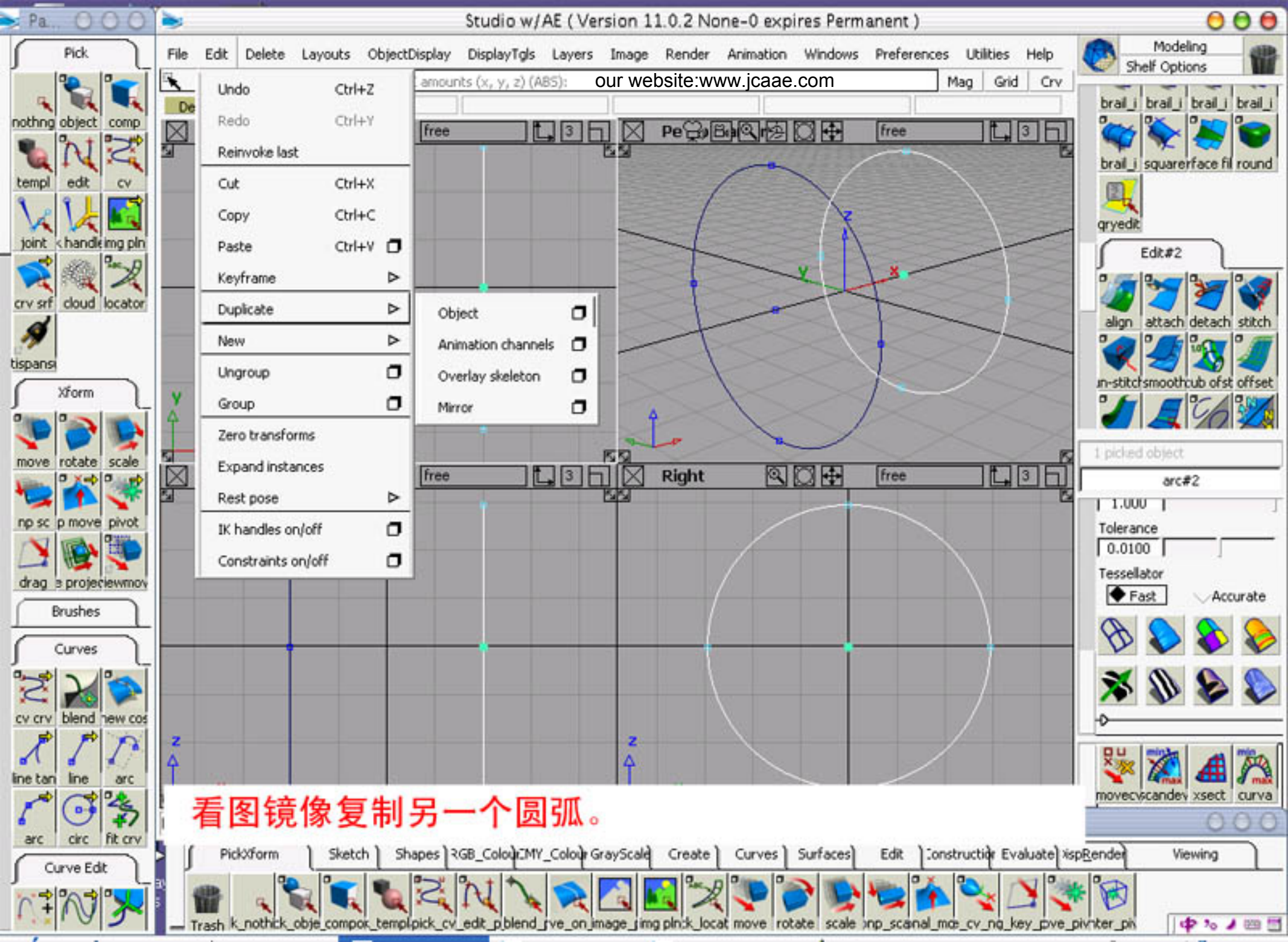


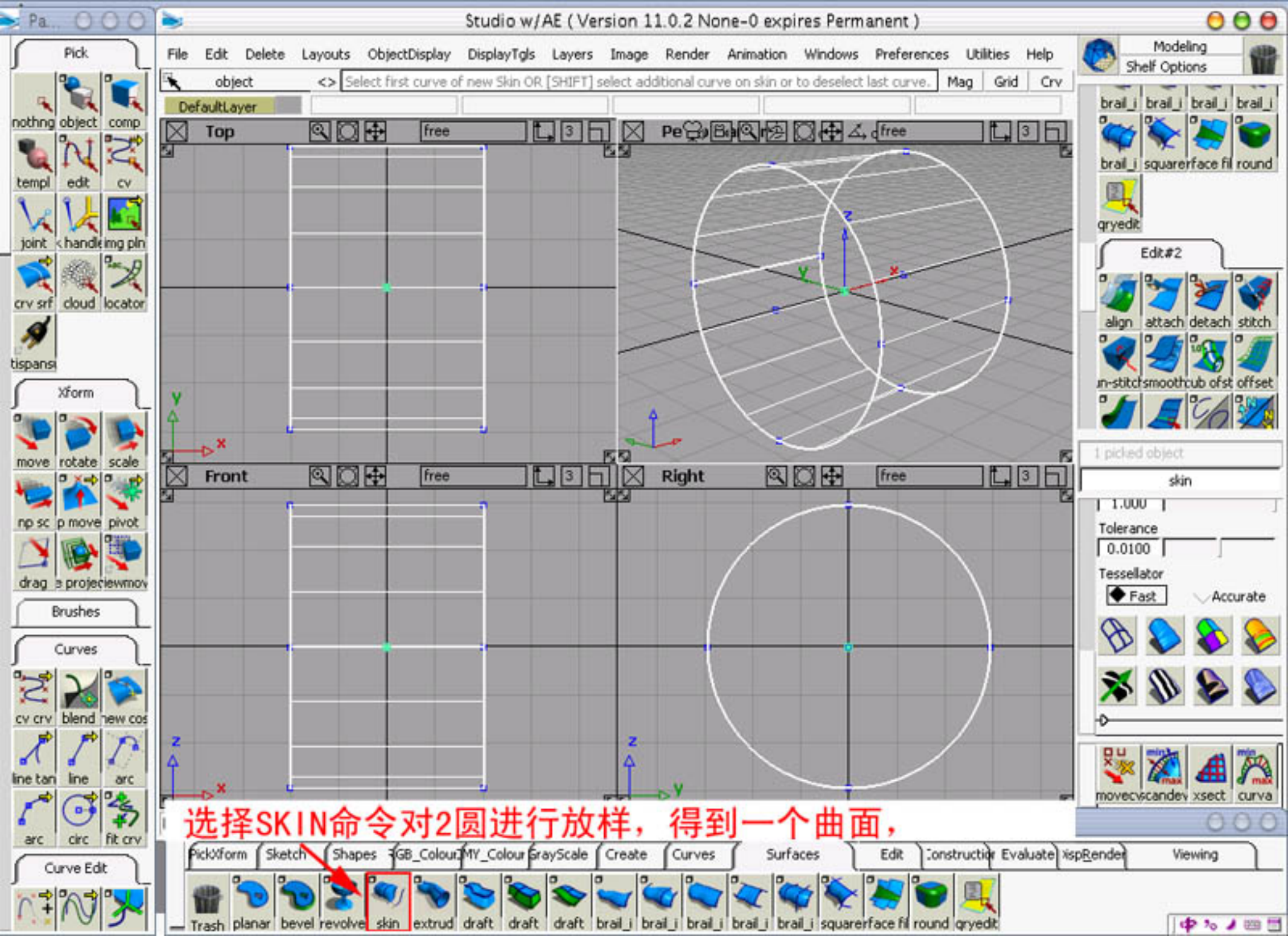
CTRL + SHIFT + 鼠标中键, 调出物体移动工具选择移动





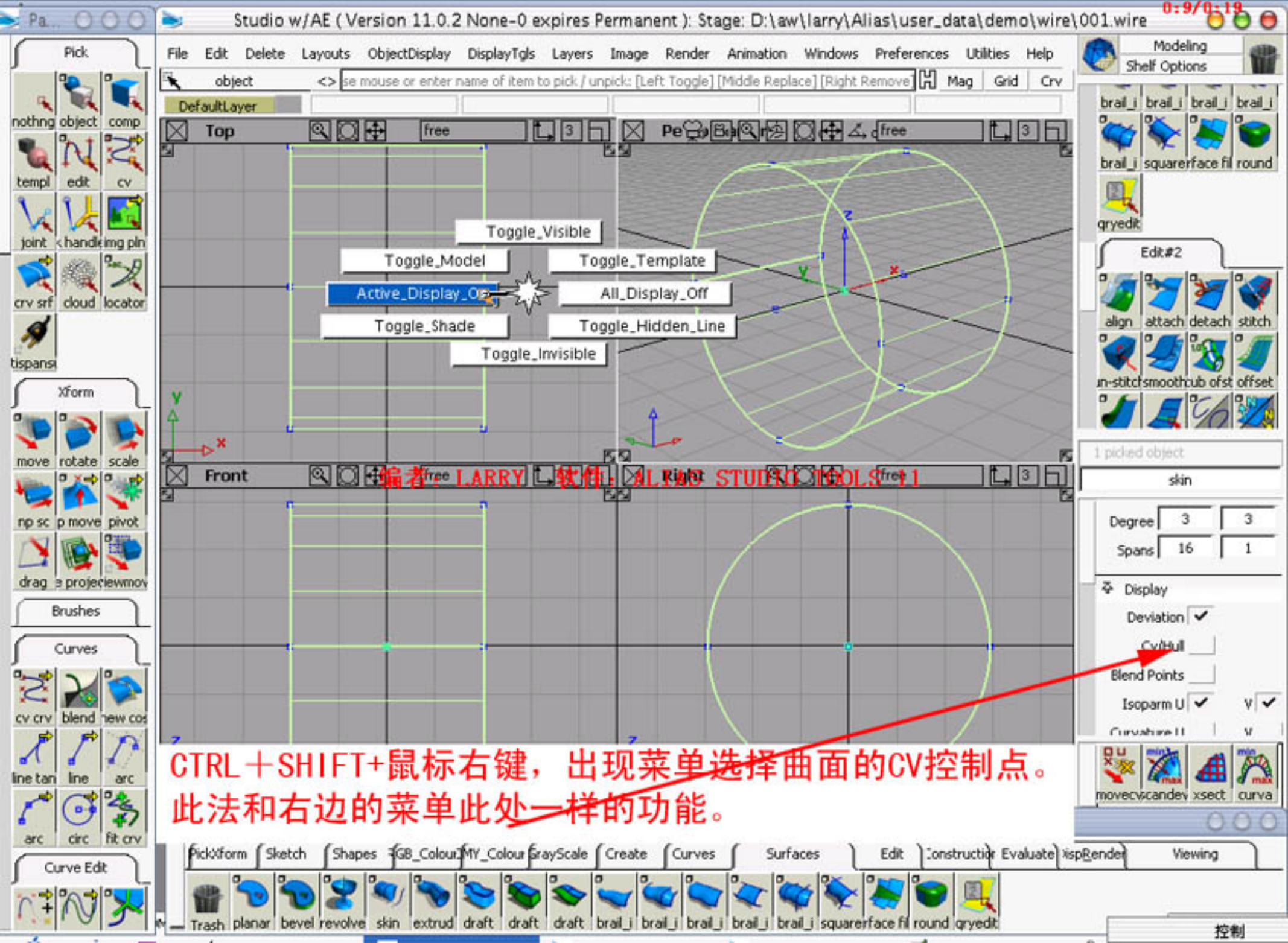
看图镜像复制另一个圆弧。





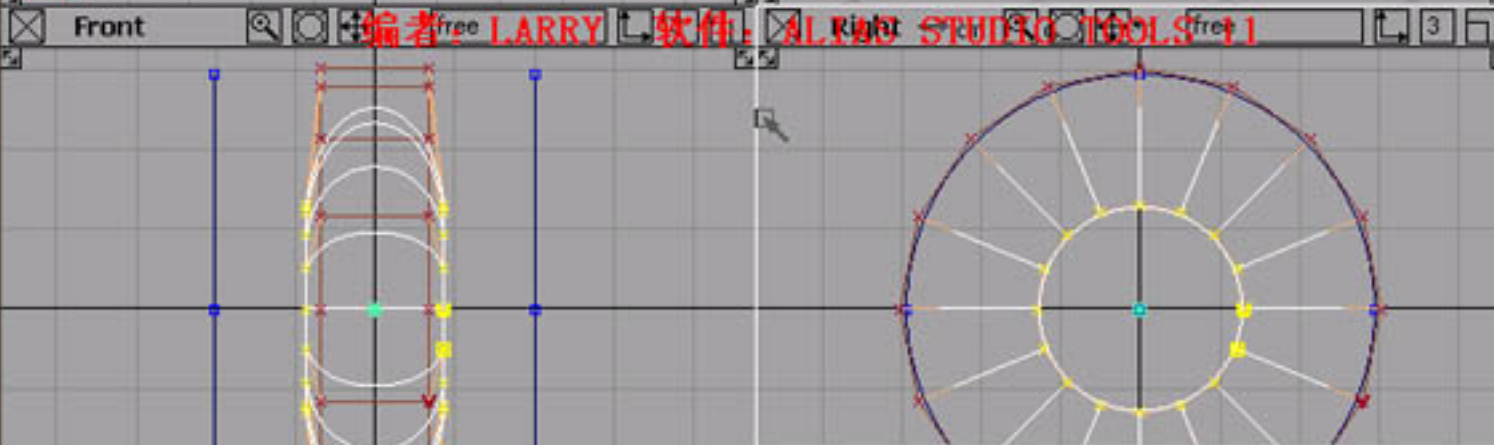
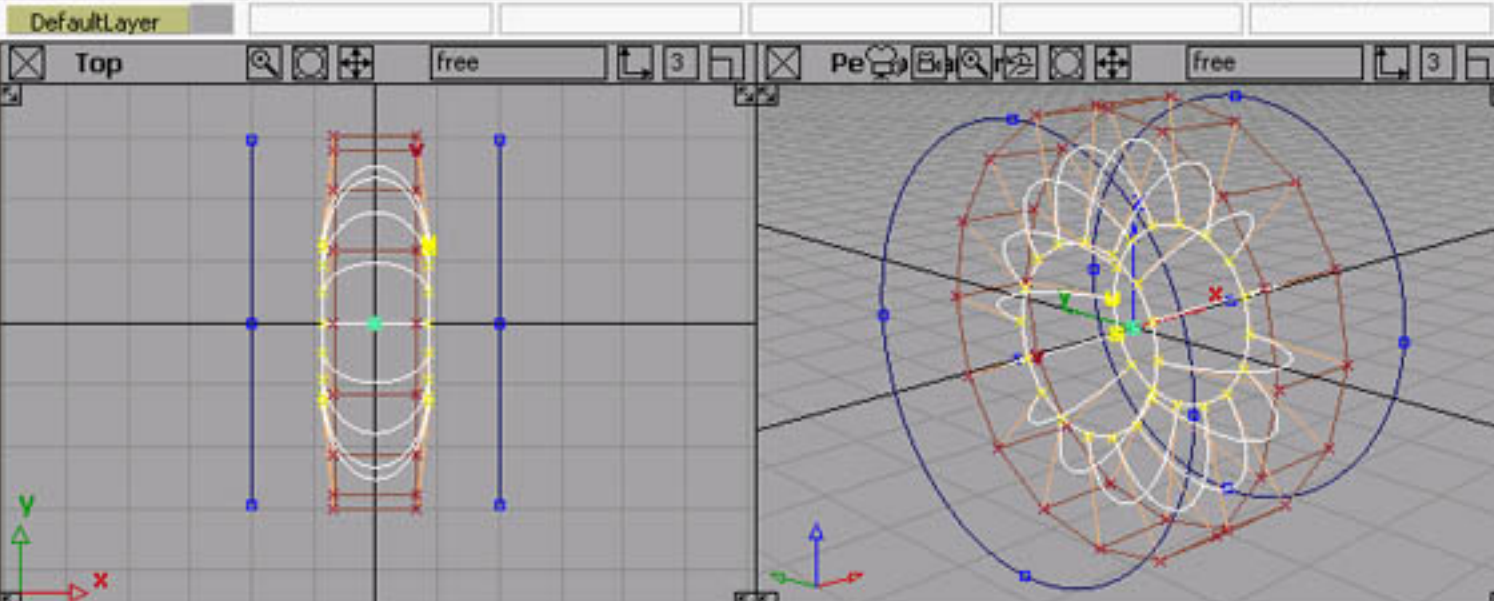
选择SKIN命令对2圆进行放样，得到一个曲面，





CTRL+SHIFT+鼠标右键，出现菜单选择曲面的CV控制点。  
此法和右边的菜单此处一样的功能。





brail\_j | brail\_j | brail\_j | brail\_j

brail\_j | squareface fil round

qryedt

Edit#2

align | attach | detach | stitch

in-stitch | smooth | cub | ofst | offset

1 picked object

skin

|        |    |   |
|--------|----|---|
| Degree | 3  | 3 |
| Spans  | 16 | 1 |

Display

Deviation

Cv/Hull

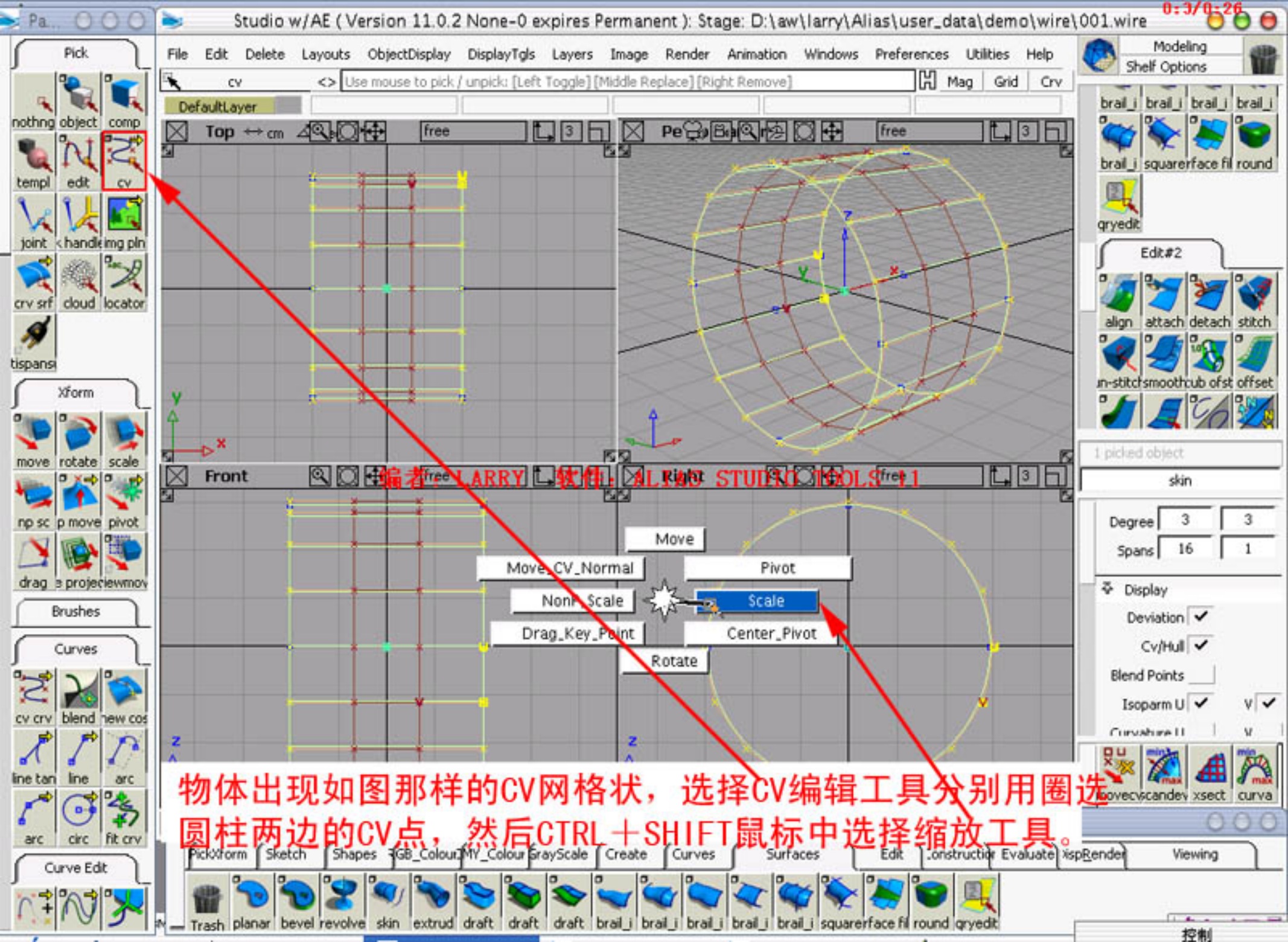
Blend Points

Isoparm U  V

用鼠标左键点这窗口往中间拖动，就会得到您所需要的形状即可。

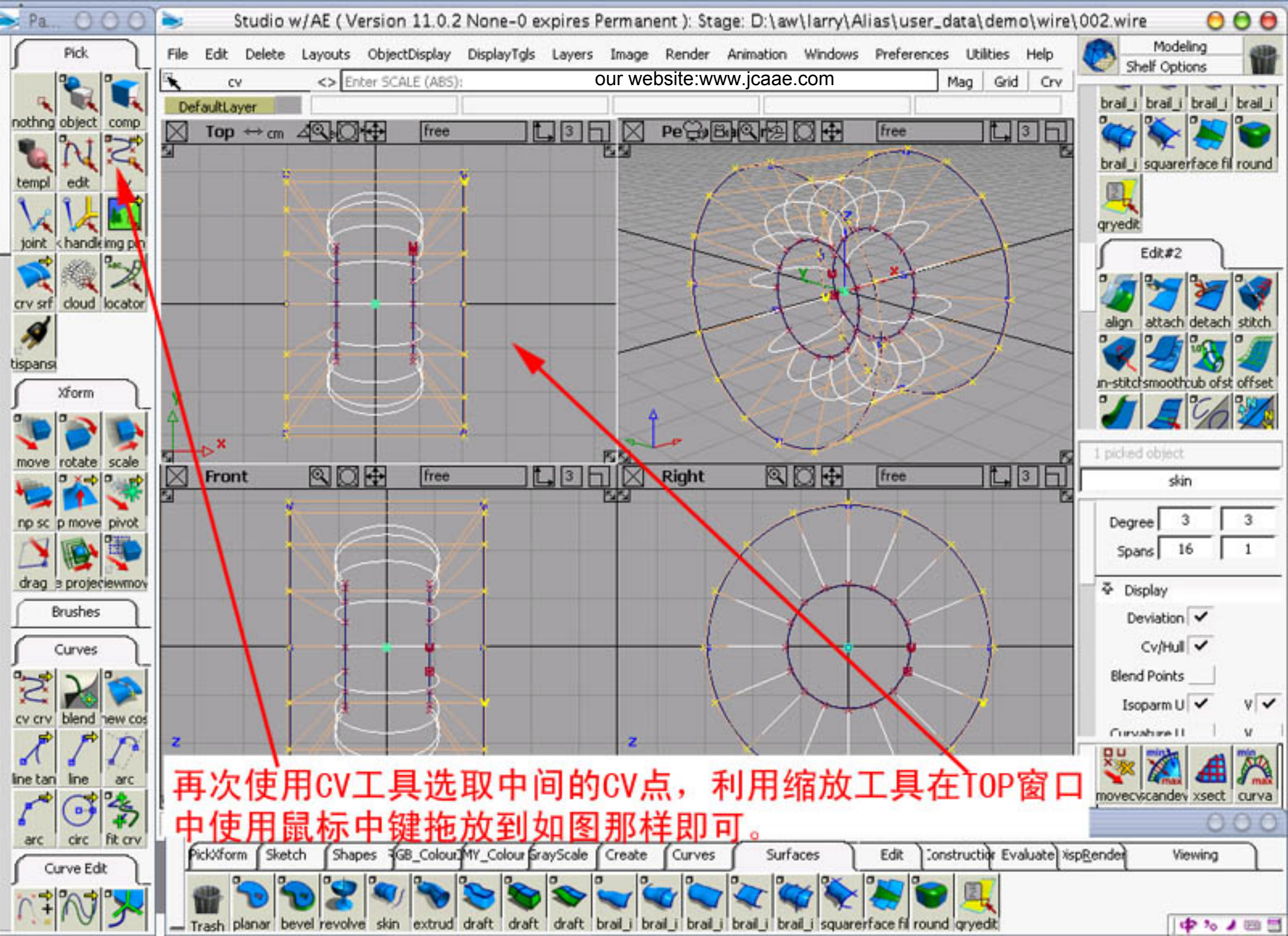
Trash | planar | bevel | revolve | skin | extrud | draft | draft | draft | brail\_j | brail\_j | brail\_j | brail\_j | brail\_j | squareface fil | round | qryedt





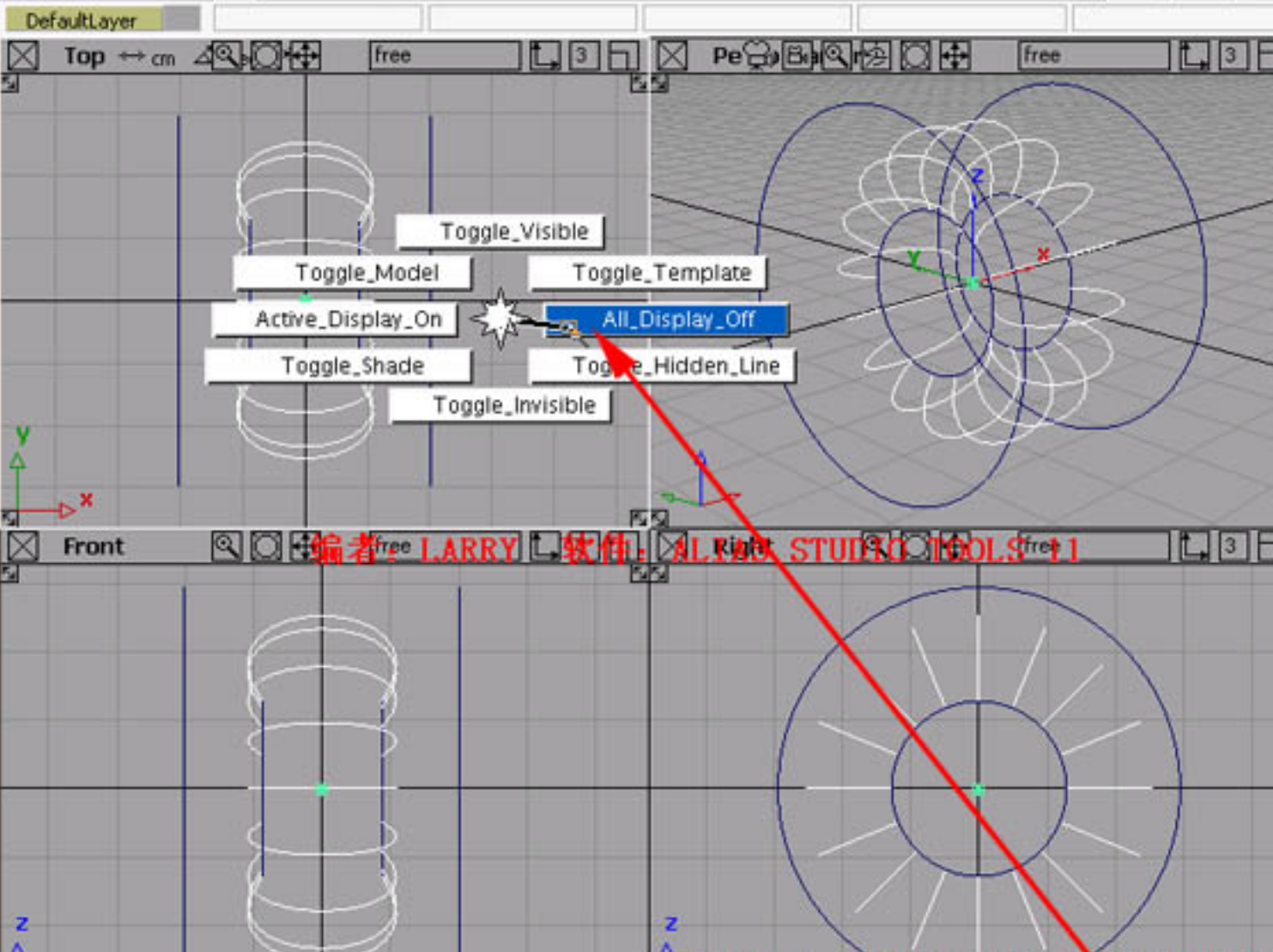
物体出现如图那样的CV网格状，选择CV编辑工具分别用圈选圆柱两边的CV点，然后CTRL+SHIFT鼠标中选择缩放工具。





再次使用CV工具选取中间的CV点，利用缩放工具在TOP窗口中使用鼠标中键拖放到如图那样即可。





- Toggle\_Visible
- Toggle\_Model
- Toggle\_Template
- Active\_Display\_On
- All\_Display\_Off
- Toggle\_Shade
- Toggle\_Hidden\_Line
- Toggle\_Invisible

Modeling Shelf Options

brail\_j | brail\_j | brail\_j | brail\_j

brail\_j | squarerface fil round

qryedit

Edit#2

align | attach | detach | stitch

in-stitch | smooth | cub | ofst | offset

1 picked object

skin

Degree 3 3

Spans 16 1

Display

Deviation

Cv/Hull

Blend Point

Isoparm U  V

Curvature H  W

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CTRL + SHIFT + 鼠标右键出现菜单选择CV点不可见, 相当于此处不打勾。



Pick

nothing object comp  
templ edit cv  
joint < handle ing pin  
crv srf cloud locator  
tspan

Xform

move rotate scale  
np sc p move pivot  
drag projection mov

Brushes

Curves

cv crv blend new cos  
line tan line arc  
arc circ fit crv

Curve Edit

File Edit Delete Layouts ObjectDisplay DisplayTgls Layers Image Render Animation Windows Preferences Utilities Help

cv <> Insertion complete. Move the locator or select another curve or a surface isoparm.0.7\_ Mag Grid Crv

DefaultLayer

Top cm free

Front free

Right free

Modeling Shelf Options

Edit #2

align attach detach stitch  
in-stitch smooth cub ofst offset  
extend insert close rev d  
patch rebuild ft sc deform  
ject ediproject oro nrm isect

0 picked objects

none

Degree

Spans

Display

Deviation

Cv/Hull

Blend Points

Isoparm U  v

Crush view 1  v

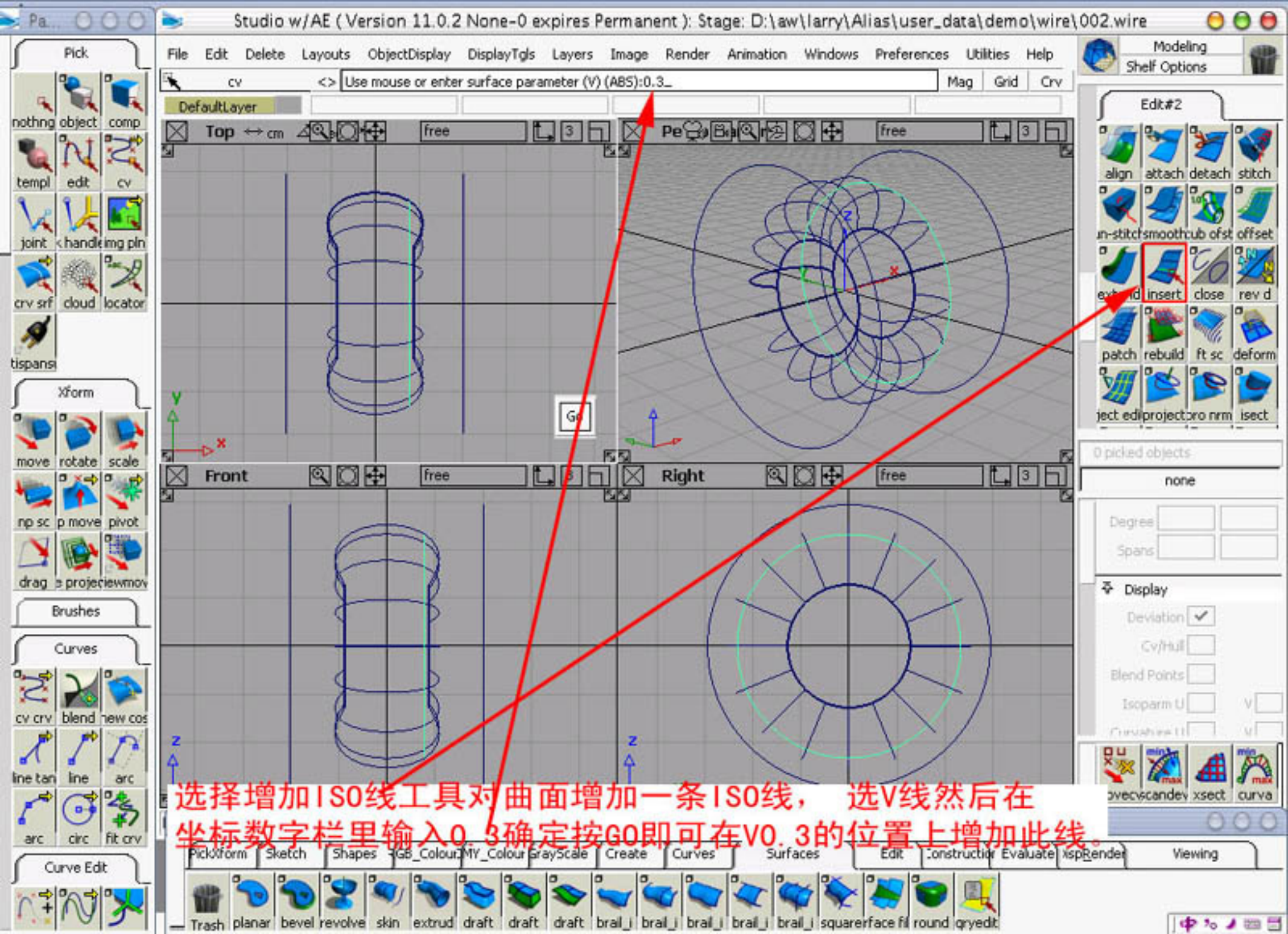
move cv candev xsect curva

ender Viewing

然后在其线的对称方向增加另一条ISO线，由于曲面为1单位，我们把它看成1，那么要在另外一边同等距离增加一条ISO线就要在数字栏里输入0.7才对的。（因为0.3+0.7=1）

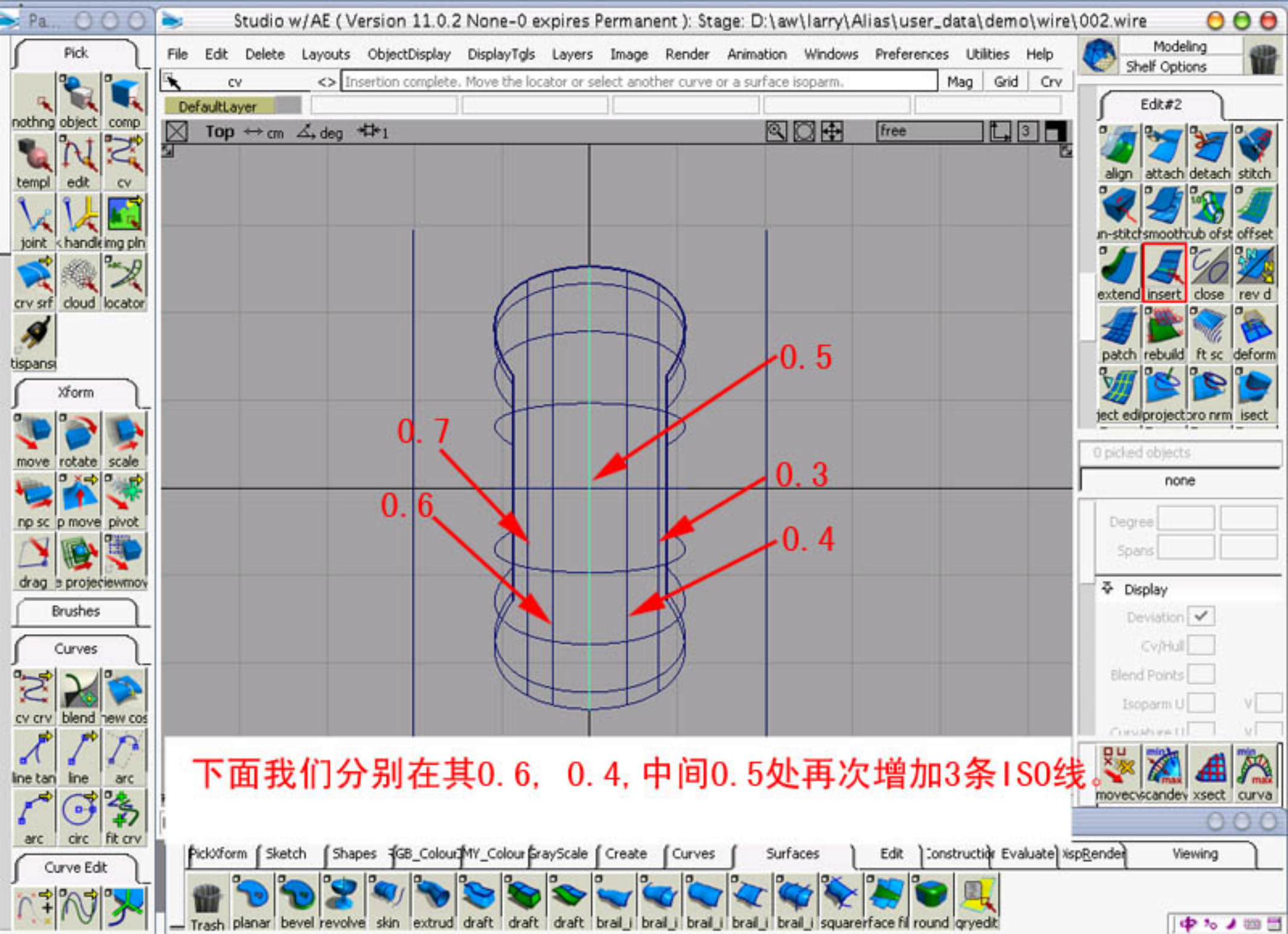
Trash planar bevel revolve skin extrud draft draft draft brail brail brail brail squareface fill round qyedit





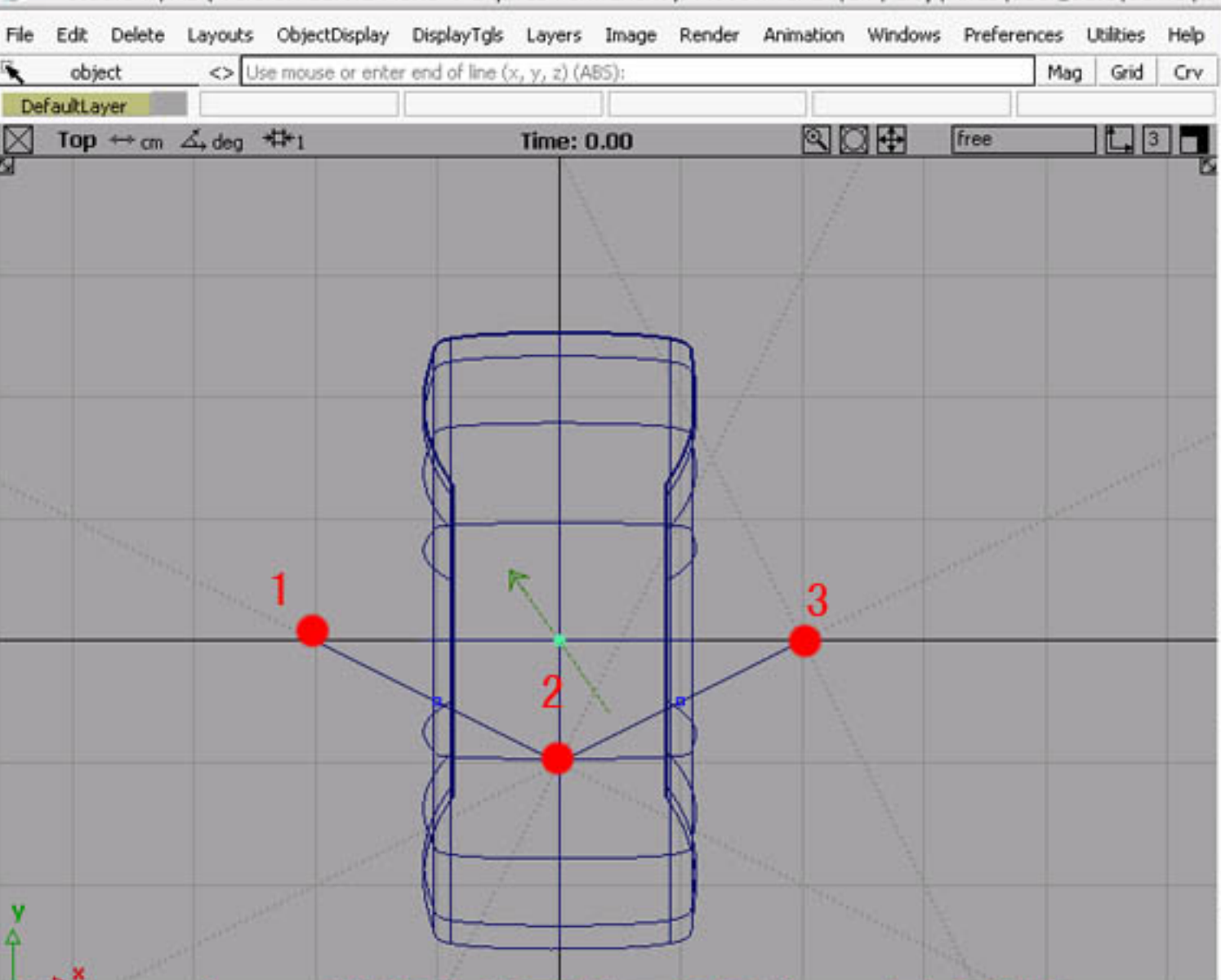
选择增加ISO线工具对曲面增加一条ISO线，选V线然后在坐标数字栏里输入0.3确定按GO即可在V0.3的位置上增加此线。





下面我们分别在其0.6, 0.4, 中间0.5处再次增加3条ISO线。

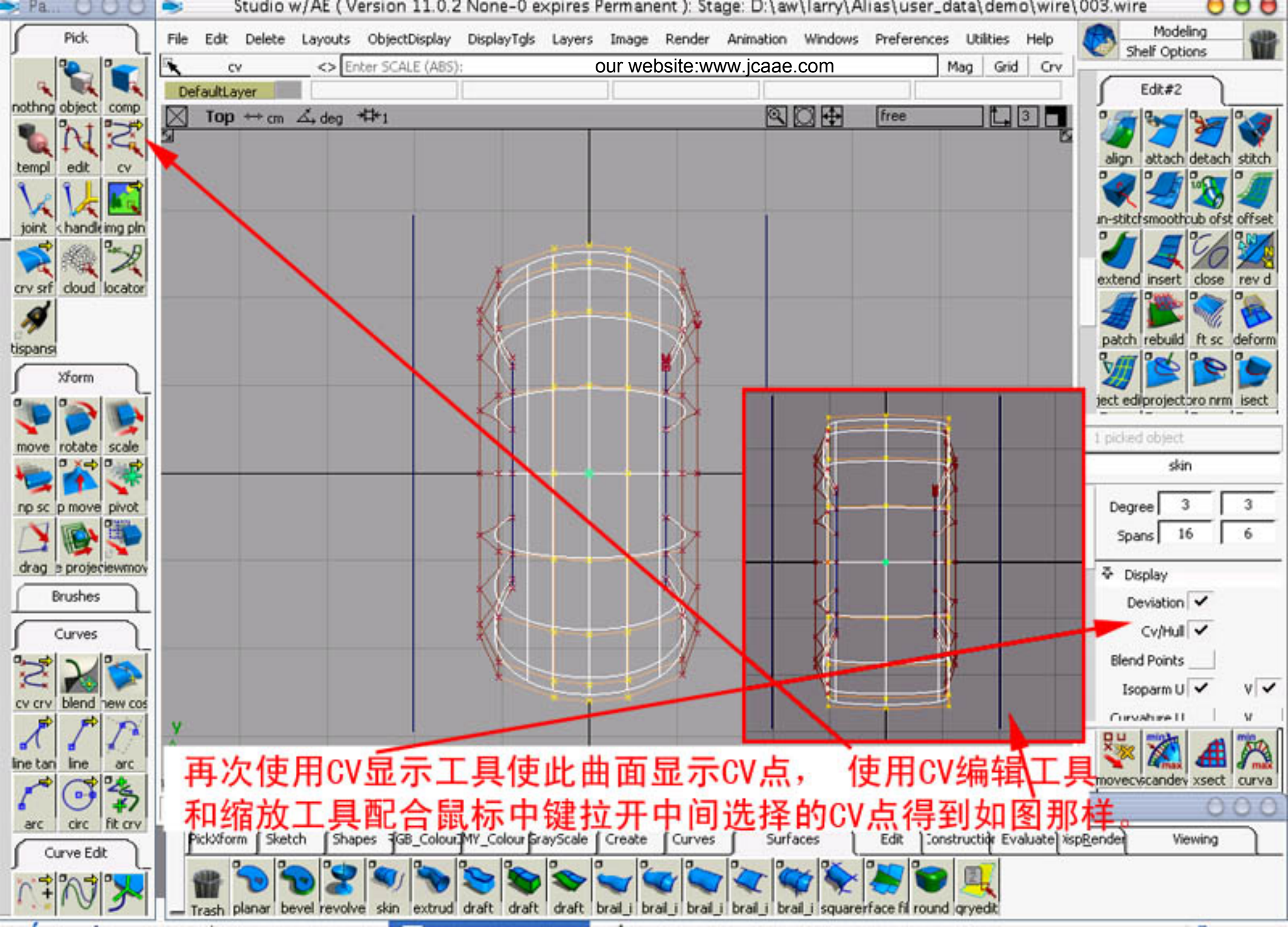




放大TOP窗口，选择连续画线工具配合ALT键分别在1，2，3点画一条曲线。







Modeling Shelf Options

Edit#2

- align attach detach stitch
- in-stitch smooth cub ofst offset
- extend insert close rev d
- patch rebuild ft sc deform
- ject edit project or nrm isect

1 picked object

skin

|        |    |   |
|--------|----|---|
| Degree | 3  | 3 |
| Spans  | 16 | 6 |

Display

- Deviation
- Cv/Hull
- Blend Points
- Isoparm U
- Curvature H



nothing object comp  
templ edit cv  
joint handlemg pln  
crv srf cloud locator  
tispansi

Xform  
move rotate scale  
np sc p move pivot  
drag projectionmov

Brushes

Curves  
cv crv blend new cos  
line tan line arc  
arc circ fit crv

Curve Edit  
add pts dupl proj tan

File Edit Delete Layouts ObjectDisplay DisplayTgls Layers Image Render Animation Windows Preferences Utilities Help

object <> Use mouse or enter line start point (x, y, z): Mag Grid Crv

DefaultLayer

Top ↔ cm ↗ deg ↕ 1 Time: 0.00 free 3

Modeling Shelf Options

xc geom pc ray dissockrvva ger  
Deg 5 stretch line  
va par rv deg  
poly rect ang circ  
ellipse arc arc arc tan  
ine persweeps fillet proj tan  
dupl fit crv crv scrv plnr

1 picked object  
line#4  
Degree 3  
Spans 1  
Display  
Deviation   
Cv/Hull   
Blend Points

movecvscandev xsect curva

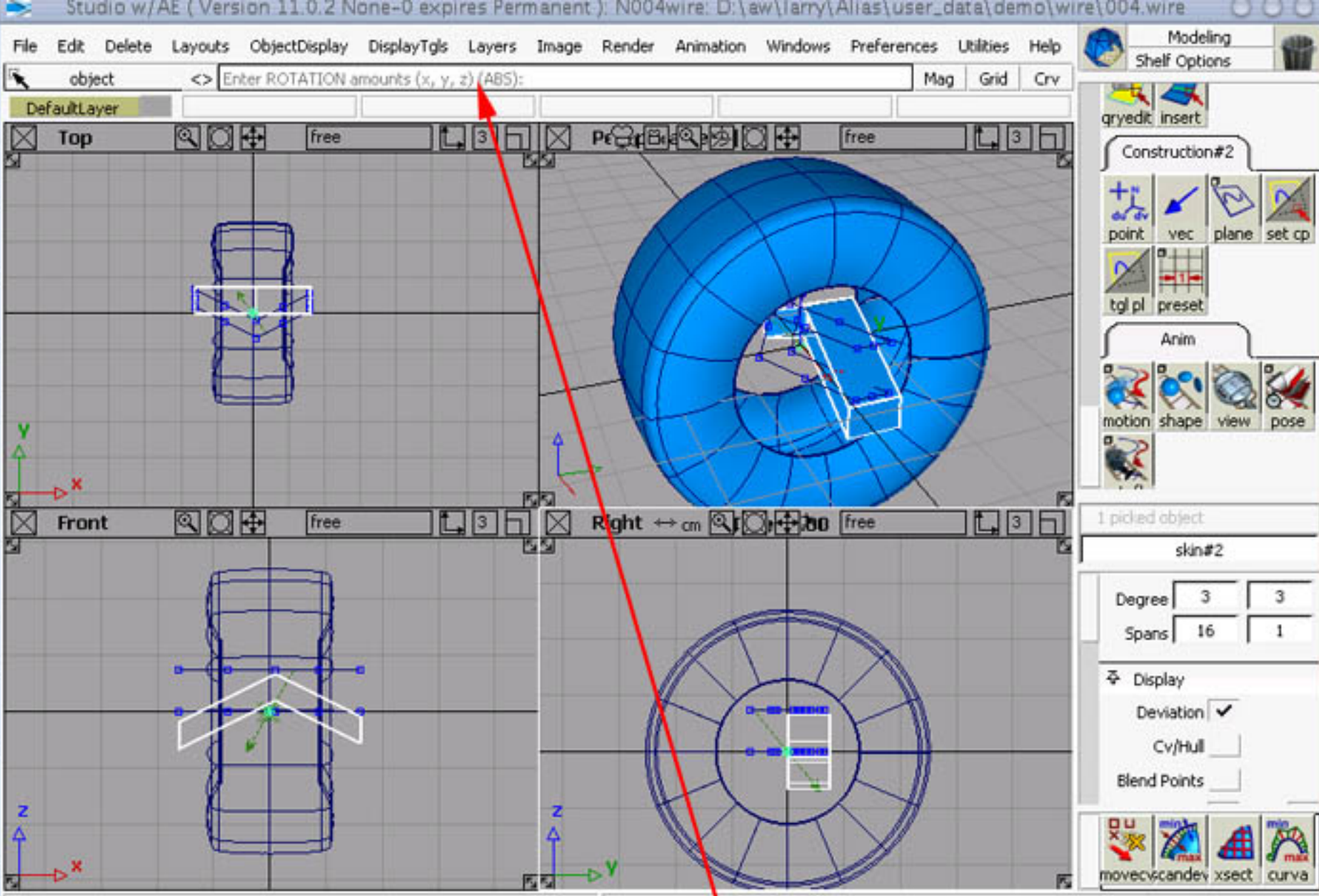
在次画2条直线。

PickXform Sketch Shapes RGB\_Colour CMY\_Colour GrayScale Create Curves Surfaces Edit Construction Evaluate XspRender Viewing

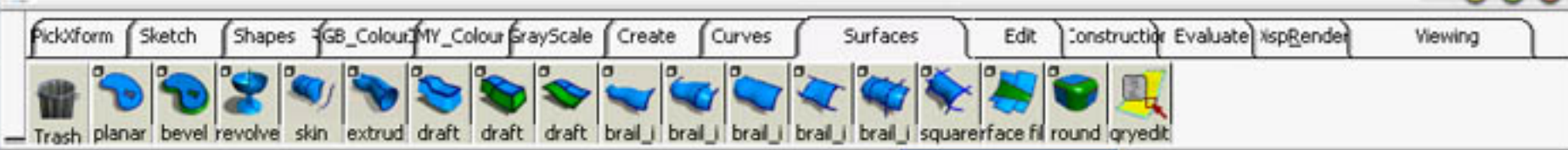
Trash k\_nothick\_obje\_compok\_templpick\_cv\_edit\_pblend\_rve\_on\_image\_img plnck\_locat move rotate scale np\_scanl\_moe\_cv\_nq\_key\_pve\_pivnter\_ph

En ..

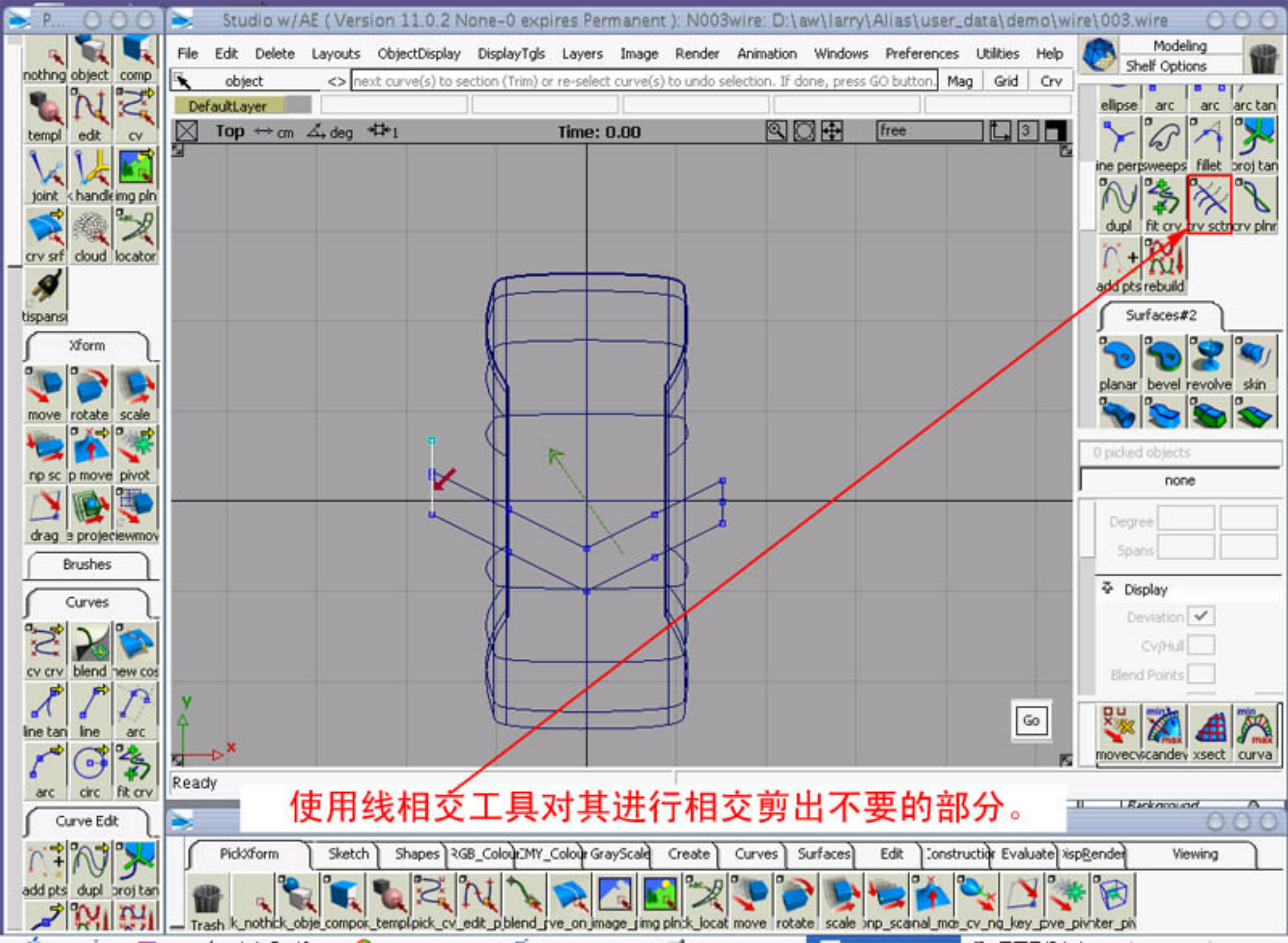




使用旋转工具在数值栏里输入-90回车得到如图。

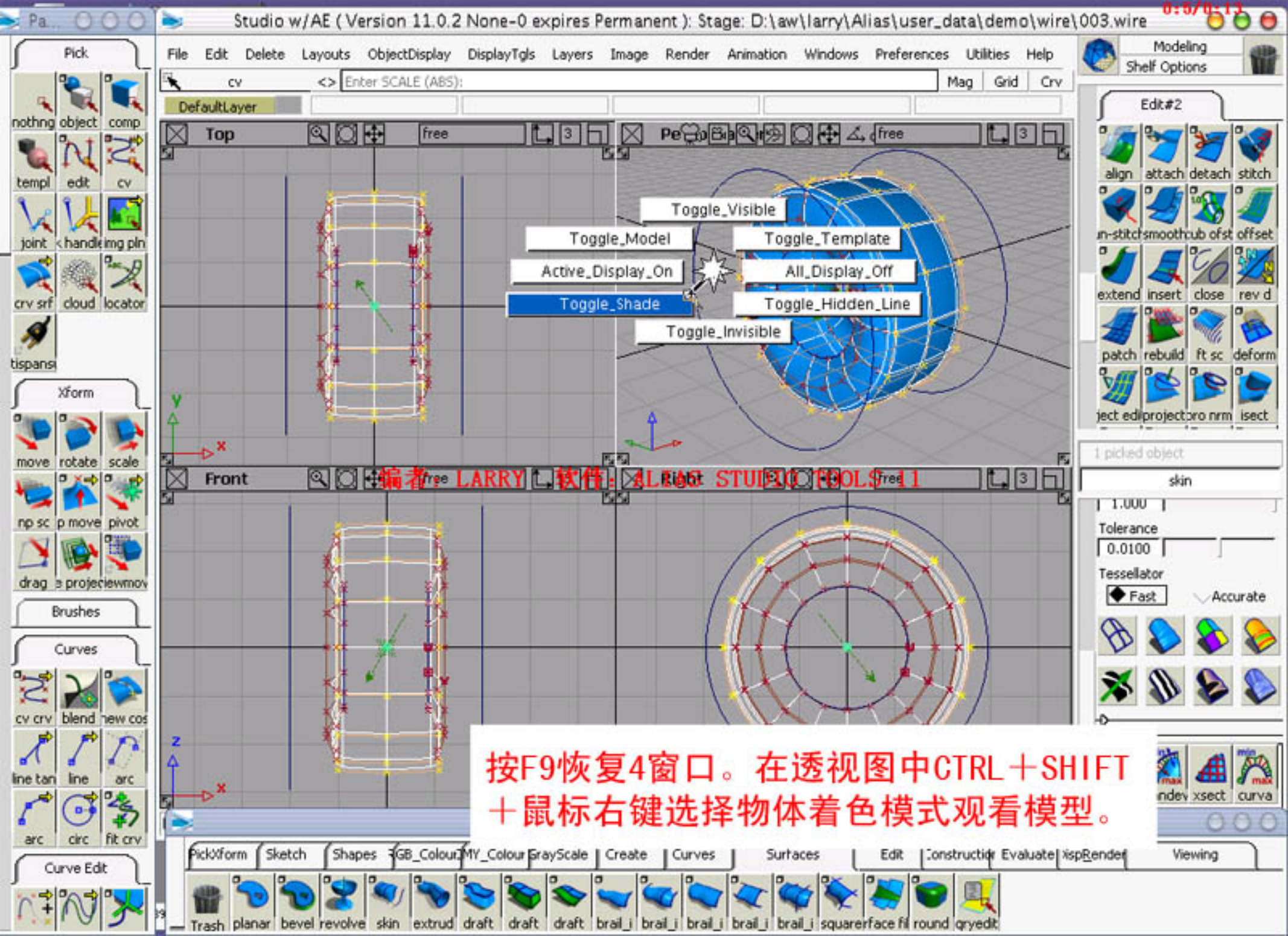






使用线相交工具对其进行相交剪出不要的部分。

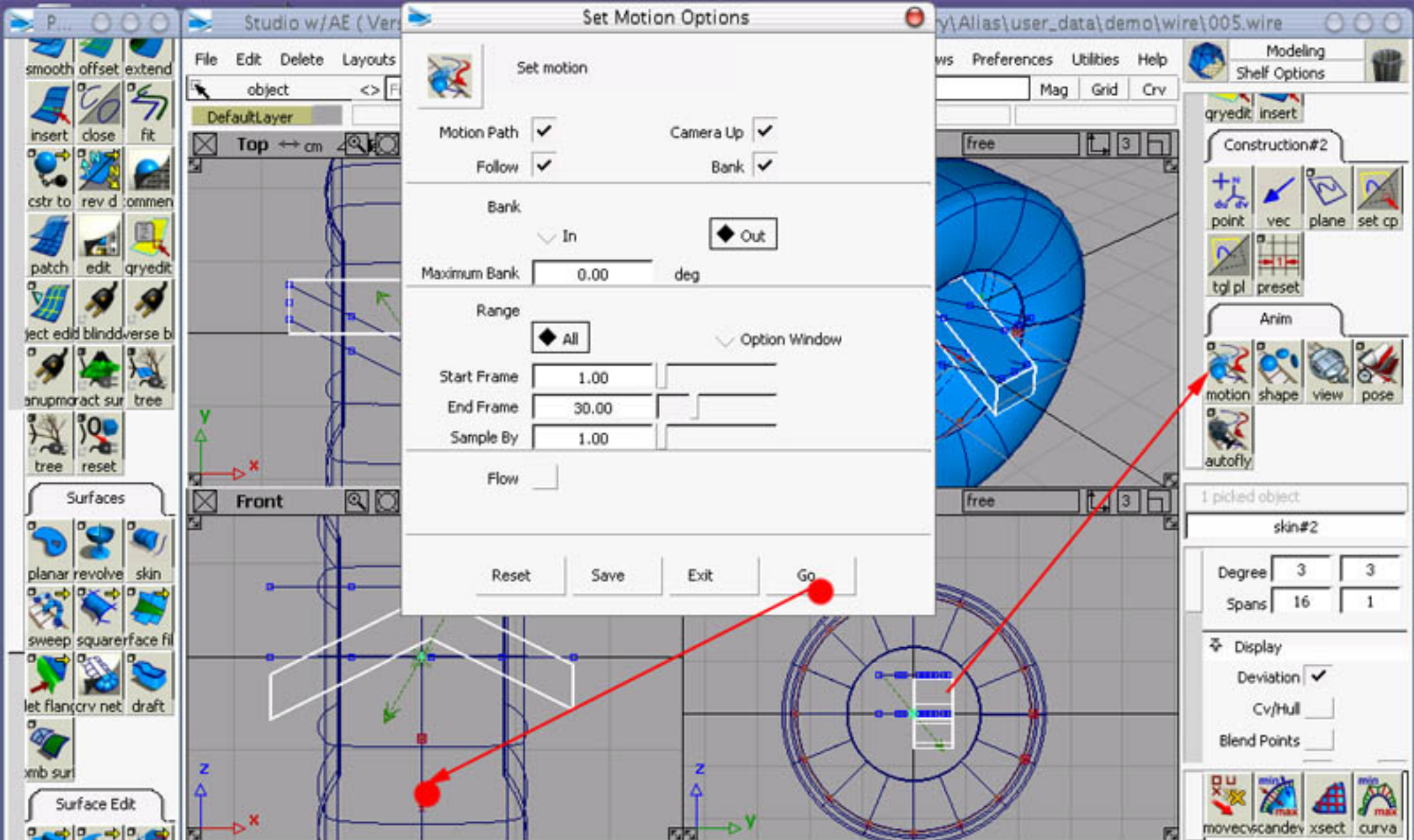




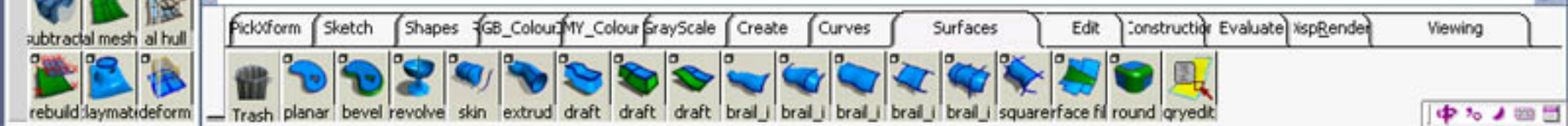
编者: LARRY 软件: ALIAS STUDIO TOOLS 11

按F9恢复4窗口。在透视图图中CTRL+SHIFT+鼠标右键选择物体着色模式观看模型。

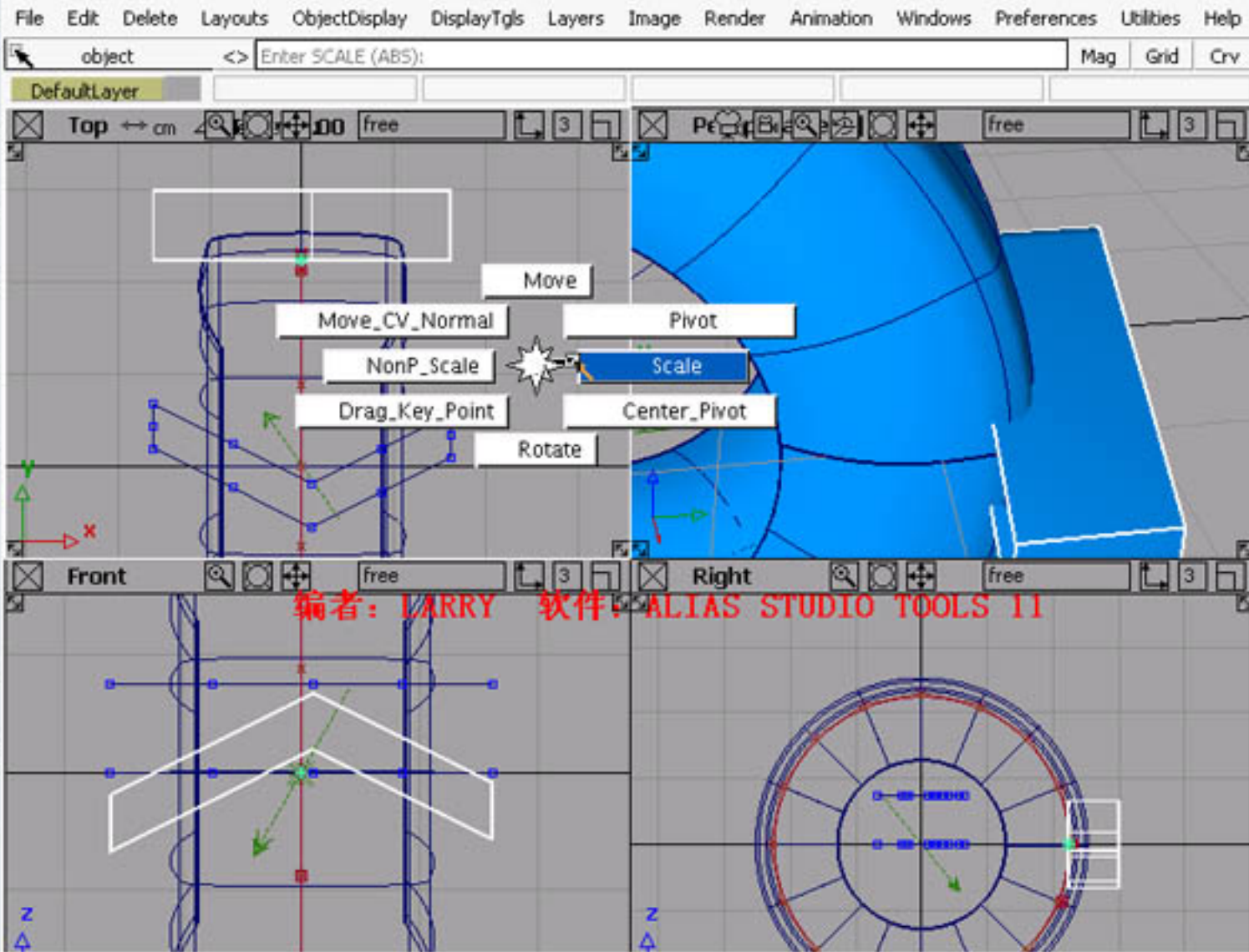




选择物体使用动画路径工具对其进行动画放样。







编者: LARRY 软件: ALIAS STUDIO TOOLS 11

CTRL+SHIF+鼠标中键选择缩放工具配合鼠标中, 右键, 对其进行缩放。

Pick/Form Sketch Shapes GB\_Colour MY\_Colour GrayScale Create Curves Surfaces Edit Construction Evaluate %spRender Viewing



Modeling Shelf Options

qryedit insert

Construction#2

point vec plane set cp

tgl pl preset

Anim

motion shape view pose

autofly

1 picked object

skin#2

Degree 3 3

Spans 16 1

Display

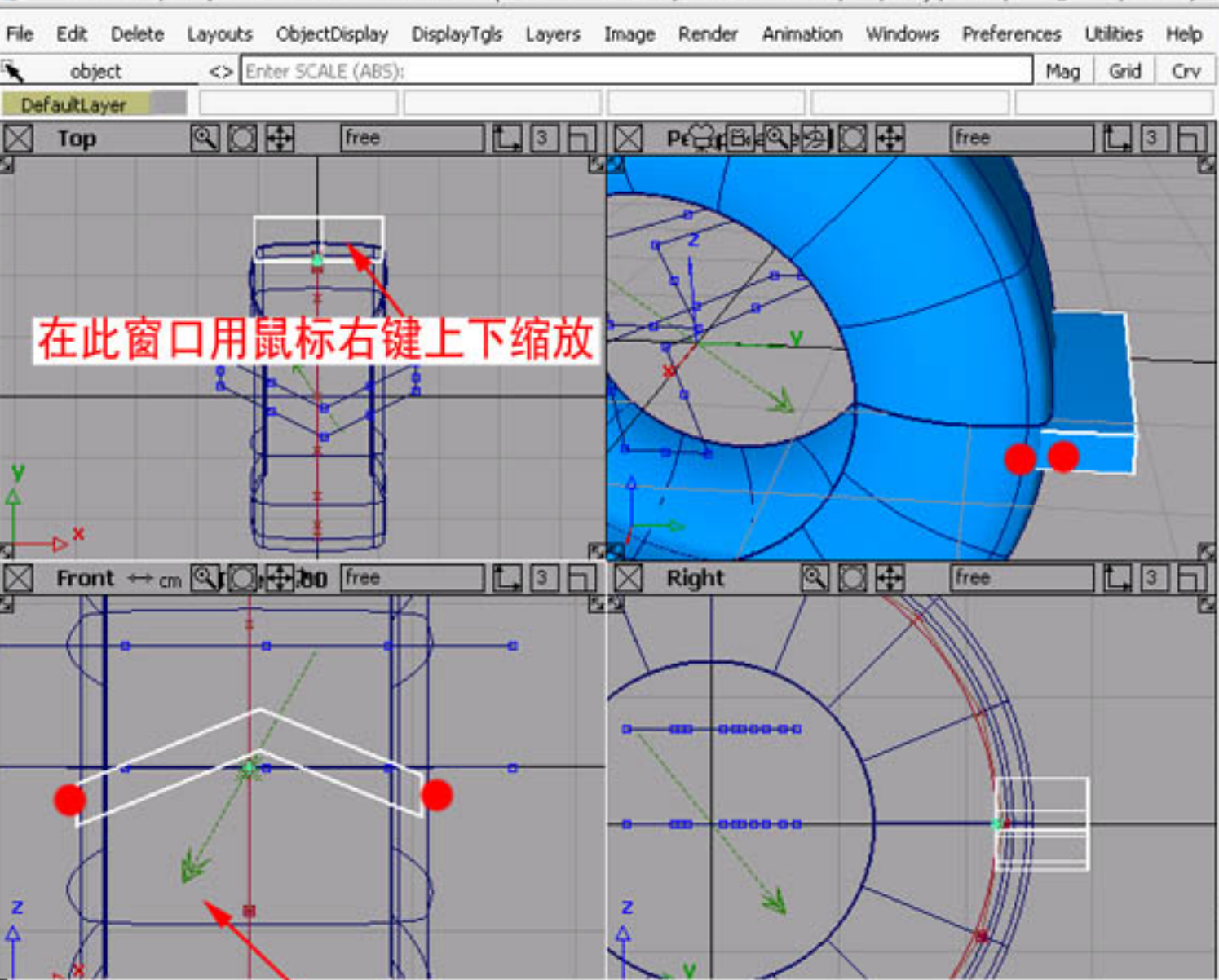
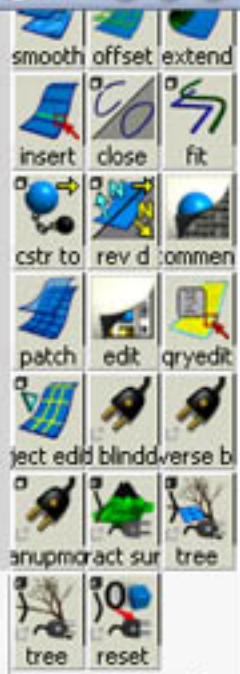
Deviation

Cv/Hull

Blend Points

min max curva





在此窗口用鼠标右键上下缩放

在此窗口用鼠标中键左右缩放，观察一直调到合适位置即可。





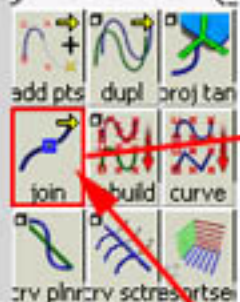


Brushes

Curves



Curve Edit



Objects



Object Edit

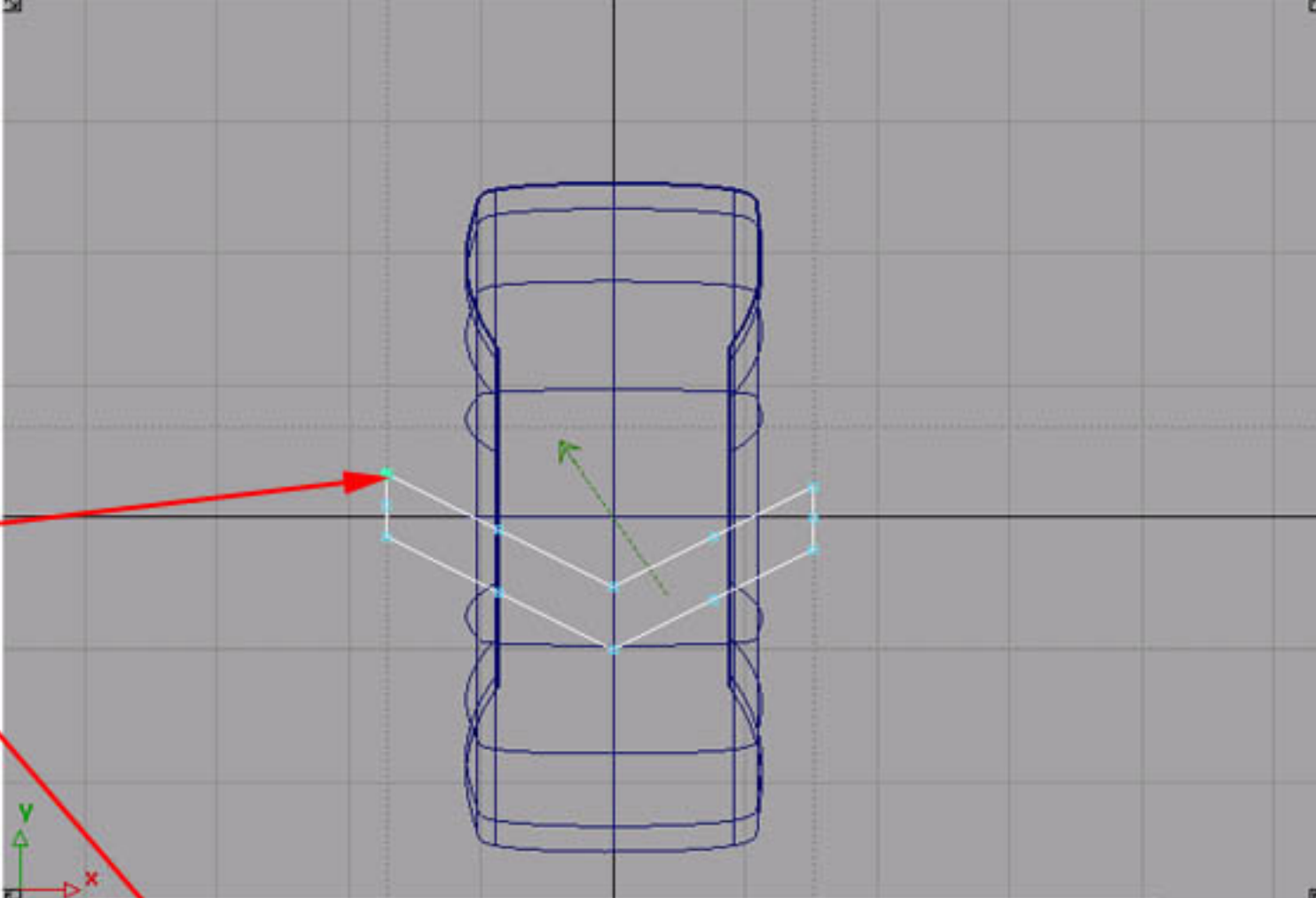


File Edit Delete Layouts ObjectDisplay DisplayTgls Layers Image Render Animation Windows Preferences Utilities Help

object &lt;&gt; Select keypoints or edit points to join at. Mag Grid Crv

DefaultLayer

Top ↔ cm △ deg ↕ 1 Time: 0.00 free 3



Ready

使用相交点结合工具对其都进行结合。

Modeling Shelf Options



Surfaces#2



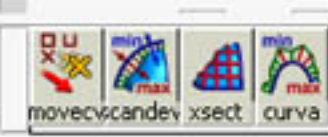
1 picked object

line#4

Degree 3

Spans 16

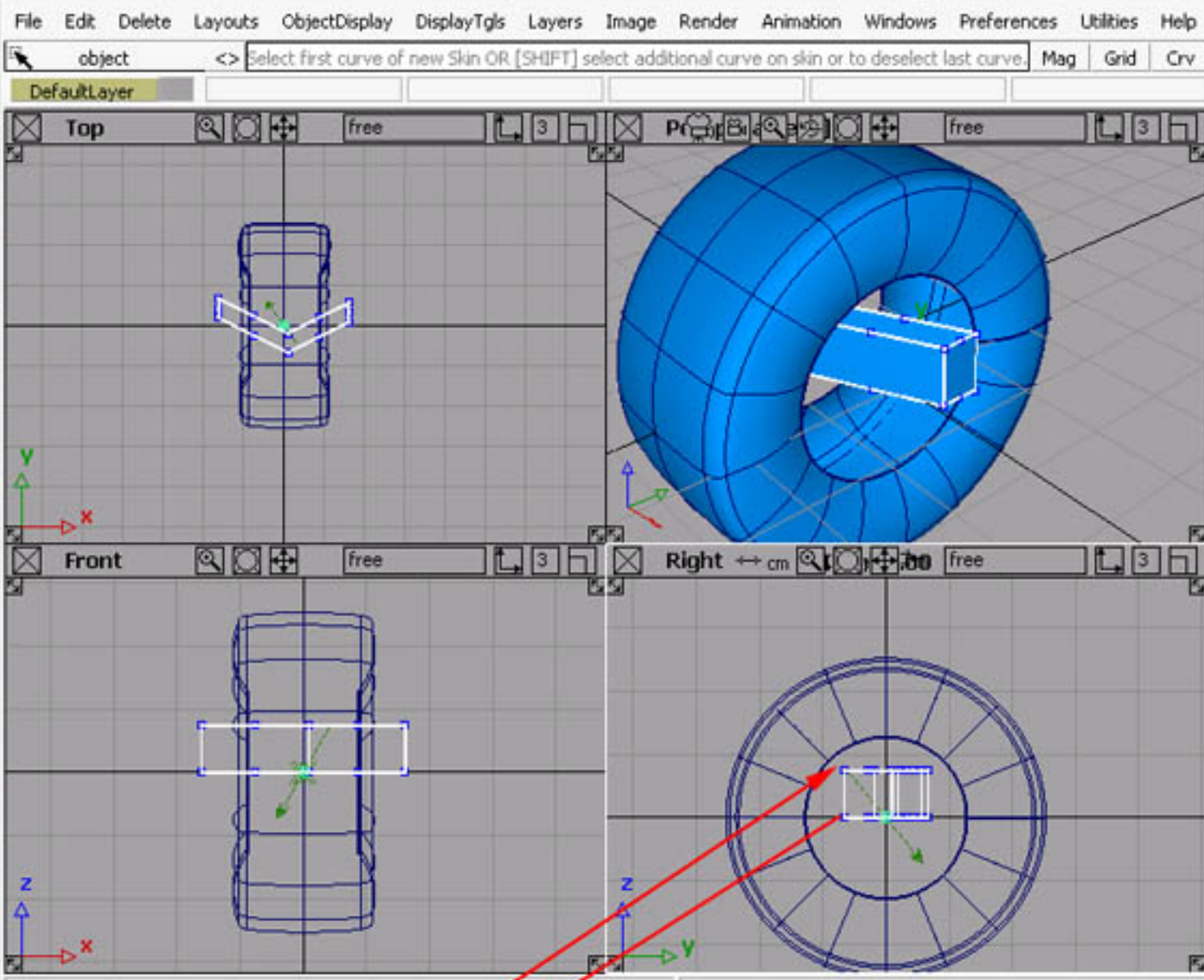
Display

Deviation Cv/Hull Blend Points 

Pickform Sketch Shapes RGB\_Colour ZMY\_Colour GrayScale Create Curves Surfaces Edit Construction Evaluate xspRender Viewing







Modeling Shelf Options

ellipse arc arc arc tan  
ine persweeps fillet proj tan  
dupl fit crv crv sctncrv plnr  
add pts rebuild

Surfaces#2

planar bevel revolve skin

1 picked object

skin#2

Degree 3 3  
Spans 16 1

Display  
Deviation   
Cv/Hull  
Blend Points

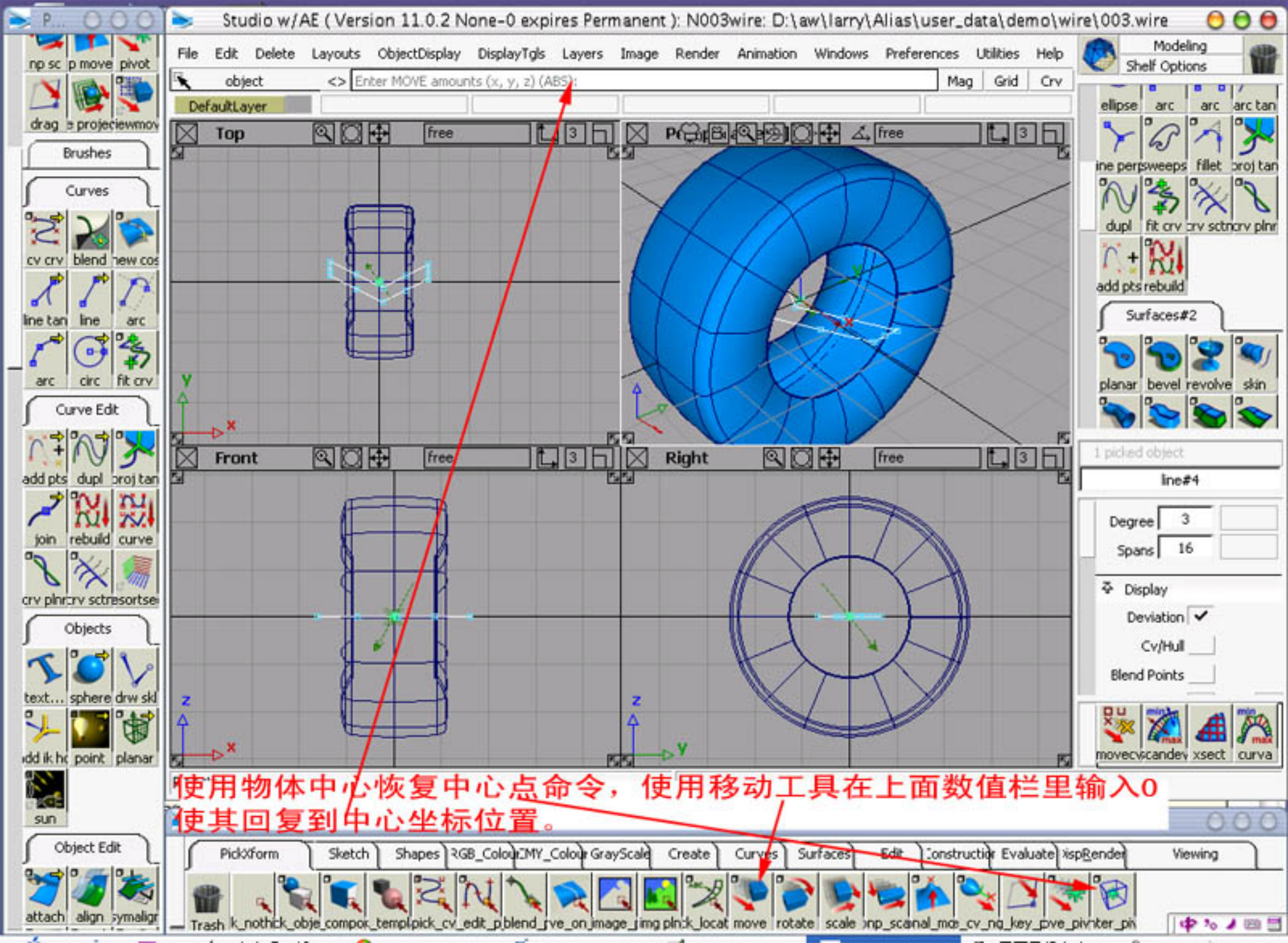
movecscandev xsect curva

对其俩线进行SKIN放样。

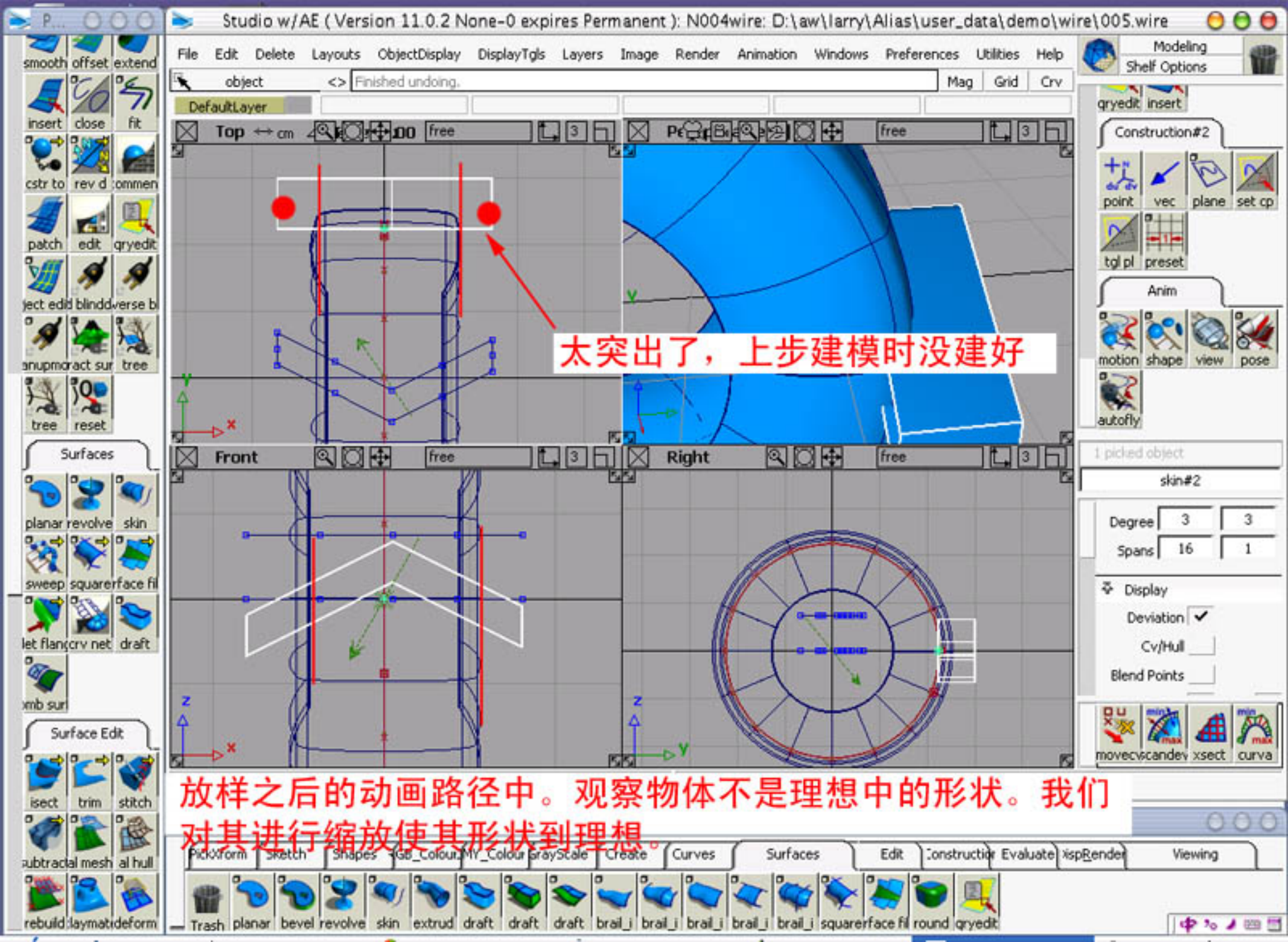
Pick/Form Sketch Shapes GB\_Colour My\_Colour GrayScale Create Curves Surfaces Edit Constructor Evaluate ispRender Viewing

Trash planar bevel revolve skin extrud draft draft draft brai brai brai brai brai square face fil round orvedt





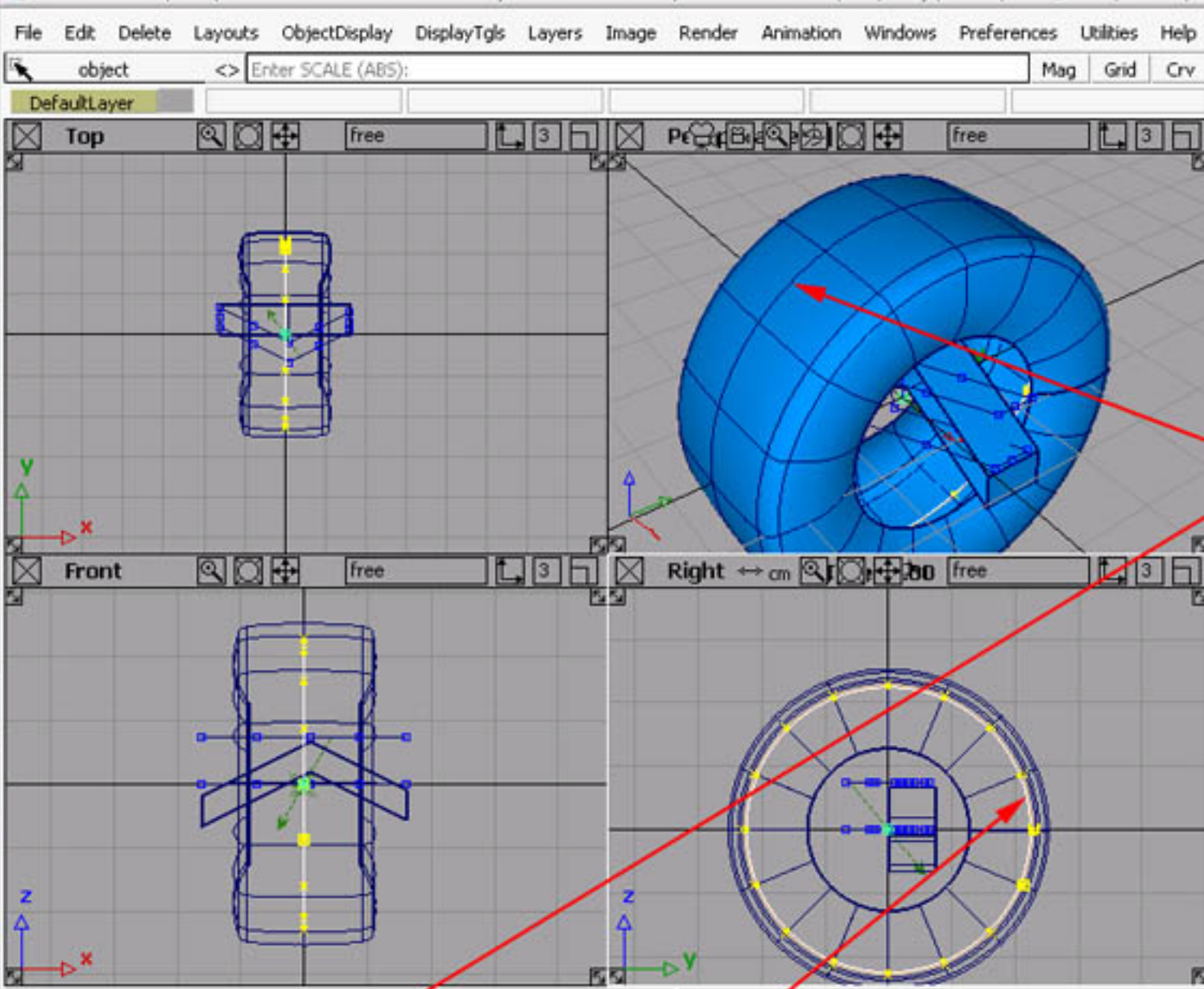
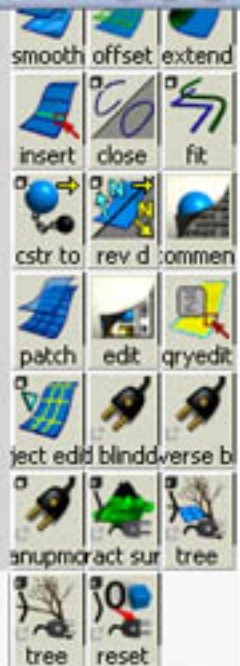




太突出了，上步建模时没建好

放样之后的动画路径中。观察物体不是理想中的形状。我们对其进行缩放使其形状到理想。

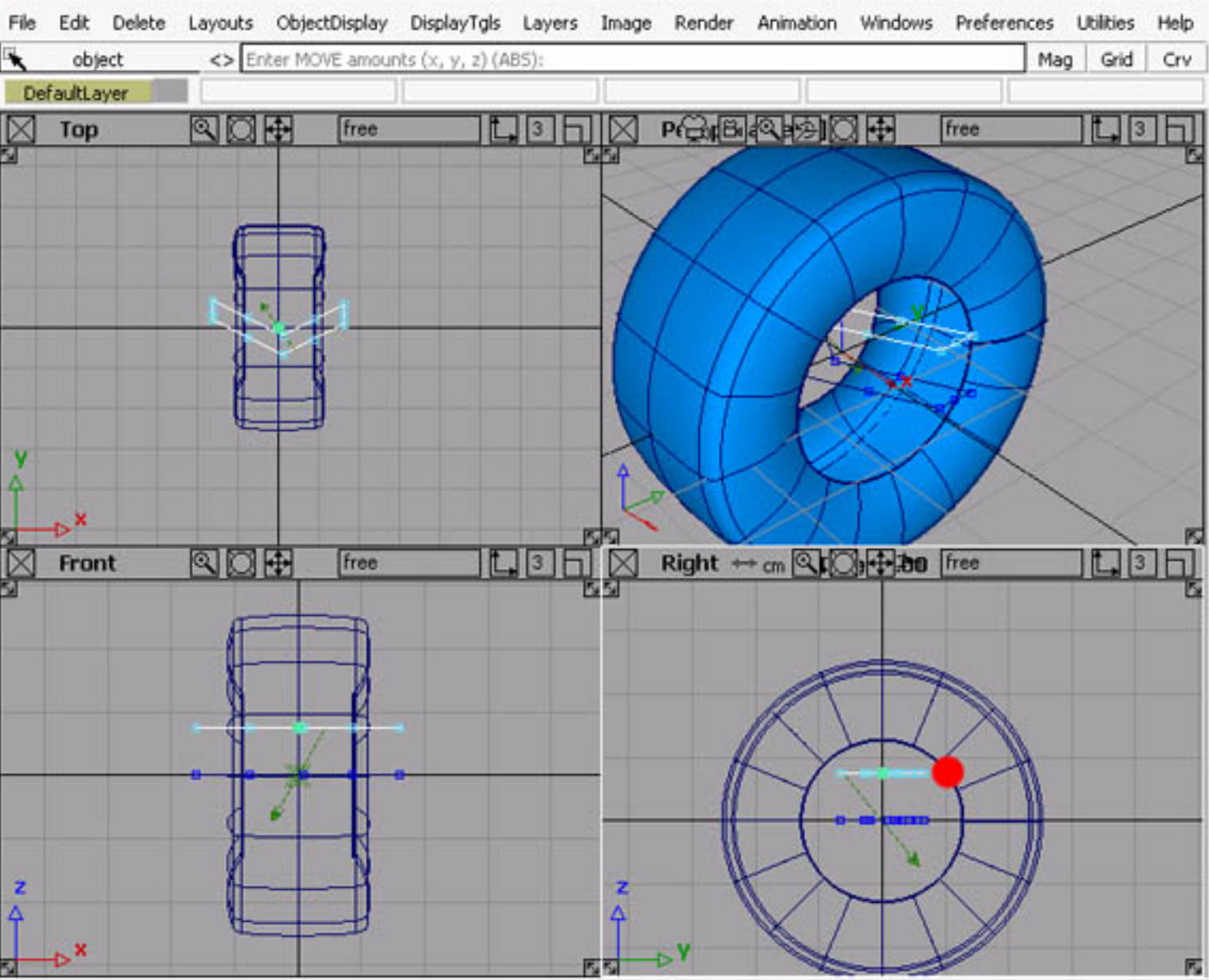




使用复制线命令对此处线复制一条，然后在前视图对其进行缩放如图。



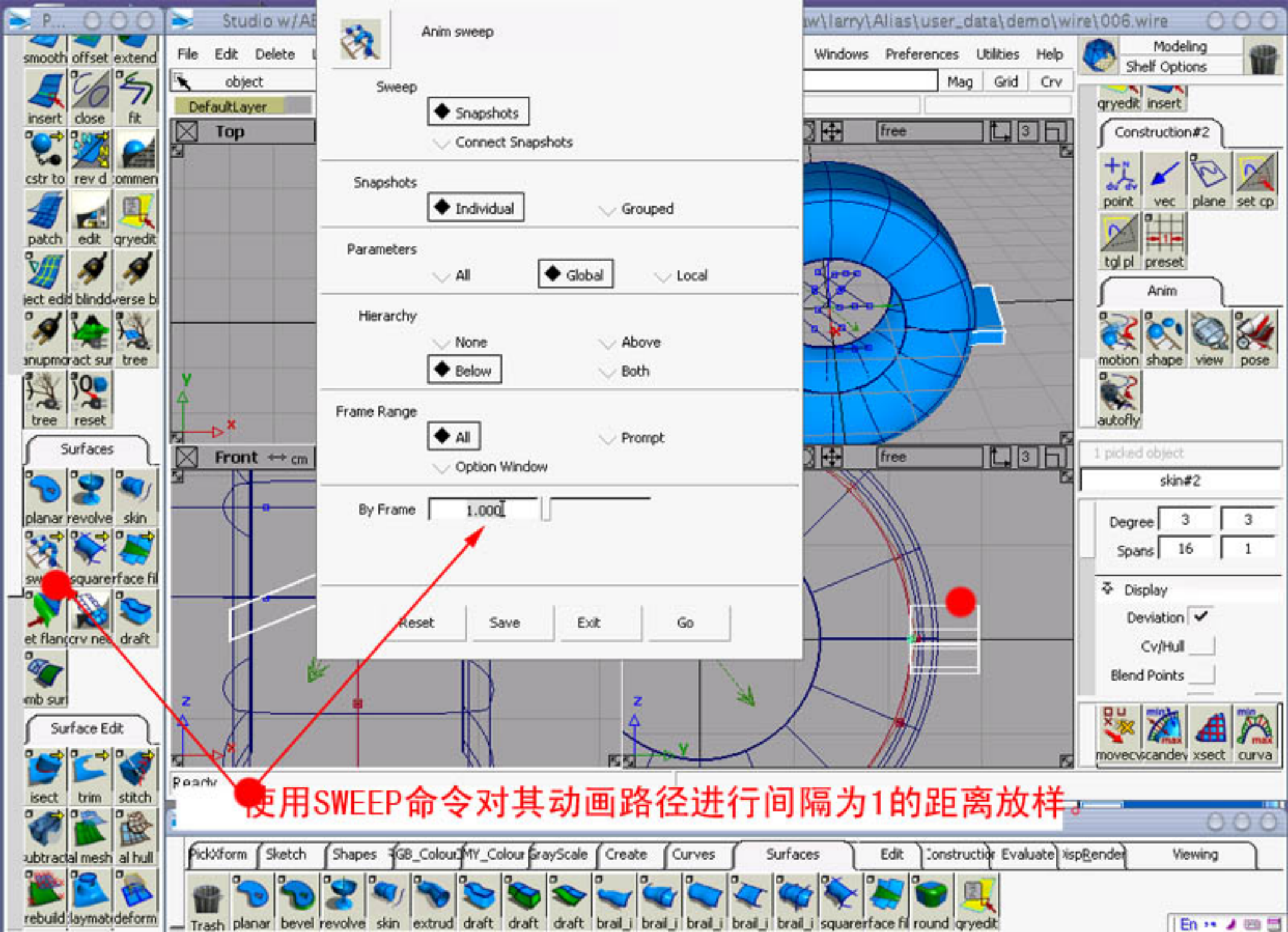




复制同样线物体并移动到如图那样的位置。





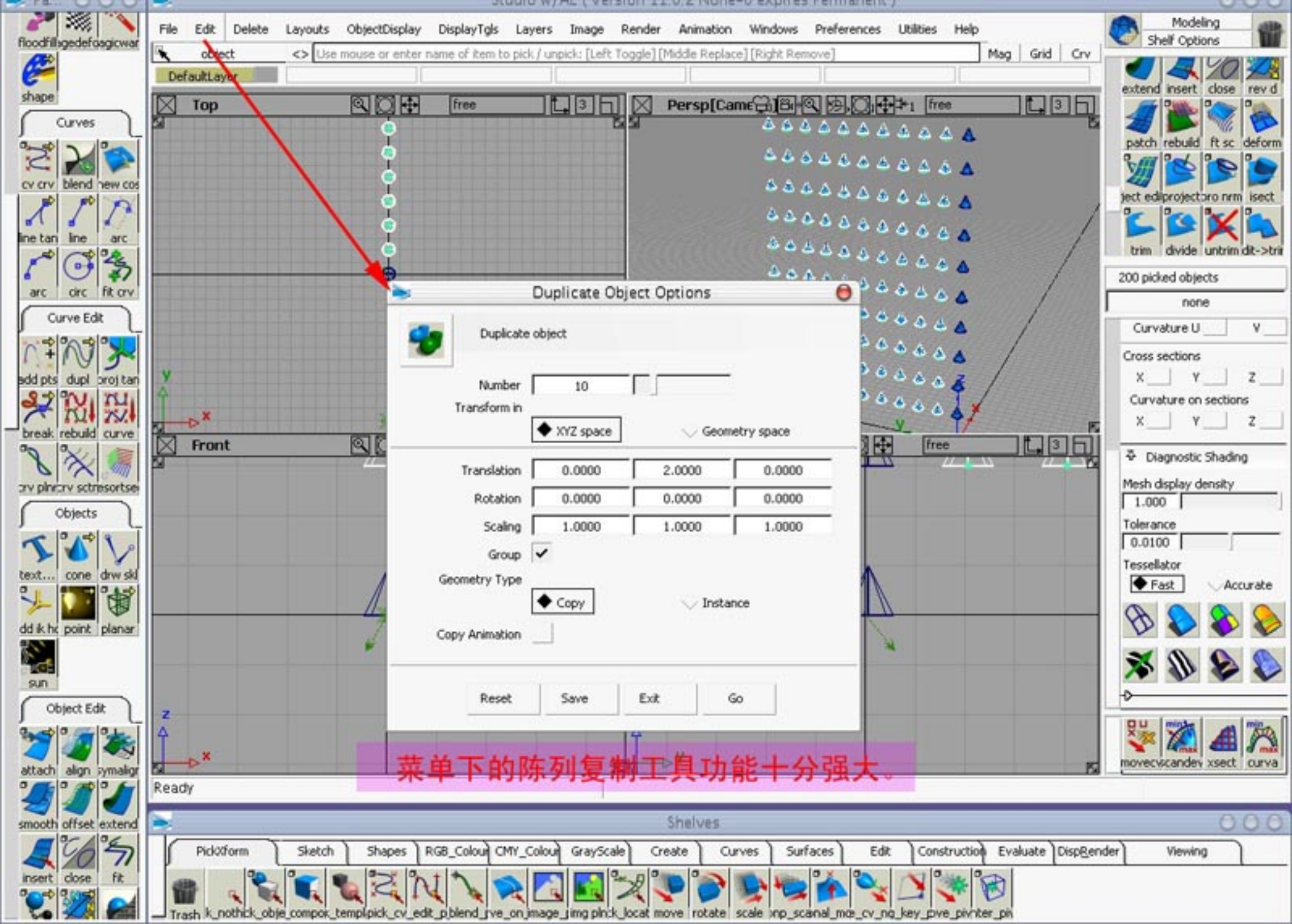


使用SWEEP命令对其动画路径进行间隔为1的距离放样。









DefaultLayer

Top free Persp[Camera] free

Front free

Ready

Shelves

Pickofrom Sketch Shapes RGB\_Colour CMY\_Colour GrayScale Create Curves Surfaces Edit Construction Evaluate DispRender Viewing

Trash\_k\_nothick\_obje\_compok\_templpick\_cv\_edit\_pblend\_rve\_on\_image\_img\_pick\_local move rotate scale\_inp\_scanal\_mae\_cv\_na\_key\_pve\_perter\_ph

Modeling Shelf Options

extend insert close rev d

patch rebuild ft sc deform

ject ediprojectoro nrm isect

trim divide untrim dt->tri

200 picked objects

none

Curvature U Y

Cross sections X Y Z

Curvature on sections X Y Z

Diagnostic Shading

Mesh display density 1.000

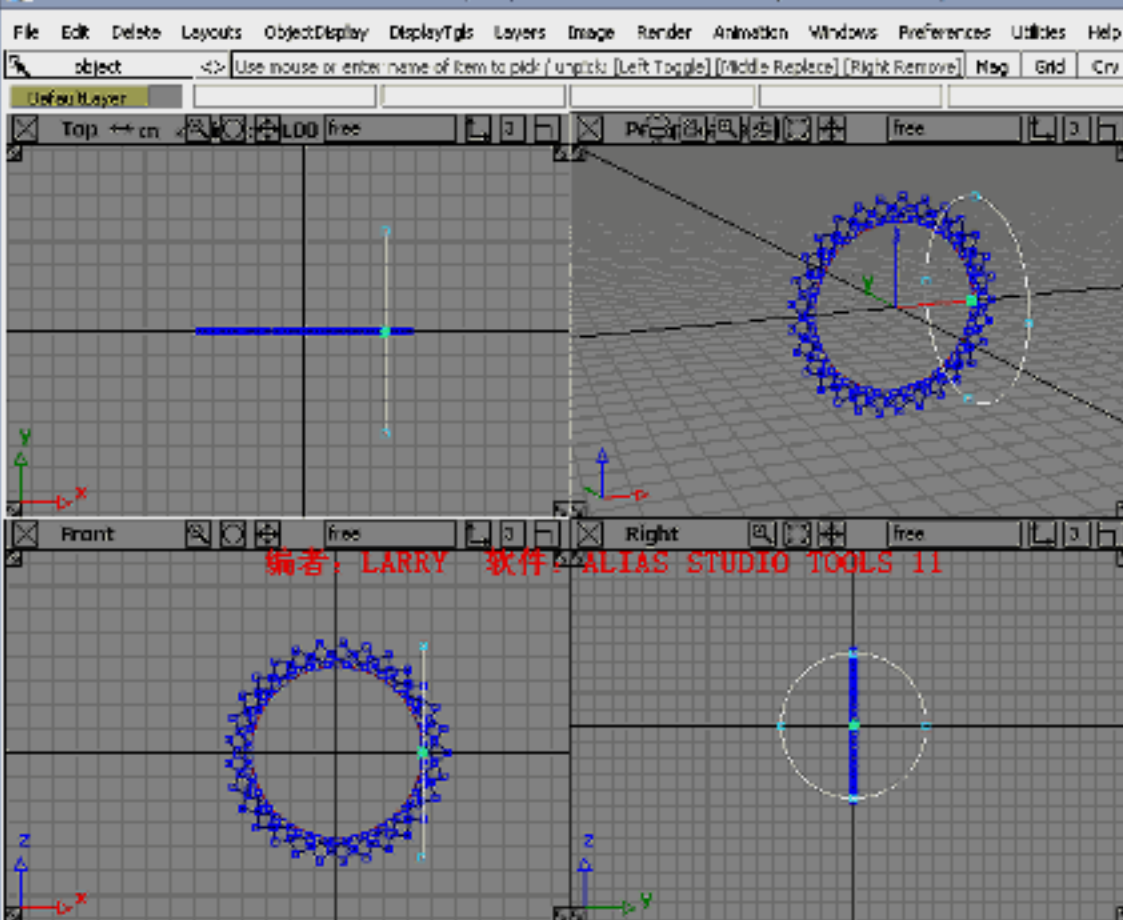
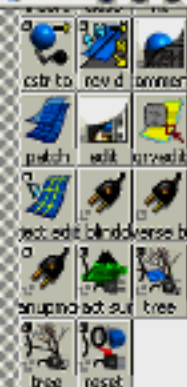
Tolerance 0.0100

Tessellator Fast Accurate

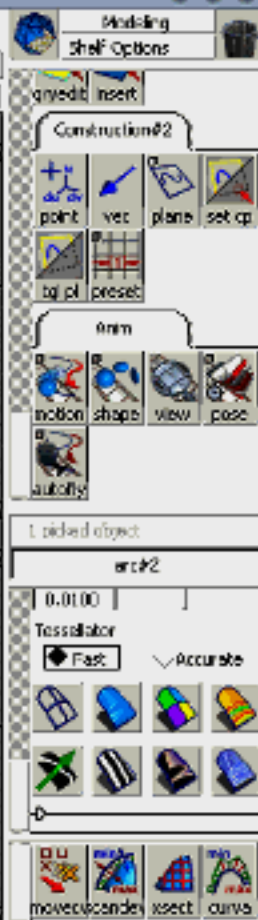
movecvcandev xsect curva

菜单下的陈列复制工具功能十分强大。



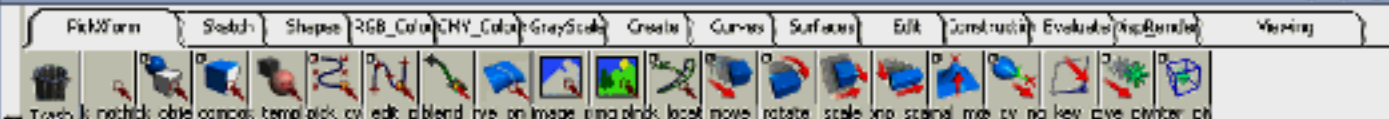


编者: LARRY 软件: ALIAS STUDIO TOOLS 11

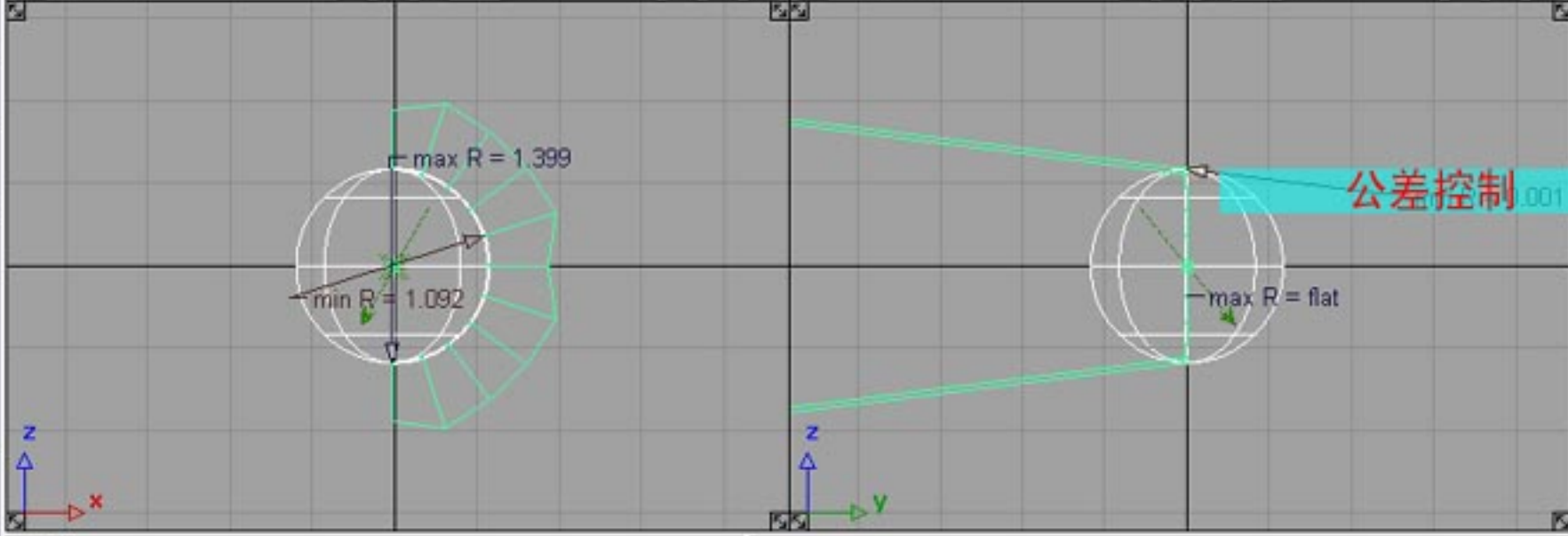
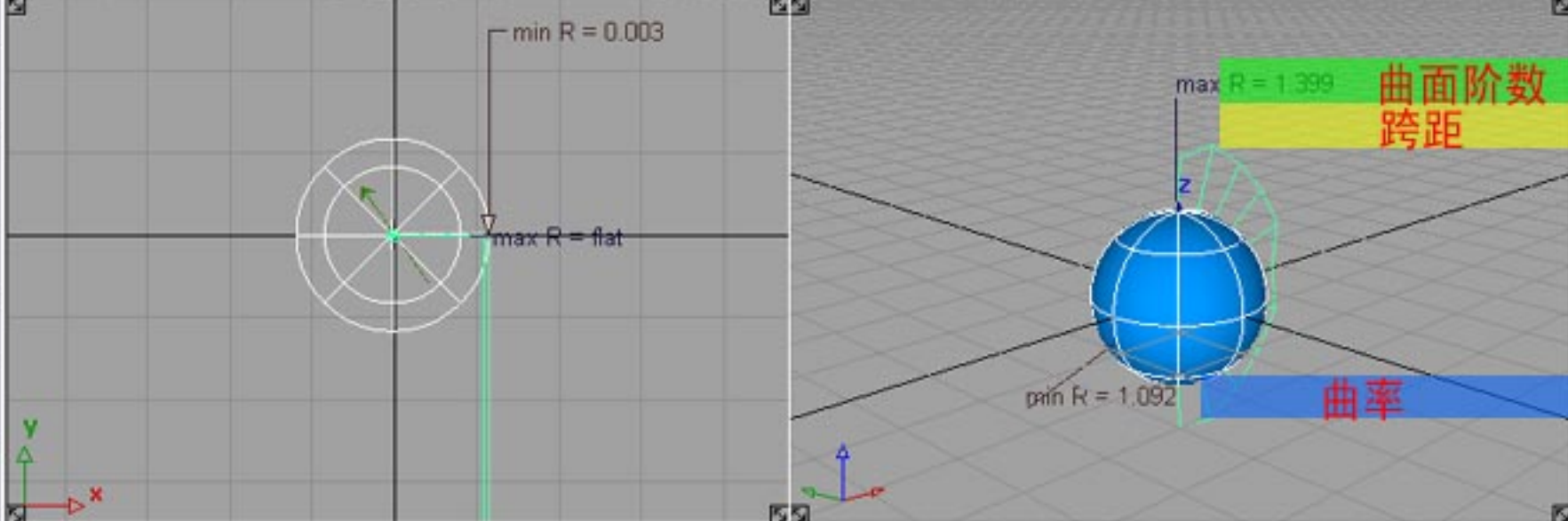


Create a surface by sweeping an animated curve through time

Shelves







Ready

Modeling Shelf Options

trim divide untrim dit->tri

I picked object

sphere

|        |   |   |
|--------|---|---|
| Degree | 2 | 2 |
| Spans  | 8 | 4 |

Display

Deviation

Cv/Hull

Blend Points

Isoparm U  v

Curvature U  v

Cross sections

X  Y  Z

Curvature on sections

X  Y  Z

Diagnostic Shading

Mesh display density

0.100

Tolerance

0.0100

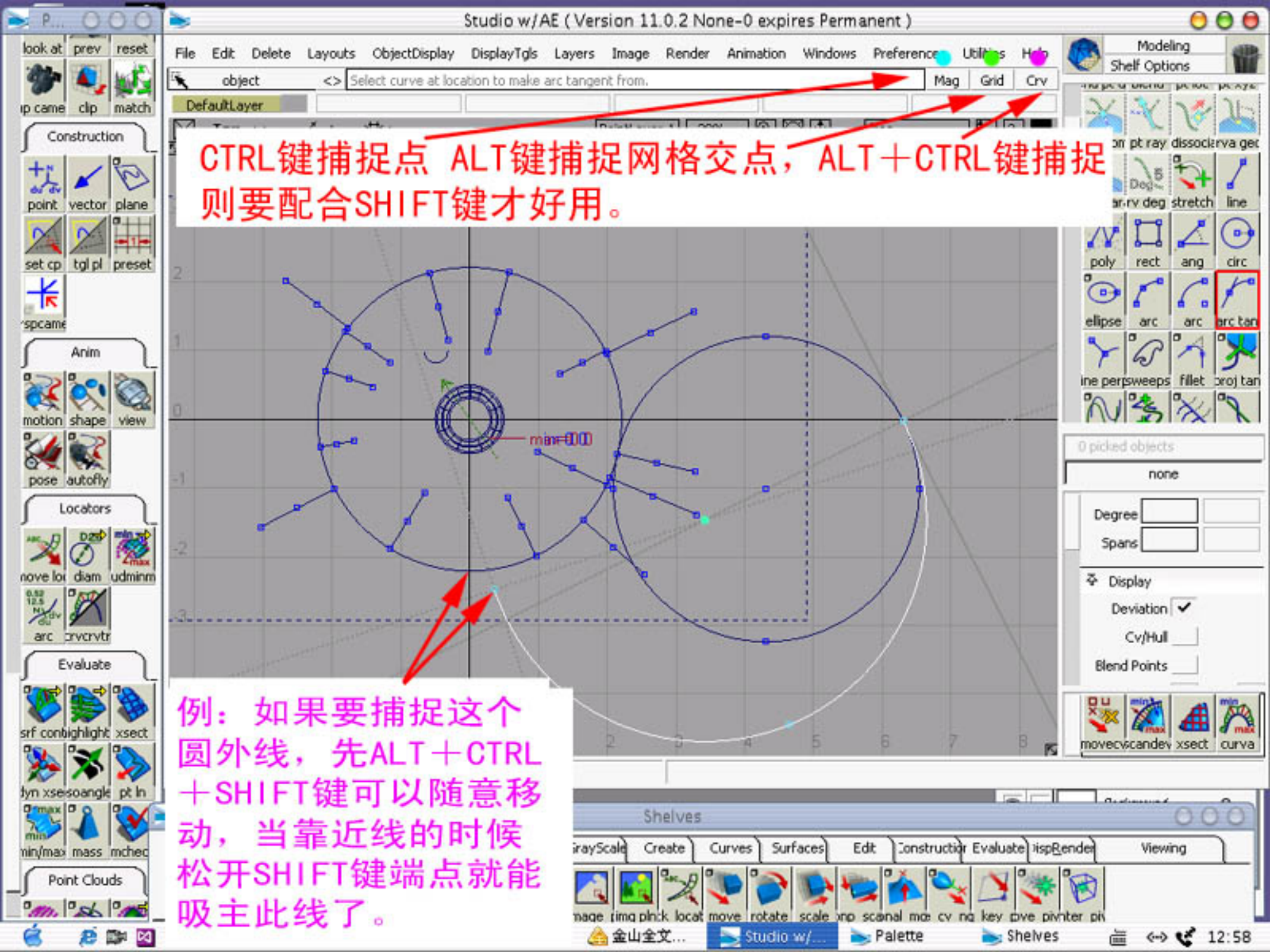
Tessellator

Fast  Accurate

move cv candev xsect curva



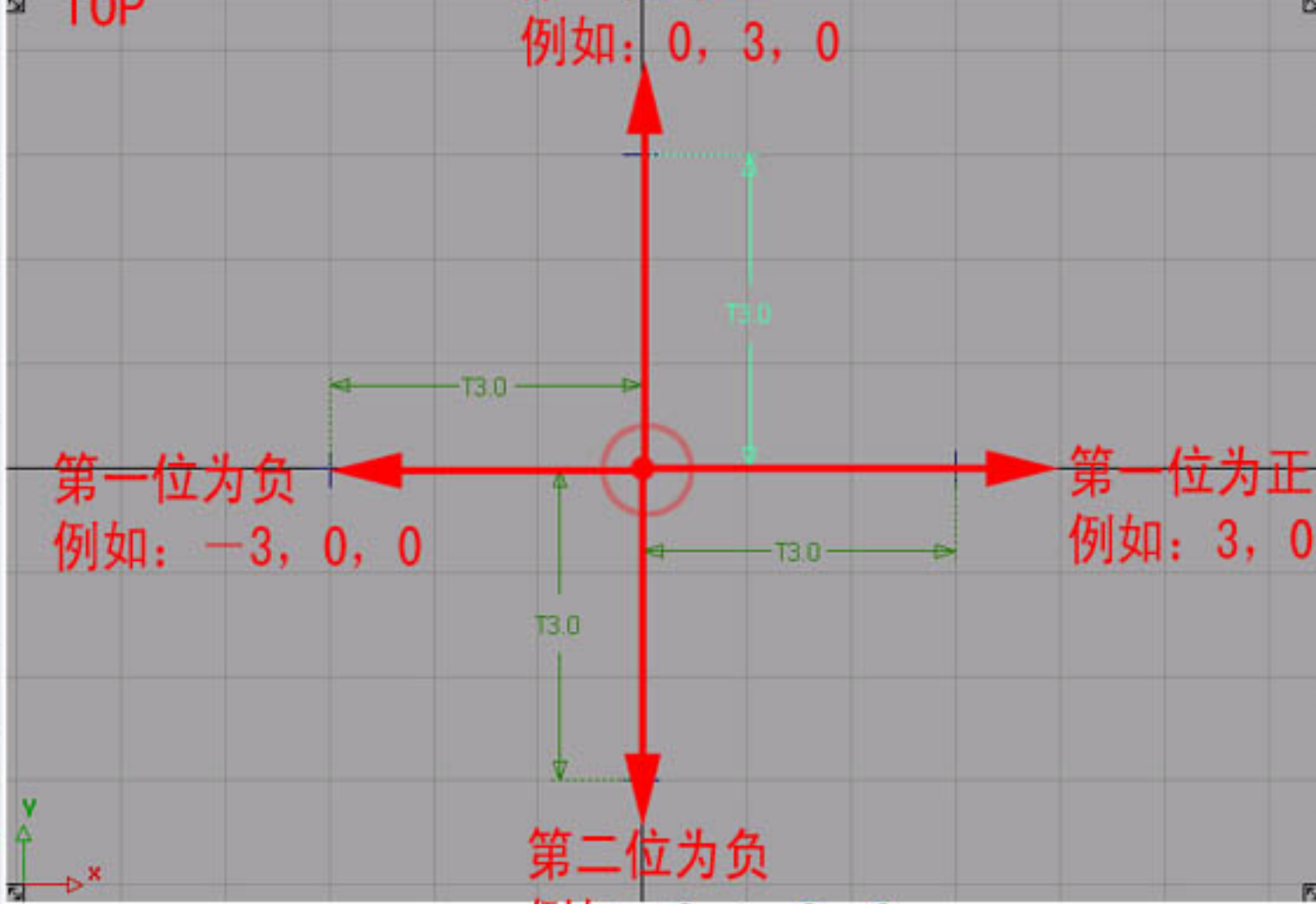




CTRL键捕捉点 ALT键捕捉网格交点，ALT+CTRL键捕捉则要配合SHIFT键才好用。

例：如果要捕捉这个圆外线，先ALT+CTRL+SHIFT键可以随意移动，当靠近线的时候松开SHIFT键端点就能吸主此线了。





Modeling Shelf Options

0 picked objects

none

0.000

Tolerance 0.0100

Tessellator  Fast  Accurate

min max xsect curva

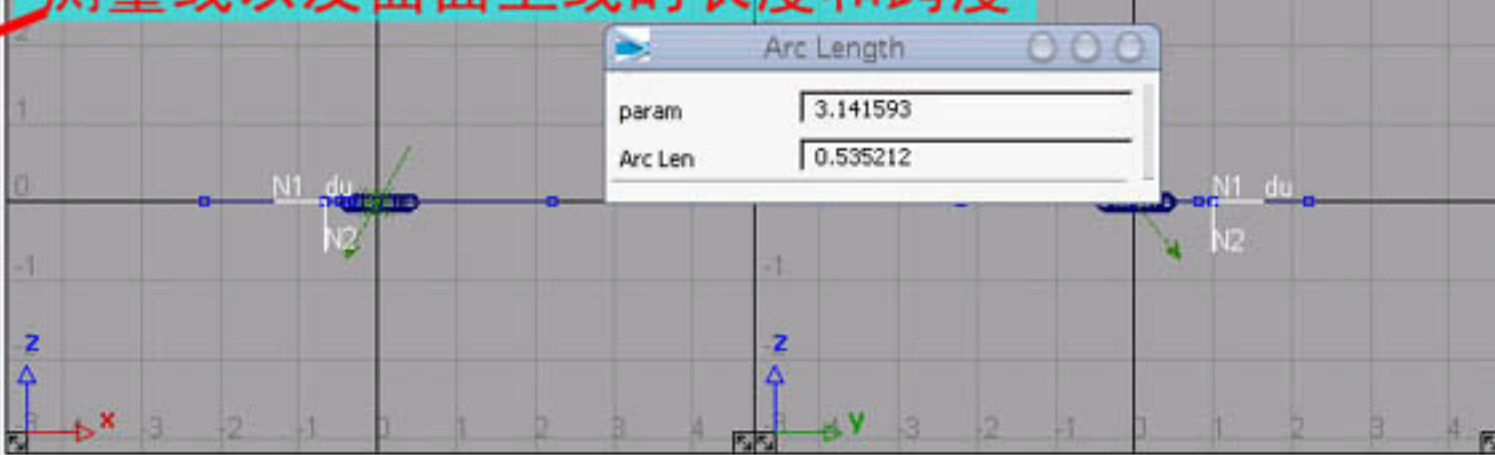
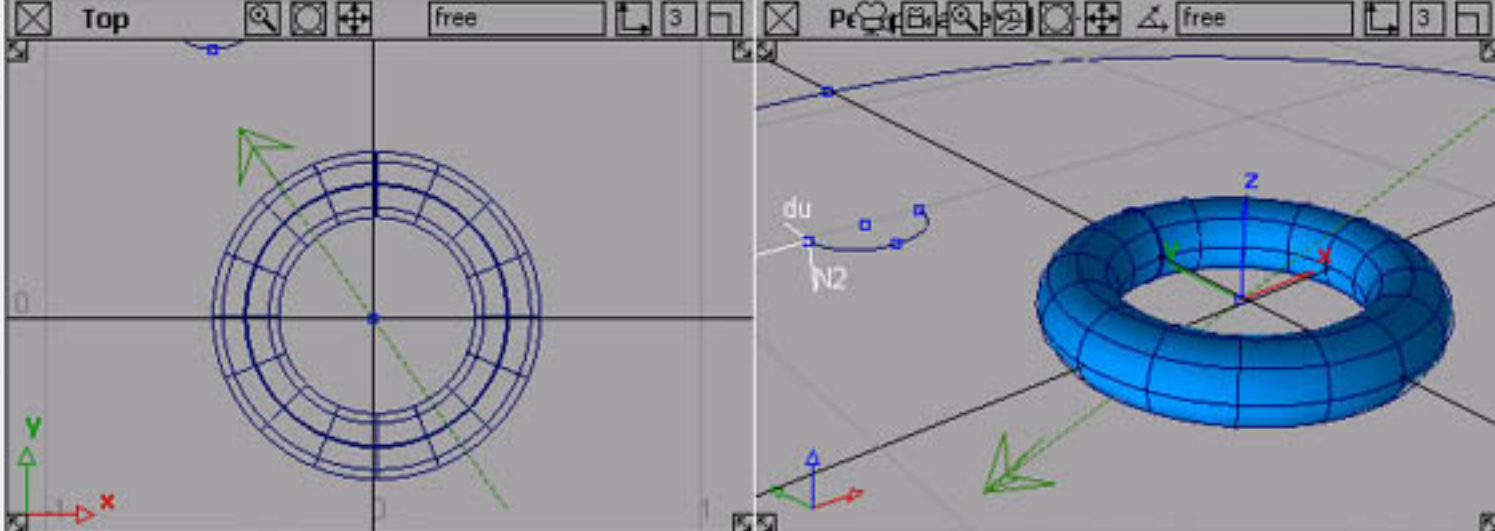
Ready

Shelves

Pickform Sketch Shapes RGB\_Colour CMY\_Colour GrayScale Create Curves Surfaces Edit Construction Evaluate XspRender Viewing

Trash k\_nothick\_obje\_compok\_templpick\_cv\_edit\_pblend\_rve\_on\_image\_img\_pick\_locat move rotate scale inp\_scanl\_mce\_cv\_nq\_key\_pve\_privter\_pi





测量线以及曲面上线的长度和跨度

Modeling Shelf Options

va par rv deg stretch line

poly rect ang circ

ellipse arc arc arc tan

ine persweeps fillet proj tan

dupl fit crv crv scrvr plnr

add pts rebuild

0 picked objects

none

1.000

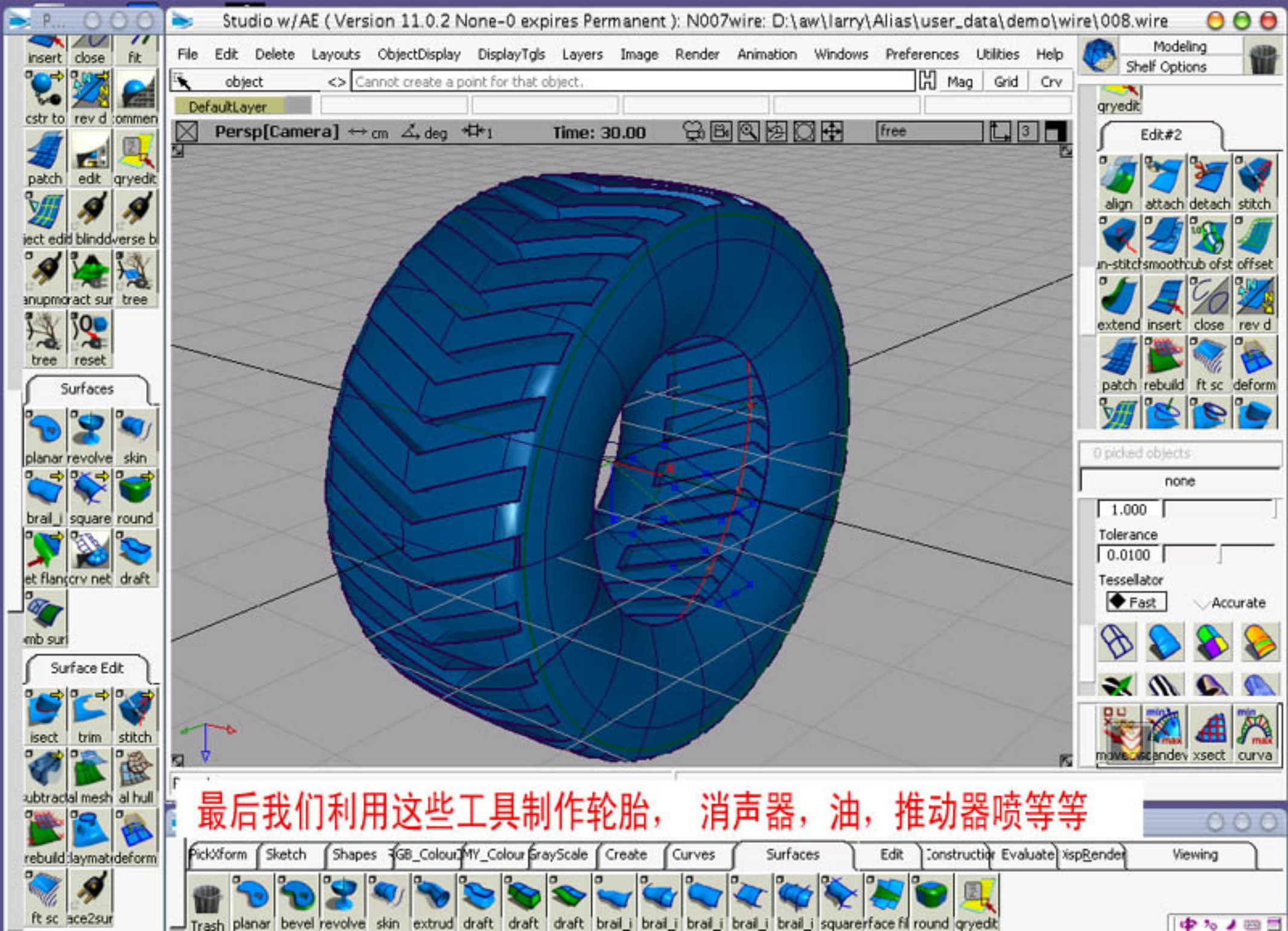
Tolerance 0.0100

Tessellator Fast Accurate

movecscandev xsect curva

Toolbar with various icons for modeling, editing, and rendering.





最后我们利用这些工具制作轮胎，消声器，油，推动器喷等等



Tools palette:

- fill, gedefo, agic, war
- shape
- Curves: cv crv, blend, new cos, line tan, line, arc, arc, circ, fit crv
- Curve Edit: add pts, dupl, proj tan, break, rebuild, curve, crv plnr, crv scres, sortse
- Objects: text..., sphere, drw skl, add ik hc, point, planar, sun
- Object Edit: attach, align, symalgr, smooth, offset, extend, insert, close, fit

Information Window for sphere \*\*\*

Name: sphere

Bounding Box:  Invisible  Simple Display

Transform info

|           |         |        |        |     |
|-----------|---------|--------|--------|-----|
| Translate | -0.3090 | 0.0000 | 0.0000 | mm  |
| Rotate    | 0.0000  | 0.0000 | 0.0000 | deg |
| Scale     | 2.3460  | 2.3460 | 2.3460 |     |

Pivot info

|              |         |        |        |     |
|--------------|---------|--------|--------|-----|
| Rotate Pivot | -0.3090 | 0.0000 | 0.0000 | mm  |
| Local Axes   | 0.0000  | 0.0000 | 0.0000 | deg |
| Scale Pivot  | -0.3090 | 0.0000 | 0.0000 | mm  |

Bounding box info

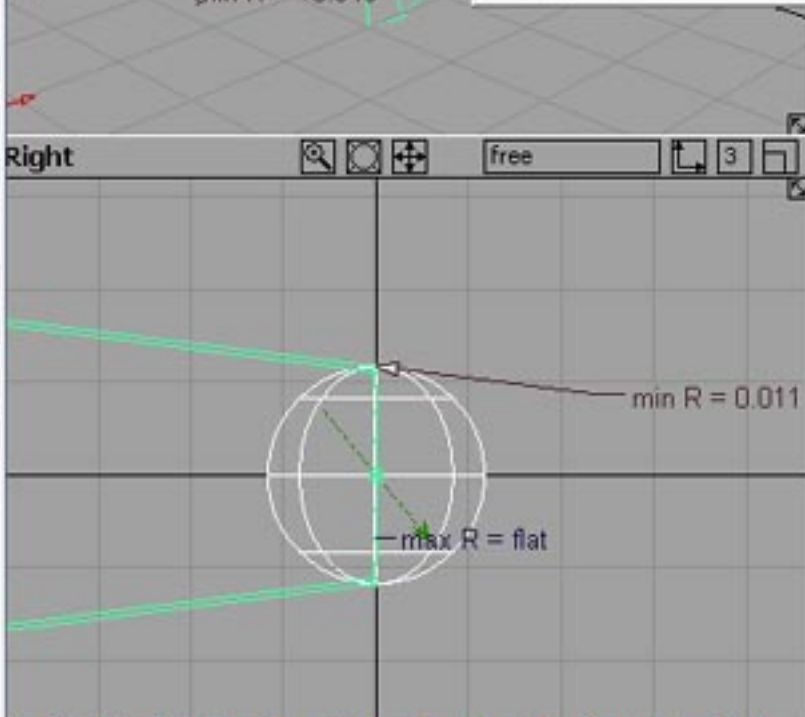
|      |          |          |          |    |
|------|----------|----------|----------|----|
| Min  | -11.9854 | -11.6761 | -11.7271 | mm |
| Max  | 11.3724  | 11.6761  | 11.7271  | mm |
| Size | 23.3578  | 23.3522  | 23.4541  | mm |
| Size | 23.3578  | 23.3522  | 23.4541  | mm |

Surf Geometry info

|               |          |      |
|---------------|----------|------|
| Form(U,V)     | PERIODIC | OPEN |
| Degree(U,V)   | 2        | 2    |
| Spans(U,V)    | 8        | 4    |
| Segments(U,V) | 16       | 16   |
| Curves(U,V)   | 2        | 2    |

Context menu:

- Palette...
- Shelves...
- Multi-lister
- Information (highlighted) -> Information window... Ctrl+5
- Edit
- Sets
- Deformation cntrl...
- Expression controls...
- SBD
- + Polysset Data



Shelf Options

trim divide untrim dit->trim

I picked object: sphere

Degree: 2 2

Spans: 8 4

Display: Deviation  Cv/Hull

Blend Points: Isoparm U  V  Curvature U  V

Cross sections: X Y Z

Curvature on sections: X Y Z

Diagnostic Shading

Mesh display density: 0.100

Tolerance: 0.1000

Tessellator: Fast Accurate

move cv candev xsect curva

每个物体都会有它们各自的参数属性。

Ready

En ..

Shelves: Pickform Sketch Shapes RGB\_Colour CMY\_Colour GrayScale Create Curves Surfaces Edit Construction Evaluate DispRender Viewing

Bottom toolbar: Trash k\_nothick\_obje\_compor\_templpick\_cv\_edt\_pblend\_rve\_on\_image\_img\_pick\_locat move rotate scale rnp\_scanal\_moe\_cv\_no\_key\_pve\_pivnter\_ph



malblunalsmneddon  
floodfillgedefæe (rect)  
shape

Curves

cv crv blend flow con  
line per line tan line tan line per  
arc tan circ fit crv

Curve Edit

add pts dupl proj tan  
break rebuild curve  
crv pin crv scresortse

Objects

text... sphere drw skl  
add ik hc point planar  
sun

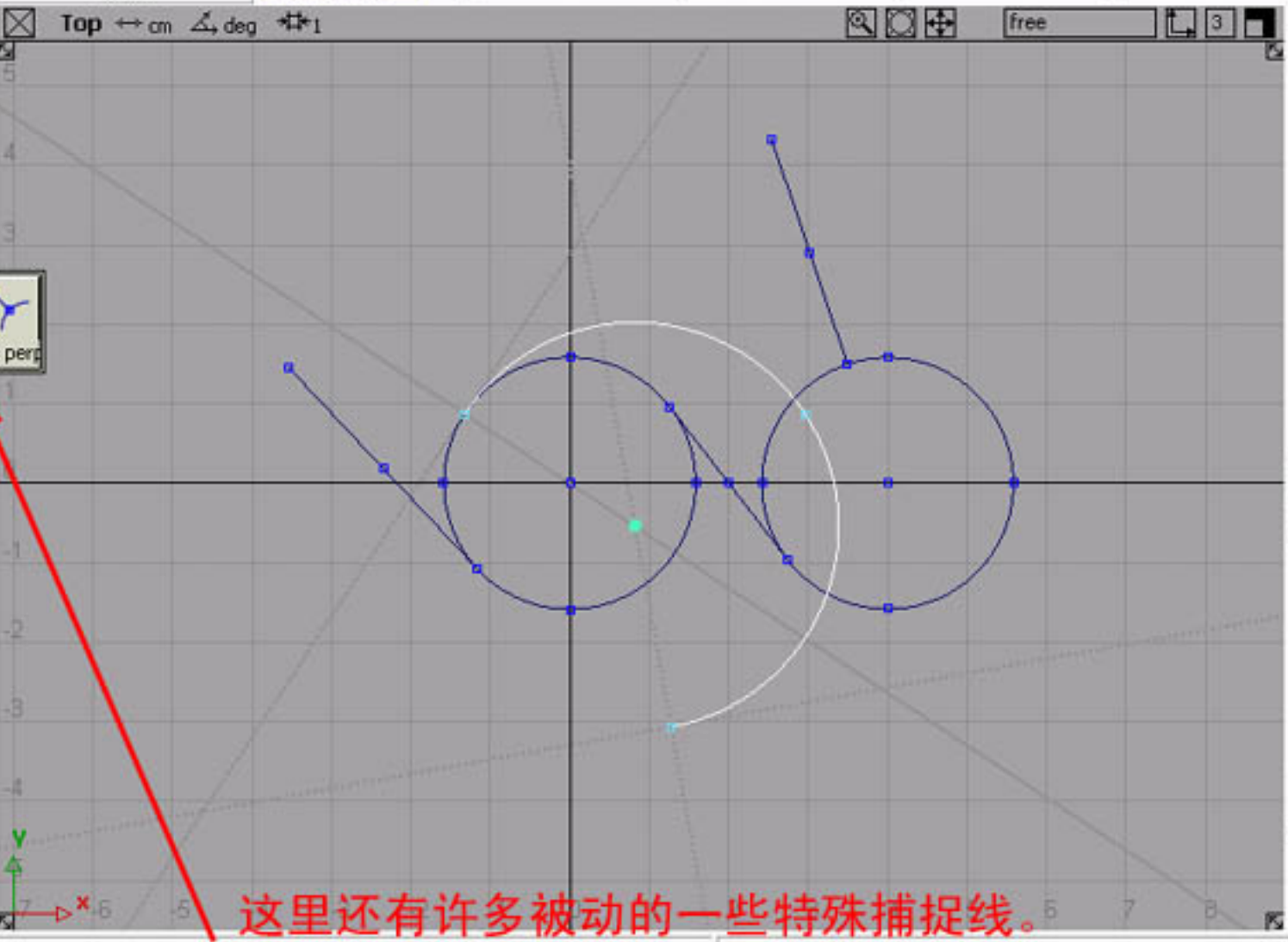
Object Edit

File Edt Delete Layouts ObjectDisplay DisplayTgls Layers Image Render Animation Windows Preferences Utilities Help

Select curve at location to make arc tangent from. Mag Grid Crv

Stages DefaultLayer

Top cm deg 1



这里还有许多被动的一些特殊捕捉线。

Modeling Shelf Options

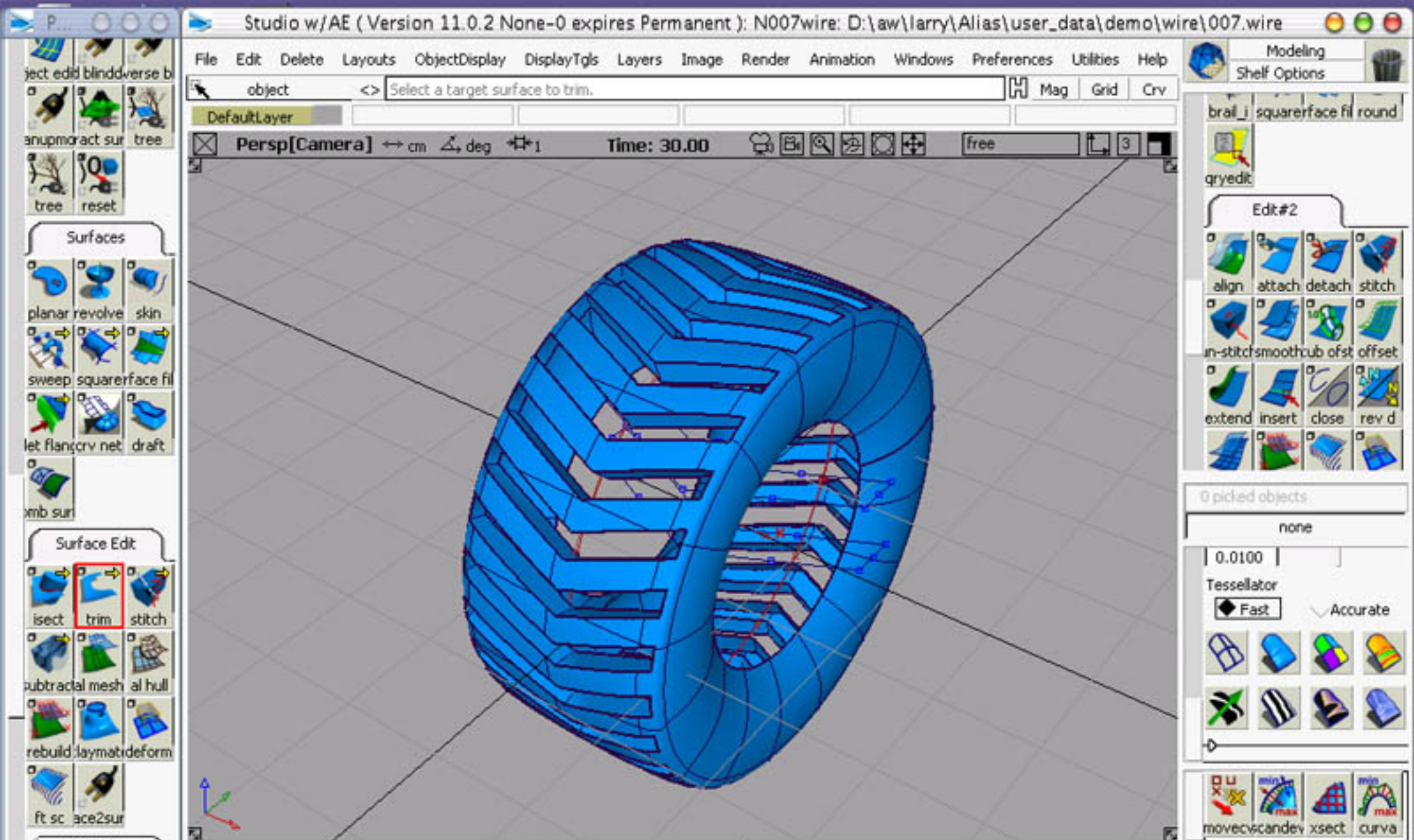
cv crv ad pt crv creatorv edit  
nd pt a blend pt loc pt xyz  
st geom pt ray dissoci rva ger  
va par rv deg stretch line  
poly rect ang circ  
I picked object  
arc#3  
Curvature  
Comb Scale 0.081  
UV Curvature  
Samples 10  
Spacing Length  
Num 3 3  
movecvcandev xsect curva

Shelves

PickXform Sketch Shapes RGB\_Colour CMY\_Colour GrayScale Create Curves Surfaces Edit Constructor Evaluate DispRender Viewing

Trash pan zoom img pin image move raphic jb\_penob\_pench\_penolid\_calline\_solinal\_solidium\_sirge\_solal\_marium\_mage\_maredium\_erge\_aial\_sharmal\_bluall\_smenal\_dor





使用裁剪工具分别对它们的面进行裁剪。 得到如图那样。









File Edit Delete Layouts ObjectDisplay DisplayTgls Layers Image Render Animation Windows Preferences Utilities Help  
object <> Select intersecting surface or construction plane. Mag Grid Crv  
DefaultLayer  
Persp[Camera] ↔ cm Δ deg \*1 Time: 30.00 free 3

ject edit blindverse b  
snupmoract sur tree  
tree reset

Surfaces

planar revolve skin  
sweep squareface fil  
et flancrv net draft  
emb sur

Surface Edit

ise trim stitch  
subtractal mesh al hull  
rebuild laymatr deform  
ft sc ace2sur

Polygons  
Polygon Edit  
Poly Shading  
Mesh  
Cameras

Modeling Shelf Options

gryedit insert

Construction#2

point vec plane set cp  
tgl pl preset

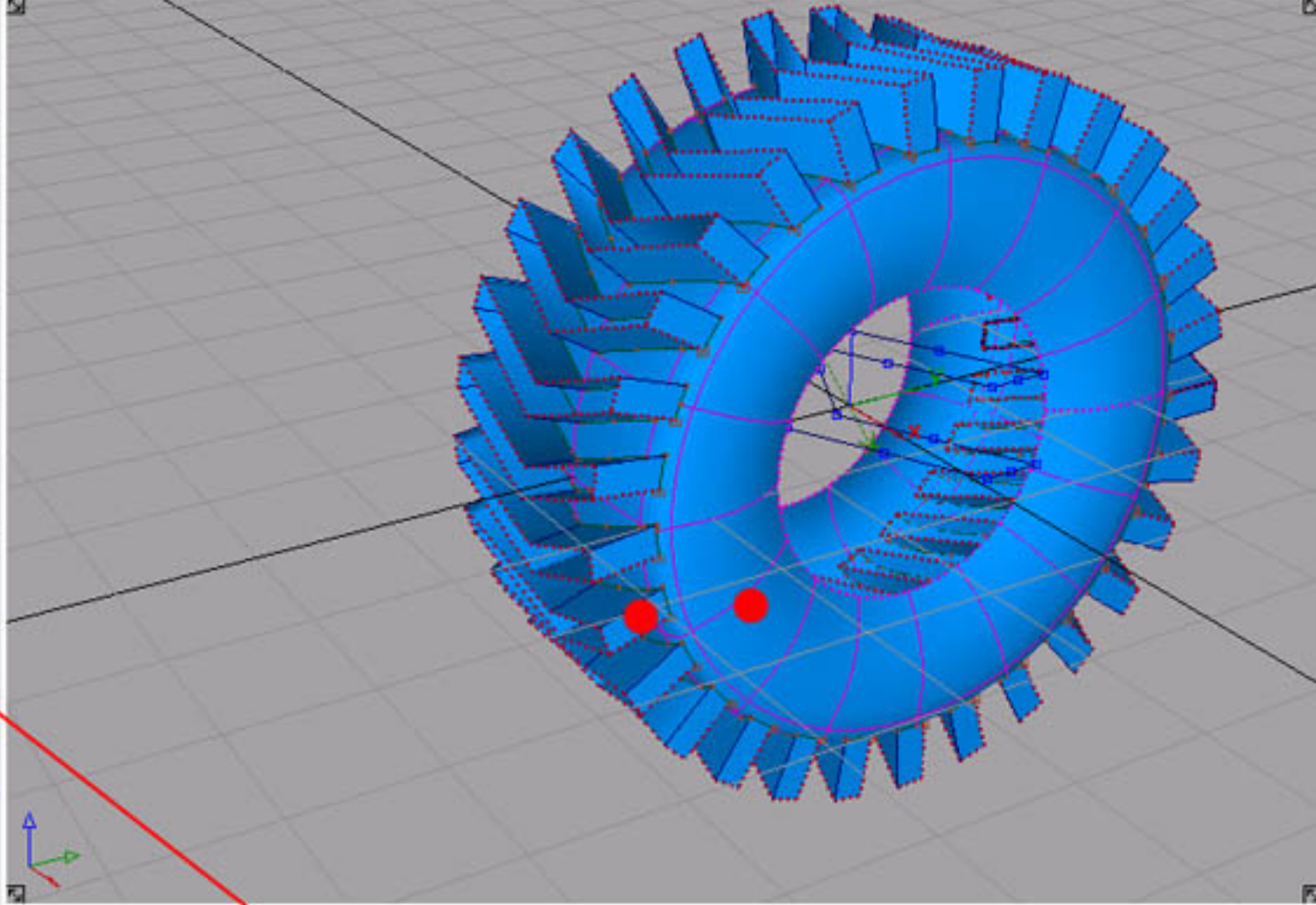
Anim

motion shape view pose  
autofly

0 picked objects  
none

0.0100  
Tessellator  
Fast Accurate

movecvcandev xsect curva



选择相交投影工具分别对它们全部进行相交投影。

PickXform Sketch Shapes GB\_Colour MY\_Colour GrayScale Create Curves Surfaces Edit Construction Evaluate isprRender Viewing

Trash planar bevel revolve skin extrud draft draft draft brai brai brai brai squareface fil round gryedit

Fn



File Edit Delete Layouts ObjectDisplay DisplayTgls Layers Image Render Animation Windows Preferences Utilities Help  
object <> Use mouse or enter name of item to pick / unpick: [Left Toggle] [Middle Replace] [Right Remove] Mag Grid Crv  
DefaultLayer  
Top ↔ cm ↗ deg ↕ 1 free 3

- subtractal mesh al hull
- rebuild laymat deform
- ft sc ace2sur
- Polygons
- Polygon Edit
- Poly Shading
- Mesh
- Cameras
- tumble twist zoom
- look at prev reset
- ip came clip match
- Construction
- point vector plane
- set cp tgl pl preset
- spcam
- Anim
- motion shape view

- Modeling Shelf Options
- nd pt a blend pt loc pt xyz
- pt geom pt ray dissoci rva get
- tch line
- ig circ
- c arc tan
- et proj tan
- Accurate
- move cv candev xsect curva

这个工具是ALIAS中表达尺寸的一个重要工具

Preset Grid Options

Grid preset

Windows  All  Current

Grid Spacing 1.0000 cm

Subdivisions 1

Perspective Grid Extent 320.00 cm

Corner Perspective Gnomon

Labels

Label Font Properties Custom

Label Font Size 10

Reset Save Exit Go

网格间距

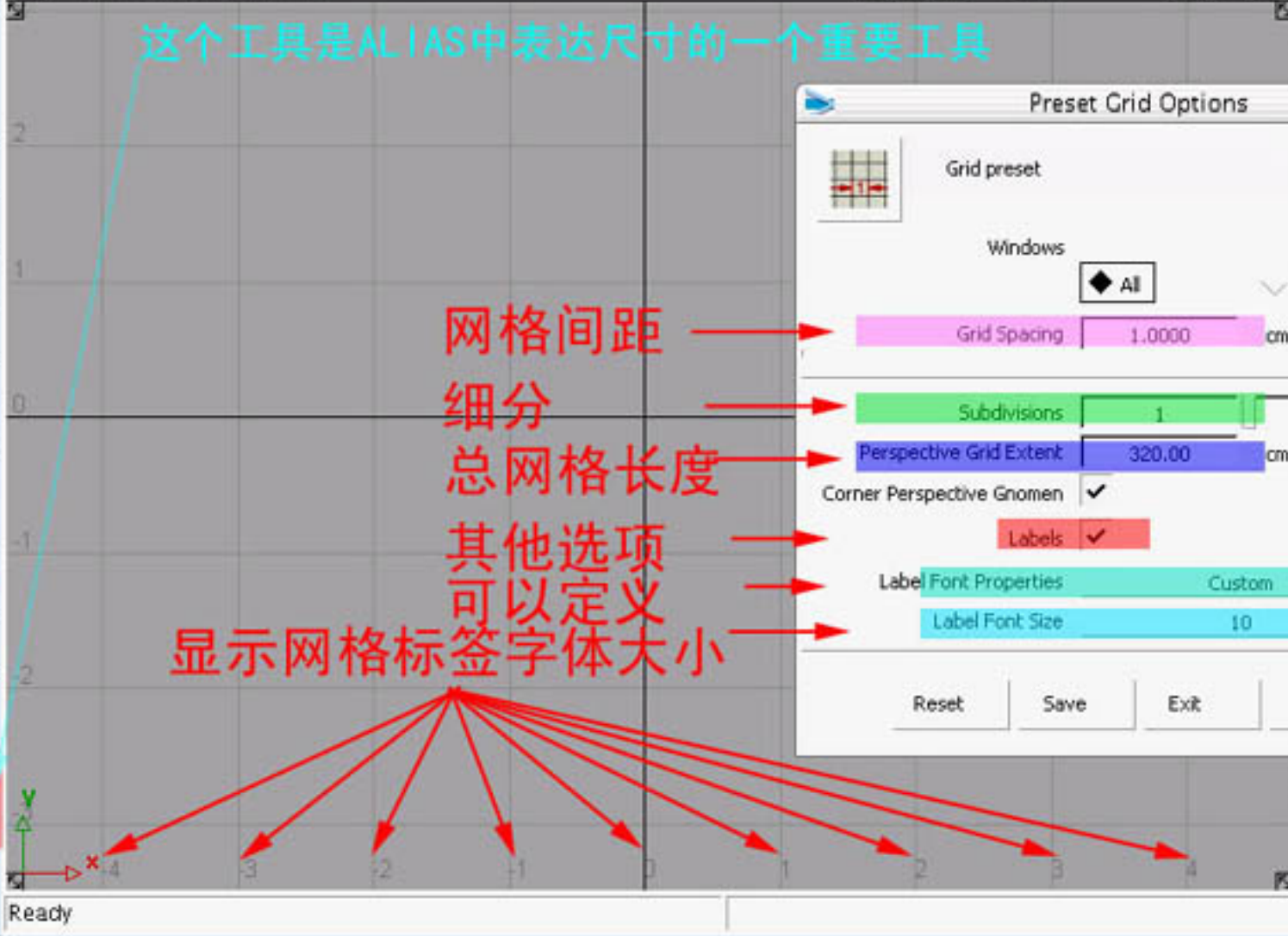
细分

总网格长度

其他选项

可以定义

显示网格标签字体大小

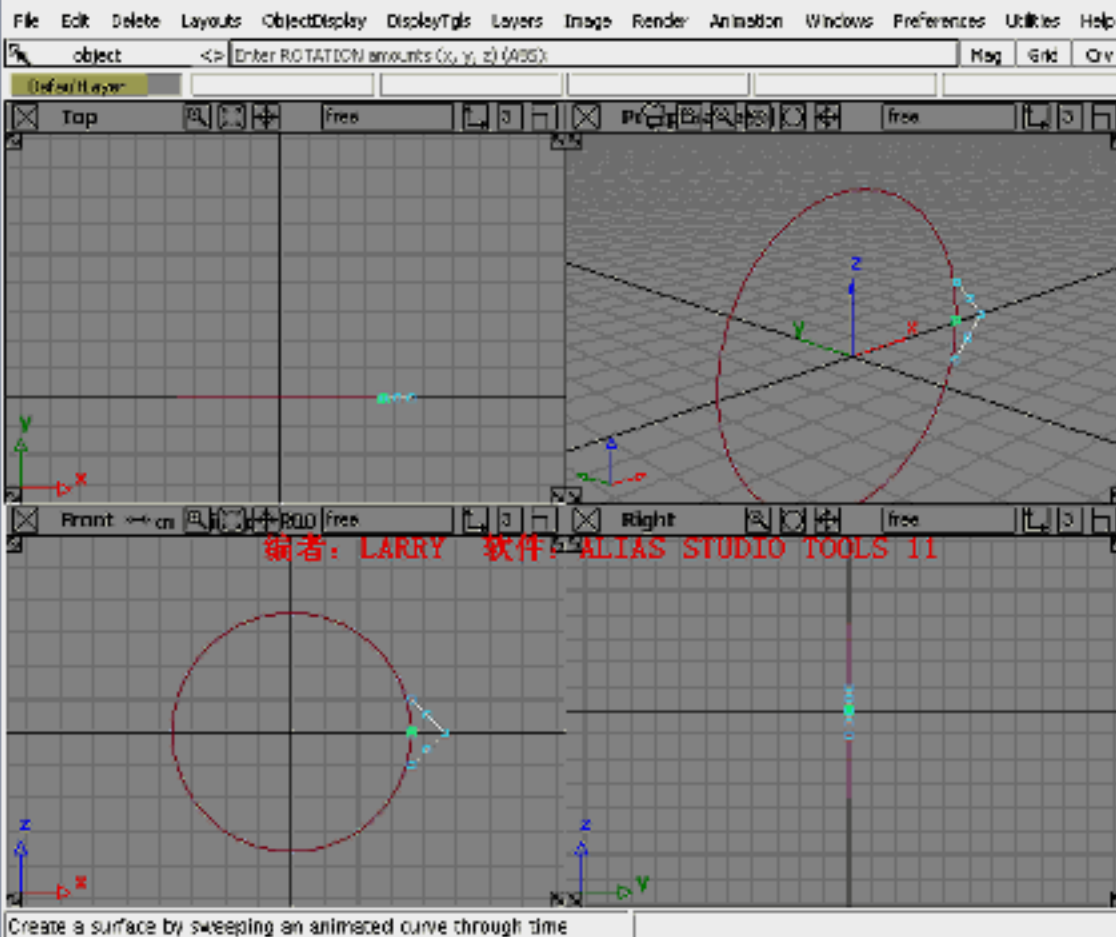


Shelves

PickXform Sketch Shapes RGB\_Colour CMY\_Colour GrayScale Create Curves Surfaces Edit Constructor Evaluate DispRender Viewing

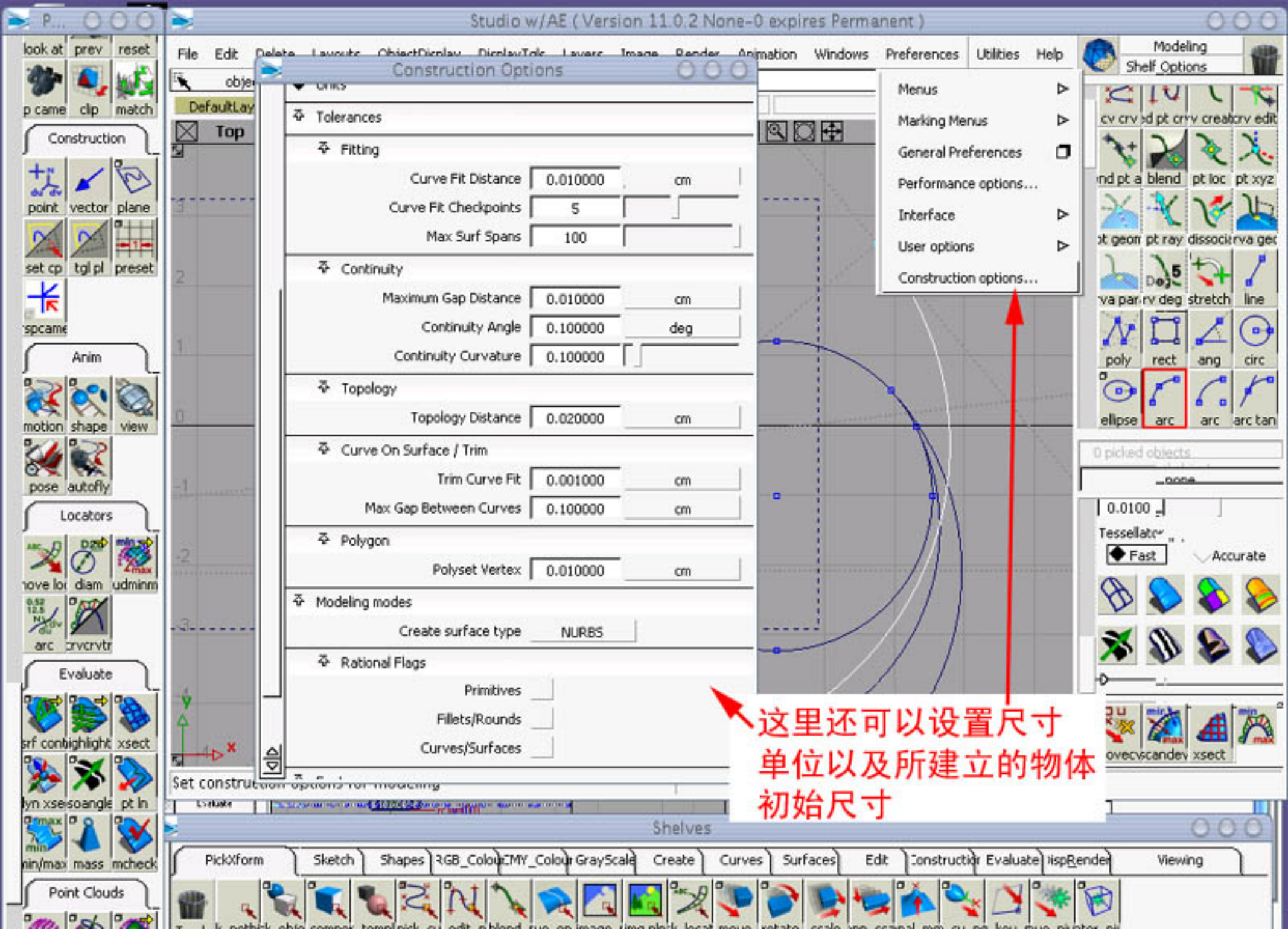
Trash k pathick obj compos tempick cv edit gblend rve on image ring pick local move rotate scale up scalal mm cv no key move pointer pi



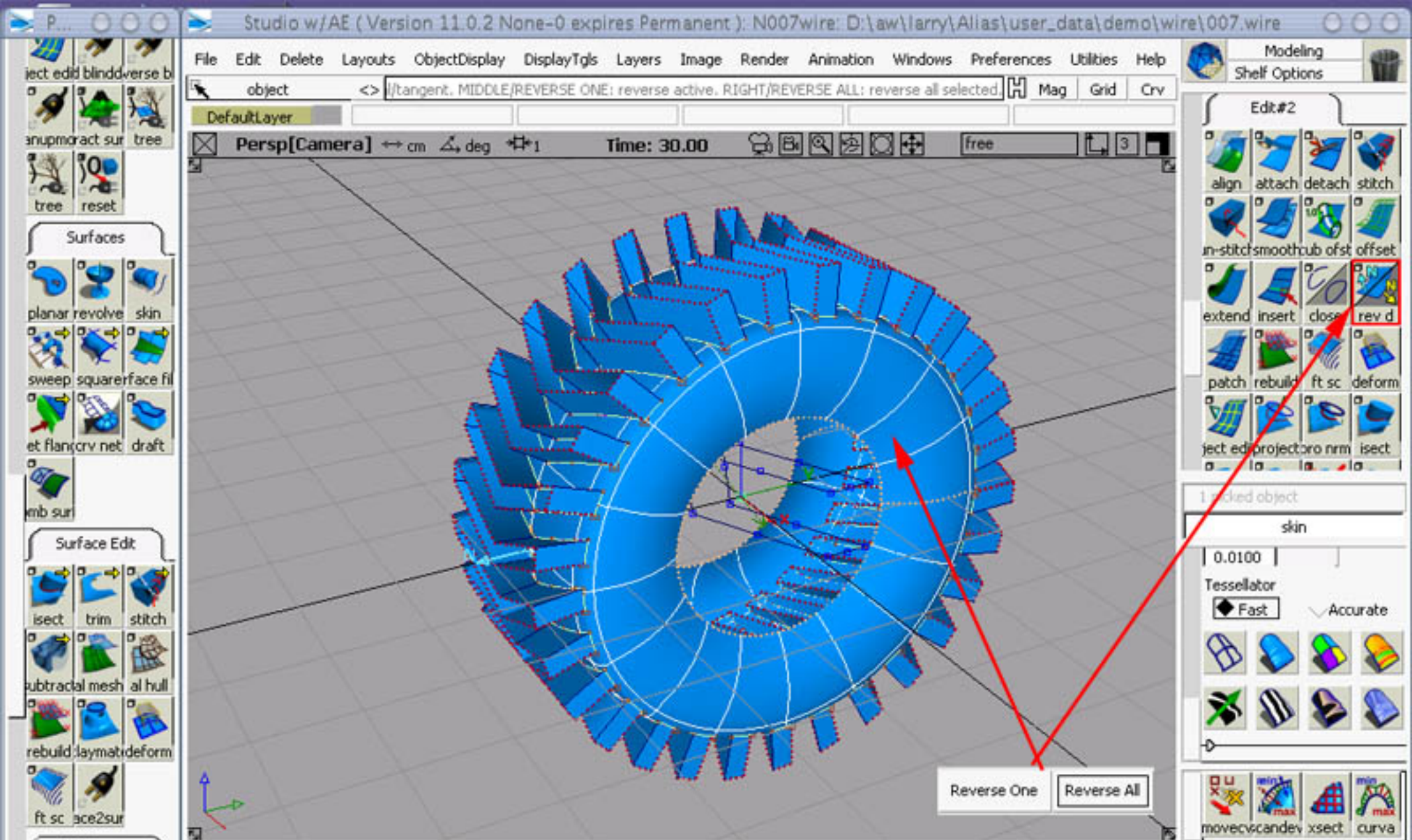


编者: LARRY 软件: ALIAS STUDIO TOOLS 11





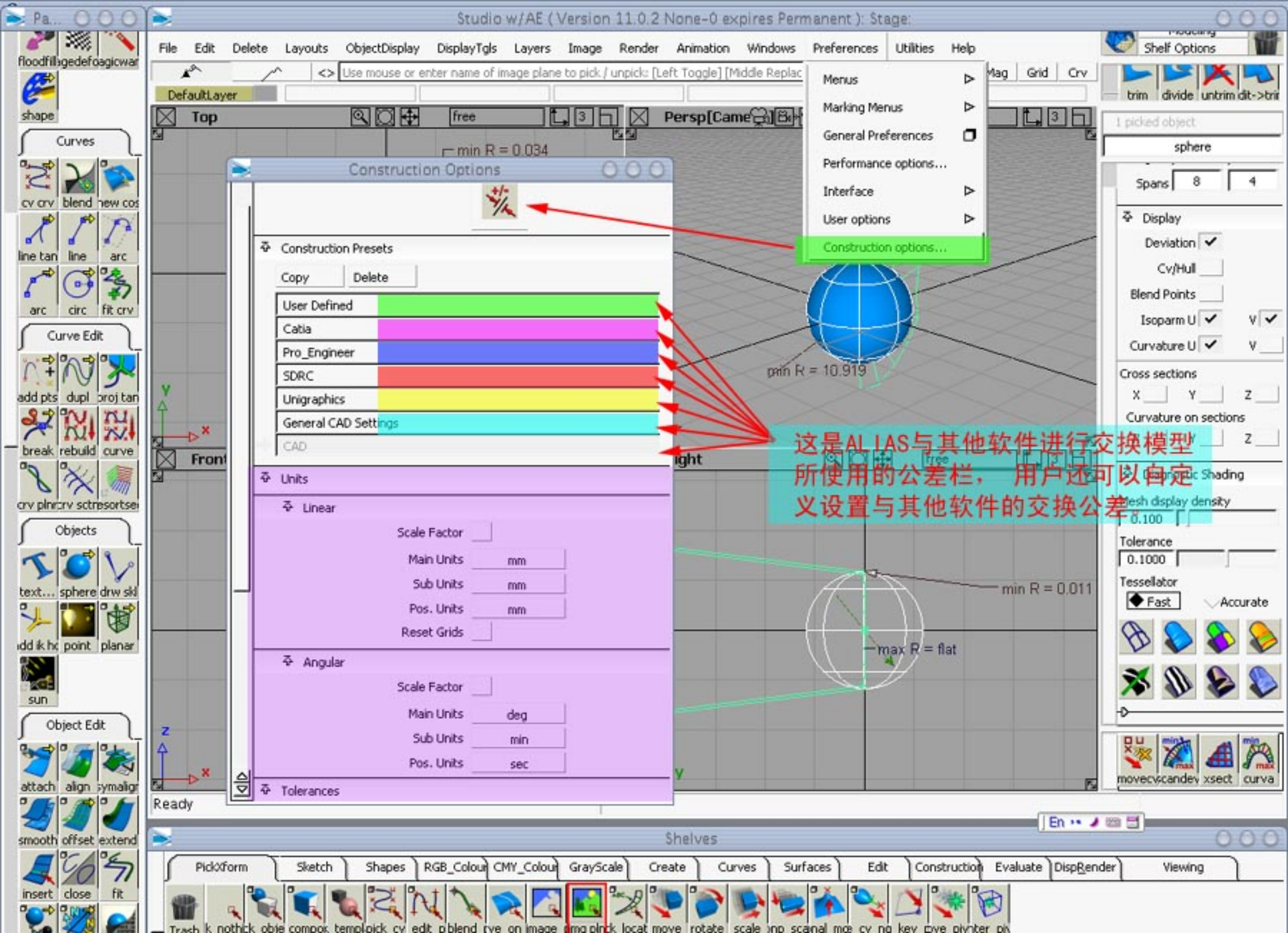




为了不使其裁剪不出错，我们先对曲面进行重整。如图







这是ALIAS与其他软件进行交换模型所使用的公差栏，用户还可以自定义设置与其他软件的交换公差

Construction Options

Construction Presets

Copy Delete

|                      |  |
|----------------------|--|
| User Defined         |  |
| Catia                |  |
| Pro_Engineer         |  |
| SDRC                 |  |
| Unigraphics          |  |
| General CAD Settings |  |
| CAD                  |  |

Units

Linear

Scale Factor

Main Units mm

Sub Units mm

Pos. Units mm

Reset Grids

Angular

Scale Factor

Main Units deg

Sub Units min

Pos. Units sec

Tolerances

- Menus
- Marking Menus
- General Preferences
- Performance options...
- Interface
- User options
- Construction options...

Shelf Options

trim divide untrim dit->trim

I picked object

sphere

Spans 8 4

Display

Deviation

Cv/Hull

Blend Points

Isoparm U  V

Curvature U  V

Cross sections

X Y Z

Curvature on sections

Mesh display density

0.100

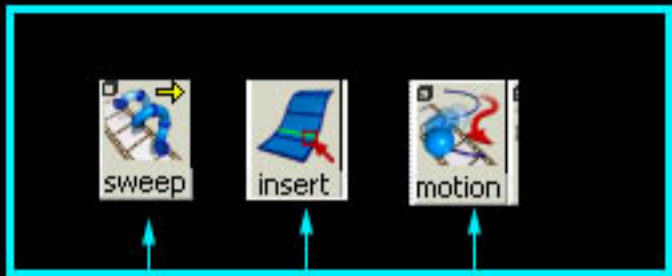
Tolerance

0.1000

Tessellator

Fast Accurate





总结理解这3个工具