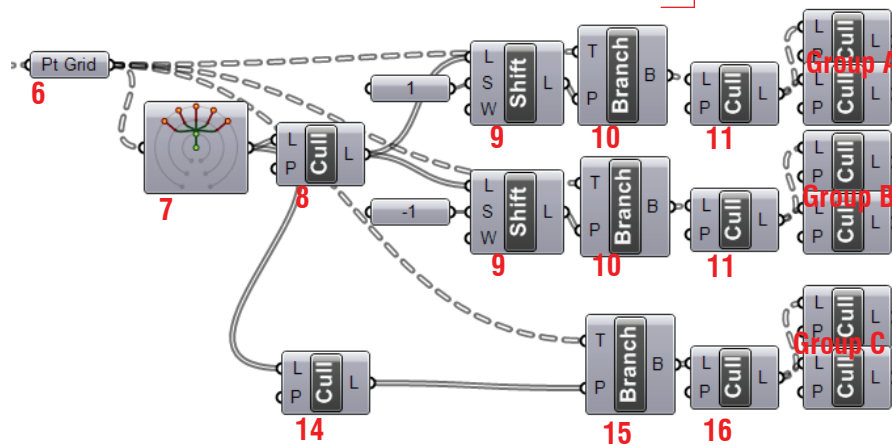
Group A



Group B



Group C



Group A  
& Group B

\* Grouping Point Group C

14. **Cull** (Logic/Sets/Cull Pattern)

- L : *Param Viewer*

- P : Manage Boolean Collection -> "False / True"

15. **Branch** (Logic/Tree/Tree Branch)

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

- P : 14. *Cull*

16. **Cull** (Logic/Sets/Cull Pattern)

- L : *Branch* (B)

- P : Manage Boolean Collection -> "True/False/False/True"

17. **Cull** (Logic/Sets/Cull Pattern)

- L : 15. *Cull*

- P : Manage Boolean Collection -> "True / False"

18. **Cull** (Logic/Sets/Cull Pattern)

- L : 10. *Cull*

- P : Manage Boolean Collection -> "False / True"

Group C

**Step3 : Connecting Point Groups**

\* Connection 1 : Lines within the same group

19. **Ln** (Curve/Primitive/Line) : between points Group A

- A : 12.Cull (group A)

- B : 13.Cull (group A)

20. **Ln** (Curve/Primitive/Line) : between points Group B

- A : 12.Cull (group B)

- B : 13.Cull (group B)

21. **Shift** (Logic/List/Shift List)

- L : 17.Cull (group C)

- S : Integer = 1

22. **Shift** (Logic/List/Shift List) :

- L : 18.Cull (group C)

- S : Integer = -1

23. **Ln** (Curve/Primitive/Line) : between points Group C

- A : 21.Shift

- B : 22.Shift

\* Connection 2 : Lines between different groups

24. **Ln** (Curve/Primitive/Line) : between points Group A and Group C

- A : 12.Cull (group A)

- B : 17.Cull (group C)

25. **Ln** (Curve/Primitive/Line) : between points Group A and Group C

- A : 13.Cull (group A)

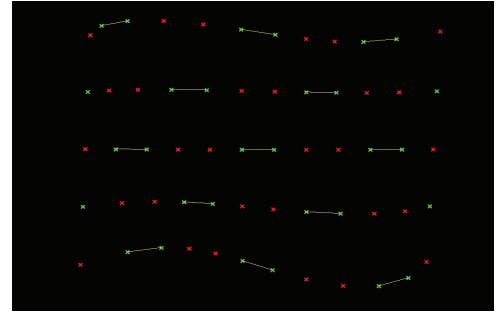
- B : 18.Cull (group C)

26. **Ln** (Curve/Primitive/Line) : between points Group B and Group C

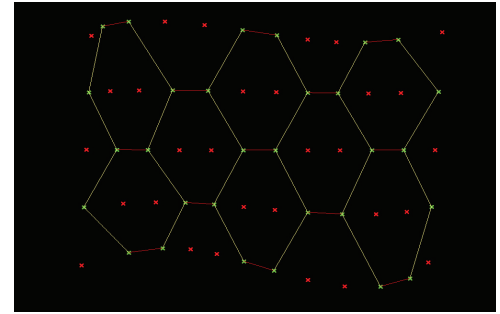
- A : 12.Cull (group B)

- B : 17.Cull (group C)

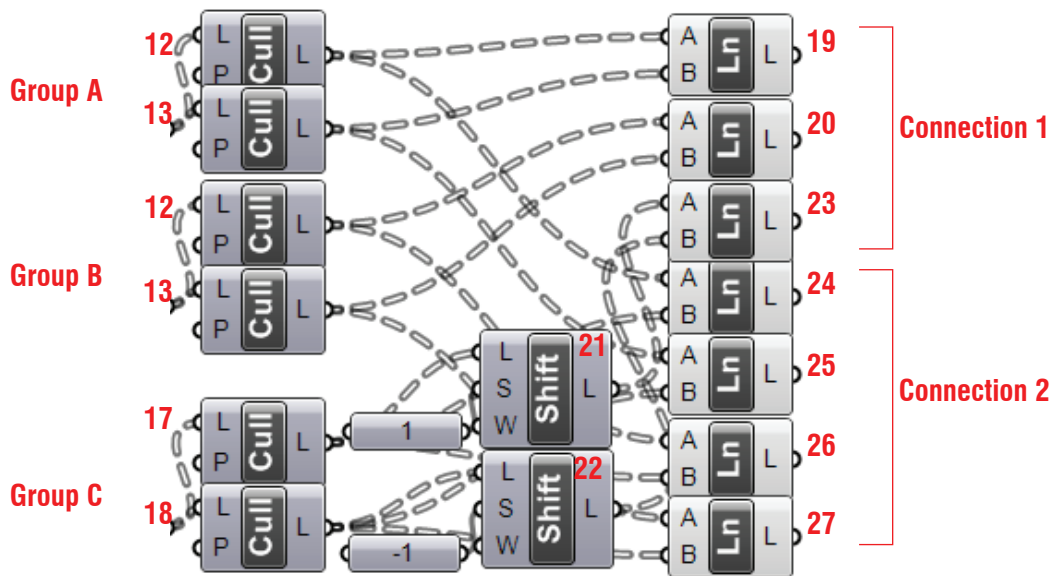
27. **Ln** (Curve/Primitive/Line) : between points Group B and Group C



**Connection 1**



**Connection 2**



**Appendix**  
- Definition map

