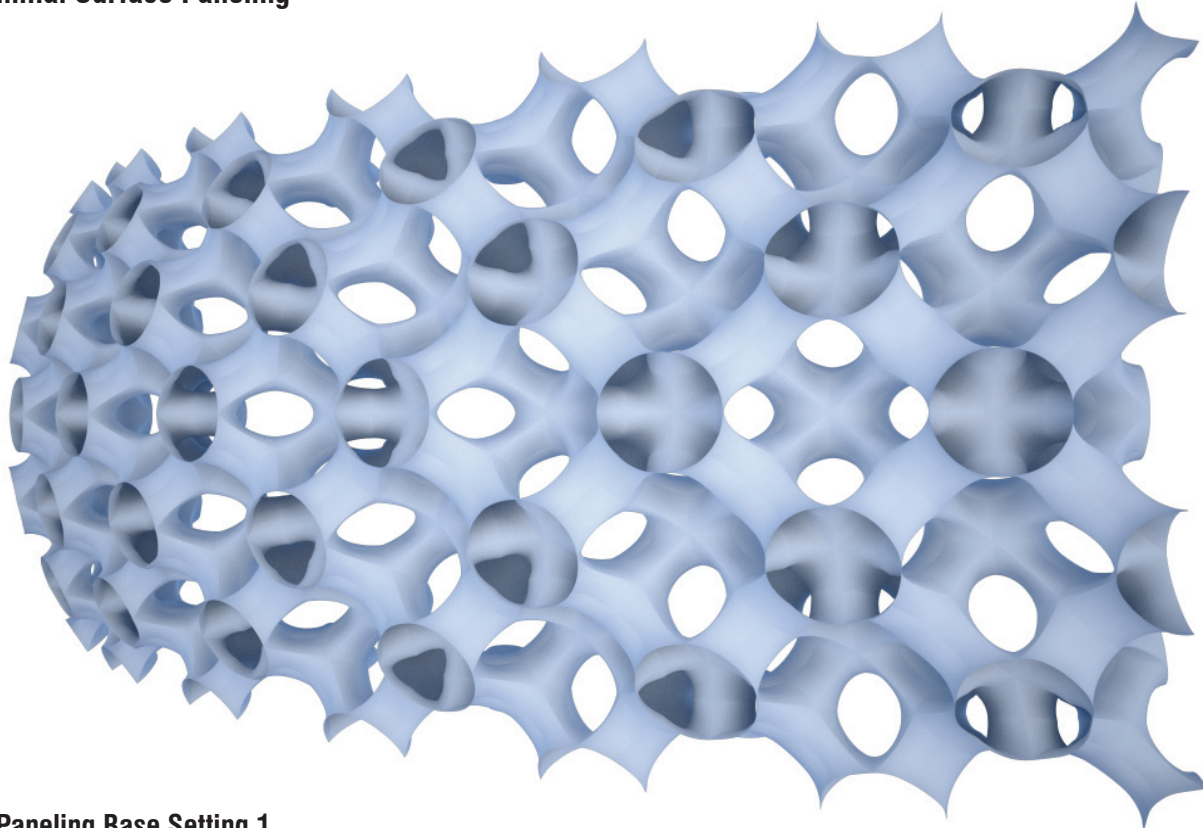


8_2 Minimal Surface Paneling



Step1 : Paneling Base Setting 1

1. **Srf (Surface)** -> Base Rhino Surface, let's make around 300 x 150 surface here

- Right click and 'Set one surface'

2. **Slider** -> number of U

- integer, lower limit = 1, upper limit = 10, value = 6 (varies)

3. **Slider** -> number of V

- integer, lower limit = 1, upper limit = 10, value = 3 (varies)

4. **Divide (Divide Domain²)**

- I : Srf from 1.

- U : Slider from 2.

- V : Slider from 3.

5. **SubSrf (Isotrim)**

- S : Srf from 1.

- D : Divide(S)

- B : A-B(R)

6. **Explode (Brep Components)**

- B : SubSrf(S)

7. **Divide (Divide Domain²)** -> divide into 4 pieces for mirror effect

- I : Explode(F) from 6.

- U : 2

- V : 2

8. **SubSrf (Isotrim)**

- S : Explode(F) from 6.

- D : Divide(S) from 7.

9. **Explode (Brep Components)** -> 4 sub modules

- B : SubSrf(S)

10. **Path Mapper**

- Connect Explode(F)

- Mapping Editor (Source : A;B;C;D;E / Target= A;B;C)

11. **Item**

- L : Path Mapper

- i : integer = 0,1,3,2 -> rotational order of 4 pieces

12. **Explode (Brep Components)**

- B : Item(E)

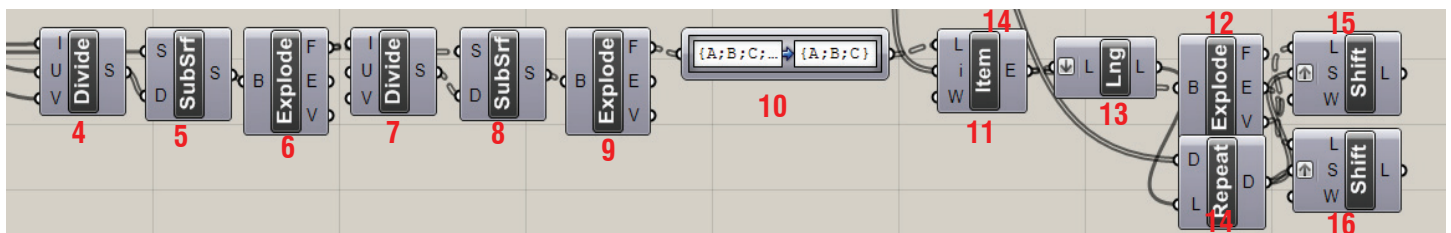
13. **Lug(List Length)**

- L : Item(E) -> hit flatten!

14. **Repeat(Repeat Data)**

- D : 0,1,2,3

- L : Lug(L)



15. **Shift (Shift List)** -> to do the same process for 4 sub modules

- L : Explode(V) -> about Points
- S : Repeat(D) -> hit graft - W : True

16. **Shift (Shift List)** -> to do the same process for 4 sub modules

- L : Explode(E) -> about Curves
- S : Repeat(D) -> hit graft - W : True

Step2 : Paneling Base Setting 2

17. **Offset** -> the depth of final structure

- S : Srf -> base surface from 1.
- D : Slider -> needs to be a similar value to each sub-module, let's make around 25 ($300/6/2=25$), ($150/3/2$) here

* do the same process(see 2.~16.) for this offset surface.

18. **Explode (Brep Components)**

- B : Item(E)
- 19. **Shift (Shift List)** -> to do the same process for 4 sub modules
- L : Explode(V) -> about Points
- S : Repeat(D) -> hit graft - W : True

20. **Shift (Shift List)** -> to do the same process for 4 sub modules

- L : Explode(E) -> about Curves
- S : Repeat(D) -> hit graft - W : True

Step3 : Organizing Points for Minimal Surface Module

It is the process to extract the input points from for Minimal Surface module which is introduced on "8_1 Minimal Surface Module"

< Side A >

21. **Area(Brep Area)**

- B : Explode(F) from 18.

22. **Cull (Cull Pattern)**

- L : Shift(L) from 20.
- P : manage Boolean collection : false/true/false/false

23. **Cull (Cull Pattern)**

- L : Shift(L) from 20.
- P : manage Boolean collection : false/false/true/false

24. **Cull (Cull Pattern)**

- L : Shift(L) from 20.
- P : manage Boolean collection : false/false/false/true

25. **Cull (Cull Pattern)**

- L : Shift(L) from 20.
- P : manage Boolean collection : true/false/false/ false

26. **Area(Brep Area)**

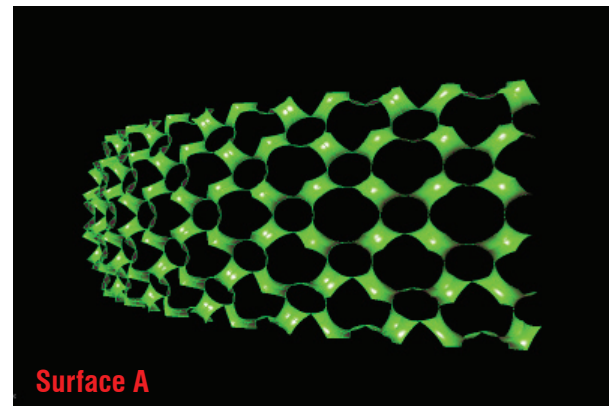
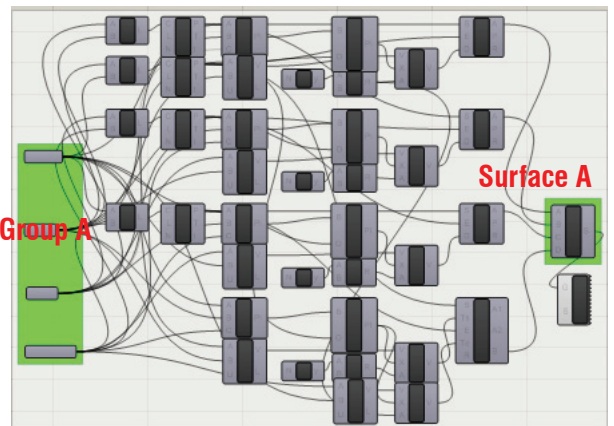
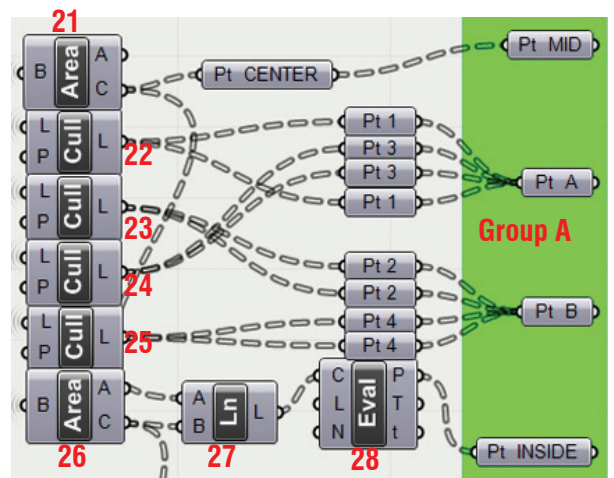
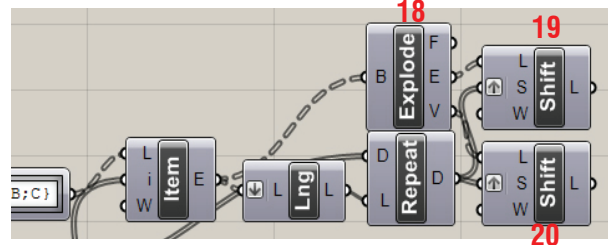
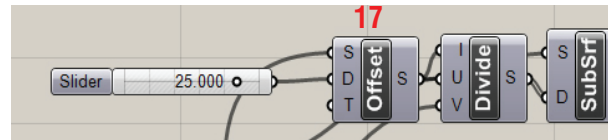
- B : Explode(F) from 12.

27. **Ln (Line)**

- A : Area(C) from 21.
- B : Area(C) from 26.

28. **Eval(Evaluate Length)**

- C : Ln(C)
- L : 0.5



29. **Pt Center / Pt 1 to Pt 4 / Pt Inside**

- see definition image ->Group A

* Copy and paste '8_1 Minimal Surface Module' definition

** Link 'Group A' points to the matching points on module definition

< Side B >

30. **Item (List Item)**

- L : Shift(L) from 19.

- i : 0

31. **Item (List Item)**

- L : Shift(L) from 16.

- i : 0

32. **Loft**

- S : item(E) from 30. / item(E) from 31.

33. **Area(Brep Area)**

- B : Loft(L)

34. **Cull (Cull Pattern)**

- L : Shift(L) from 15.

- P : manage Boolean collection : true /false/false/false

35. **Cull (Cull Pattern)**

- L : Shift(L) from 15.

- P : manage Boolean collection : false/true/false/false

36. **Cull (Cull Pattern)**

- L : Shift(L) from 20.

- P : manage Boolean collection : false/true/false/false

37. **Cull (Cull Pattern)**

- L : Shift(L) from 20.

- P : manage Boolean collection : true/false/false/false

38. **Pt Inside**

- Eval(P) from 28.

39. **Pt Center / Pt 1 to Pt 4**

- see definition image ->Group B

* Copy and paste '8_1 Minimal Surface Module' definition

** Link 'Group B' points to the matching points on module definition

< Side C >

40. **Item (List Item)**

- L : Shift(L) from 19.

- i : 1

41. **Item (List Item)**

- L : Shift(L) from 16.

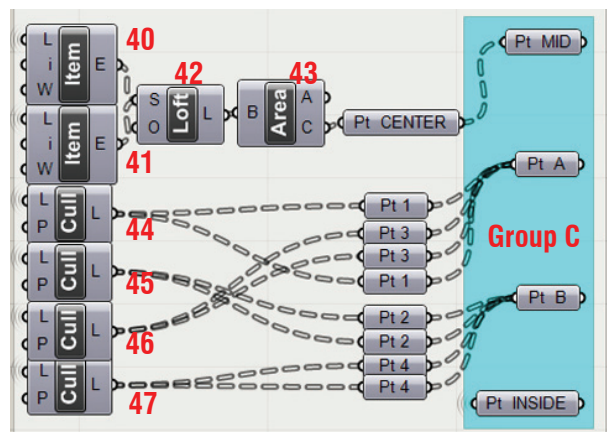
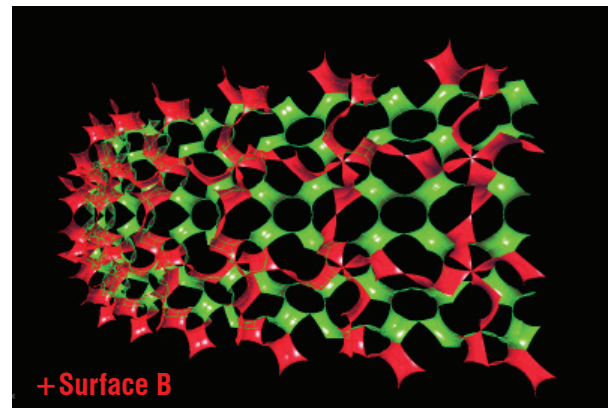
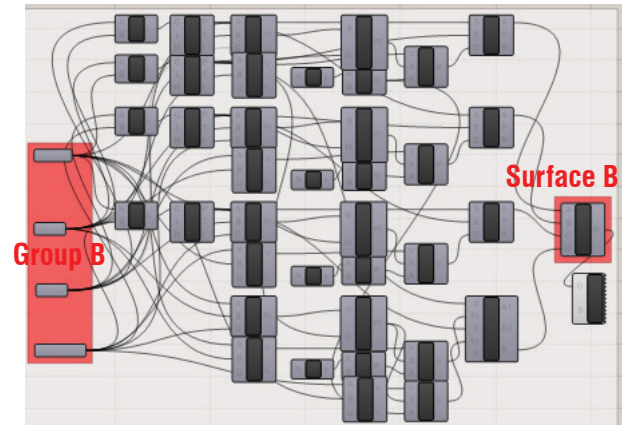
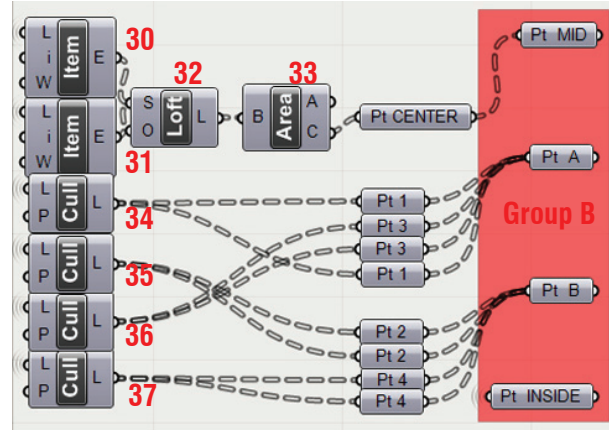
- i : 1

42. **Loft**

- S : item(E) from 40. / item(E) from 41.

43. **Area(Brep Area)**

- B : Loft(L)



44. **Cull (Cull Pattern)**

- L : Shift(L) from 15.
- P : manage Boolean collection : false/false/true/false

45. **Cull (Cull Pattern)**

- L : Shift(L) from 15.
- P : manage Boolean collection : false/true/false/false

46. **Cull (Cull Pattern)**

- L : Shift(L) from 20.
- P : manage Boolean collection : false/true/false/false

47. **Cull (Cull Pattern)**

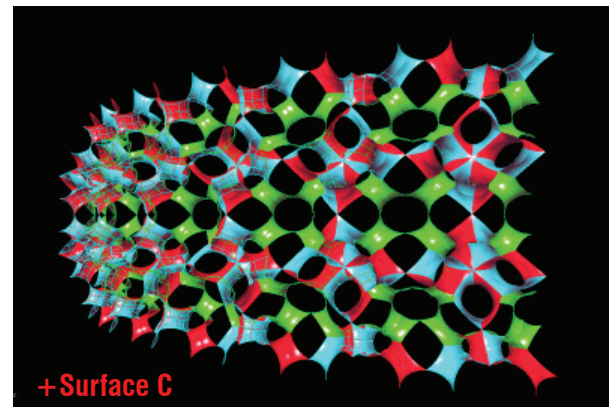
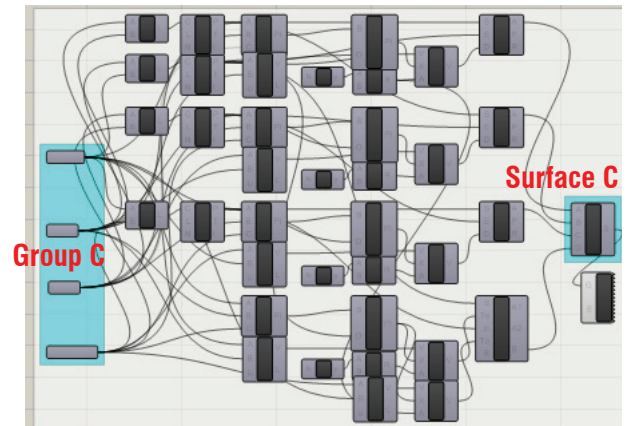
- L : Shift(L) from 20.
- P : manage Boolean collection : false/false/true/false

48. **Pt Inside**

- Eval(P) from 28.

49. **Pt Center / Pt 1 to Pt 4**

- see definition image -> Group C
- * Copy and paste '8_1 Minimal Surface Module' definition
- ** Link 'Group C' points to the matching points on module definition



< Side D >

50. **Item (List Item)**

- L : Shift(L) from 19.
- i : 2

51. **Item (List Item)**

- L : Shift(L) from 16.
- i : 2

52. **Loft**

- S : item(E) from 50. / item(E) from 51.

53. **Area(Brep Area)**

- B : Loft(L)

54. **Cull (Cull Pattern)**

- L : Shift(L) from 15.
- P : manage Boolean collection : false/false/ true /false

55. **Cull (Cull Pattern)**

- L : Shift(L) from 15.
- P : manage Boolean collection : false/false/false/true

56. **Cull (Cull Pattern)**

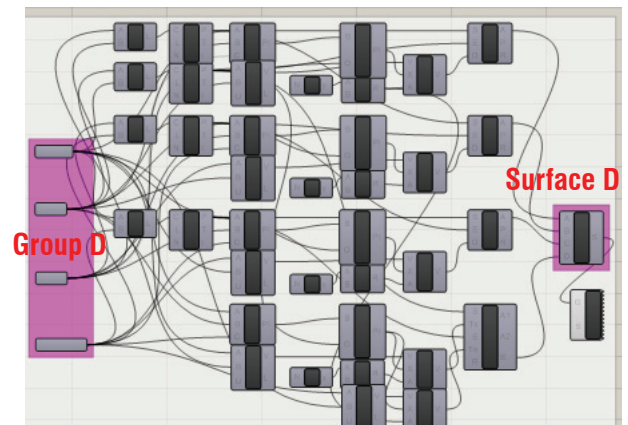
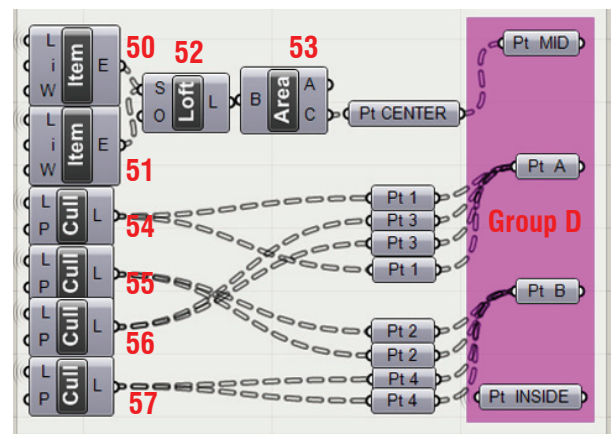
- L : Shift(L) from 20.
- P : manage Boolean collection : false/false/false/true

57. **Cull (Cull Pattern)**

- L : Shift(L) from 20.
- P : manage Boolean collection : false/false/true/false

58. **Pt Inside**

- Eval(P) from 28.

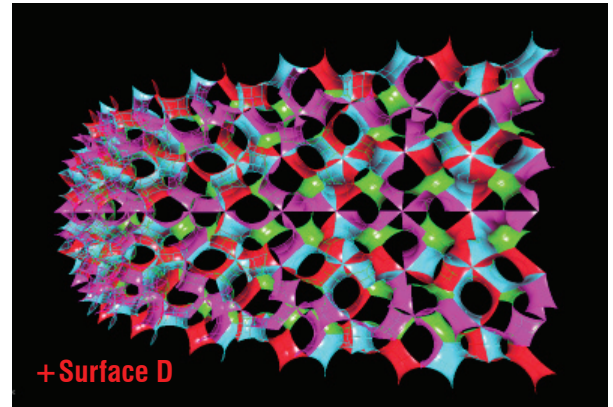


59. **Pt Center / Pt 1 to Pt 4**

- see definition image ->Group D

* Copy and paste '8_1 Minimal Surface Module' definition

** Link 'Group B' points to the matching points on module definition



< Side E >

60. **Item (List Item)**

- L : Shift(L) from 19.

- i : 3

61. **Item (List Item)**

- L : Shift(L) from 16.

- i : 3

62. **Loft**

- S : item(E) from 60. / item(E) from 61.

63. **Area(Brep Area)**

- B : Loft(L)

64. **Cull (Cull Pattern)**

- L : Shift(L) from 15.

- P : manage Boolean collection : true/false/false/false

65. **Cull (Cull Pattern)**

- L : Shift(L) from 15.

- P : manage Boolean collection : false/false/false/true

66. **Cull (Cull Pattern)**

- L : Shift(L) from 20.

- P : manage Boolean collection : false/false/false/true

67. **Cull (Cull Pattern)**

- L : Shift(L) from 20.

- P : manage Boolean collection : true/false/false/false

68. **Pt Inside**

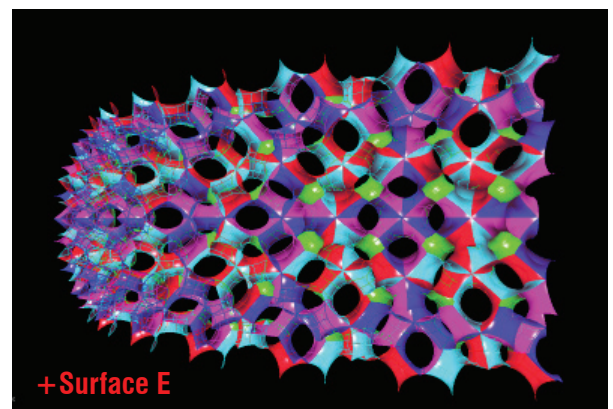
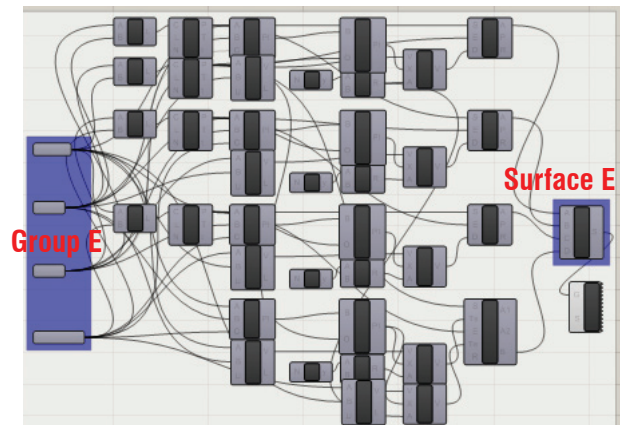
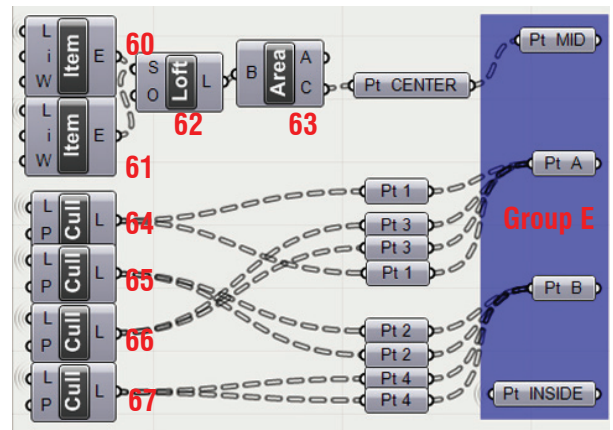
- Eval(P) from 28.

69. **Pt Center / Pt 1 to Pt 4**

- see definition image ->Group E

* Copy and paste '8_1 Minimal Surface Module' definition

** Link 'Group B' points to the matching points on module definition



< Side F >

70. **Cull (Cull Pattern)**

- L : Shift(L) from 15.
- P : manage Boolean collection : true/false/false/false

71. **Cull (Cull Pattern)**

- L : Shift(L) from 15.
- P : manage Boolean collection : false/true/false/false

72. **Cull (Cull Pattern)**

- L : Shift(L) from 15.
- P : manage Boolean collection : false/false/true/false

73. **Cull (Cull Pattern)**

- L : Shift(L) from 15.
- P : manage Boolean collection : false/false/false/true

74. **Pt Center**

- Area(C) from 26.

75. **Pt Inside**

- Eval(P) from 28.

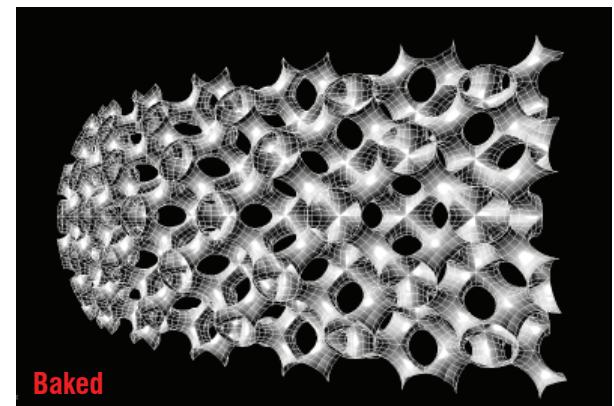
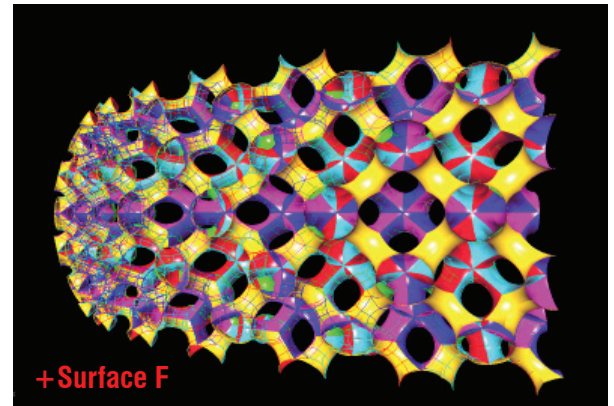
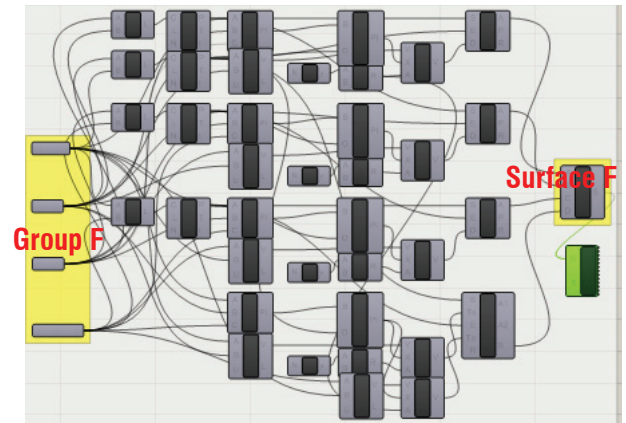
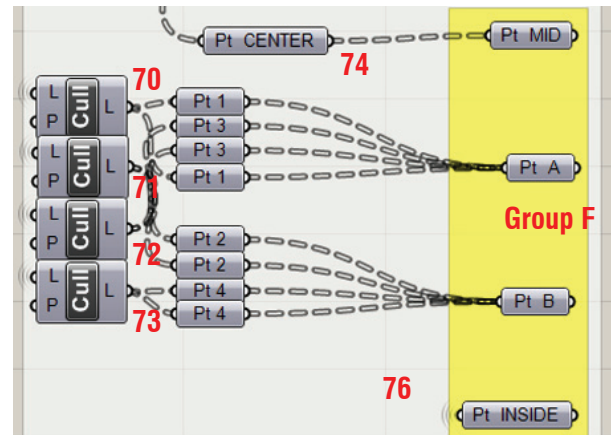
76. **Pt 1 to Pt 4**

- see definition image -> Group F

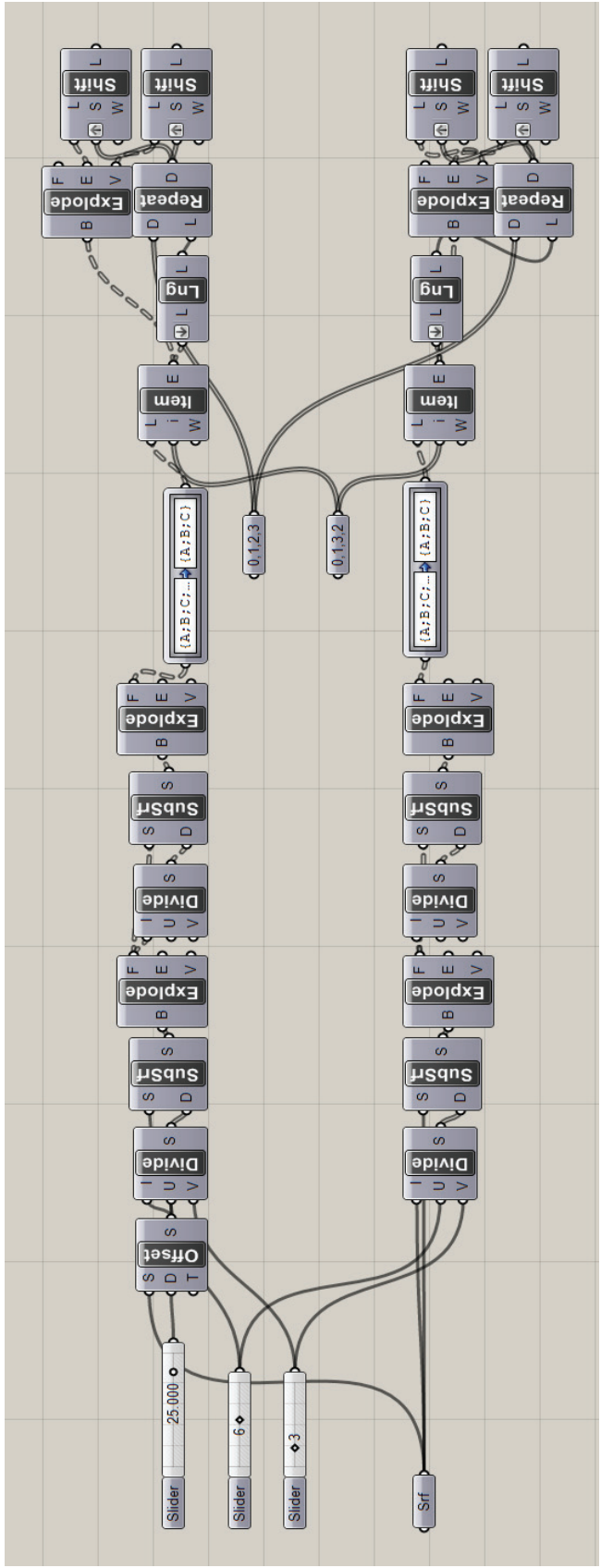
* Copy and paste '8_1 Minimal Surface Module' definition

** Link 'Group B' points to the matching points on module definition

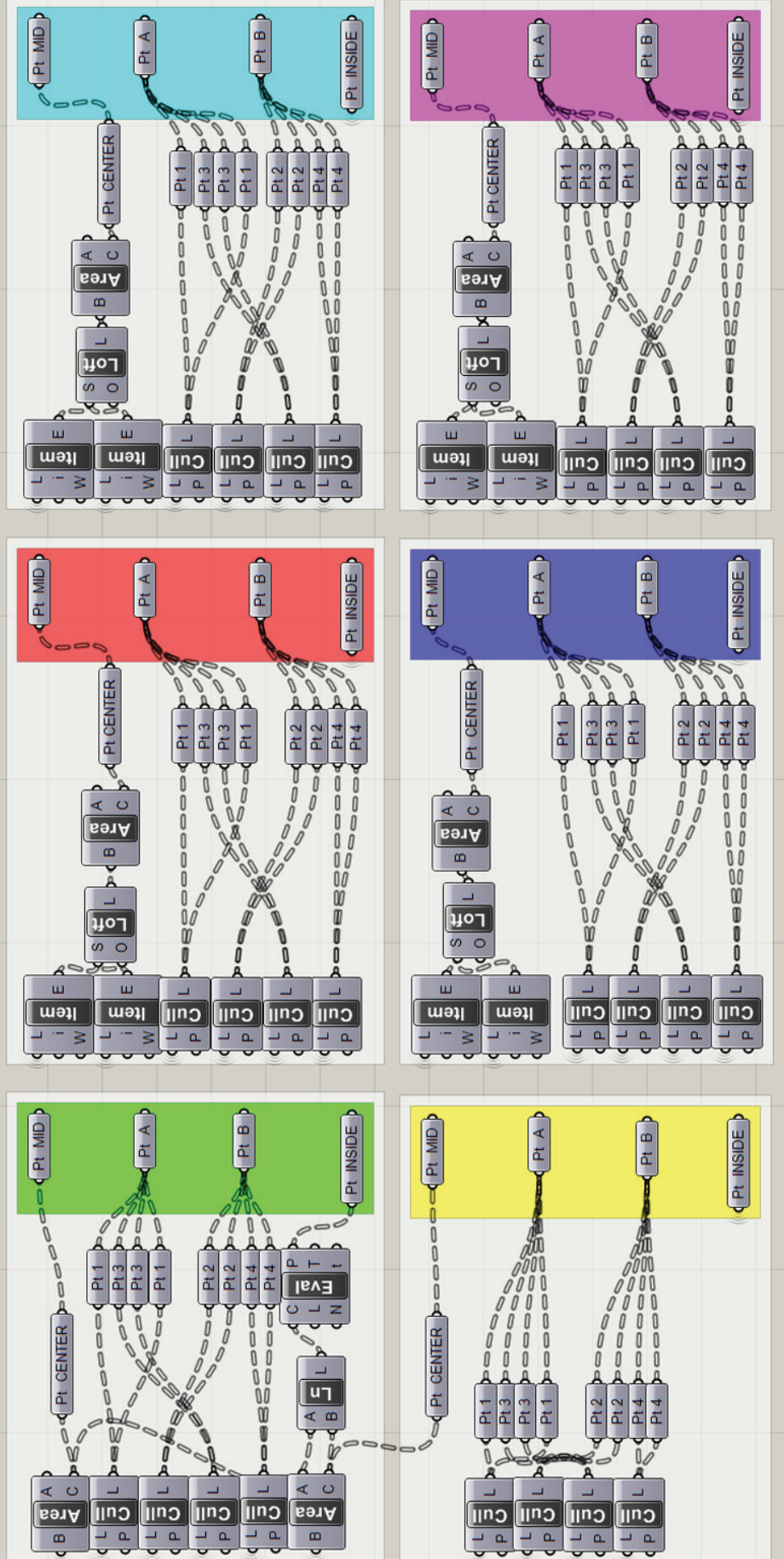
- The End



Appendix
- Definition map 1



Appendix
- Definition map 2



Appendix

- Definition map 3
- Use the copy of 8_1 Minimal Surface Module Definition

