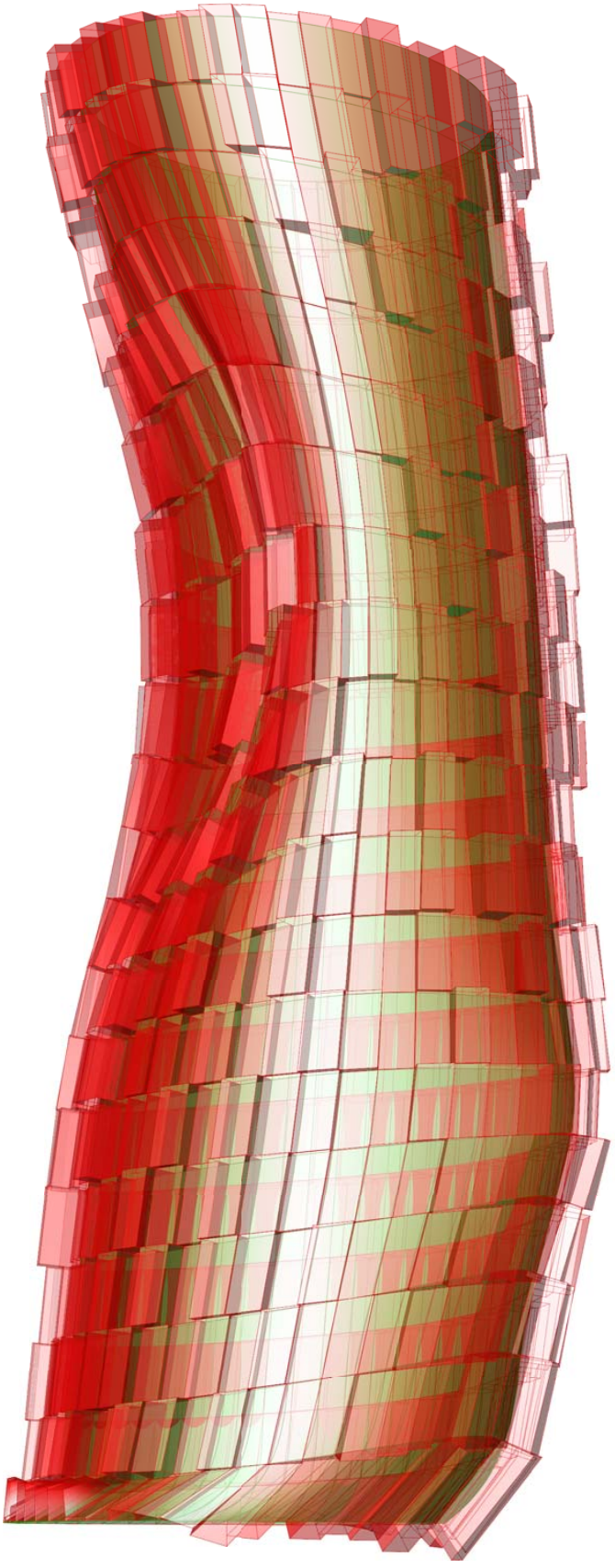
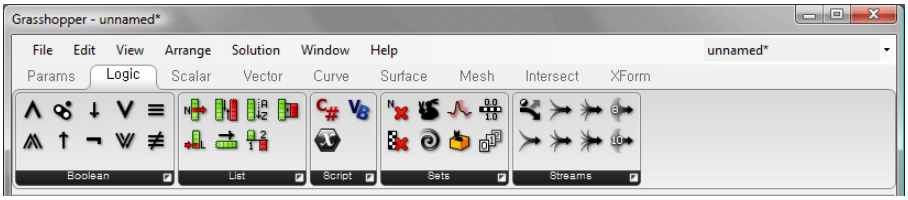
GRASSHOPPER WORKSHOP

WOO JAE SUNG · WS92@CORNELL.EDU · WWW.WOOJSUNG.COM



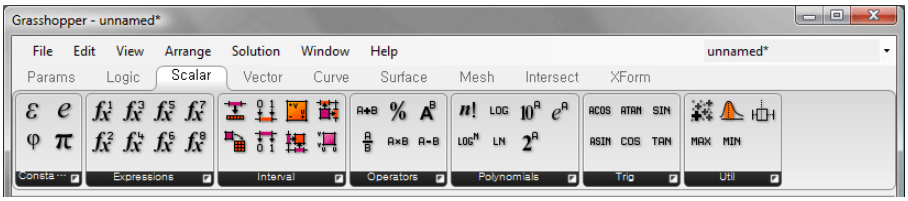
+ **Parameter Tab**

  Bridge between Rhino/user input and GH objects



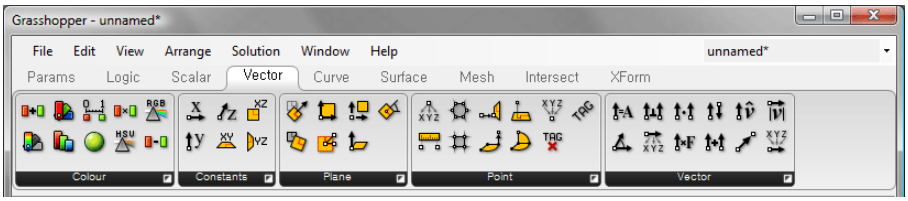
+ **Logic Tab**

  Data[geometries/numeric values] handling



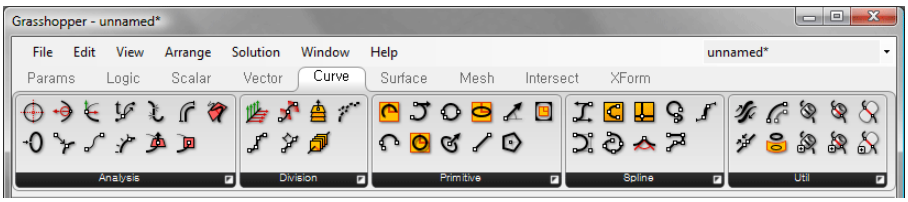
+ **Scalar Tab**

  Scalar data generating/processing



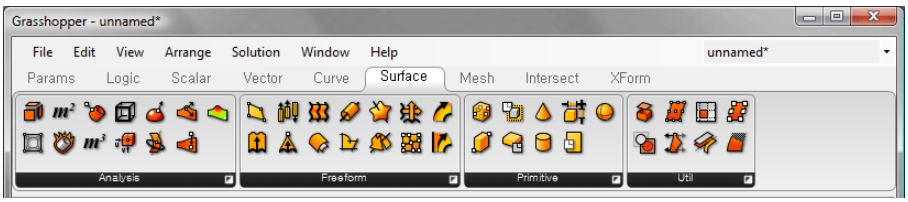
+ **Vector Tab**

  Vector data generating/processing



+ **Curve Tab**

  Curve entities generating/modifying/evaluating



+ **Surface Tab**

  Surface entities generating/modifying/evaluating

+ **Mesh Tab**

  Mesh entities generating/modifying/evaluating

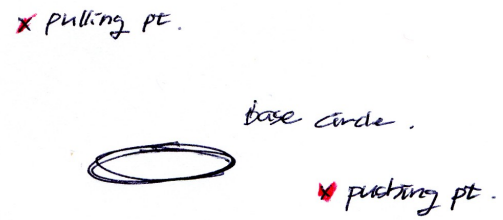
+ **Intersection Tab**

  Generating intersections between objects

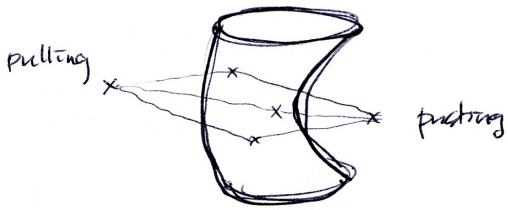
+ **Transform/deform Tab**

  Transform or deform objects

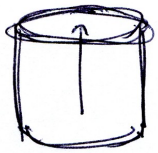
+ RHINO INPUT (BASE CIRCLE + 2 POINTS)



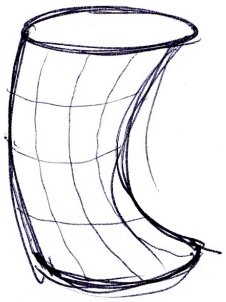
+ DEFORM GEOMETRY BY VECTORS



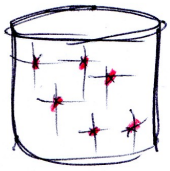
+ INITIAL SURFACE (BASE GEOMETRY)



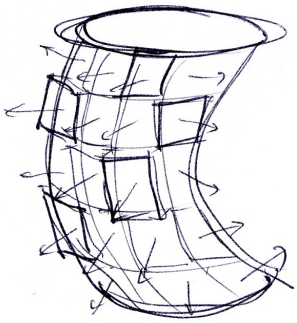
+ SUBDIVIDE SURFACE



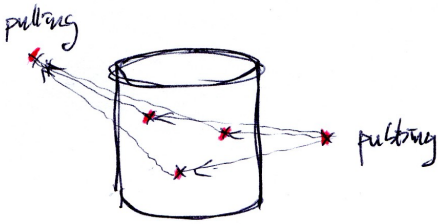
+ GET SURFACE UV POINTS

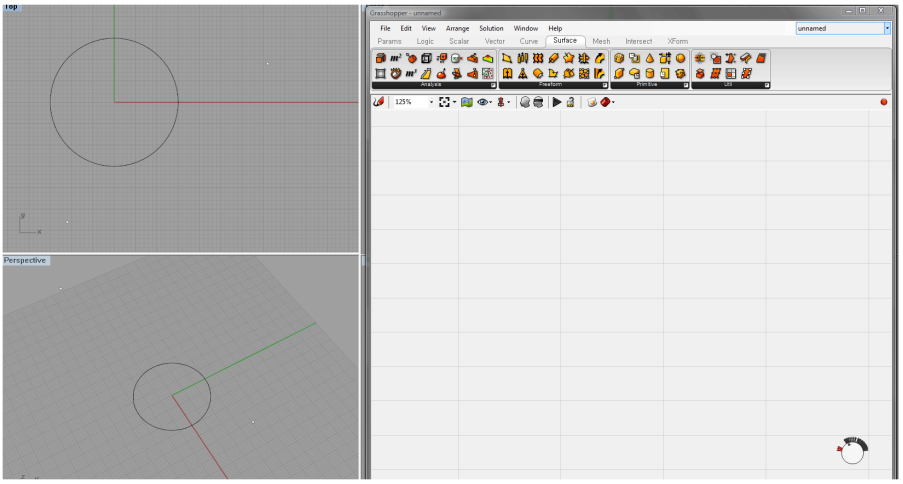


+ EXTRUDE (RANDOM HEIGHTS)

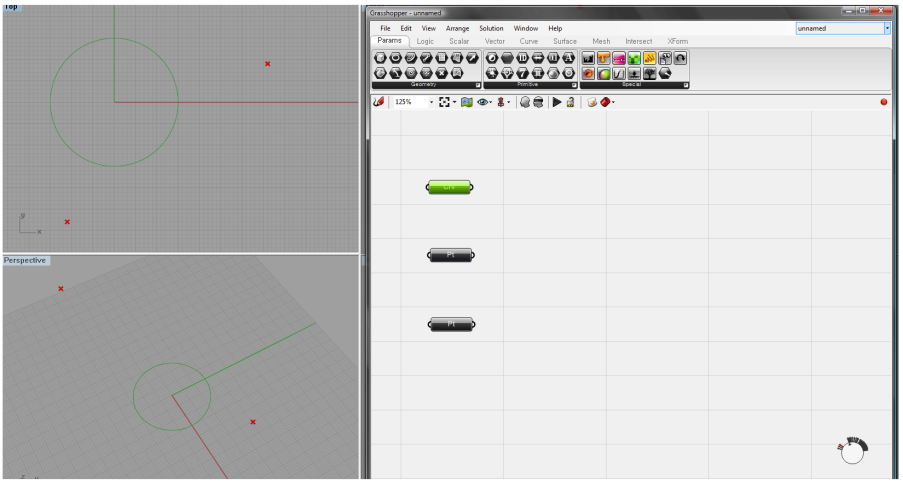


+ GET PULLING AND PUSHING VECTORS

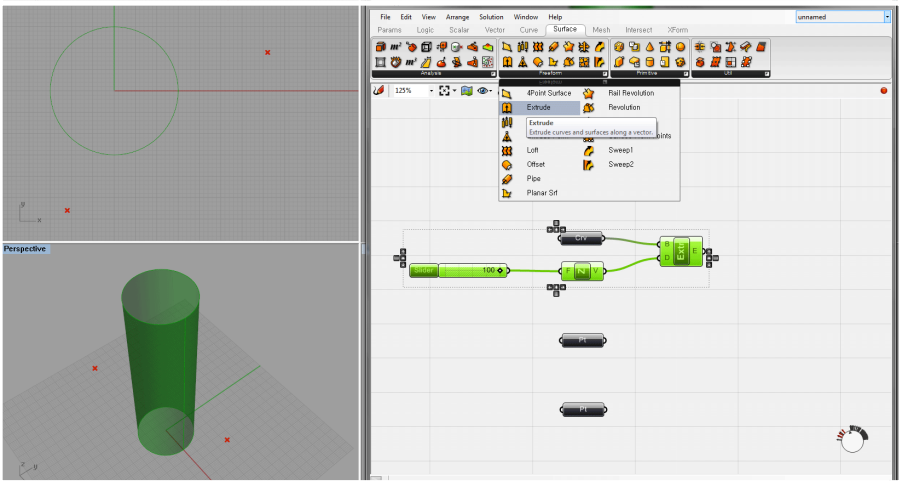




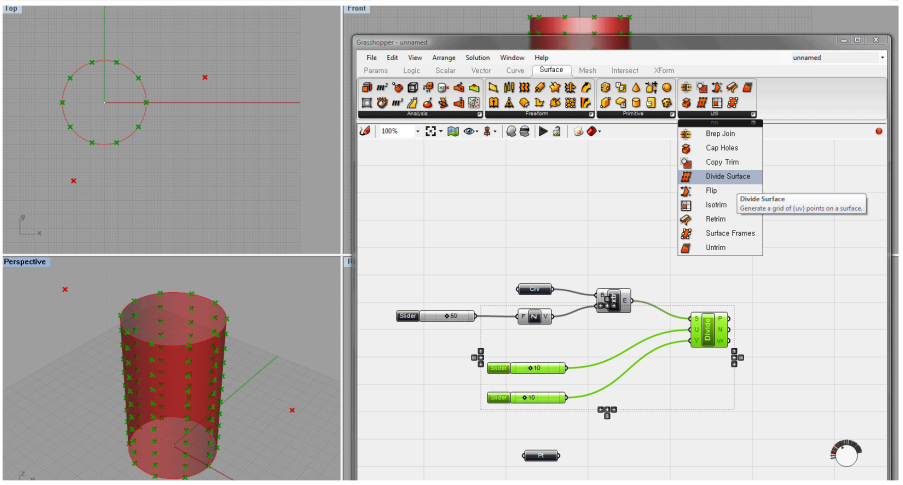
+ 1 BASE CIRCLE / 1 PULLING POINT / 1 PUSHING POINT



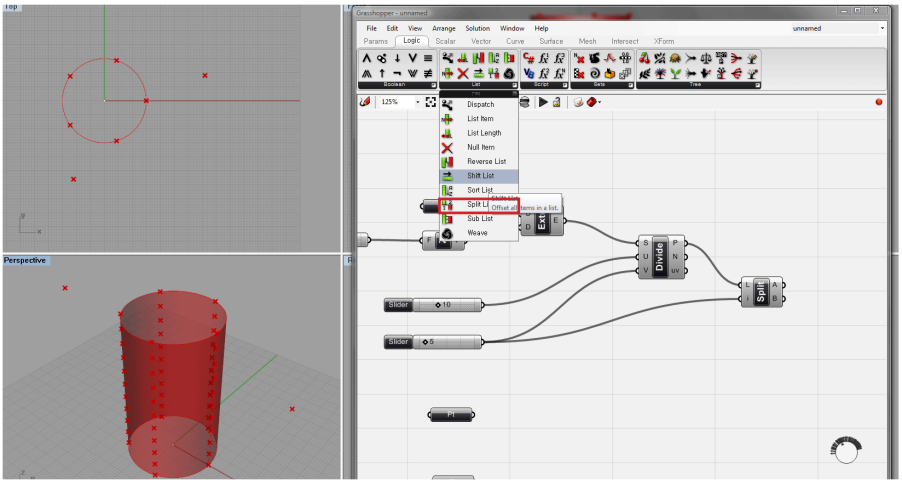
+ GH PARAMETERS



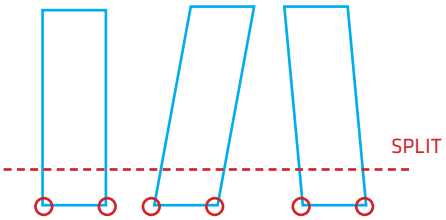
+ EXTRUDE ALONG Z VECTOR

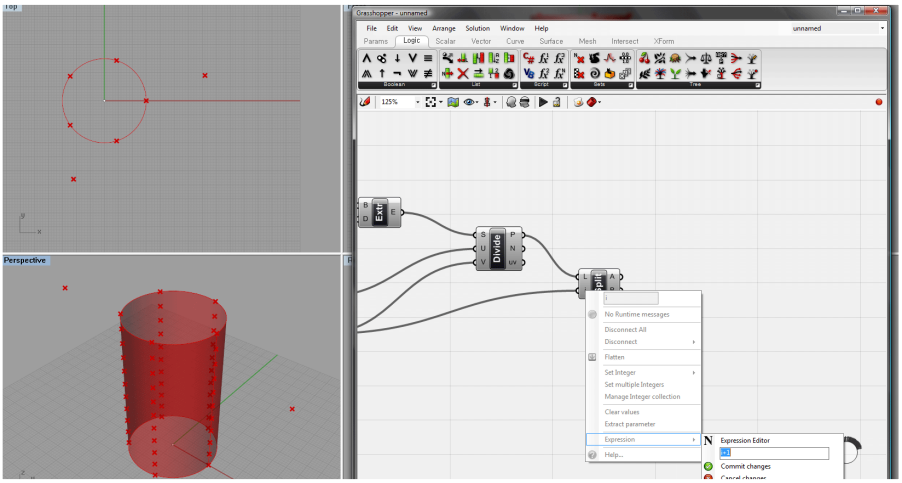


+ DIVIDE SURFACE

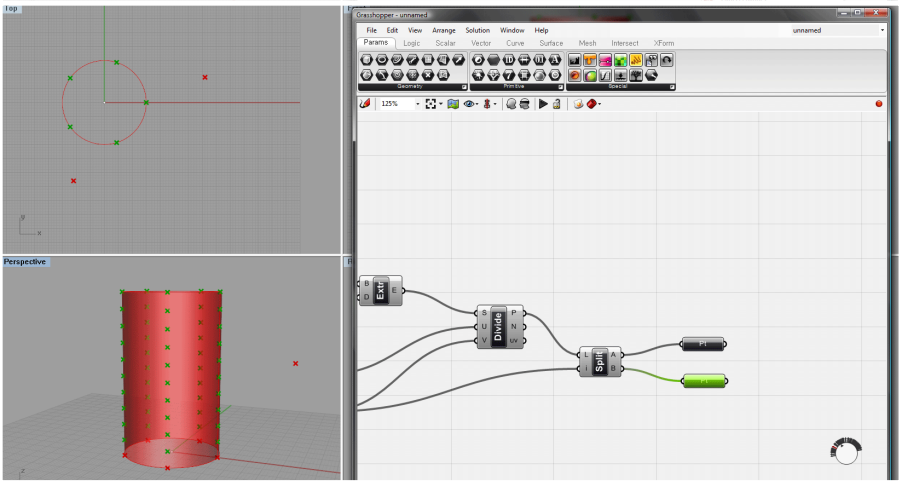


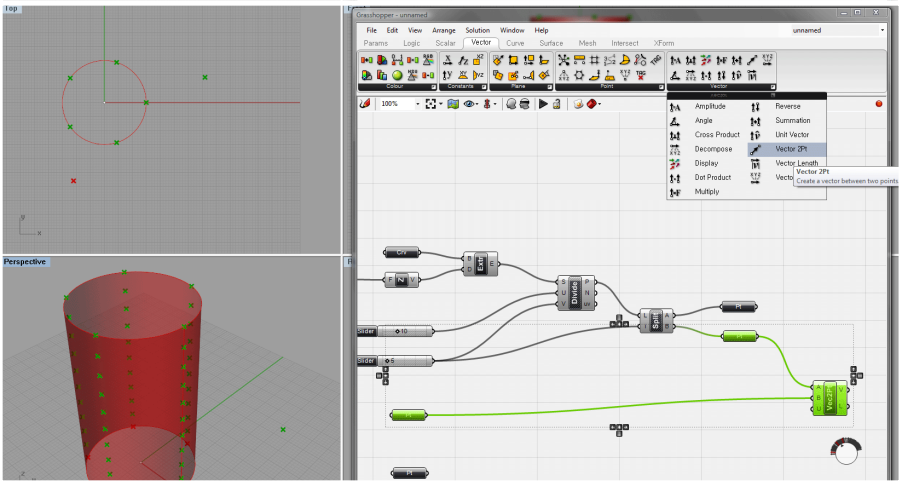
- SPLIT LIST
- BUILDING BASE WILL NOT MOVE



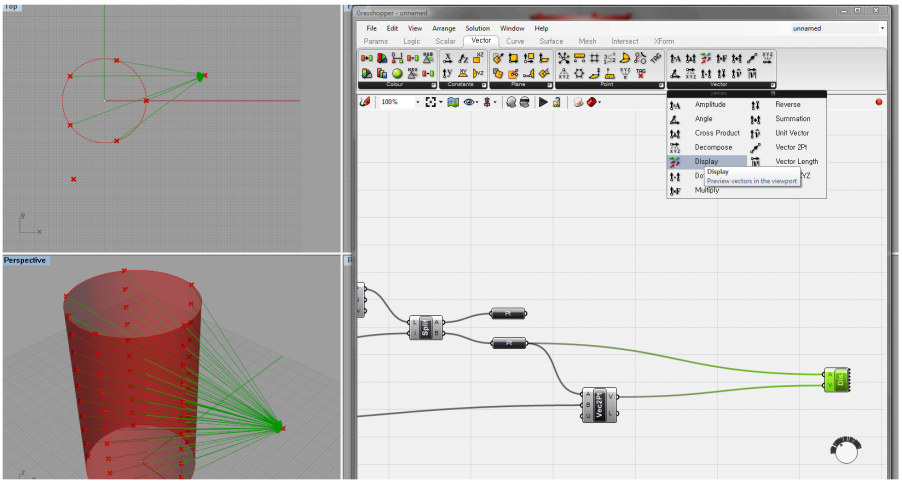


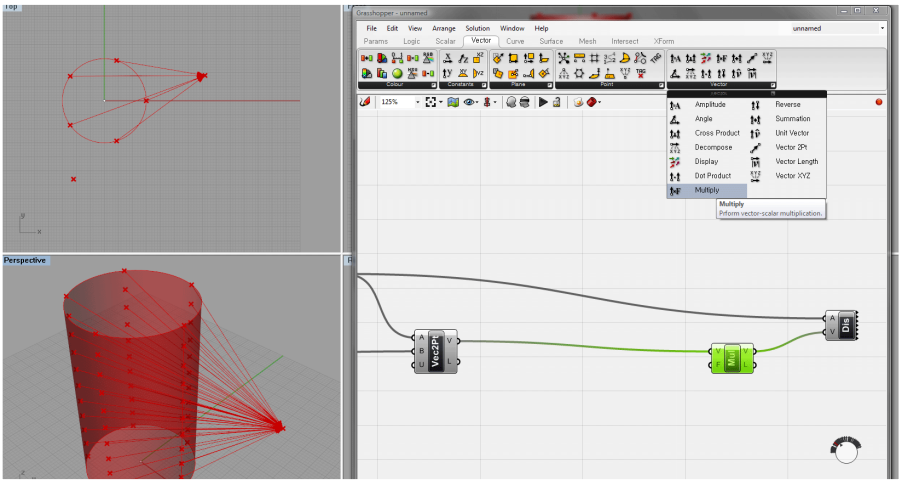
- SPLIT AT i+1

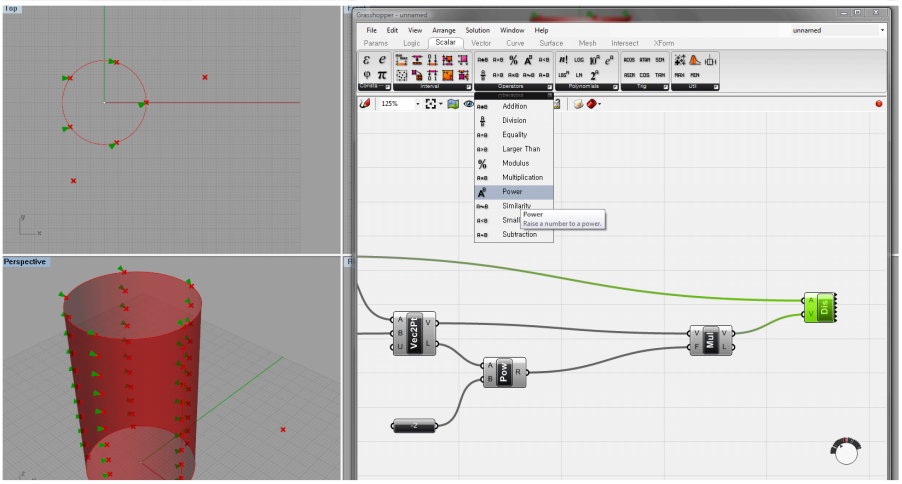


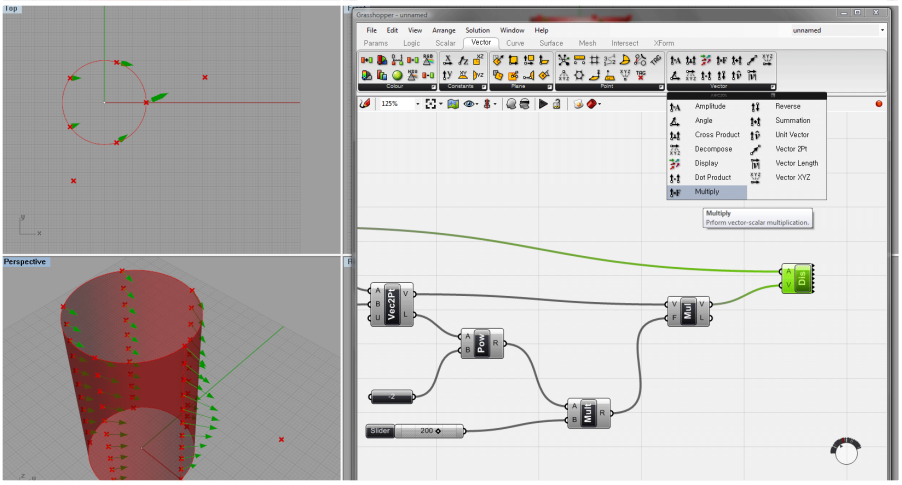


- GET PULLING & PUSHING VECTORS

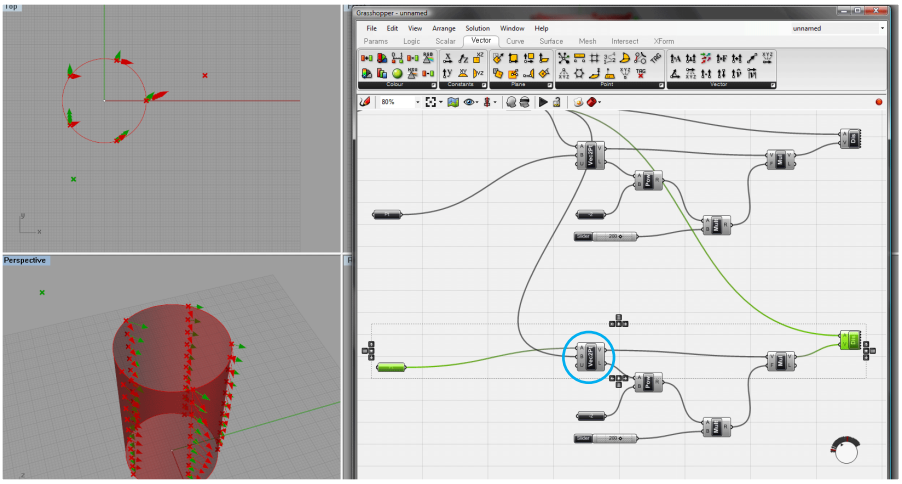




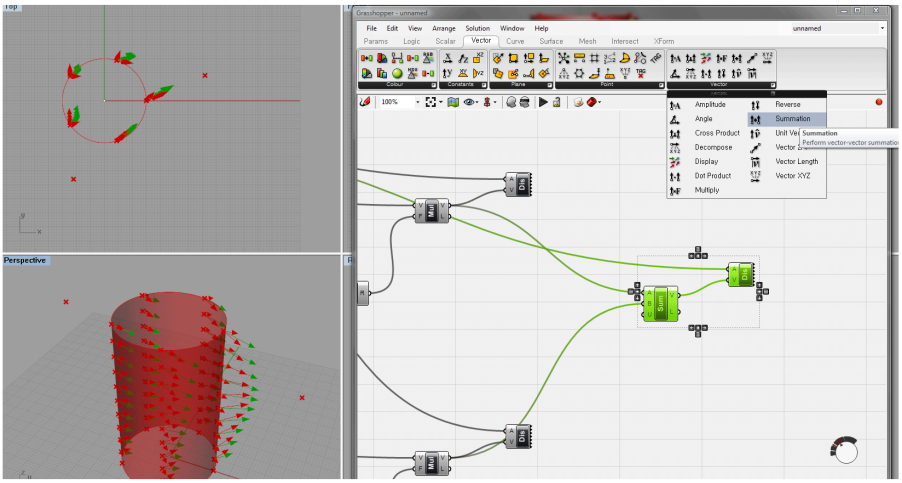




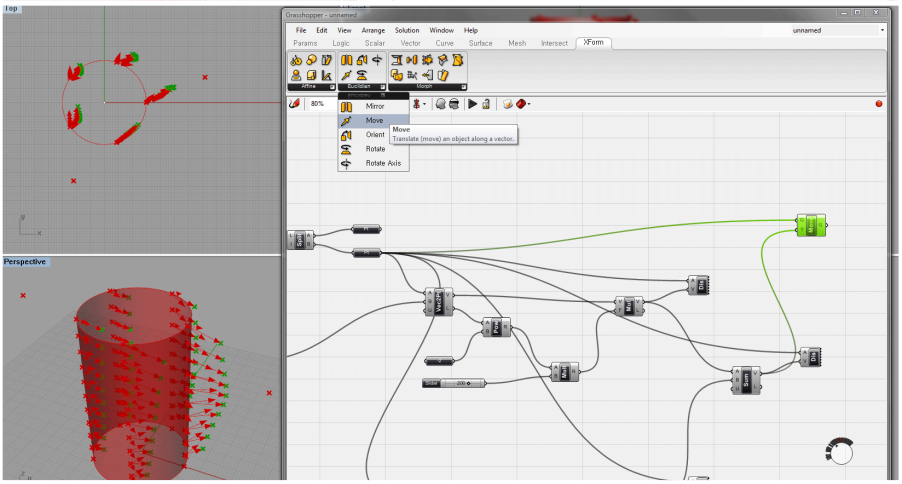
- **RESCALE VECTOR INTENSITY BY POWER AND MULTIPLY**



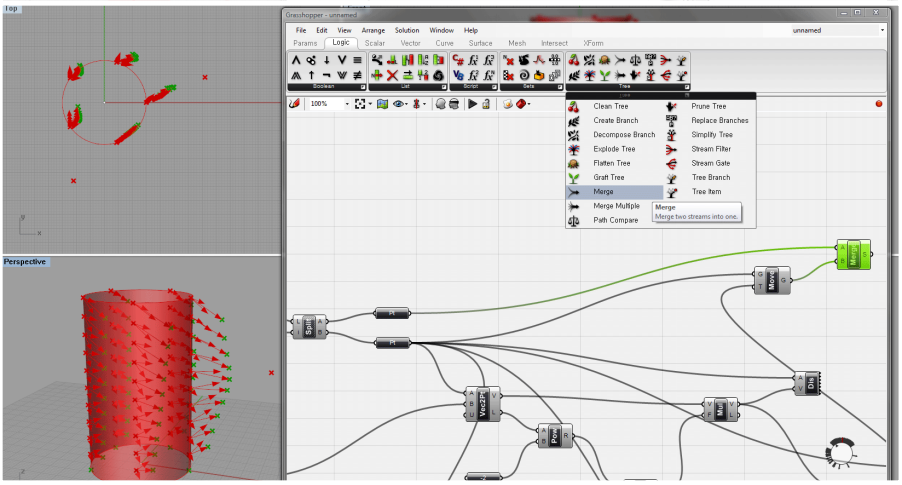
- NOTE OPPOSITE POINT CONNECTION FOR PUSHING VECTORS



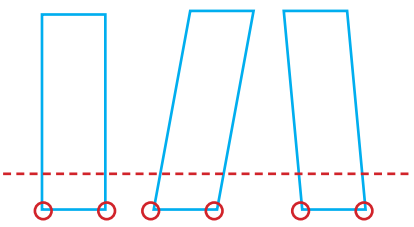
- SUM PULLING AND PUSHING VECTORS

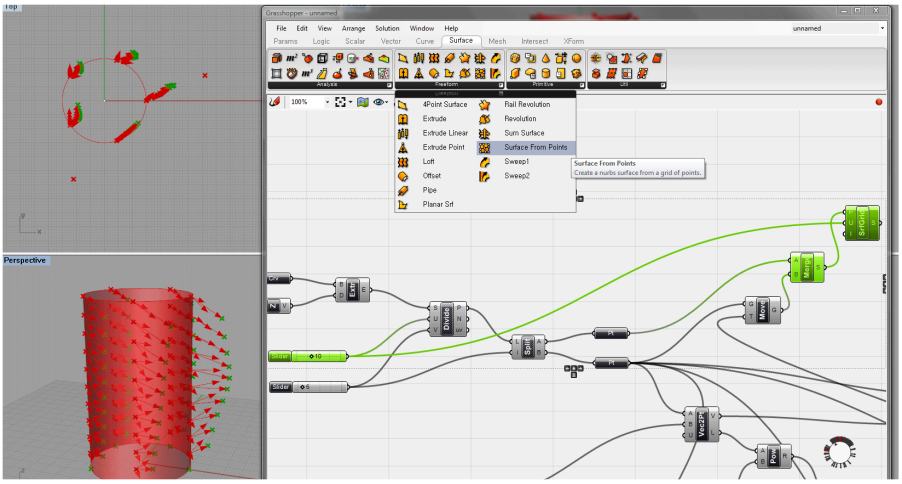


- MOVE POINT GRID BY VECTORS

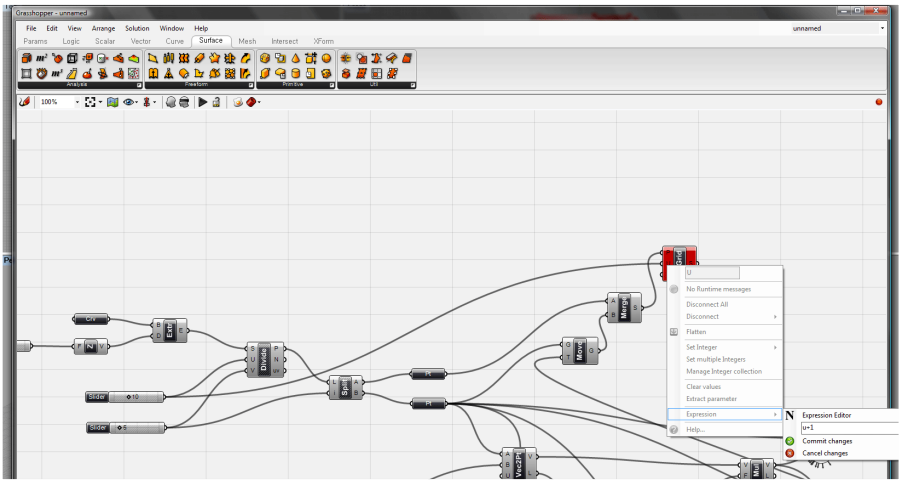


- MERGE

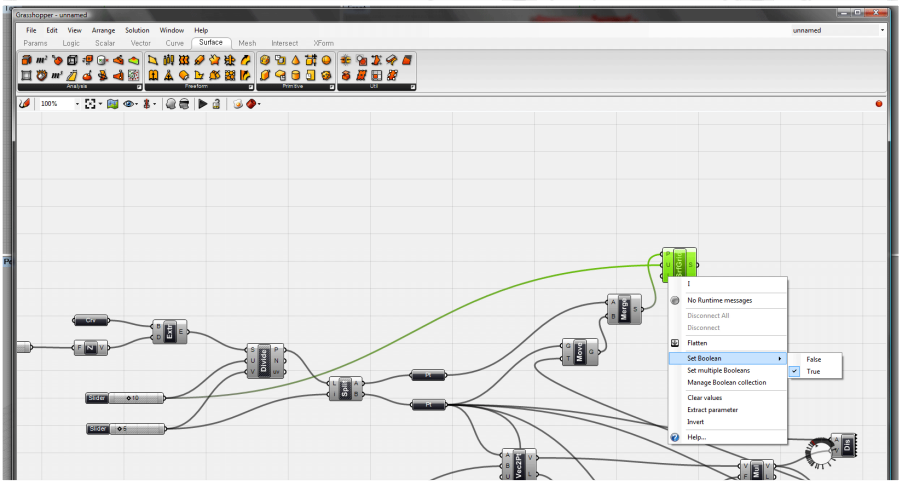




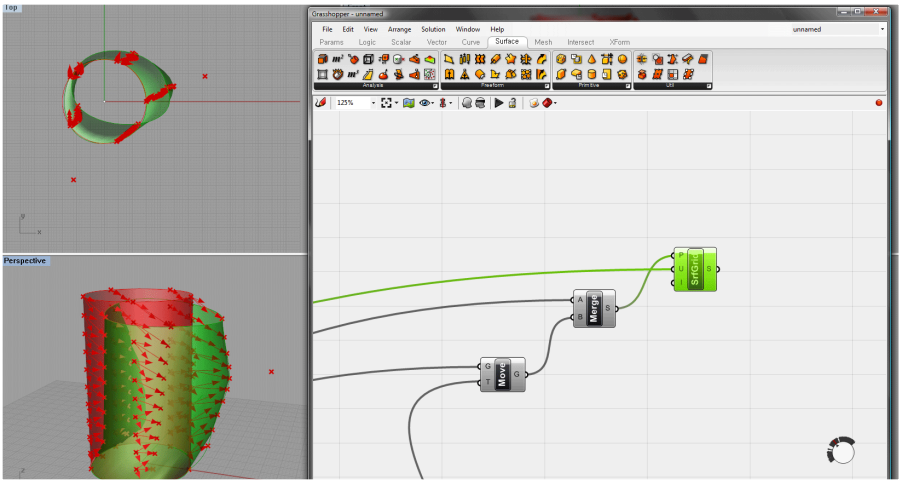
- MAKE SURFACE OUT OF POINT GRID



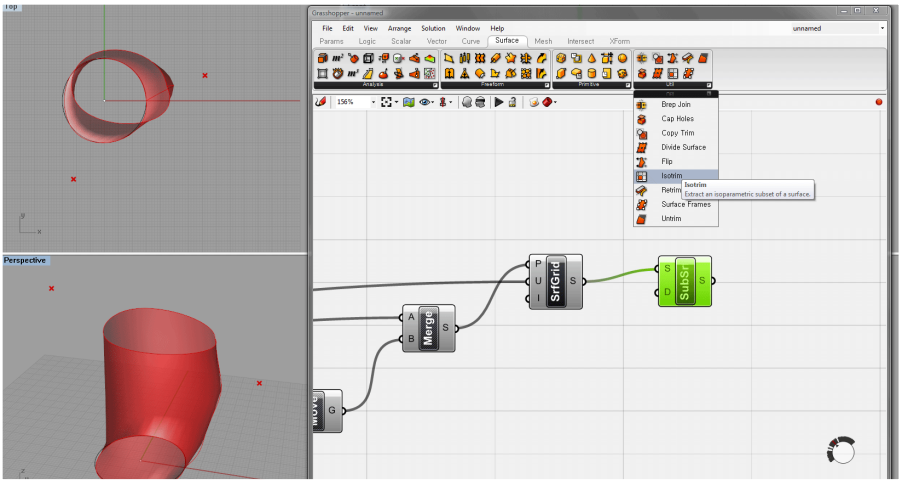
- SET U AS ‘U+1’



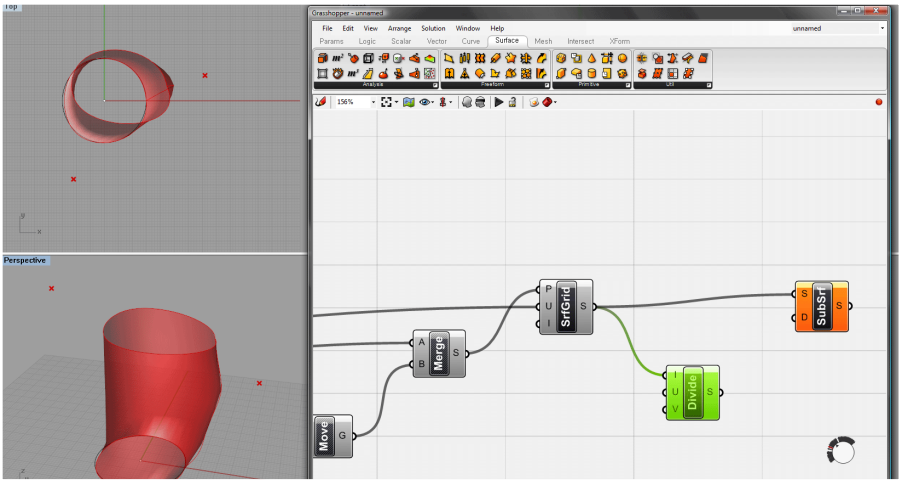
- SET i AS TRUE



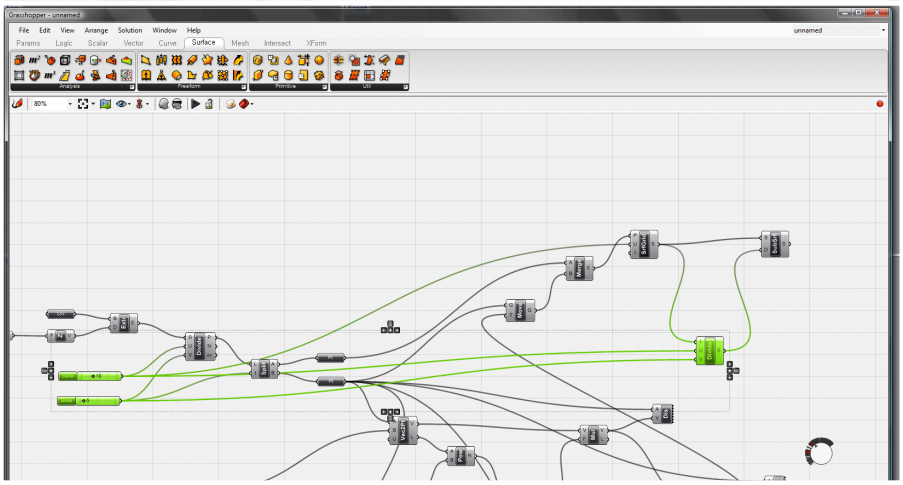
- BASE GEOMETRY TRANSFORMED

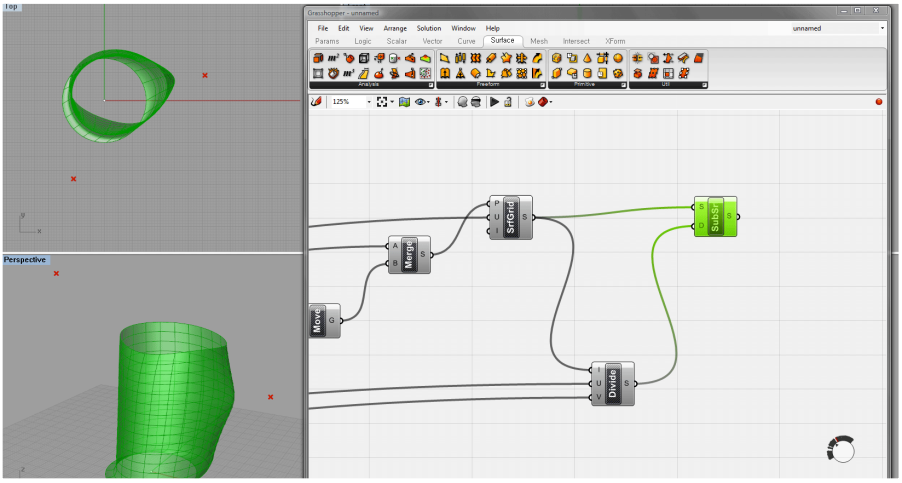


+ SUBDIVIDE SURFACE

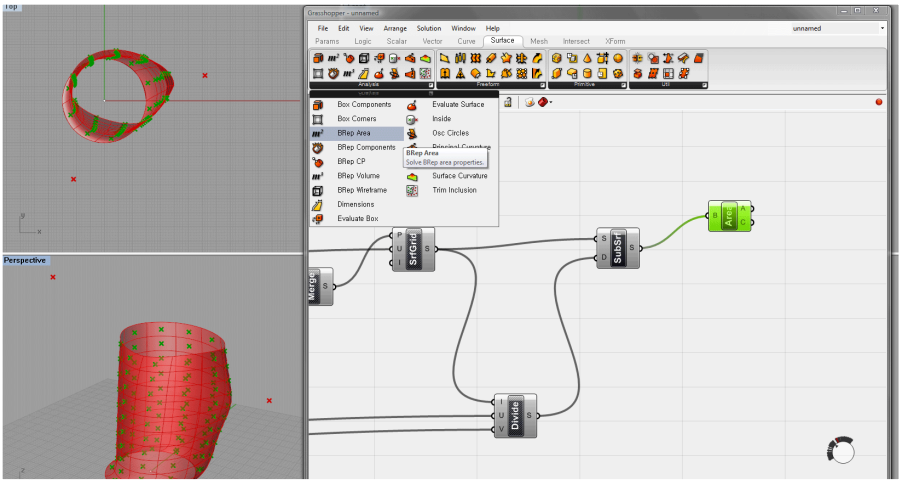


- DIVIDE INTERVAL
- SURFACES ARE UNDERSTOOD AS 2 DIMENSIONAL DOMAIN

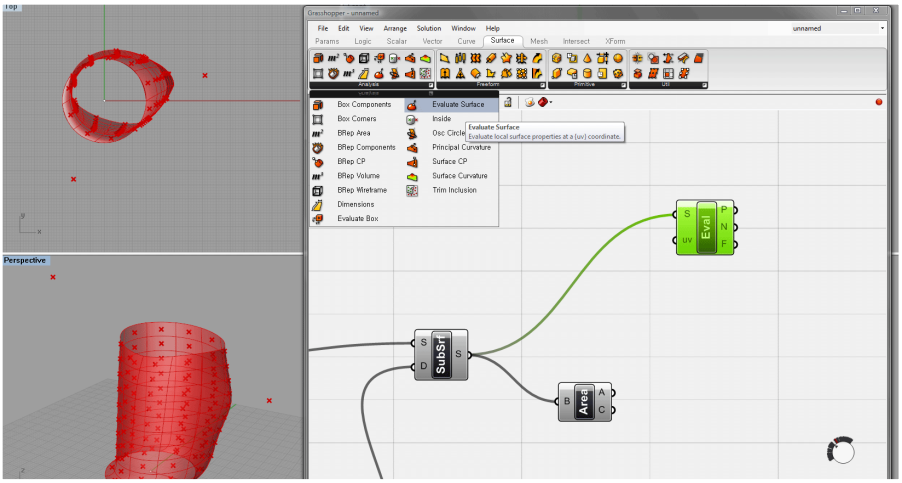




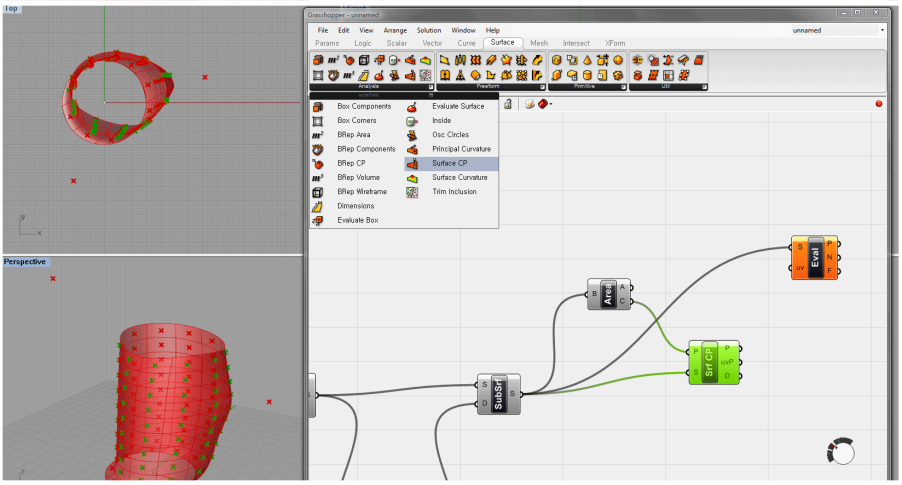
- ISOTRIM SURFACE



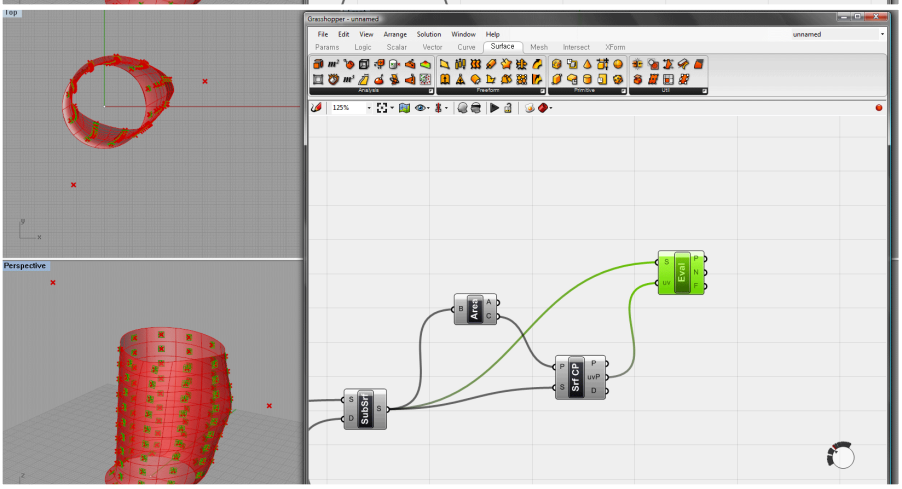
- GET CENTROID OF EACH SUBSURFACE

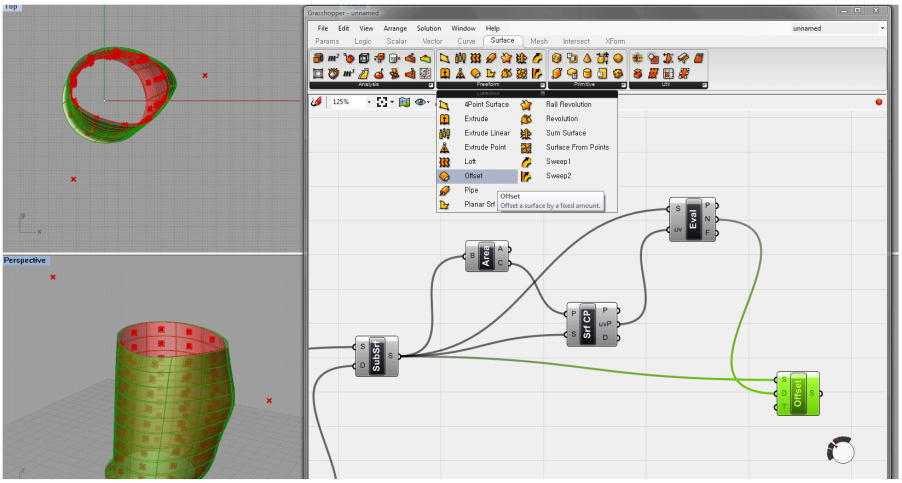


- GET NORMAL VECTORS BY EVALUATION SURFACE

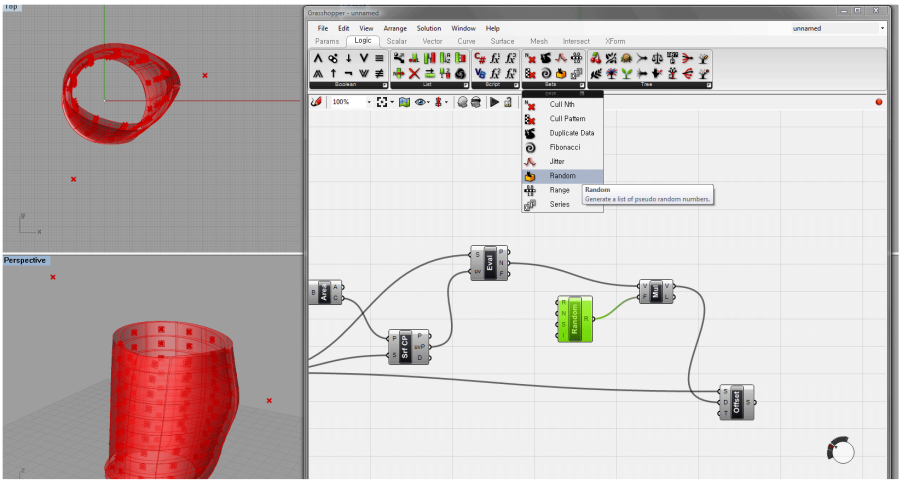


- GET UV POINTS BY ‘CLOSEST POINT ON SURFACE” OBJECT

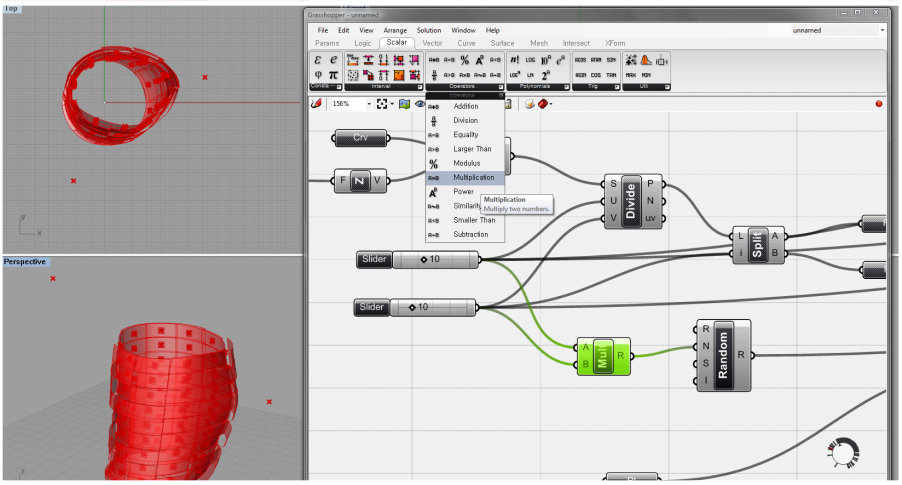




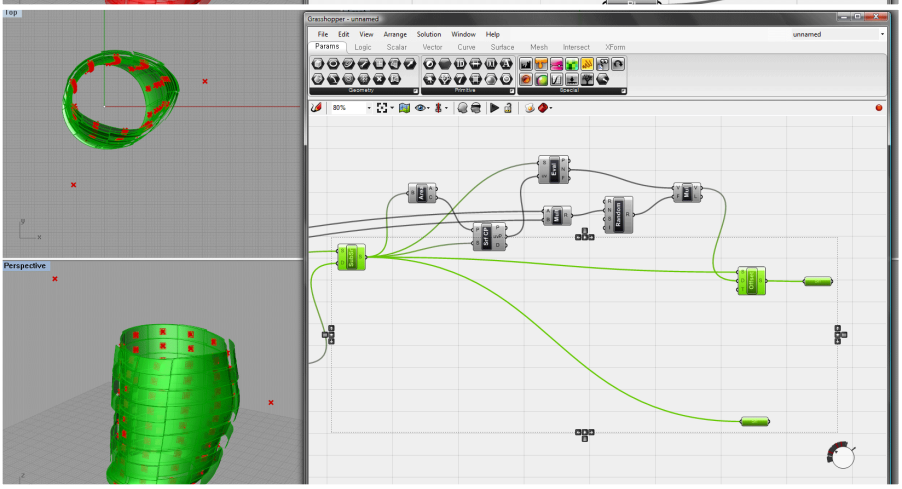
- OFFSET SURFACE



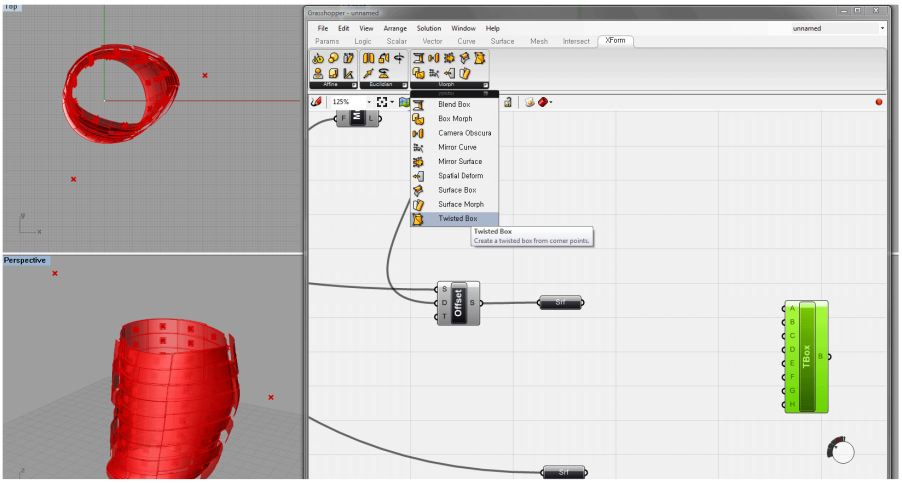
+ MULTIPLY OFFSET HEIGHT WITH RANDOM NUMBERS



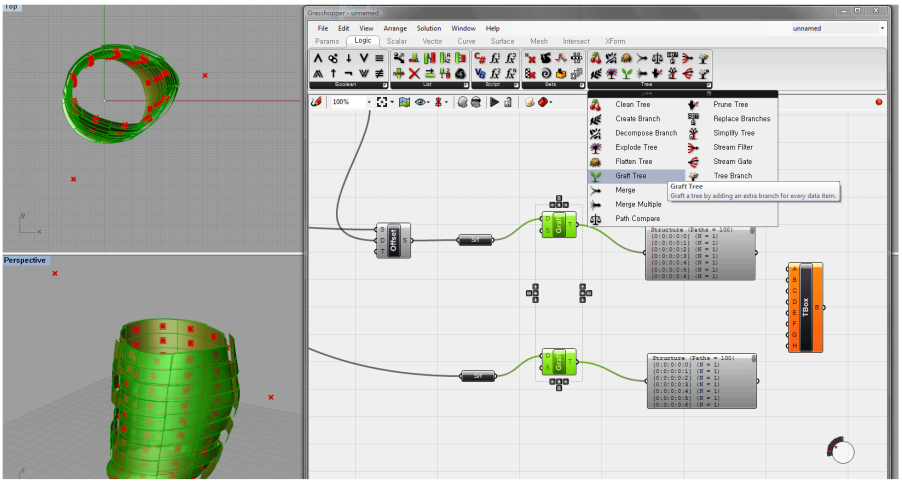
- GET TOTAL NUMBER OF RANDOM NUMBERS BY U/V SLIDERS



+ TWO SETS OF SUBDIVIDED SURFACES

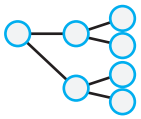


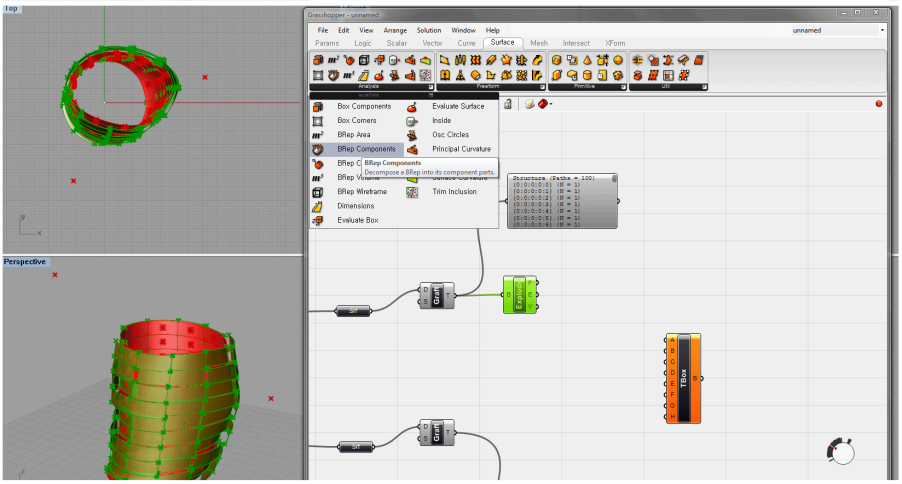
+ MAKE LOFT BOXES BETWEEN TWO SETS OF SURFACES



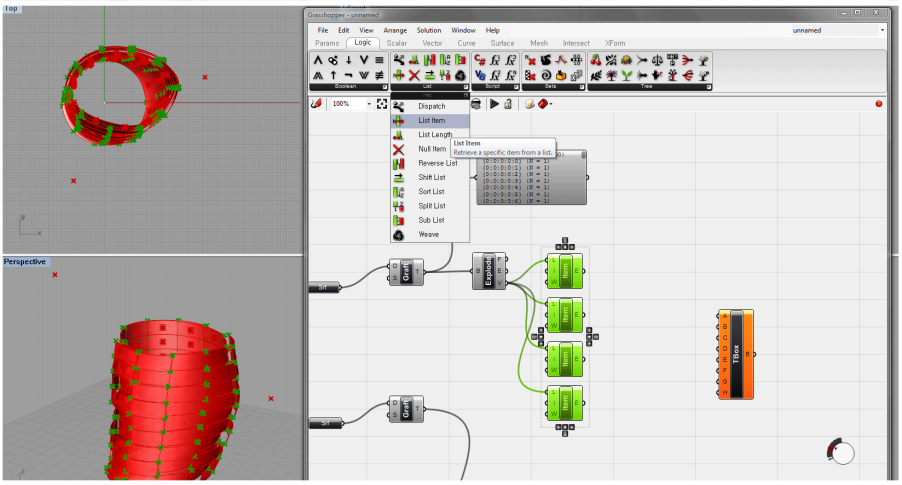
- STRUCTURE OF SURFACE SET (DATA TREE)
- 1 DIMENSIONAL

- MULTI DIMENSIONAL

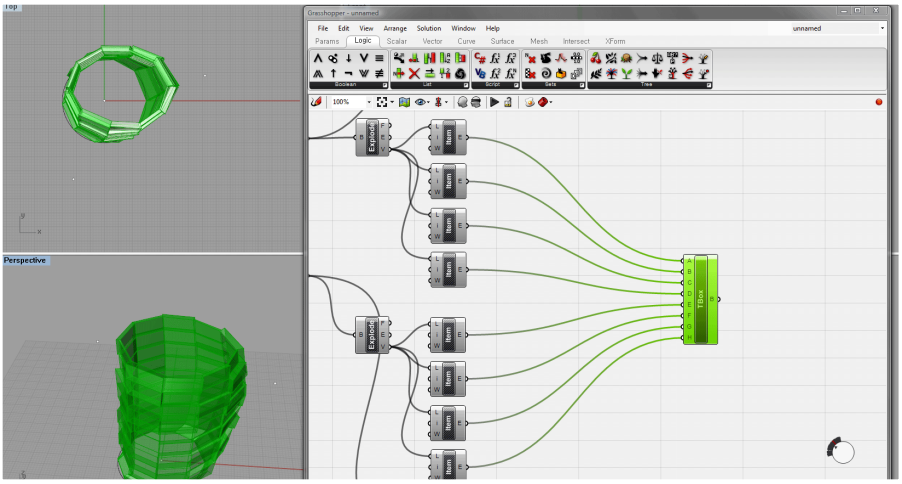




- GRAFT



- EXPLODE SUBSURFACES TO GET VERTICES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Perspective
Grasshopper - unnamed
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Params Logic Scalar Vector Curve Surface Mesh Intersect XForm
Explode
Num
Flatten