

# 第一章 使用ZWrap拓扑

**Draw**

Draw Size 64 (Dynamic)  
Focal Shift 0

Z Intensity 25  
Rgb Intensity

Mrgb Rgb M  
Zadd Zsub Zcut

Width Height  
Depth Imbed

Dynamic  
Angle Of View  
Perp Align To Object

Auto Adjust Distance

Horizontal  
Vertical  
18 24 28 35 50 85  
Focal length(mm) 85  
Field of view(deg) 23.91316  
Crop factor 1

Undo 14  
Redo 0

Open Save  
Elev -1  
Floor Fill Mode Front

Grid Size 3  
Tiles 7  
Enhance Factor  
Enhance Opacity

Project On Mesh 0  
Snapshot To Grid

Snap  
Front-Back  
Up-Down  
Left-Right  
Modifiers

Channels

Select Camera

Alpha Brush Color Document Draw Edit File Layer Light Macro Marker Material Movie Picker Preferences Render Stencil Stroke Texture Tool Transform Zplugin Zscript light\*\* xzl

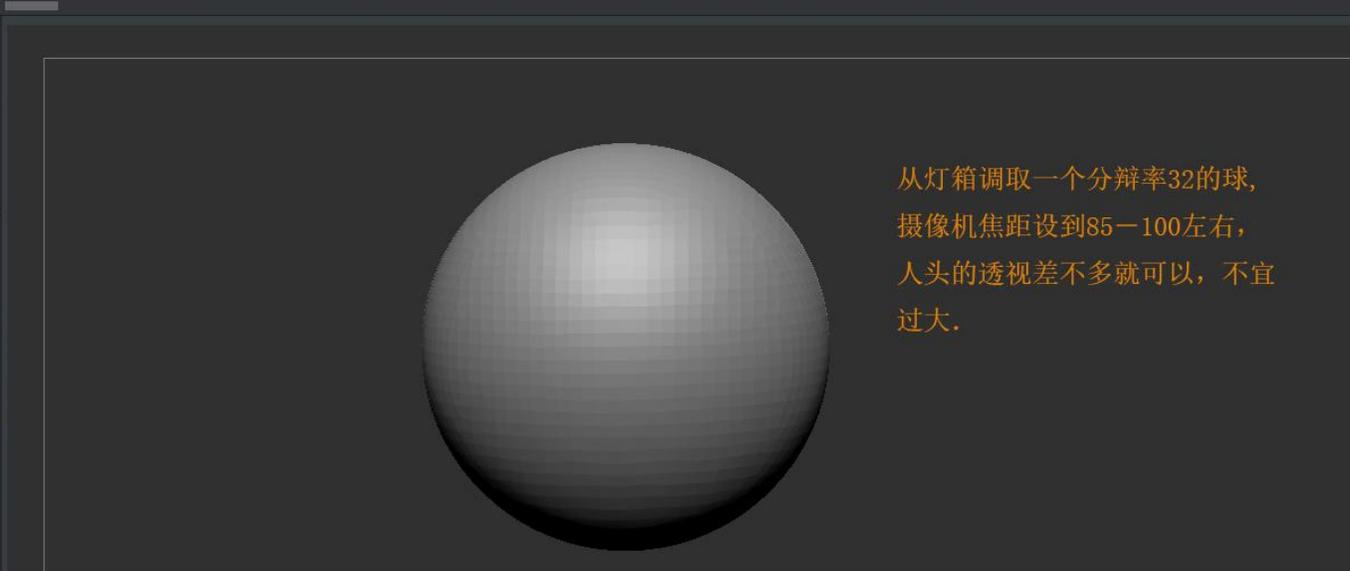
LightBox Edit Draw Move Rotate Scale Mrgb Rgb SubTool Master Projection Master Range 0 Floor Persp

Angle Of View  
Align To Object

Best Flat SmoothNormals  
Preview Fast Activate Symmetry

Zadd Zsub Rgb Intensity Focal Shift 0 Draw Size 64 Dynamic Z Intensity 25 BrushMod FillObject LazyMouse LazyRad

Standard Dots Alpha Off ClayBuild Curve Tu ZRemes hPolish TrimDyr SnakeHi Move To SelectLa MaskLa MaskRe



从灯箱调取一个分辨率32的球，  
摄像机焦距设到85-100左右，  
人头的透视差不多就可以，不宜  
过大。

Open File Recent Project Tool Brush Texture Alpha Material Noise Fibers Arrays Grids Document RenderSet Filters QuickSave Spotlight \*\* Go New Folder

Boolean	Head planes	Material	NPR	Cube.ZPR	DemoHeadFema	DynaMesh_Capsl	DynaMesh_Spher	DynaWax128.ZPF	PolySphere.ZPR
3D Printing	DemoProjects	Jewelry	Misc	Wacom	DemoAnimeHear	DemoSoldier.ZPR	DynaMesh_Stone	DynaWax64.ZPR	Primitives.ZPR
ArrayMeshes	FiberMeshes	Mannequin	NanoMeshes	ZSpheres	DemoHead.ZPR	Dog.ZPR	DynaMesh_Stone	Grid.ZPR	QCubeBevel.ZPR

Go To Folder D:\PROGRAM FILES\PIXOLOGIC\ZBRUSH 2019\ZProjects\DynaMesh\_Sphere\_32.ZPR

Mrg Grp Cust1 Cust2 Standar Move Flatten Clay Pinch ClayTub Morph Inflat Polish CurveTu Inflat ZRemes Armatur SkinSha RS\_RedC BasicMe Metal 0' caizhiqi

**Tool**

Load Tool Save As  
Load Tools From Project  
Copy Tool Paste Tool  
Import Export  
Clone Make PolyMesh3D  
GoZ All Visible R  
Lightbox Tools  
PolySphere. 48 R

PolySphere PolySph Cylinder  
PolyMes SimpleB

Subtool  
Geometry  
ArrayMesh  
NanoMesh  
Layers  
FiberMesh  
Geometry HD  
Preview  
Surface  
Deformation  
Masking  
Visibility  
Polygroups  
Contact  
Morph Target  
Polypaint  
UV Map  
Texture Map  
Displacement Map  
Normal Map  
Vector Displacement Map  
Display Properties  
Unified Skin  
Initialize  
Import  
Export

ZModelt  
Line Fill  
PolyF

Transp

Dynamic  
Solo  
BasicMe

Adjust Plugin  
Maya Blend Shapes  
Decimation Master  
FBX ExportImport  
GoUVLayout  
Intersection Masker  
Multi Map Exporter  
PolyGroupIt

Ryan's Tools  
**Ryan's Tools**  
by  
**Ryan Kittleson**  
ryankittleson@gmail.com  
www.ryankittleson.com

**EasyPrimitives**

**EasyMesh**  
Detail Level 5 EasyMesh  
Lower Higher  
**Color and Material**  
Polypaint Mode  
Texture Map Mode  
Sculpting Mode Fill Color  
Fill Material  
Clear Material  
Polypaint from MorphUV  
**Mirror and Weld**  
Flip X Flip Y Flip Z  
WeldX WeldY WeldZ  
**Trash Bin**  
Trash UnTrash  
Take out the trash!  
**Random Extras**  
Grow Mask  
Smart Subdiv  
Anti-Aliasing  
Reset Canvas Center Pivot  
Del Smaller < Crs Crs >

Scale Master  
SubTool Master  
Text 3D & Vector Shapes  
Transpose Master  
UV Master  
ZBrush To Photoshop  
ZColor  
ZWrap

USER light\*\*

Alpha Brush Color Document Draw Edit File Layer Light Macro Marker Material Movie Picker Preferences Render Stencil Stroke Texture Tool Transform Zplugin Zscript light\*\* xzl

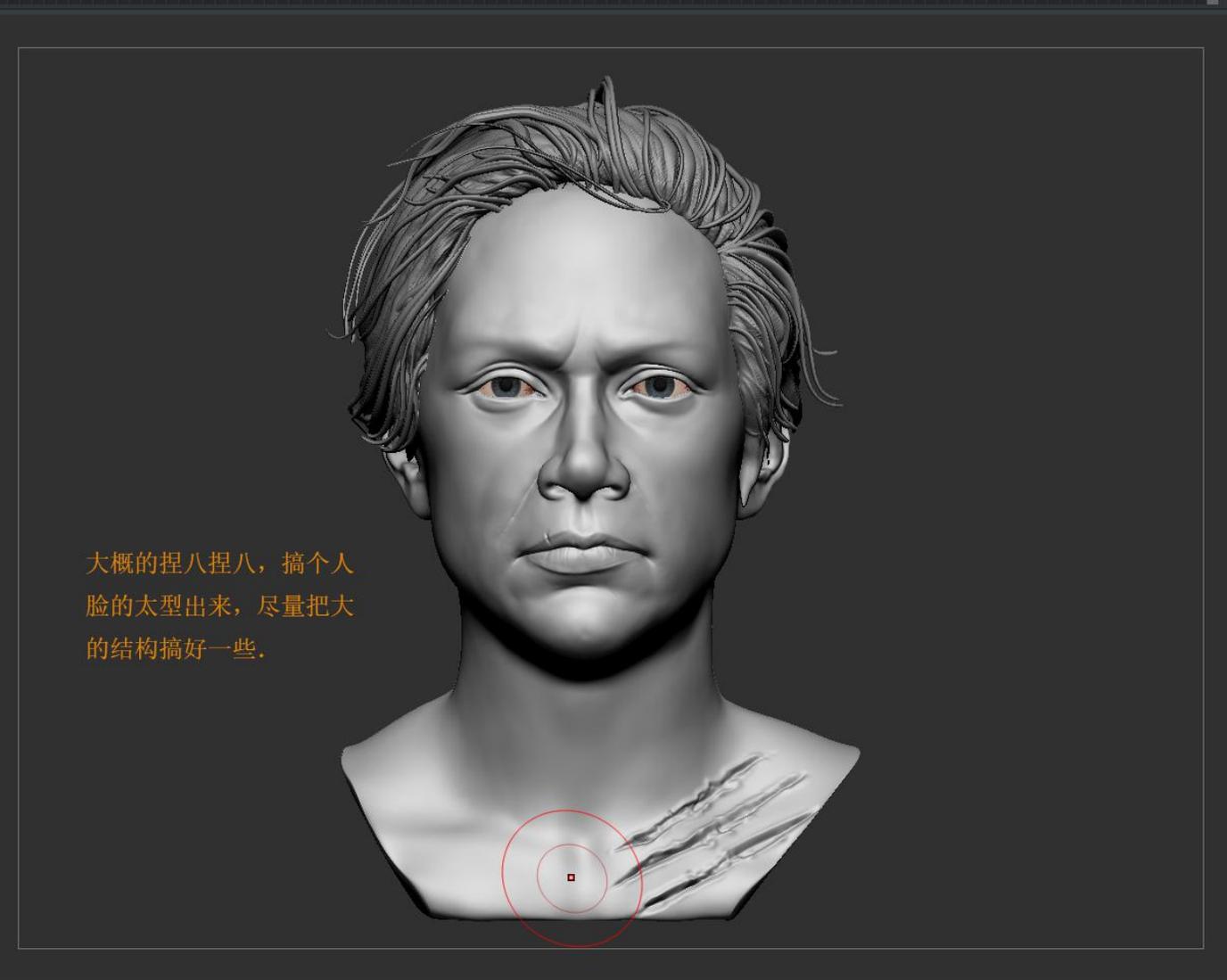
LightBox Edit Draw Move Rotate Scale Mrgb Rgb SubTool Master Projection Master Range 0 Floor Dynamic Persp

-0.051,1.836,-0.068

Zadd Zsub Rgb Intensity Focal Shift 0 Draw Size 71 Dynamic Z Intensity 8 BrushMod FillObject LazyMouse LazyRad

Angle Of View Best Flat SmoothNormals  
Align To Object BPR Preview Fast Activate Symmetry

Standard  
Dots  
Alpha Off  
ClayBullCurveTL  
ZRemes  
hPolish  
TrimDyr  
SnakeH.  
Move Tc  
SelectLa  
MaskLa  
Maskre



大概的捏八捏八，搞个人脸的太型出来，尽量把大的结构搞好一些。

Clone Make PolyMesh3D  
GoZ All Visible R  
Lightbox Tools  
Britany, 48 R  
Sphere AlphaBr  
SimpleB EraserB  
Britany 6

Subtool  
Geometry  
Lower Res Higher Res  
SDiv 4 Cage Patr  
Del Lower Del Higher  
**Freeze SubDivision Levels**  
Reconstruct Subdiv  
Convert BPR To Geo  
Divide Smt  
Subv ReUV

Dynamic Subdiv  
EdgeLoop  
Create  
ShadowBox  
ClayPolish  
DynaMesh  
Tessimate  
ZRemesher  
Modify Topology  
Position  
Size  
MeshIntegrity

ArrayMesh  
NanoMesh  
Layers  
FiberMesh  
Geometry HD  
Preview  
Surface  
Deformation  
Masking  
Visibility

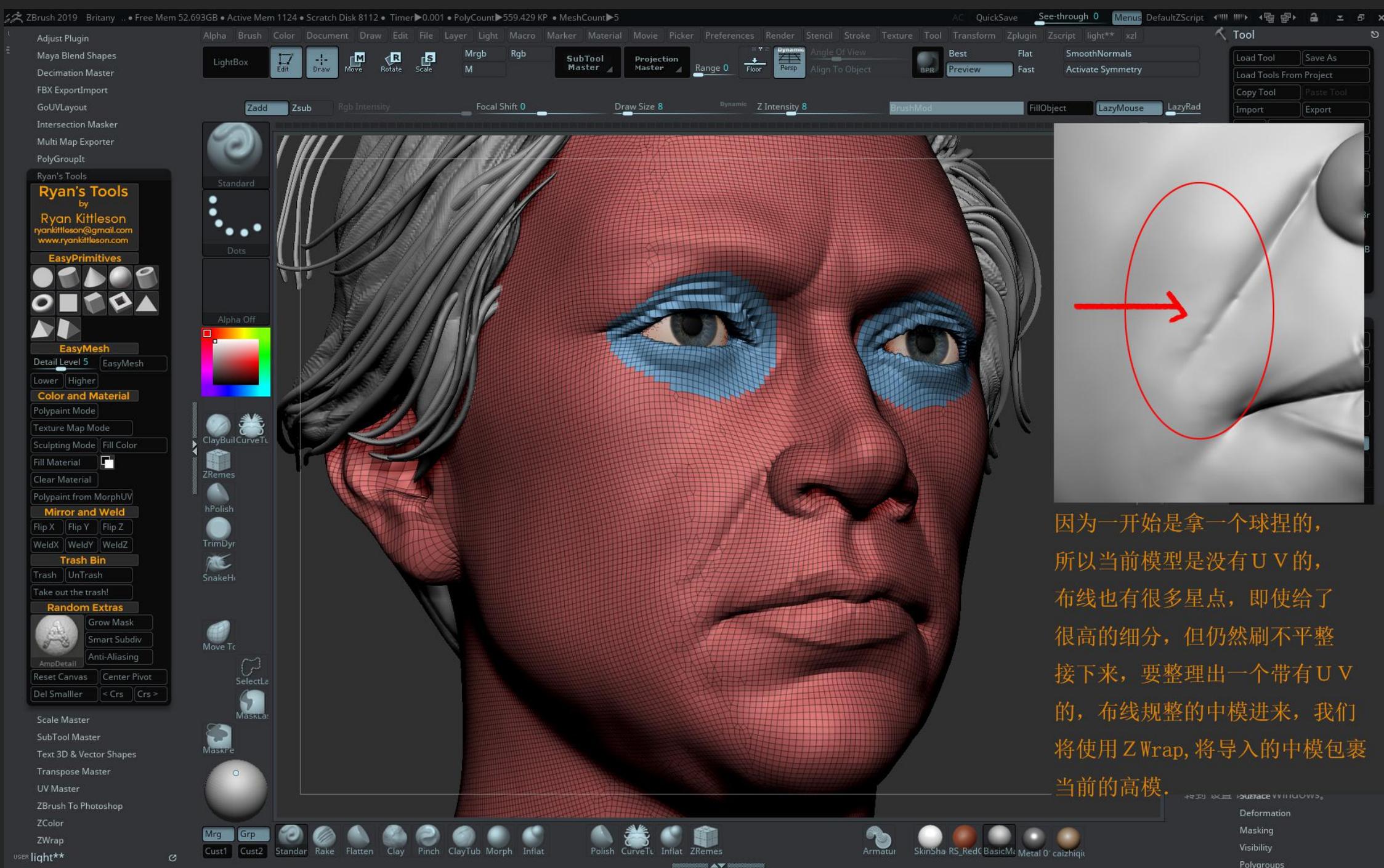
Dynamic Solo  
BasicMi

激活 Windows  
转到“设置”以激活 Windows。

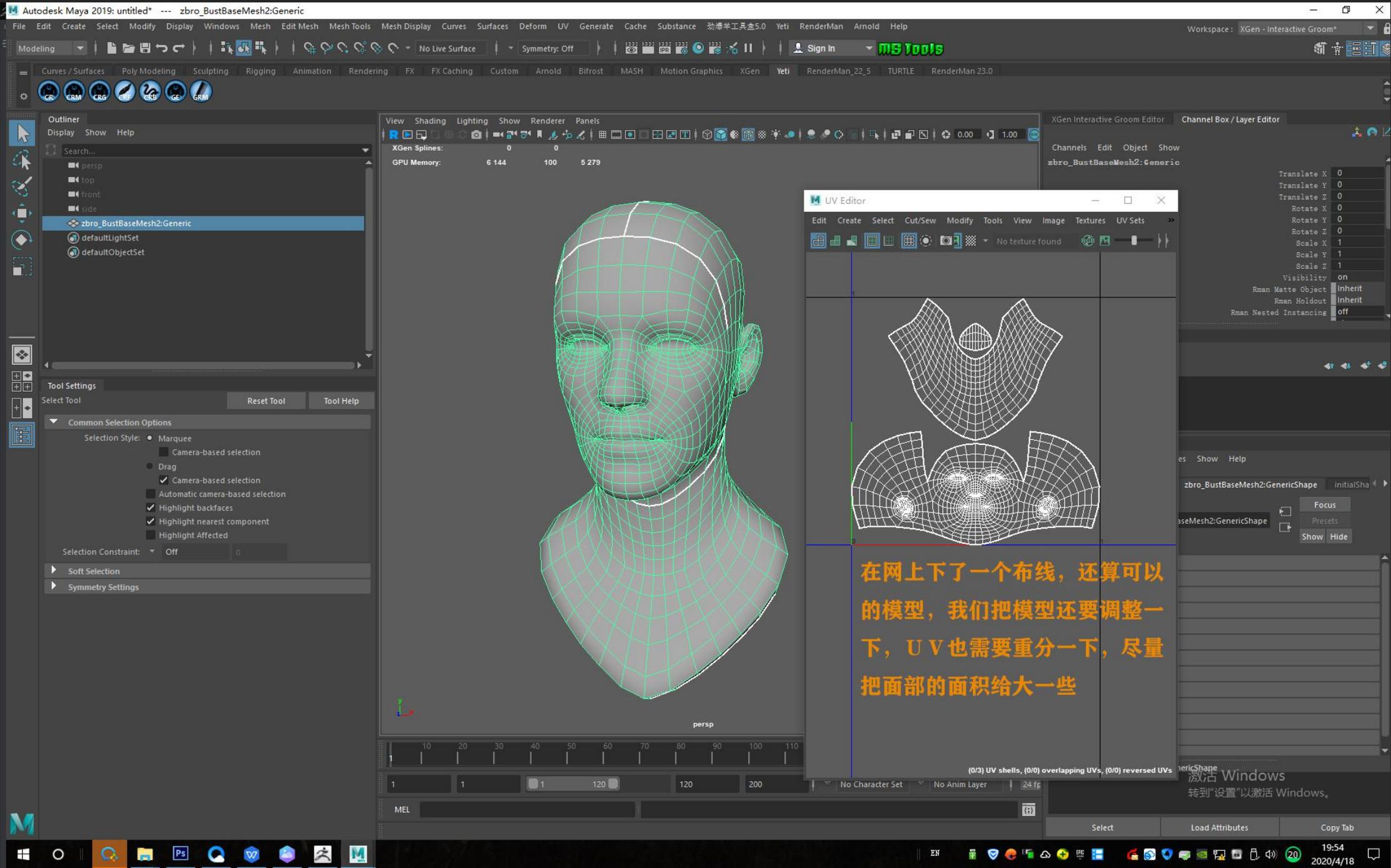
Polygroups  
Morph Target  
Polypaint  
UV Map  
Texture Map

Mrg Grp  
Cust1 Cust2

Standar Rake Flatten Clay Pinch ClayTub Morph Inflat  
Polish CurveTL Inflat ZRemes  
Armatu SkinSha RS\_RedC(BasicMi) Metal 0 caizhiqi



因为一开始是拿一个球捏的，所以当前模型是没有UV的，布线也有很多星点，即使给了很高的细分，但仍然刷不平整。接下来，要整理出一个带有UV的，布线规整的中模进来，我们将使用ZWrap，将导入的中模包裹当前的高模。

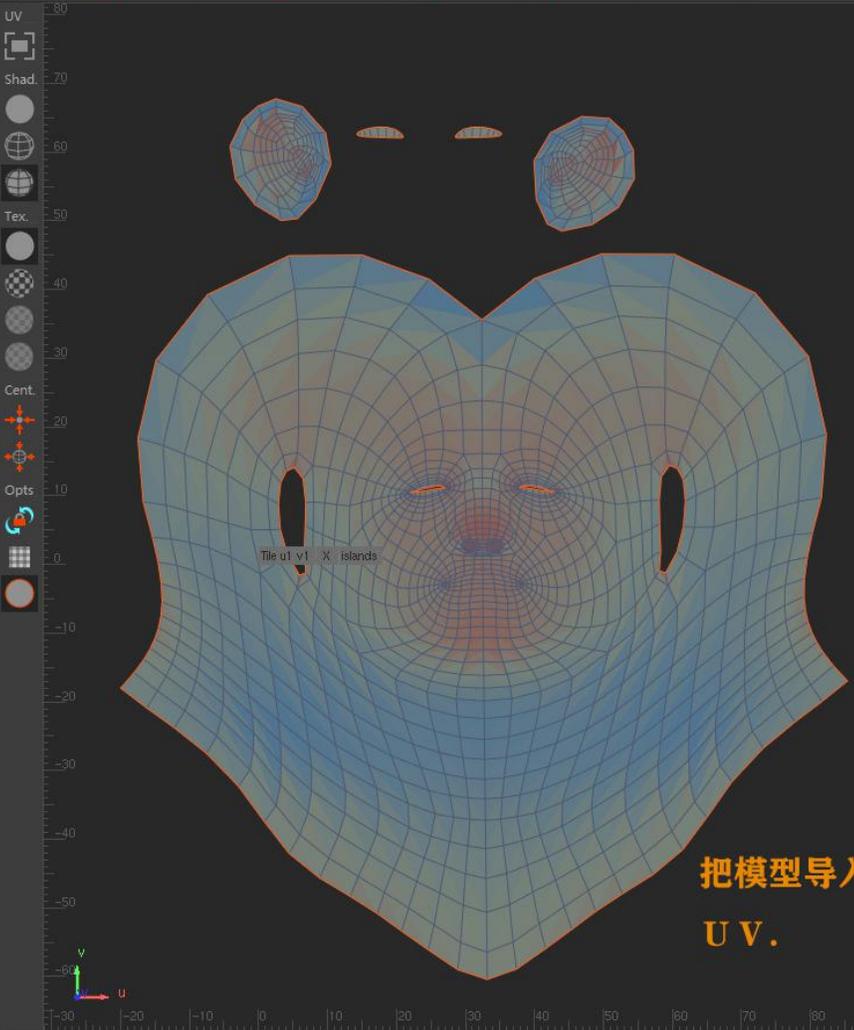
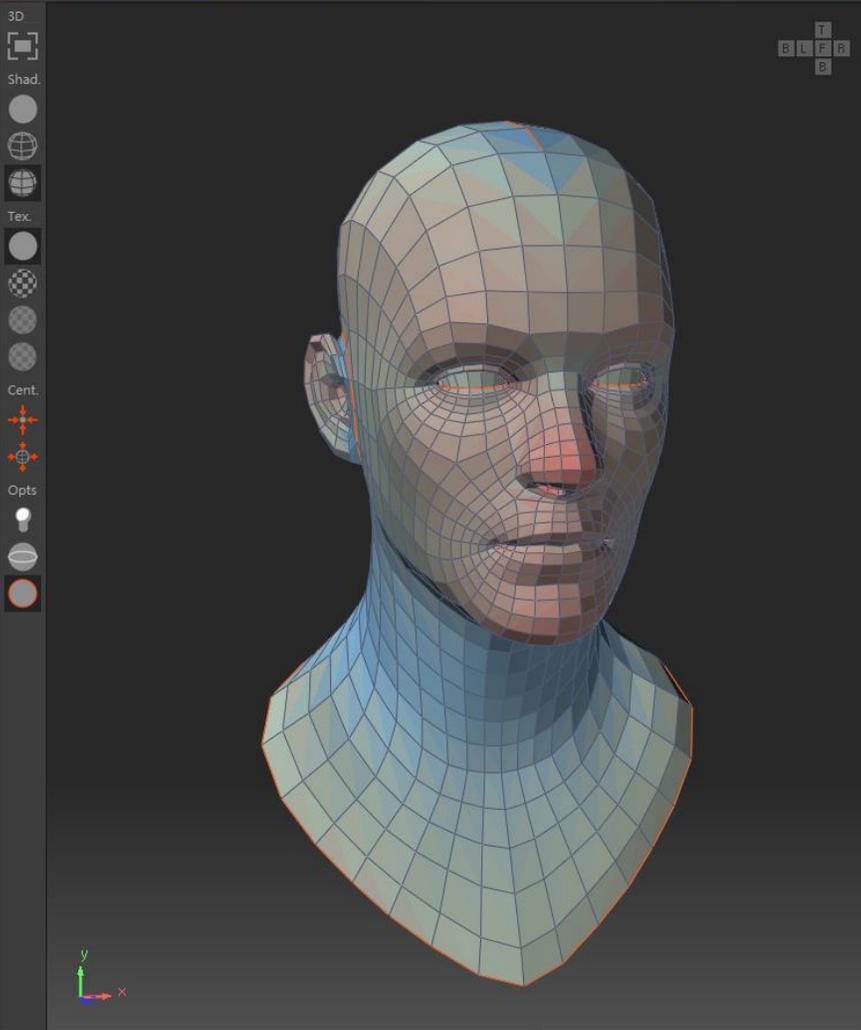


在网上下了一个布线，还算可以的模型，我们把模型还要调整一下，UV也需要重分一下，尽量把面部的面积给大一些

(0/3) UV shells, (0/0) overlapping UVs, (0/0) reversed UVs

激活 Windows  
转到“设置”以激活 Windows。

Select Load Attributes Copy Tab



**+ 多种UV集**

— 变换 显示工具 ?

转换比例旋转

Tu 0 Tv 0

Su 0 Sv 0

Rw 0 In 45

中心

Box中心 鼠标 多重 用户

轴

局部 世界

— 对齐拉直翻转贴合 ?

拉直 翻动

对齐

适应到网格

+ 自动选择元素群

+ 帮助选择 (Islands)

选择

Modify

Map Paint

Sel. Prim

Area Tool.

对称

局部

把模型导入UNFold中，重新切一下UV.

— 展开 ? — Layout [Global] ? + 显示颜色

展开 Optimize 权重 防止 Sel.范围 包装 匹配 比例 边缘 单位 Texel Dens.

1 1 1 0 填充

0.0019 Px Re 拾取

0.0039 1024 Set

+ 元素可见性

+ 网络

+ 元素可见性

+ 元素可见性

— UV平铺 ? + 多重纹理

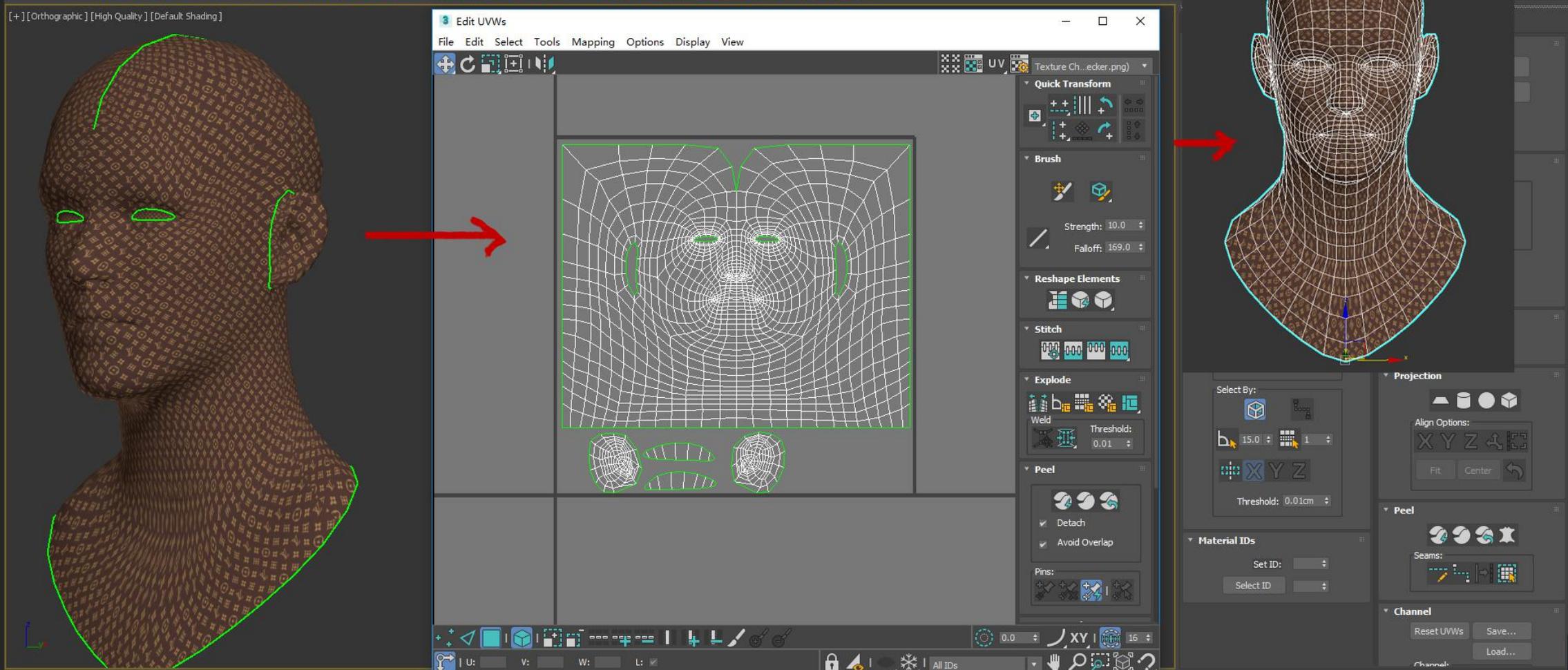
Size and Offset U & V

Su 1 50

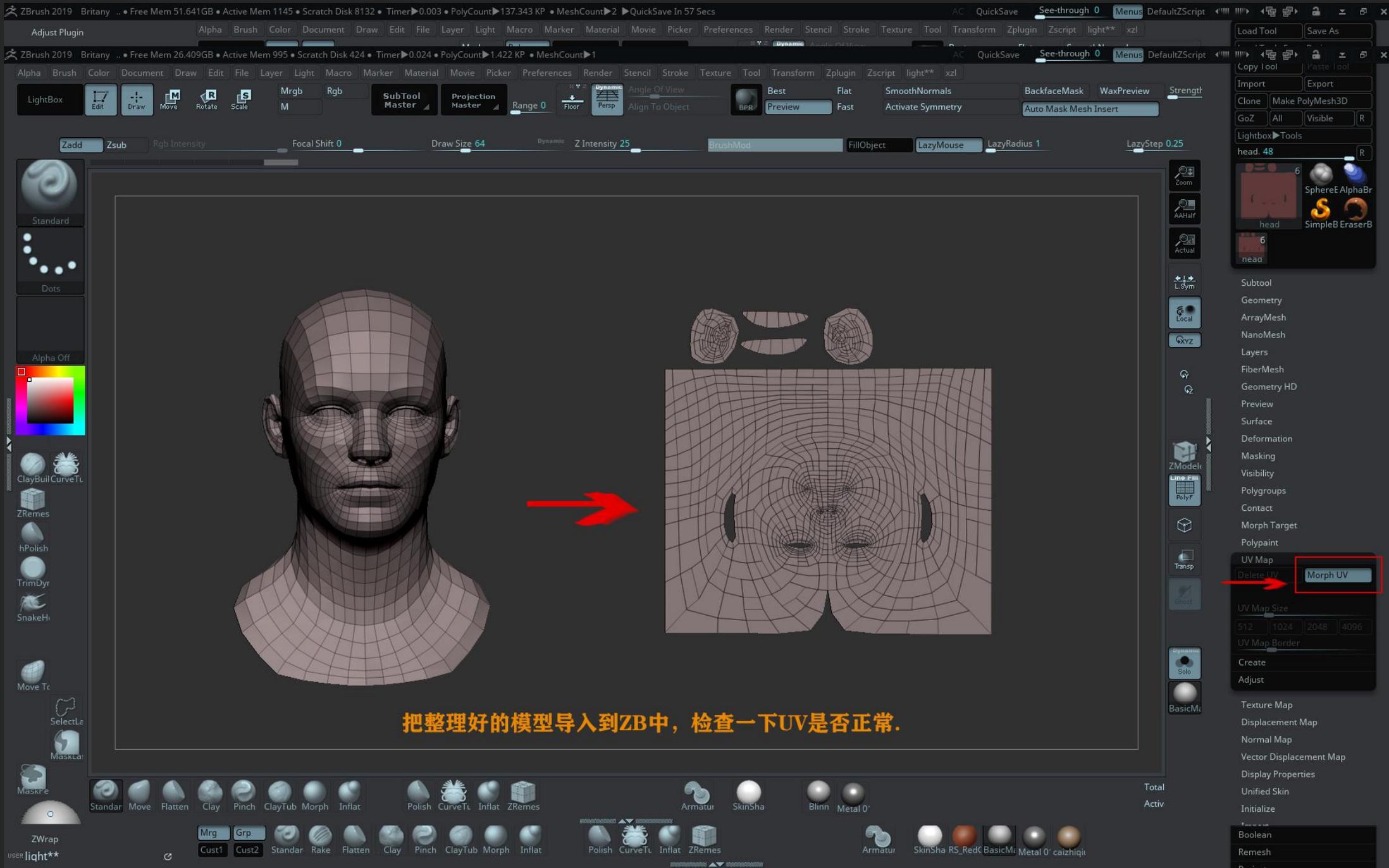
Tu 0 50

重排 匹配 Fit Origin 1:1 Link 自由 Pic

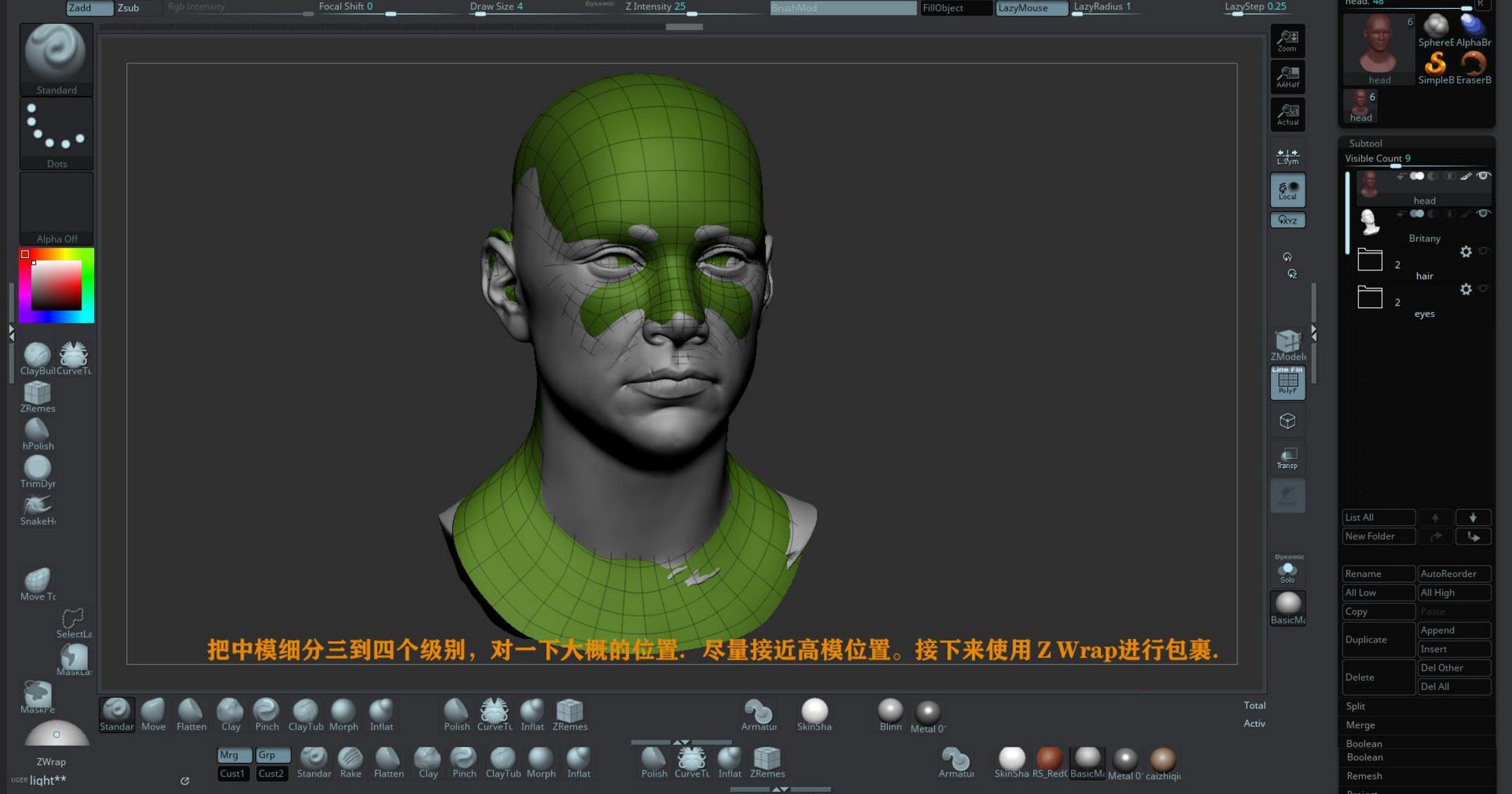
把模型导入MAX2020,使用UV笔刷工具,把脸部面积刷大一些,重排列UV,然后再调整一下模型,整理好的中模,就可以导入到ZBrush中使用,用来包裹前面搞好的高模。



激活 Windows  
转到“设置”以激活 Windows。



把整理好的模型导入到ZB中，检查一下UV是否正常。



把中模细分三到四个级别，对一下大概的位置。尽量接近高模位置。接下来使用 Z Wrap 进行包裹。

Load Tool Save As

Import Export

Clone Make PolyMesh3D

GoZ All Visible R

Lightbox Tools

head. 48 R

6 SphereE AlphaBr

head SimpleB EraserB

6 head

Subtool Visible Count 9

- head
- Britany
- 2
- hair
- 2
- eyes

List All

New Folder

Rename AutoReorder

All Low All High

Copy Paste

Duplicate Append

Insert

Delete Del Other

Del All

Split

Merge

Boolean

Boolean

Remesh

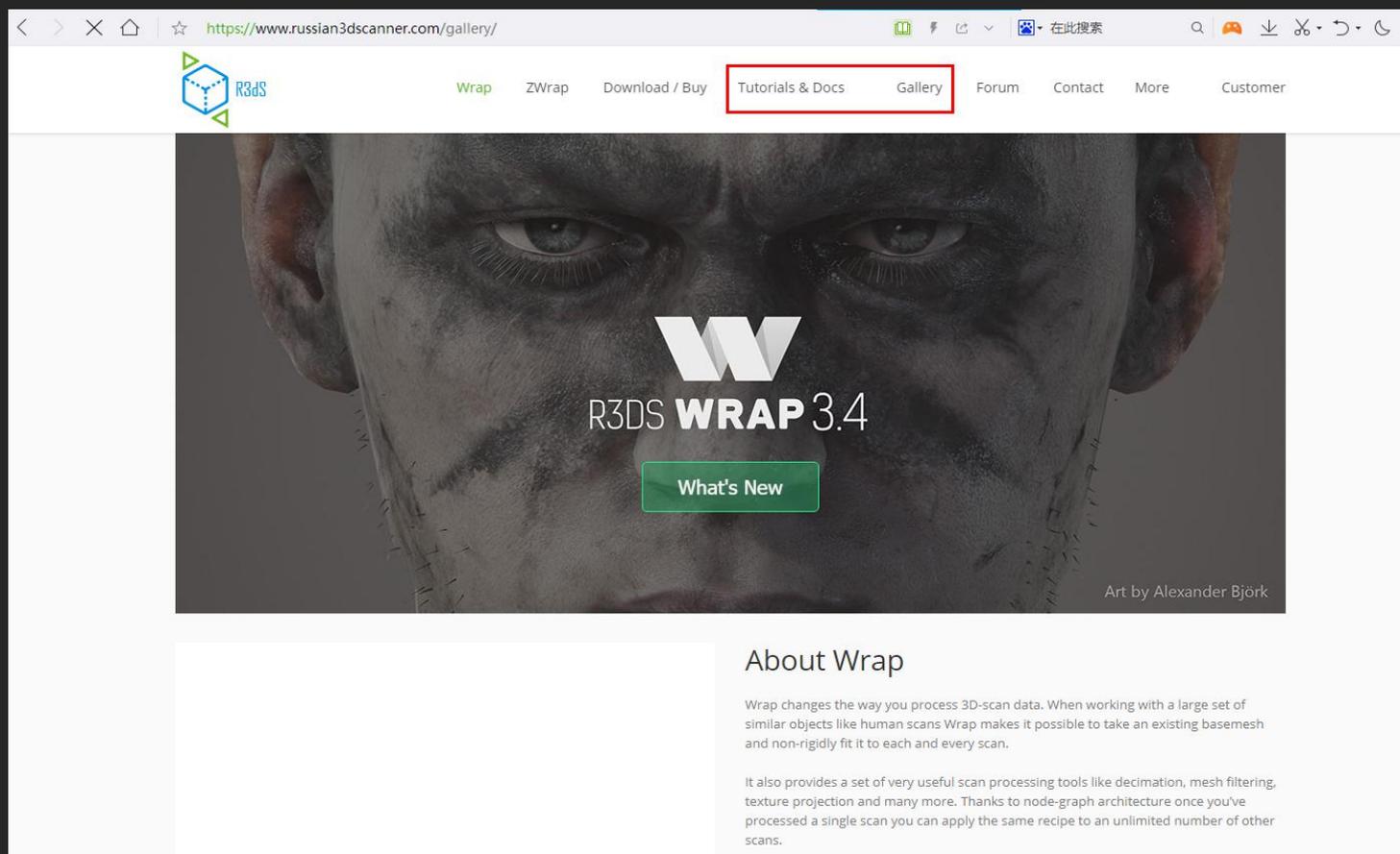
BasicMi

Total Activ

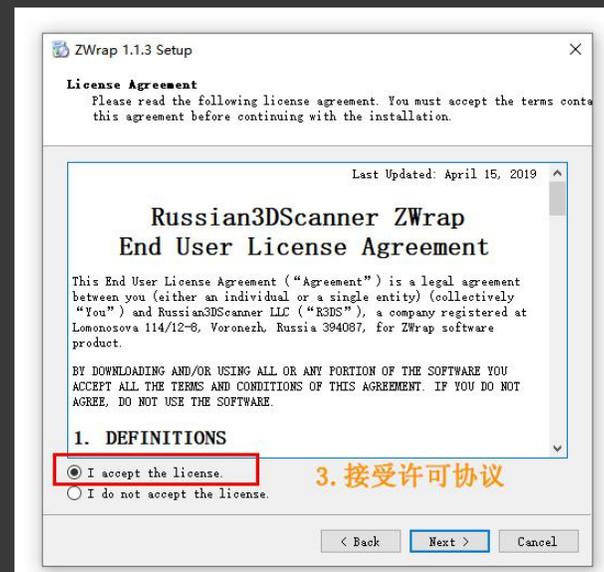
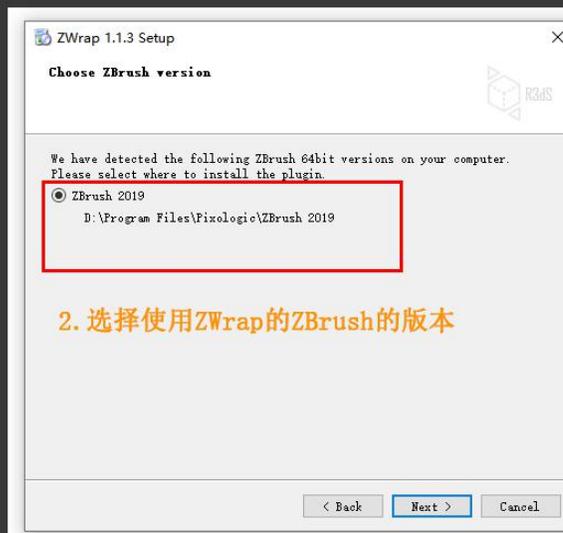
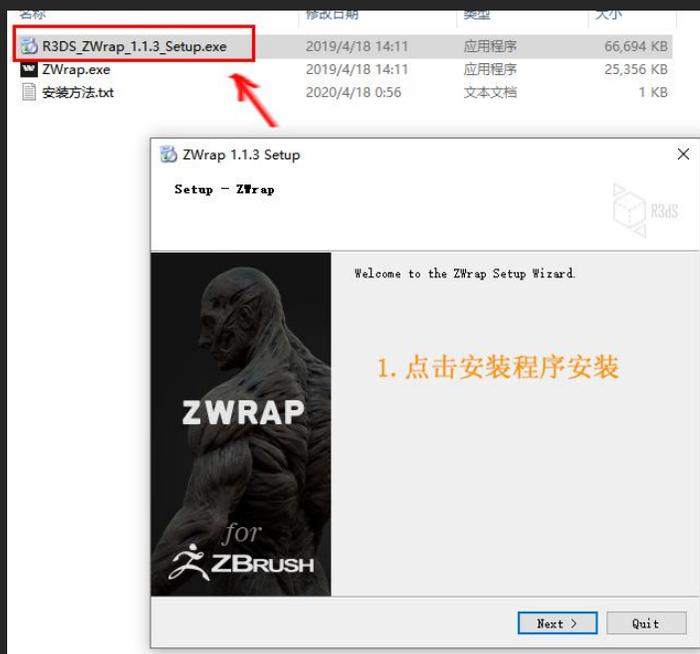
下面我们就安装一下这个插件，安装之前，先简单介绍一下这款软件

## Zwrap简介

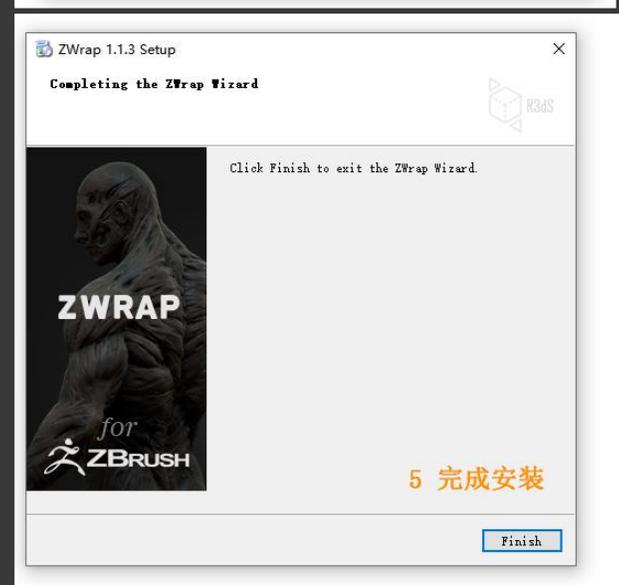
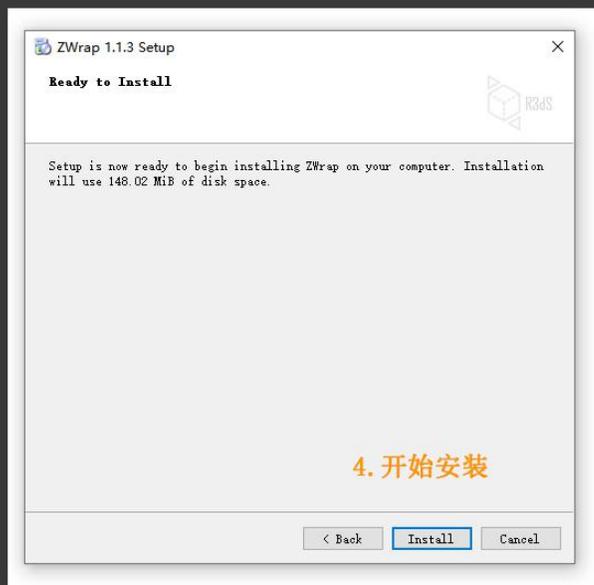
- 由russian3dscanner开发，是战斗民族的产品，该公司还有一个著名的产品叫Wrap3。ZWrap是一款 3D 扫描插件，可以在ZBrush中进行
- 模型3D扫描、数据转移变形等。可以使用以有basemesh（布线工整，展好UV），快速完成拓扑，贴图烘焙等工作。目前只支持角色
- 制作。可以在官网上进行学习，观看艺术家作品。ZWrap是一款简单易学，但功能却非常强大的插件，颠覆了角色制作的传统流程。



# 安装步骤



## 安装ZWrap



## 破解方法



拷贝ZWrap.exe文件 分别到以下两个目录即可

X:\Program Files\Pixologic\ZBrush 2019\ZStartup\ZPlugs64\ZWrap  
(X为ZB安装盘符)

C:\Program Files\R3DS\ZWrap for ZBrush 2019\ZStartup\ZPlugs64



1. 在插件面板中启动ZWrap

2. 低模在上层

3. 不能出现中文命名

# ZWrap界面

**清除所有点** (Clear all points)

**在模型上对称放置点** (Place points symmetrically on the model)

**与左侧命令完全相同** (Completely the same as the command on the left)

**左右视图联动操作开关** (Toggle for linked operation of left and right views)

**存储点位数据** (Save point data)

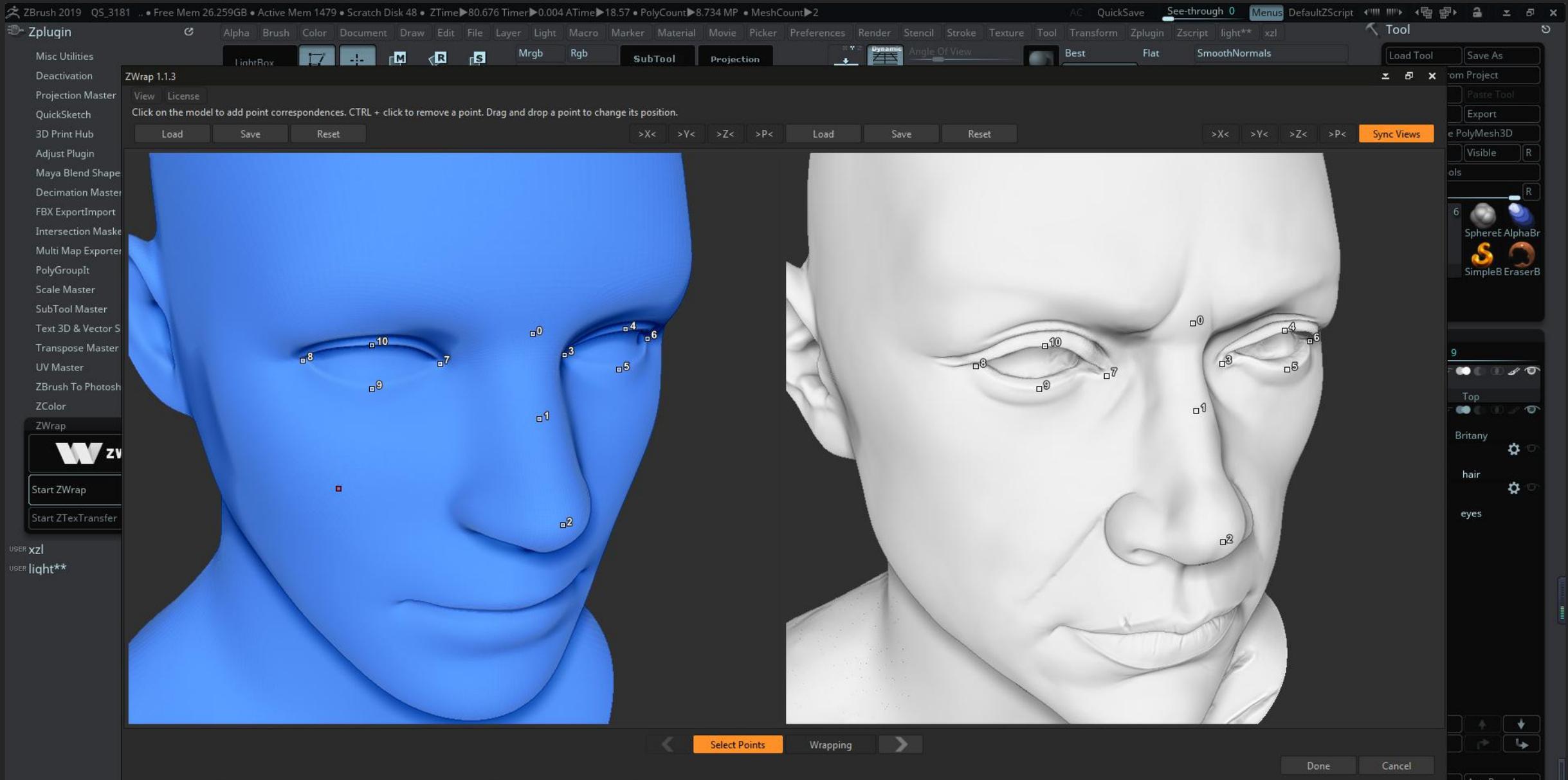
**载入点位数据** (Load point data)

**01** 视图的控制和ZB是相同的。左键旋转视图，ALT+左键平移，Ctrl+右键缩放

**02** 在两边模型上点击添加模型的对应点

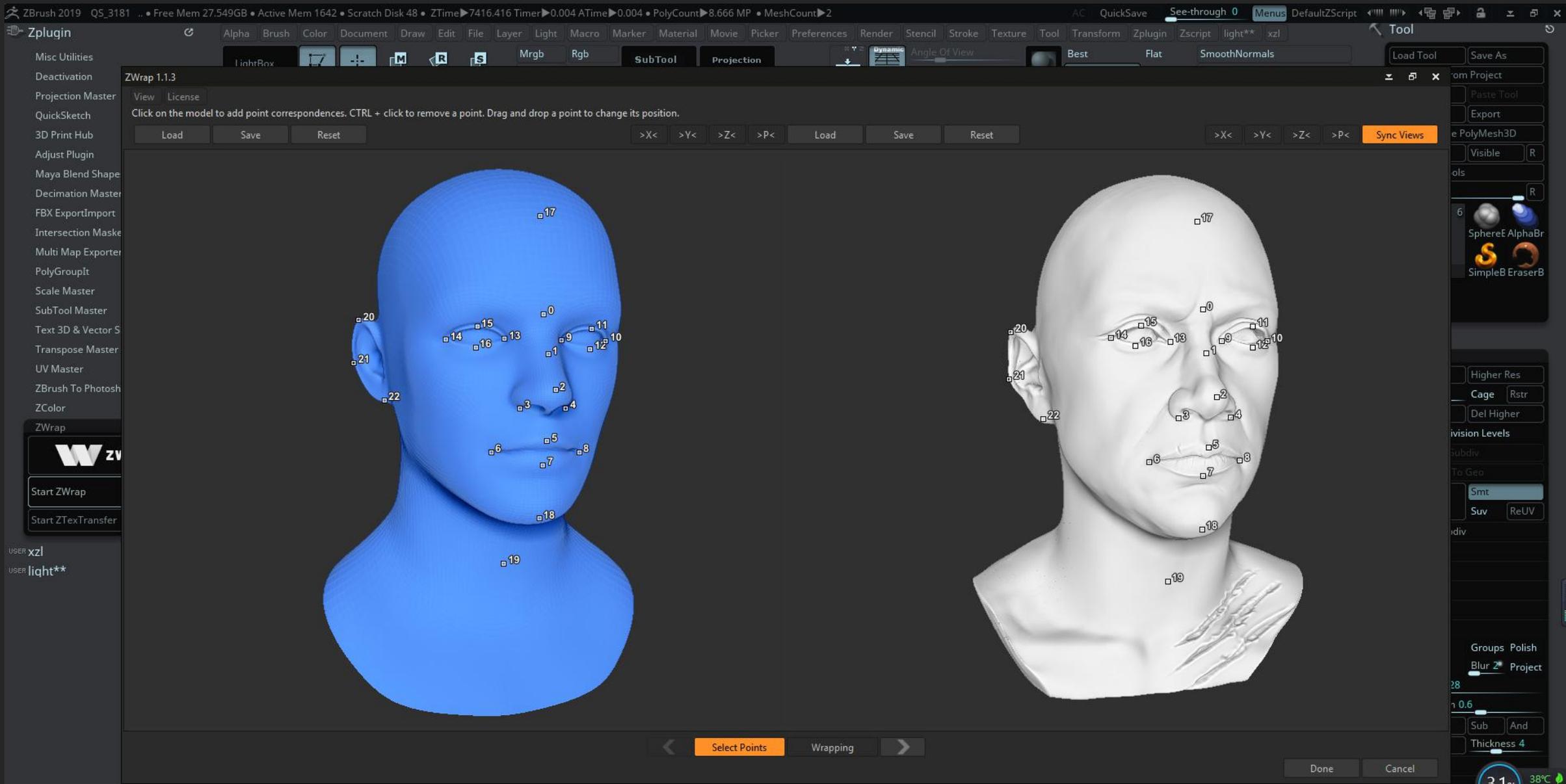
**03** Ctrl+左键点击删除点位

**04** 拖拽改变点的位置



01. 一侧模型上放置点，另一侧高模上也在对应位置上放置一个点

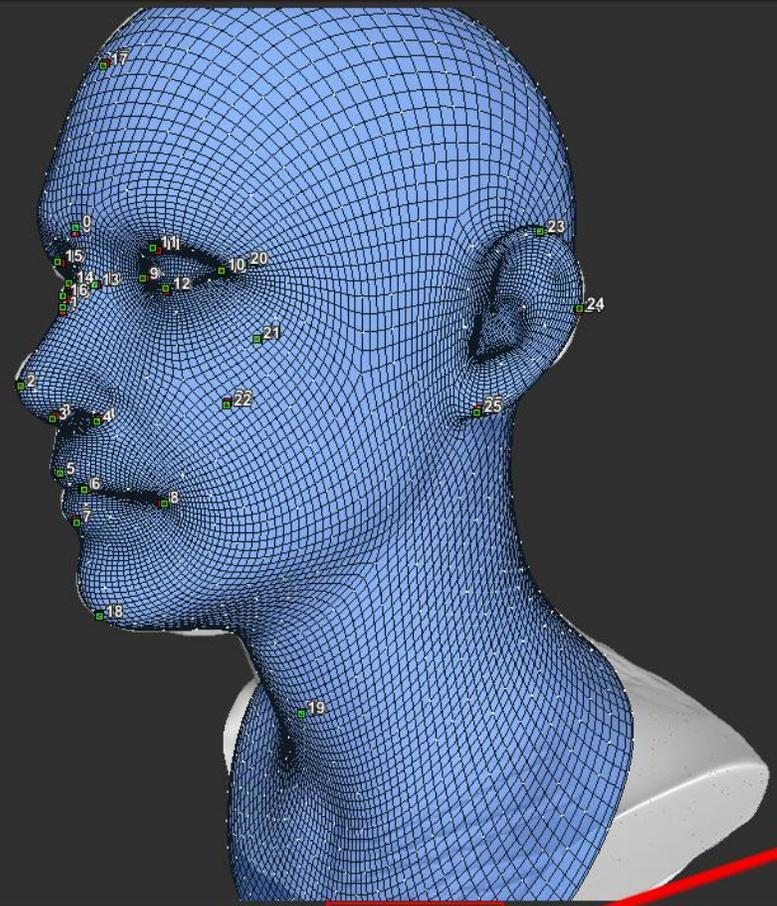
02. 一侧模型上，可以连续放置点，另一侧也对应放置，序号和位置要对应



依次在两侧模型上放置好对应的点，序号对应的位置一定不要搞错。basemesh的面数越高和打点的数量越多，解算的过程就越慢。

Start Wrapping

02 点击开始



01 点击wrapping

Wrapping

开始解算

Tool

Load Tool Save As

From Project

Paste Tool

Export

SimpleMesh3D

Visible R

Tools

R

6

SphereE AlphaBr

SimpleB EraserB

Higher Res

Cage Rstr

Del Higher

Division Levels

Subdiv

To Geo

Smt

Suv ReUV

Groups Polish

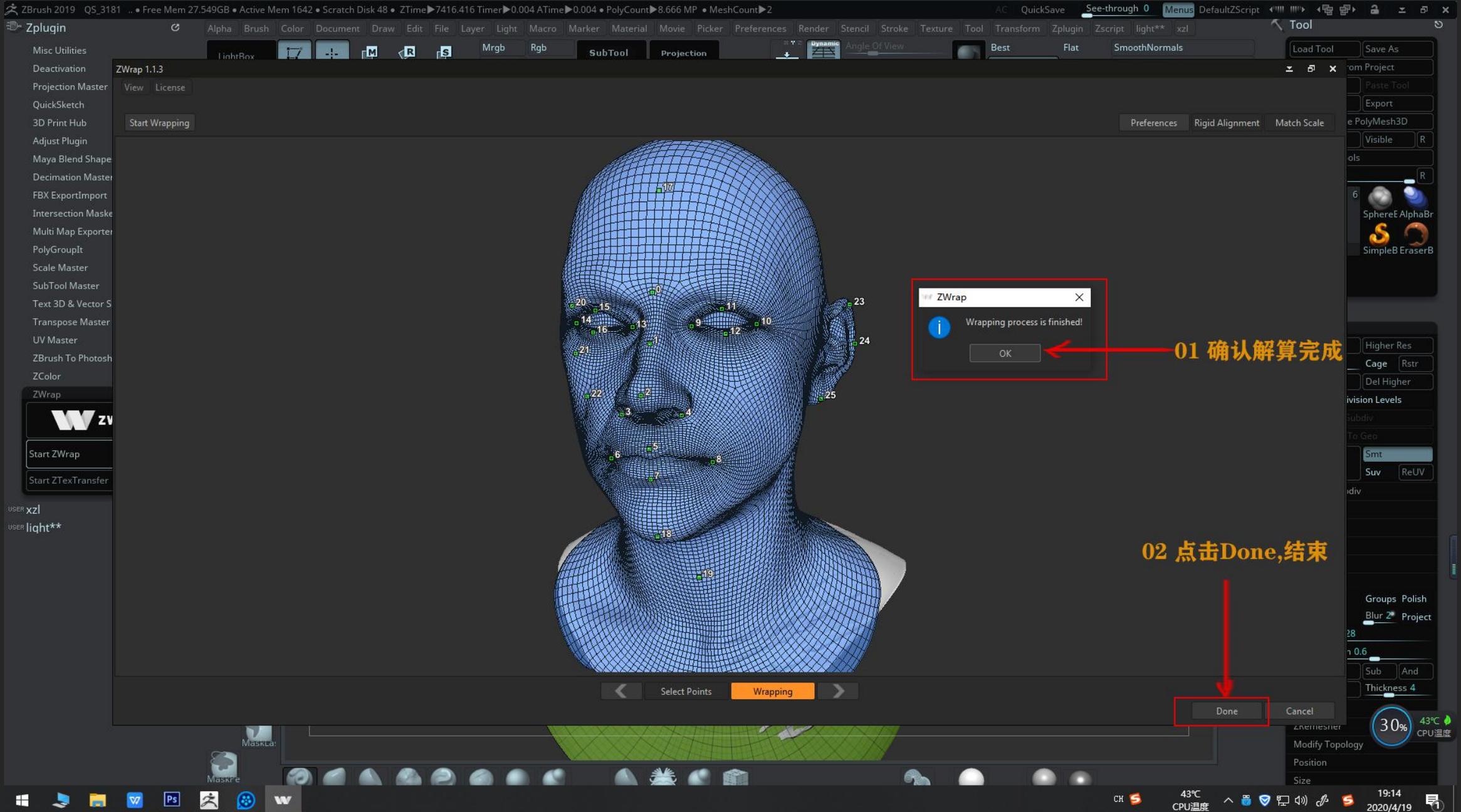
Blur 2 Project

28

0.6

Sub And

Thickness 4



01 确认解算完成

02 点击Done,结束

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shapes
- Decimation Master
- FBX Export/Import
- Intersection Masker
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector Shapes
- Transpose Master
- UV Master
- ZBrush To Photoshop
- ZColor

ZWrap



Start ZWrap

Start ZTexTransfer

- Standard
- Dots
- Alpha Off
- ClayBuil CurveTl
- ZRemes
- hPolish
- TrimDyr
- SnakeHi
- Move Tc
- SelectLa
- MaskLa
- MaskRe



回到ZB中，可以看到  
basemesh完全包裹在高  
模上

- Standar Move Flatten Clay Pinch ClayTub Morph Inflat
- Polish CurveTl Inflat ZRemes
- Armatu SkinSha Blinn Metal 0

Tool

Load Tool Save As

Load Tools From Project

Copy Tool Paste Tool

Import Export

Clone Make PolyMesh3D

GoZ All Visible R

Lightbox▶Tools

Top. 48 R

6 SphereE AlphaBr

SimpleB EraserB

6 Top

6 Top

Subtool

Geometry

Lower Res Higher Res

SDiv 3 Cage Rstr

Del Lower Del Higher

Freeze SubDivision Levels

Reconstruct Subdiv

Convert BPR To Geo

Divide Smt

Suv ReUV

Dynamic Subdiv

EdgeLoop

Crease

ShadowBox

ClayPolish

DynaMesh

DynaMesh Groups Polish

Blur 2 Project

Resolution 128

SubProjection 0.6

Add Sub And

Create Shell Thickness 4

Tessimate

ZRemesher

Modify Topology

Position

Size

MeshIntegrity

Zplugin

Misc Utilities  
Deactivation  
Projection Master  
QuickSketch  
3D Print Hub  
Adjust Plugin

Maya Blend Shapes  
New Layer TurnOff All  
Selected Visible All  
Export Blend Shapes

Decimation Master  
FBX ExportImport  
Intersection Masker  
Multi Map Exporter  
PolyGroupIt  
Scale Master  
SubTool Master  
Text 3D & Vector Shapes  
Transpose Master  
UV Master  
ZBrush To Photoshop  
ZColor  
ZWrap

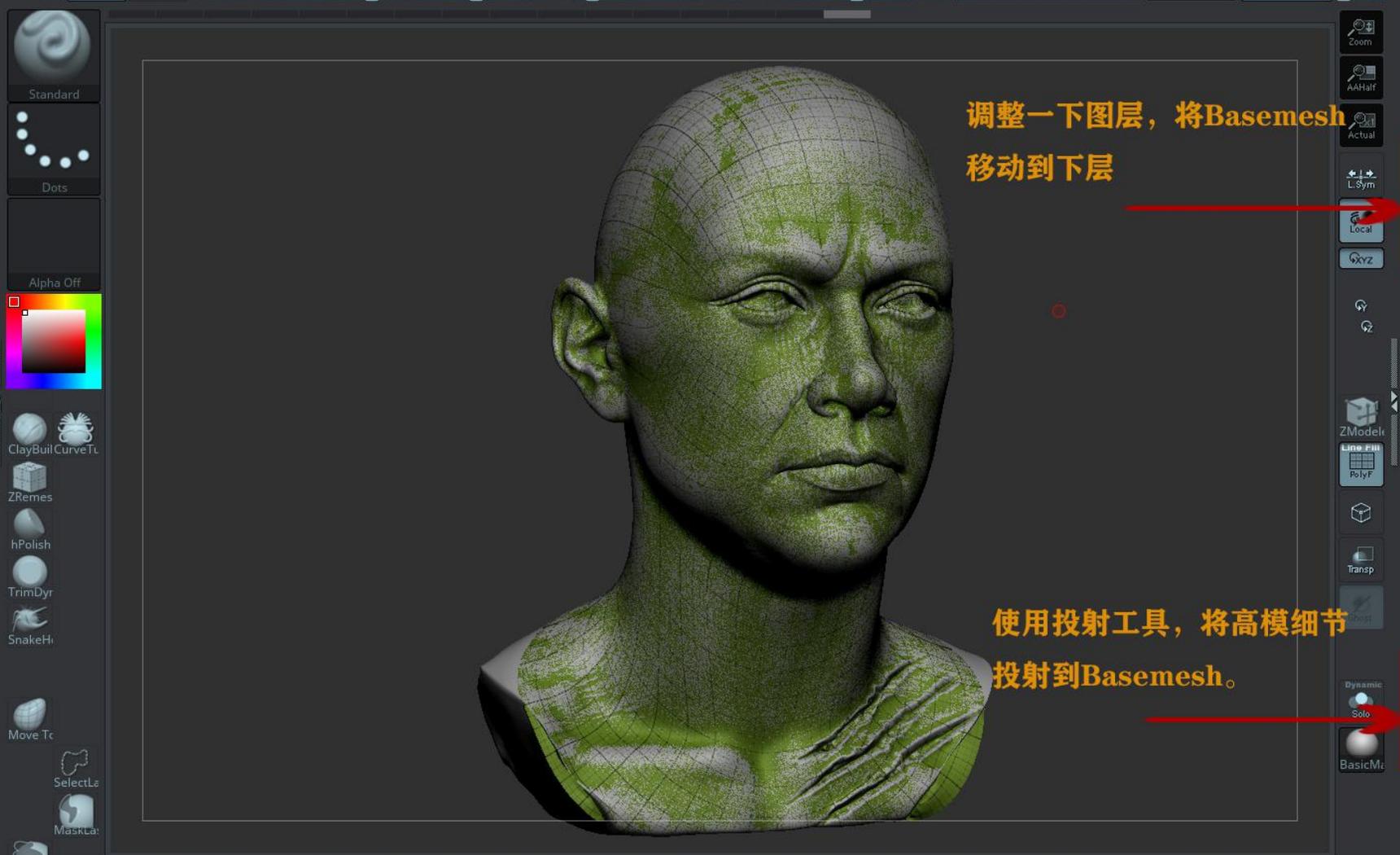
USER xzl  
USER light\*\*

Standard  
Dots  
Alpha Off  
ClayBuil CurveT  
ZRemes  
hPolish  
TrimDyr  
SnakeHi  
Move Tc  
SelectLa  
MaskLa  
MaskPe

Alpha Brush Color Document Draw Edit File Layer Light Macro Marker Material Movie Picker Preferences Render Stencil Stroke Texture Tool Transform Zplugin Zscript light\*\* xzl

LightBox Edit Draw Move Rotate Scale Mrgb Rgb SubTool Master Projection Master Range 0 Floor Dynamic Persp Angle Of View Best Flat SmoothNormals BPR Preview Fast Activate Symmetry

Zadd Zsub Rgb Intensity 100 Focal Shift 0 Draw Size 6 Dynamic Z Intensity 25 BrushMod FillObject LazyMouse LazyRad



调整一下图层，将Basemesh  
移动到下层

使用投射工具，将高模细节  
投射到Basemesh。

Clone Make PolyMesh3D  
GoZ All Visible R  
Lightbox Tools  
Top. 48 R  
6 SphereE AlphaBr  
SimpleB EraserB  
6 Top  
Subtool  
Visible Count 3  
Britany  
Top  
2 hair  
List All  
New Folder  
Rename AutoReorder  
All Low All High  
Copy Paste  
Duplicate Append  
Insert  
Delete Del Other  
Del All  
Split  
Merge  
Boolean  
Remesh  
Project  
ProjectAll Dist 0.02  
Mean 25  
PA Blur 10  
ProjectionShell 0 xyz  
Farthest Outer Inner  
Reproject Higher Subdiv  
Extract  
Geometry  
ArrayMesh  
NanoMesh

Standar Move Flatten Clay Pinch ClayTub Morph Inflat Polish CurveT Inflat ZRemes Armatur SkinSha Blinn Metal 0

Zplugin

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shapes
  - New Layer
  - TurnOff All
  - Selected
  - Visible
  - All
  - Export Blend Shapes
- Decimation Master
- FBX ExportImport
- Intersection Masker
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector Shapes
- Transpose Master
- UV Master
- ZBrush To Photoshop
- ZColor
- ZWrap
- USER xzl
- USER light\*\*
- Standard
- Dots
- Alpha Off
- ClayBuil CurveTu
- ZRemes
- hPolish
- TrimDyr
- SnakeHi
- Move Tc
- SelectLa
- MaskLa
- MaskRe

Alpha Brush Color Document Draw Edit File Layer Light Macro Marker Material Movie Picker Preferences Render Stencil Stroke Texture Tool Transform Zplugin Zscript light\*\* xzl

LightBox Edit Draw Move Rotate Scale Mrgb Rgb M SubTool Master Projection Master Range 0 Floor Dynamic Persp Angle Of View Align To Object Best Flat SmoothNormals Preview Fast Activate Symmetry

DIVIDER

Zadd Zsub Rgb Intensity 100 Focal Shift 0 Draw Size 6 Dynamic Z Intensity 25 BrushMod FillObject LazyMouse LazyRad



到这一步，我们相当于完成了高模的拓扑工作，我们把当前模型降低级别的时候布线仍然是非常工整的，我们完全可以直接导出去使用这个低级别的模型，在项目中使用时，如果是做渲染、个人作品，可以使用更高一点的级别。接下来，我们继续使用ZWrap,给高模增加皮肤的微表面细节。

Standar Move Flatten Clay Pinch ClayTub Morph Inflat Polish CurveTu Inflat ZRemes Armatur SkinSha

DIVIDER

Click to restore previous position.

GoZ All Visible R

Lightbox Tools

Top1. 48 R

6 SphereE AlphaBr

Top1 SimpleB EraserB

6 Top1

Subtool

Visible Count 7

Top

Top1

2

hair

2

eyes

List All

New Folder

Rename AutoReorder

All Low All High

Copy Paste

Duplicate Append

Insert

Delete Del Other

Del All

Split

Merge

Boolean

Remesh

Project

ProjectAll

Dist 0.02

Mean 25

PA Blur 10

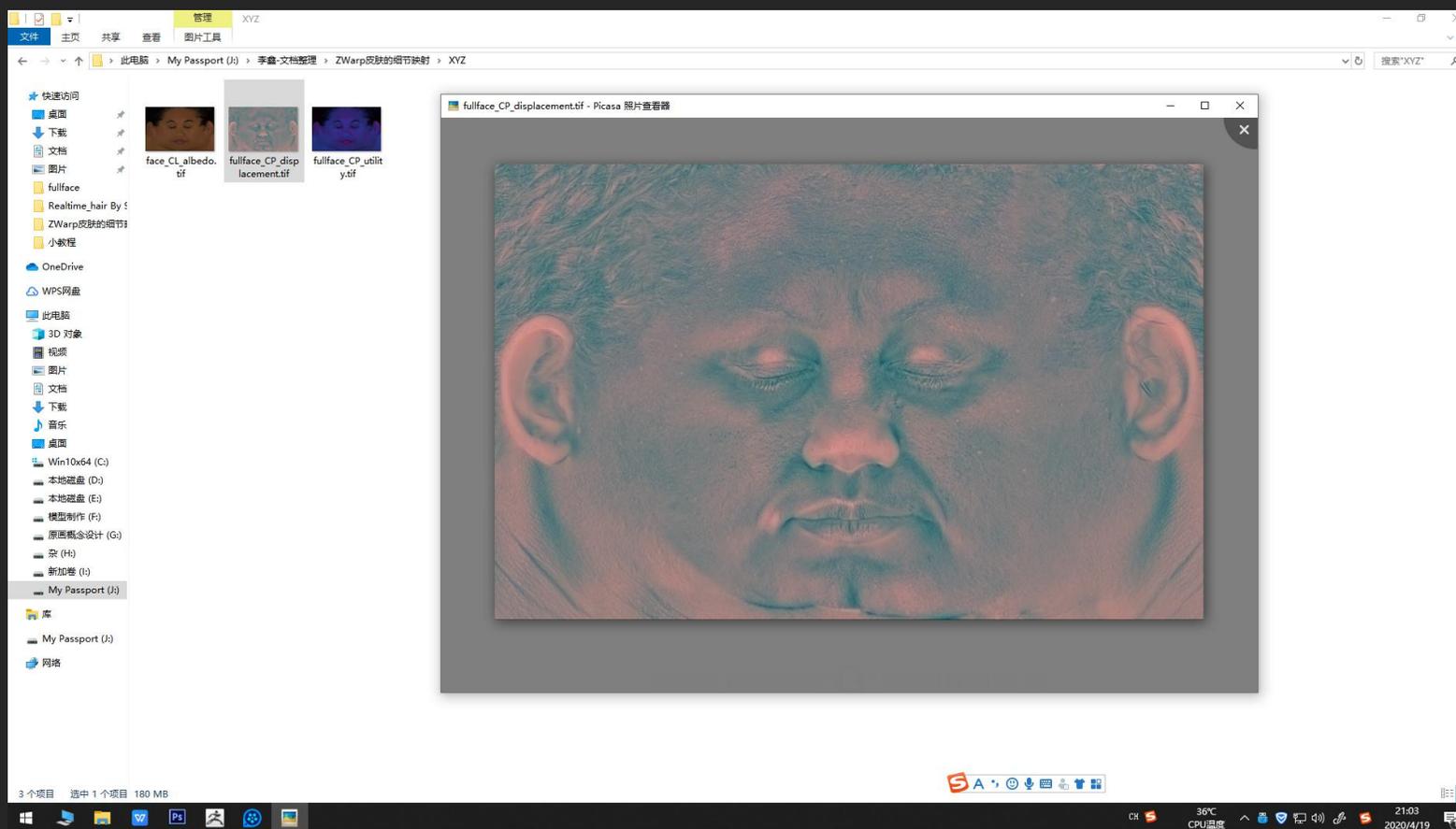
ProjectionShell 0

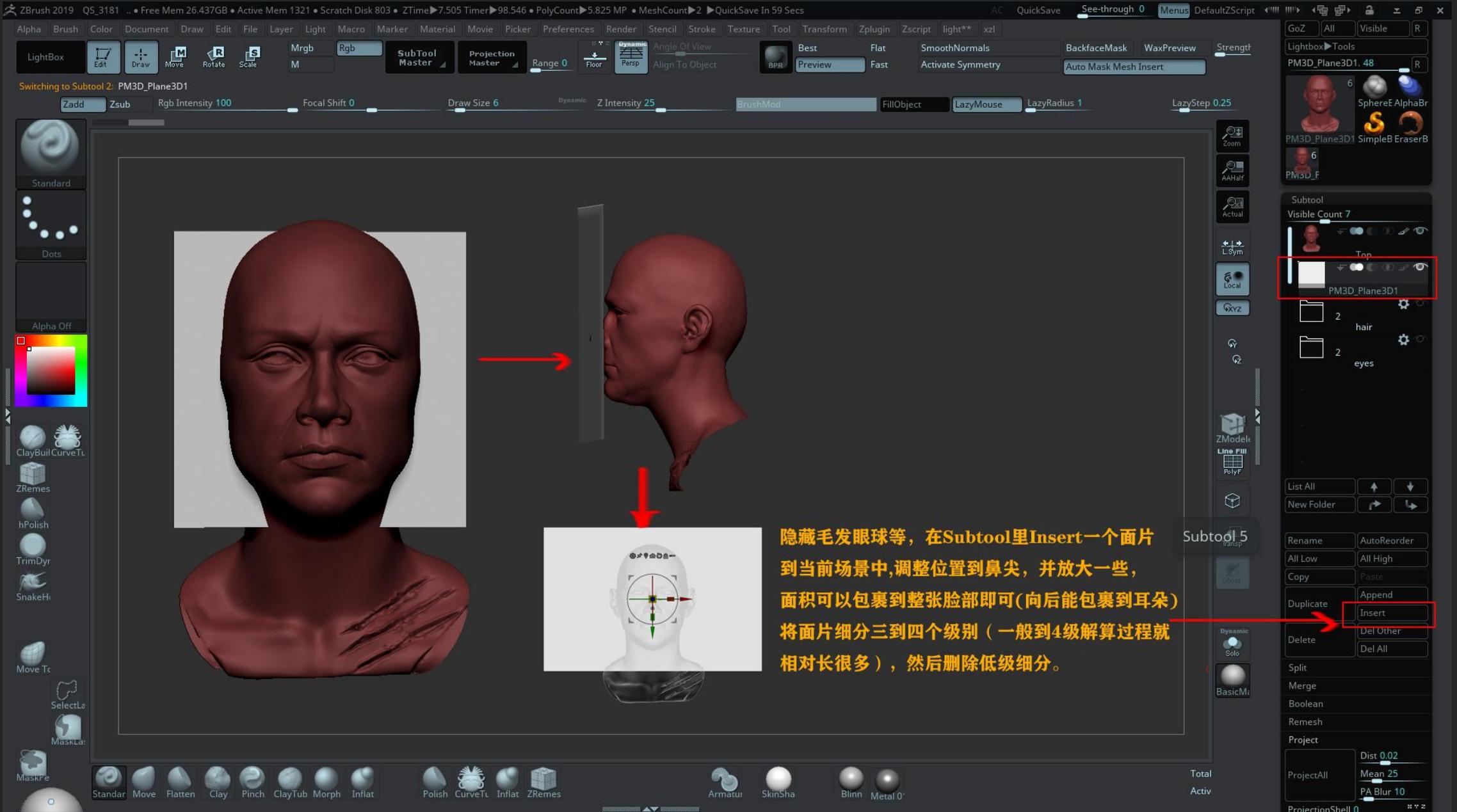
## 第二章 使用ZWrap制作皮肤微表面细节

如果你当前制作的高模，是从一个有工整的布线，UV分好的中模开始的，  
可以跳过上一章的内容，直接开始皮肤细节的制作

# 准备素材

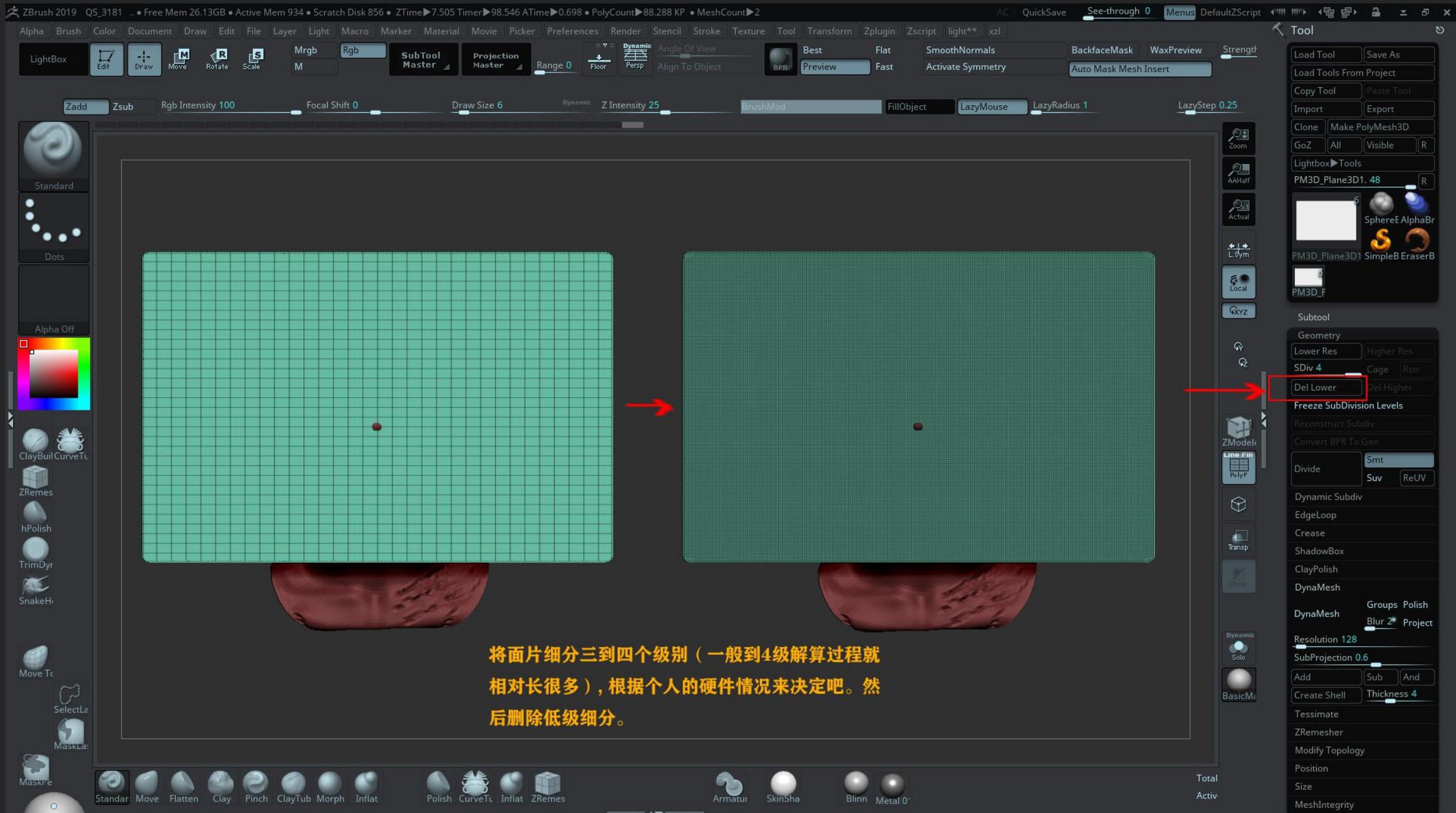
我在淘宝上花了1.8元，购买了12套XYZ的贴图，在其中没有找到特别合适的，就选了一个看上去更接近我当前制作的这张脸的年纪的黑人女性皮肤，



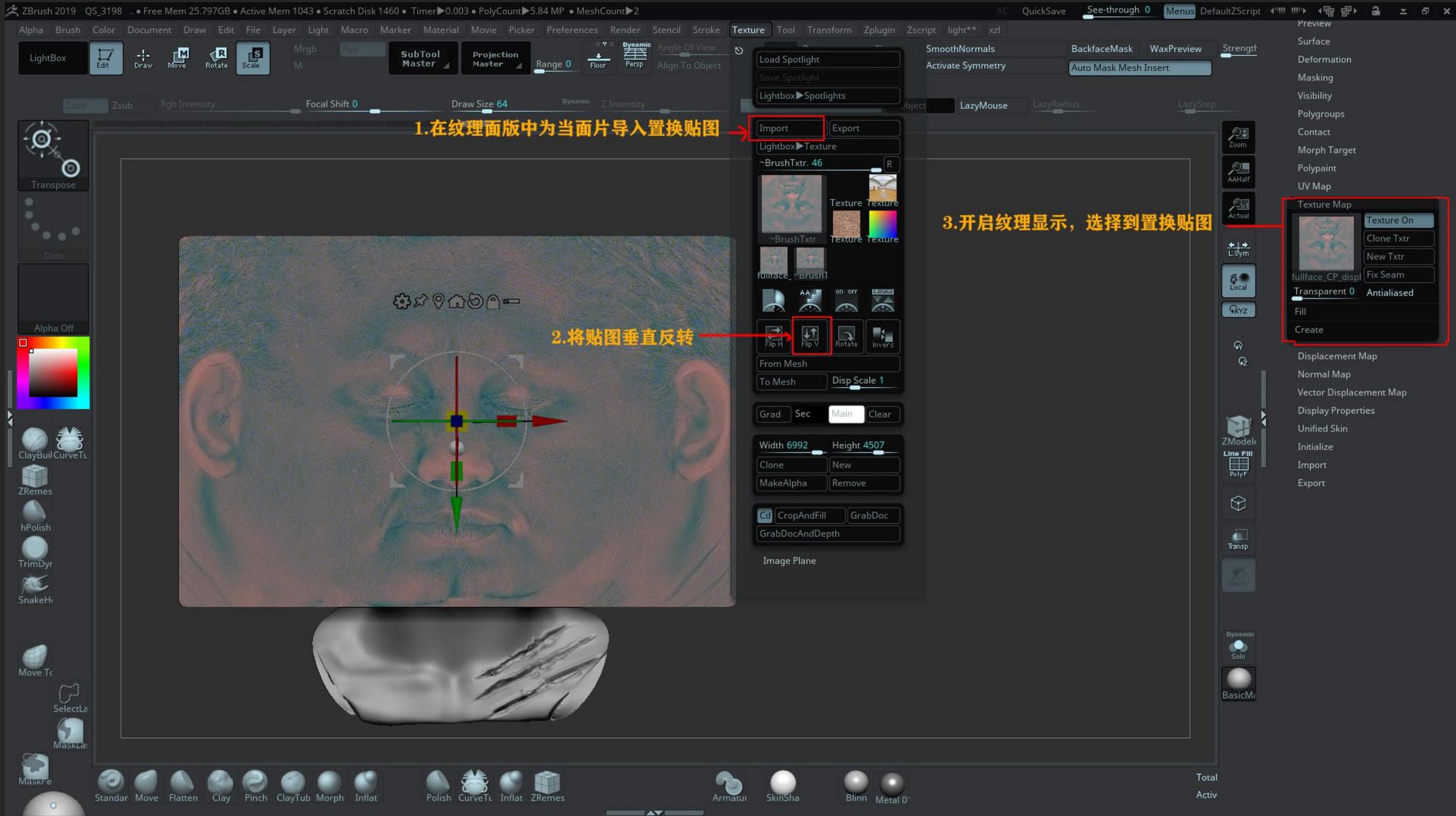


隐藏毛发眼球等，在Subtool里Insert一个面片到当前场景中，调整位置到鼻尖，并放大一些，面积可以包裹到整张脸部即可(向后能包裹到耳朵)将面片细分三到四个级别（一般到4级解算过程就相对长很多），然后删除低级细分。





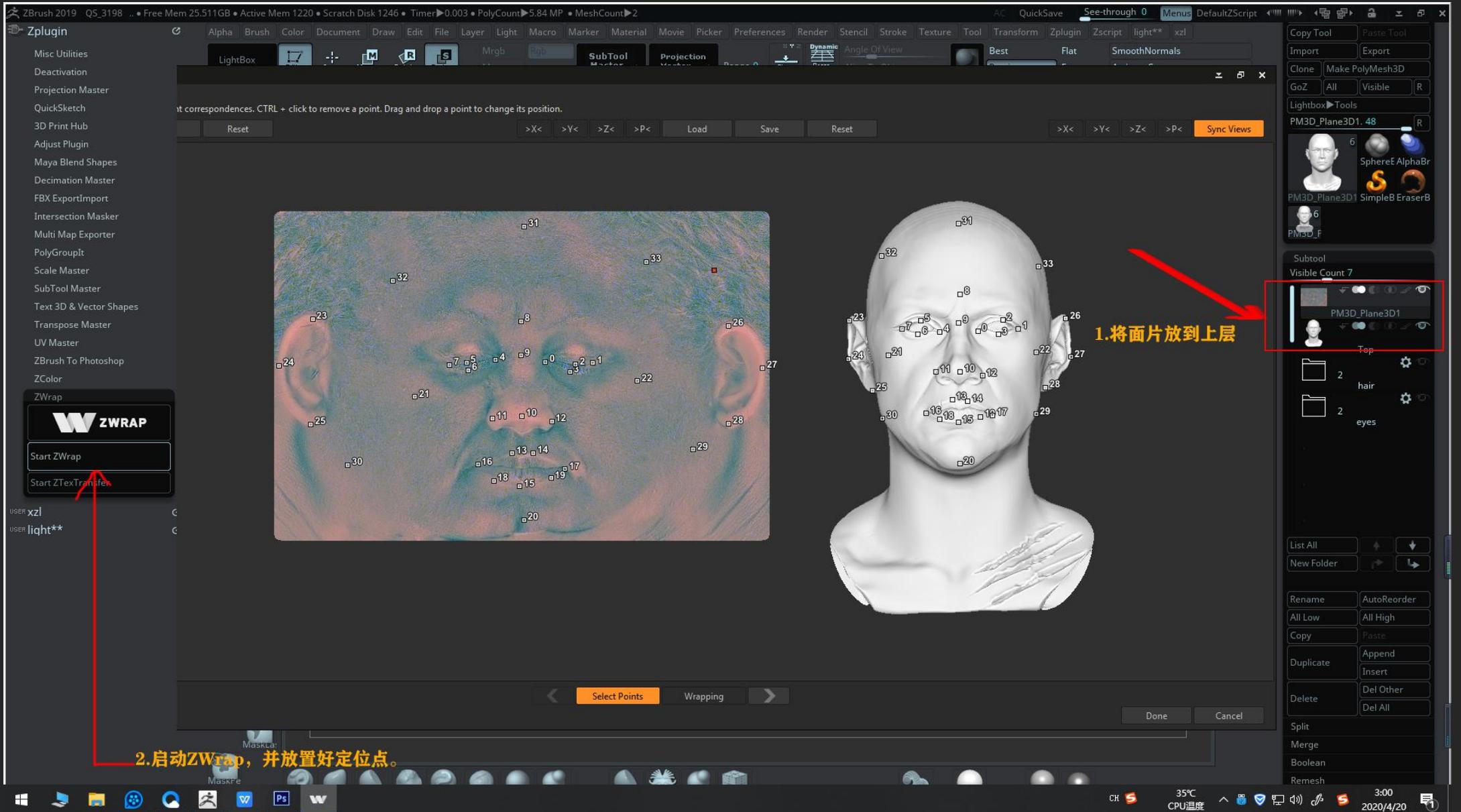
将面片细分三到四个级别（一般到4级解算过程就相对长很多），根据个人的硬件情况来决定吧。然后删除低级细分。



1. 在纹理面版中为当前片导入替换贴图

2. 将贴图垂直反转

3. 开启纹理显示，选择到替换贴图



it correspondences. CTRL + click to remove a point. Drag and drop a point to change its position.

1. 将面片放到上层

2. 启动ZWrap, 并放置好定位点。

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shape
- Decimation Master
- FBX Export/Import
- Intersection Maske
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector S
- Transpose Master
- UV Master
- ZBrush To Photoshop
- ZColor
- ZWrap
- Start ZWrap
- Start ZTexTransfer
- USER xzl
- USER light\*\*

ZWrap 1.1.3

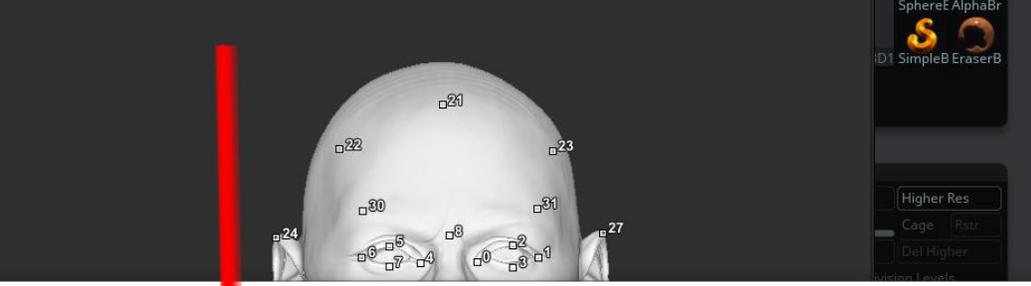
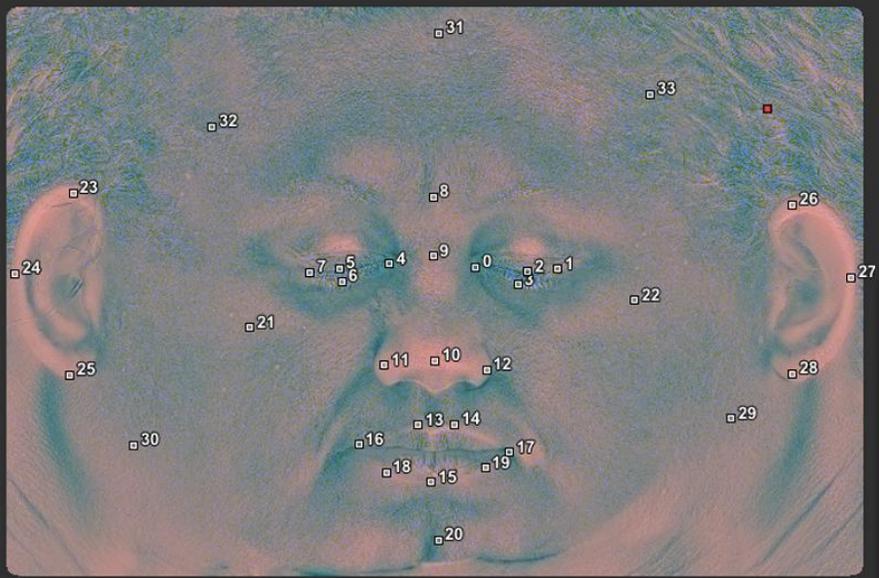
View License

Load Save Reset

>X< >Y< >Z< >P< Load Save Reset

>X< >Y< >Z< >P< Sync Views

1.后面还需要投射颜色贴图，所以将定位点信息存储一下



Save File with Points

此电脑 > Passport (J:) > 季鑫-文档整理 > ZWrap皮肤的细节映射

名称	日期	类型	大小	标记
XV	2020/4/19 21:01	文件夹		
标_北头部模型及...	2020/4/18 11:00	文件夹		
季鑫	2020/4/18 12:33	文件夹		
截图	2020/4/19 20:15	文件夹		
map_dingwei.txt	2020/4/19 21:41	文本文档	2 KB	

文件名(N): model\_dingwei

保存类型(T): Files (\*.txt);

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shape
- Decimation Master
- FBX Export/Import
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector S
- Transpose Master
- UV Master
- ZBrush To Photosh
- ZColor
- ZWrap
- Start ZWrap
- Start ZTexTransfer
- USER xzl
- USER light\*\*

ZWrap 1.1.3

View License

Load Save Reset >X< >Y< >Z< >P< Load Save Reset >X< >Y< >Z< >P< Sync Views

Save File with Points

组织 新建文件夹

名称	日期	类型	大小	标记
参考	2020/4/18 12:33	文件夹		
截图	2020/4/19 20:15	文件夹		
map_dingwei.txt	2020/4/19 21:41	文本文档	2 KB	
model_dingwei.txt	2020/4/19 21:42	文本文档	2 KB	

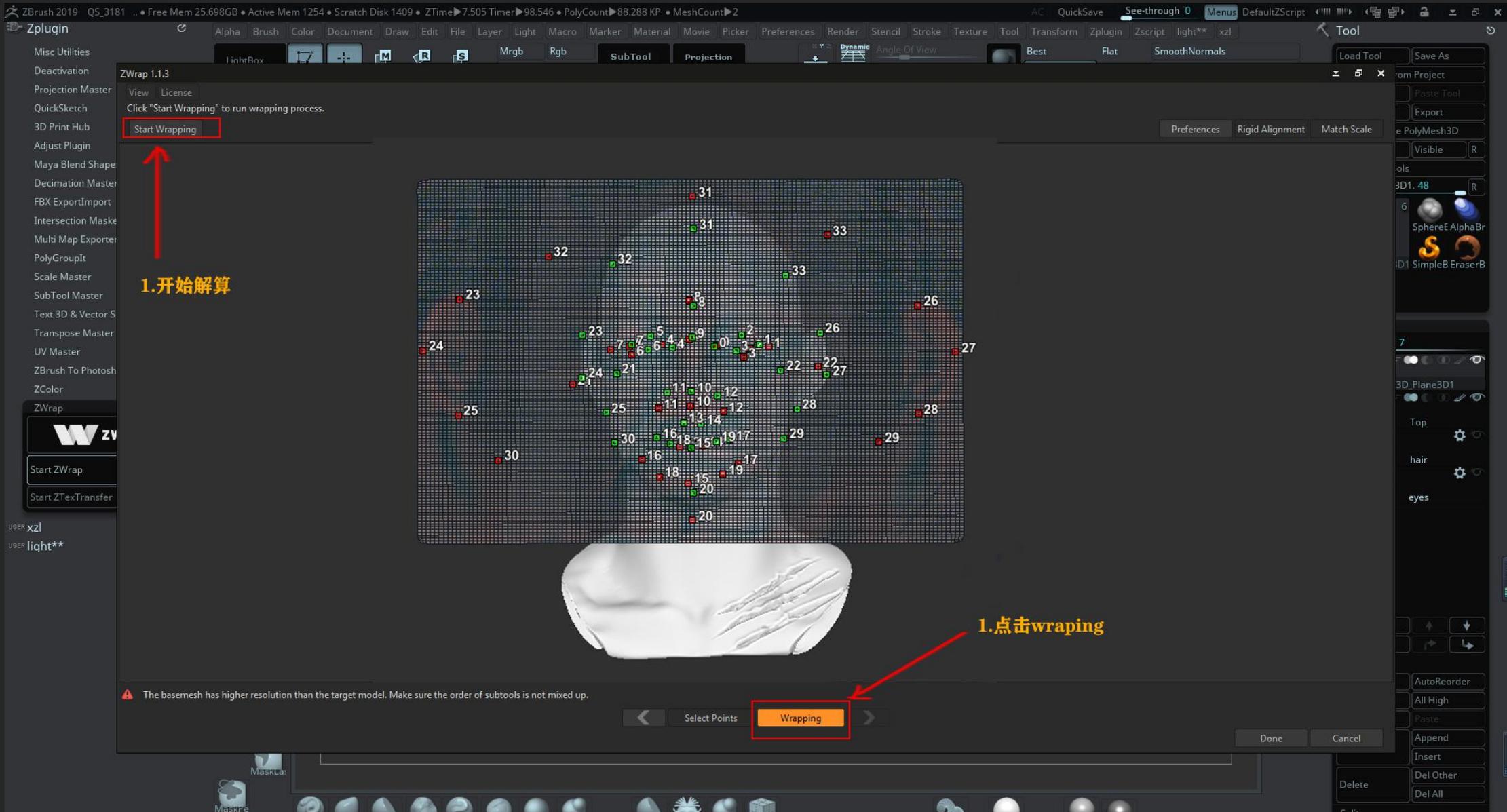
文件名(N): map\_dingwei.txt

保存类型(T): Files (\*.txt);

保存(S) 取消

Select Points Wrapping Done Cancel

同样的，也把模型的定位点信息存储一份



Click "Start Wrapping" to run wrapping process.

Start Wrapping



1. 开始解算



1. 点击wrapping



Wrapping

The basemesh has higher resolution than the target model. Make sure the order of subtools is not mixed up.

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shape
- Decimation Master
- FBX Export/Import
- Intersection Mask
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector S
- Transpose Master
- UV Master
- ZBrush To Photosh
- ZColor
- ZWrap

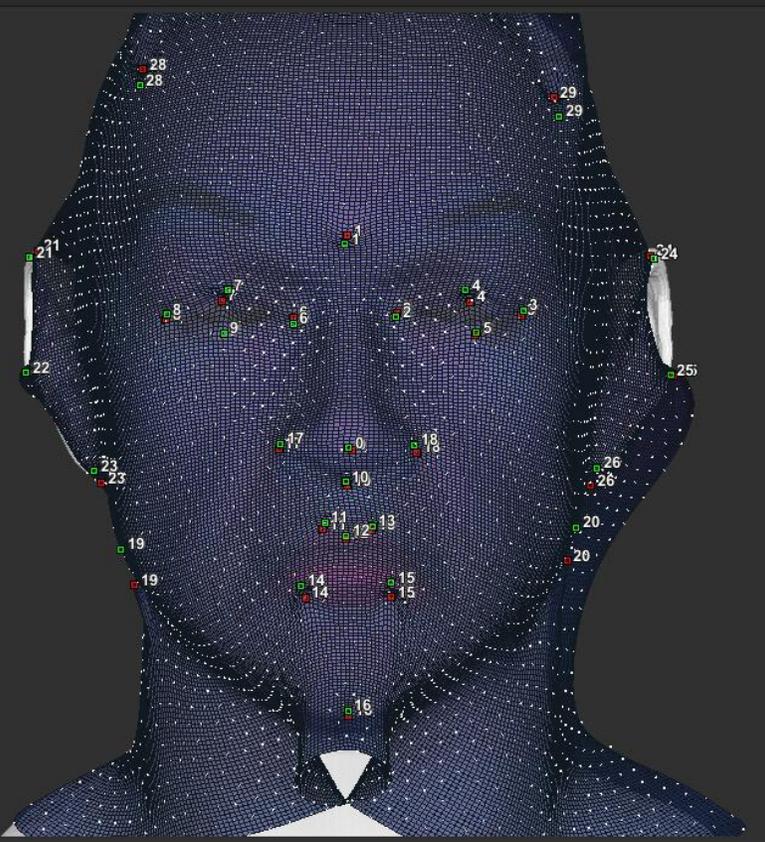
ZWrap 1.1.3

View License

Wrapping (subdivision 1 of 3)

Start Wrapping

Preferences Rigid Alignment Match Scale



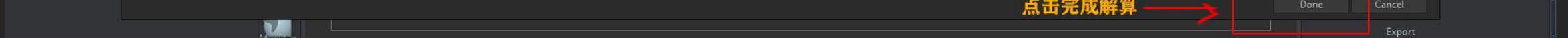
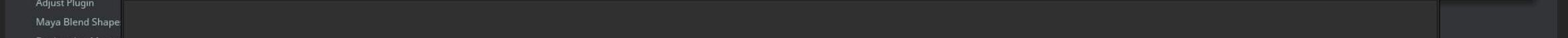
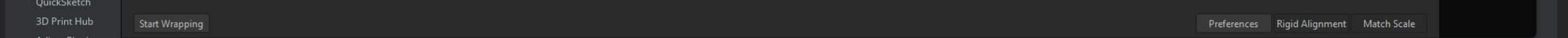
等待解算完成.....

The basemesh has higher resolution than the target model. Make sure the order of subtools is not mixed up.

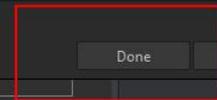
Select Points Wrapping

Done Cancel

- from Project
- Paste Tool
- Export
- e PolyMesh3D
- Visible R
- ols
- 3D1. 48 R
- 6 SphereE AlphaBr
- D1 SimpleB EraserB
- 7
- 3D\_Plane3D1
- Top
- hair
- eyes
- AutoReorder
- All High
- Paste
- Append
- Insert
- Del Other
- Del All
- Delete
- Spin



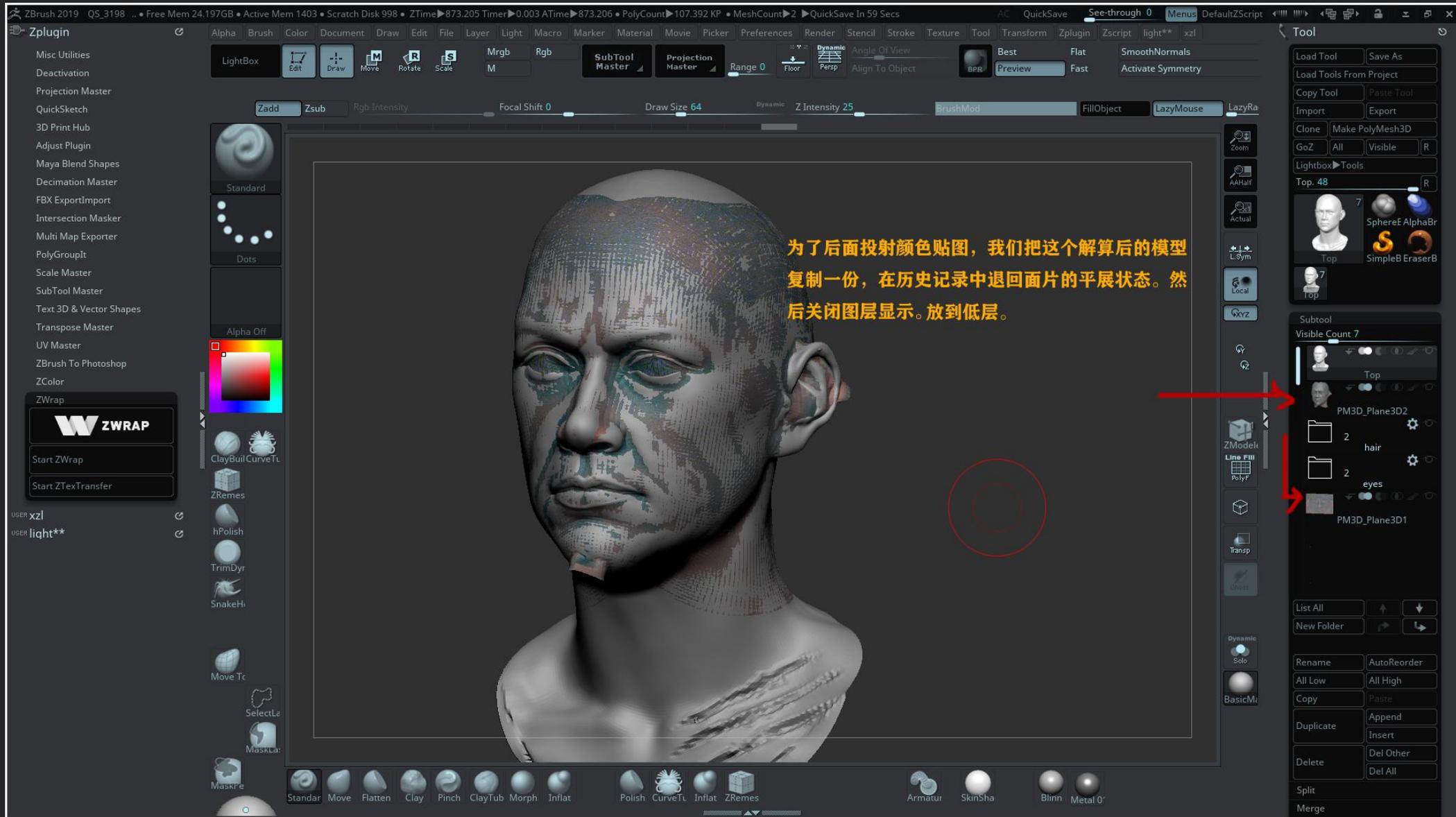
点击完成解算



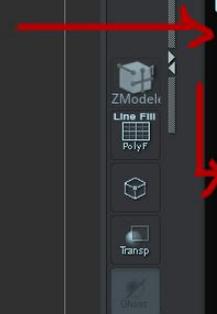
Done Cancel

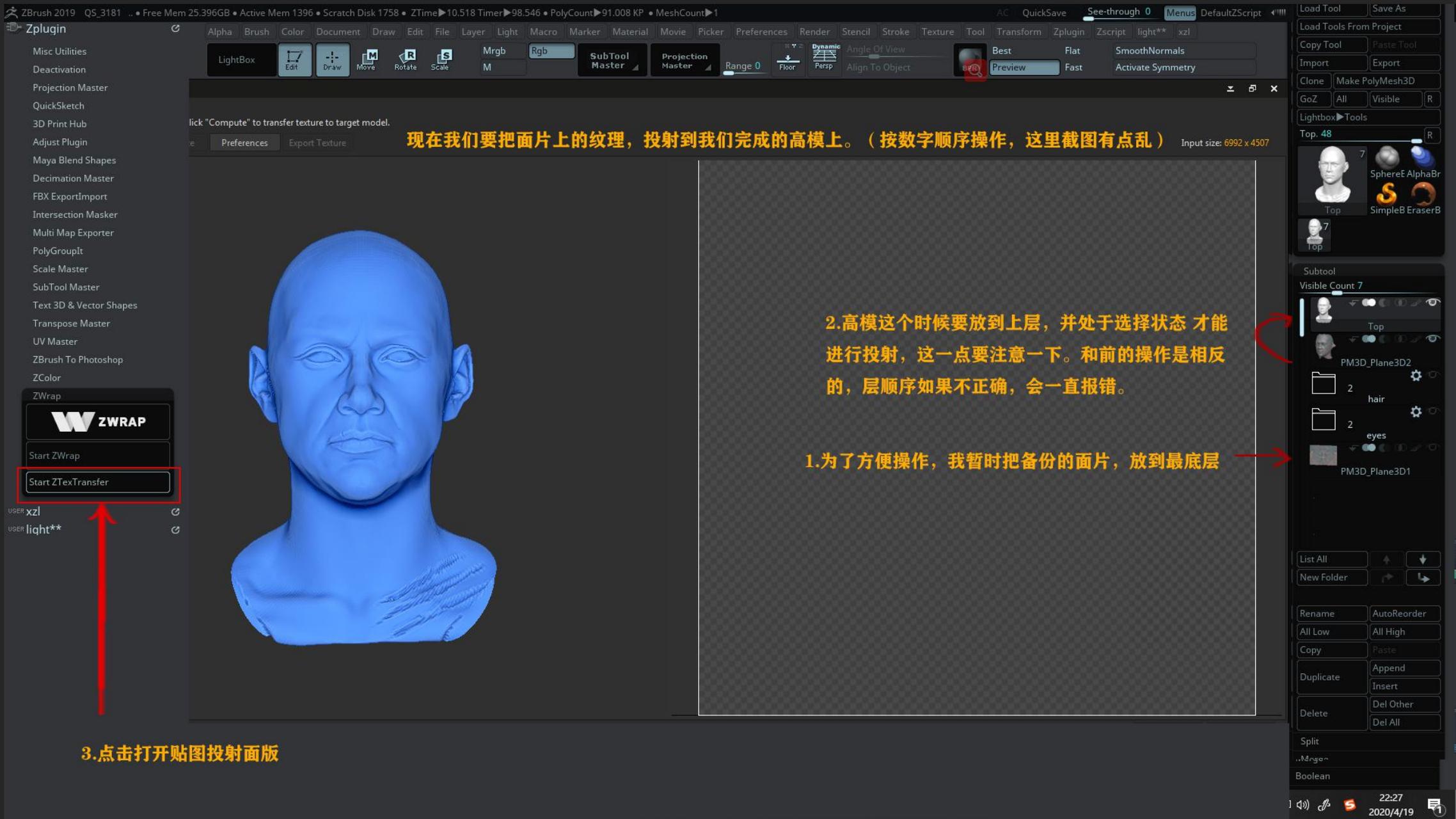


完成后，发现下巴和耳朵都有一点问题  
应该是面片的面积给的过大造成的，再重  
搞一次，又要浪费很多时间，所以有问题  
地方，将备后面在Mari里面再修一下，或  
者在ZB里，直接修一下，比较重要的位置  
包裹的还不错



为了后面投射颜色贴图，我们把这个解算后的模型复制一份，在历史记录中退回面片的平展状态。然后关闭图层显示。放到低层。





现在我们要把面片上的纹理，投射到我们完成的高模上。（按数字顺序操作，这里截图有点乱）

2. 高模这个时候要放到上层，并处于选择状态 才能进行投射，这一点要注意一下。和前的操作是相反的，层顺序如果不正确，会一直报错。

1. 为了方便操作，我暂时把备份的面片，放到最底层

3. 点击打开贴图投射面版

- Zplugin
- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shape
- Decimation Master
- FBX ExportImport
- Intersection Maske
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector S
- Transpose Master
- UV Master
- ZBrush To Photosh
- ZColor
- ZWrap
- Start ZWrap
- Start ZTexTransfer

### ZWrap 1.1.3

View License

Project Extrapolate Preferences Export Texture

Input size: 6992 x 4507

**在属性面板中，设置贴图大小**

Output Image Settings

Width 4096

Height 4096

1024 2048 4096 8192

Limit Distance

Distance 1

U Offset 0

V Offset 0

Load Tool Save As

Load Tools From Project

Paste Tool

Export

e PolyMesh3D

Visible R

ols

7

SphereE AlphaBr

SimpleB EraserB

7

Top

Britany1

hair

eyes

Britany

AutoReorder

All High

Paste

Append

Insert

Del Other

Del All

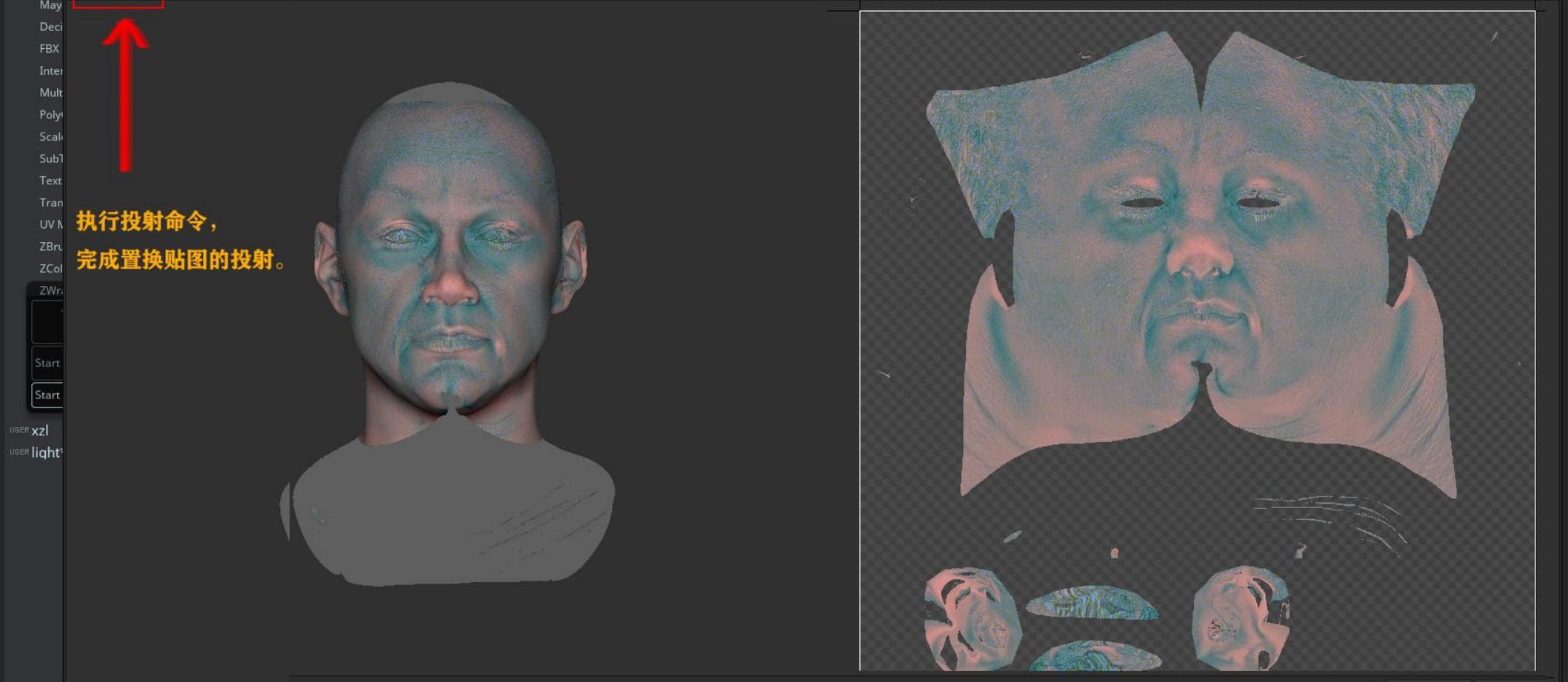
Delete

Split

Merge

USER xzl

USER light\*\*



执行投射命令，  
完成置换贴图的投射。

Project **Extrapolate** Preferences Export Texture

1. 点击扩展，填充空白区域

2. 保存贴图。

USER xzl  
USER light\*

Tool

Load Tool Save As

Load Tools From Project

Copy Tool Paste Tool

Import Export

Clone Make PolyMesh3D

GoZ All Visible R

Lightbox Tools

Top 48 R

7 SphereE AlphaBr

Top SimpleB EraserB

Subtool

Visible Count 7

Top

PM3D\_Plane3D2

2 hair

2 eyes

PM3D\_Plane3D1

List All

New Folder

Rename AutoReorder

All Low All High

Copy Paste

Duplicate Append

Insert

Delete Del Other

Del All

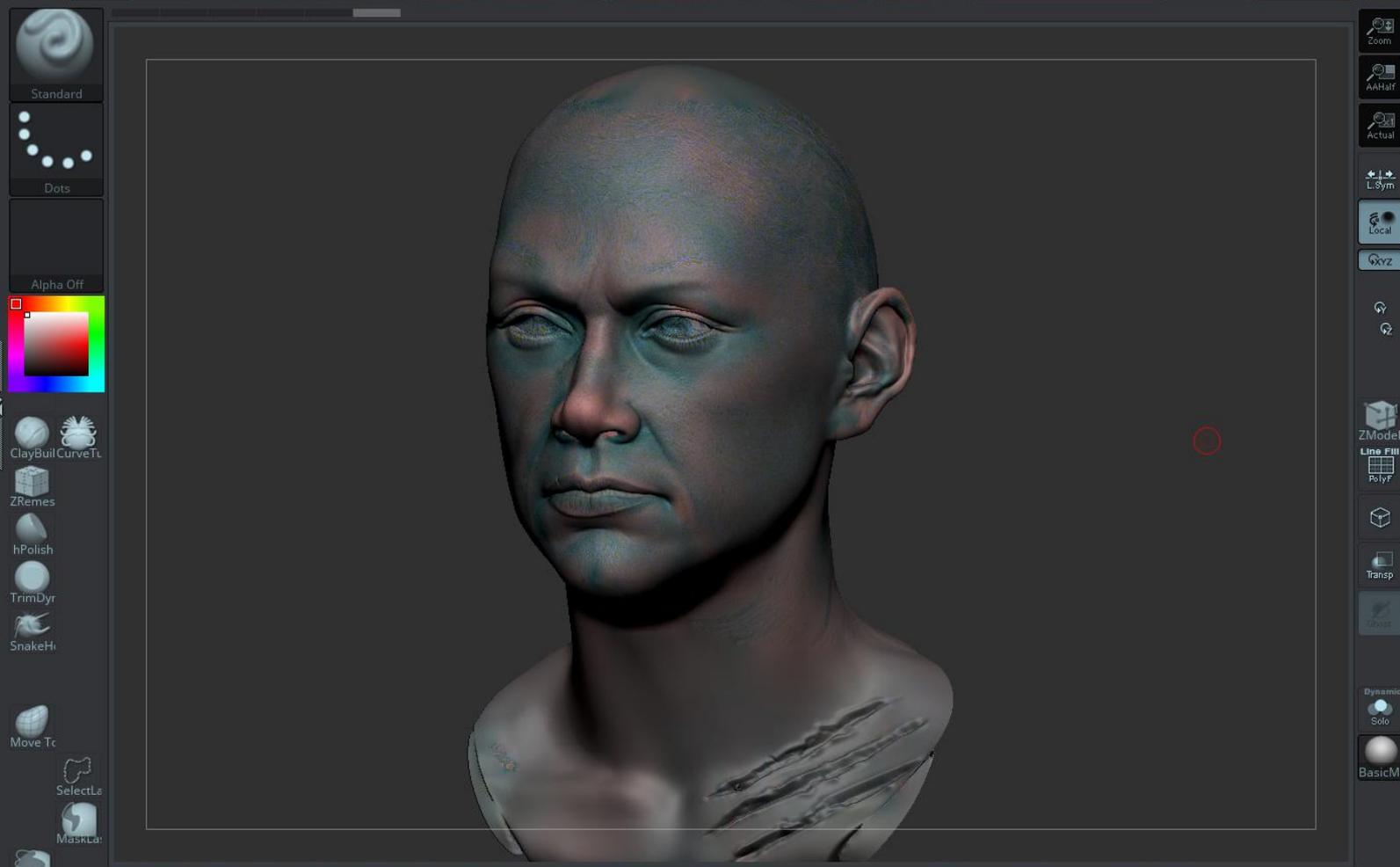
Zplugin

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shapes
- Decimation Master
- FBX Export/Import
- Intersection Masker
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector Shapes
- Transpose Master
- UV Master
- ZBrush To Photoshop
- ZColor
- ZWrap

USER xzl  
USER light\*\*

LightBox Edit Draw Move Rotate Scale Mrgb Rgb SubTool Master Projection Master Range 0 Floor Dynamic Persp Angle Of View Best Flat SmoothNormals Preview Fast Activate Symmetry

Zadd Zsub Rgb Intensity Focal Shift 0 Draw Size 13 Dynamic Z Intensity 25 BrushMod FillObject LazyMouse LazyRad



Standard Move Flatten Clay Pinch ClayTub Morph Inflat Polish CurveTl Inflat ZRemes Armatur SkinSha Blinn Metal 0

Tool

Load Tool Save As Load Tools From Project Copy Tool Paste Tool Import Export Clone Make PolyMesh3D GoZ All Visible R Lightbox▶Tools Top. 48 R SphereE AlphaBr SimpleB EraserB Top 7

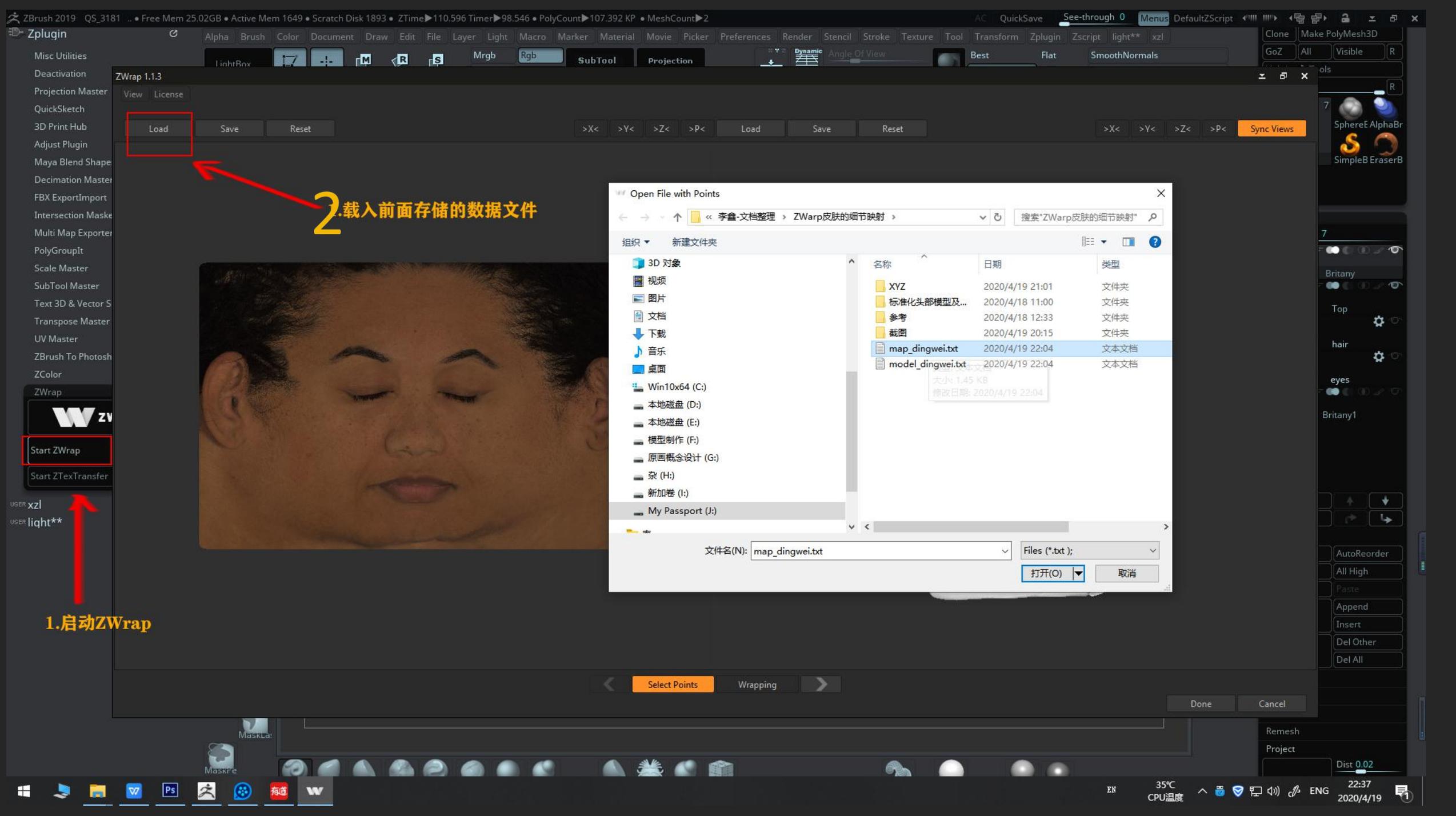
Subtool Visible Count 7 Top PM3D\_Plane3D2 2 hair 2 eyes PM3D\_Plane3D1

List All New Folder Rename AutoReorder All Low All High Copy Paste Duplicate Append Insert Delete Del Other Del All Split Merge



1.回到ZB，把最下层的面片调到高模上层并导入颜色贴图，开启纹理显示，这里不在赘述，导入贴图方法同上。

2.把替换用的面片模型，放到最下层，关闭显示



ZWrap 1.1.3

View License

Load Save Reset

>X< >Y< >Z< >P< Load Save Reset >X< >Y< >Z< >P< Sync Views

Open File with Points

李鑫-文档整理 > ZWrap皮肤的细节映射

搜索"ZWrap皮肤的细节映射"

名称	日期	类型
XYZ	2020/4/19 21:01	文件夹
标准化头部模型及...	2020/4/18 11:00	文件夹
参考	2020/4/18 12:33	文件夹
截图	2020/4/19 20:15	文件夹
map_dingwei.txt	2020/4/19 22:04	文本文档
model_dingwei.txt	2020/4/19 22:04	文本文档

大小: 1.45 KB  
修改日期: 2020/4/19 22:04

文件名(N): map\_dingwei.txt Files (\*.txt);

打开(O) 取消

2. 载入前面存储的数据文件

1. 启动ZWrap

Start ZWrap

Start ZTexTransfer

Done Cancel

Remesh Project Dist 0.02

模型同样载入前面存储的数据文件

The screenshot shows the ZBrush interface with a 3D model of a head in the center. A file selection dialog titled "Open File with Points" is open, showing a list of files. The file "model\_dingwei.txt" is selected and highlighted with a red box. A red arrow points from the Chinese text above to the "Load" button in the ZWrap toolbar. The dialog shows the following file list:

名称	日期	类型
XVZ	2020/4/19 21:01	文件夹
标准化头部模型及...	2020/4/18 11:00	文件夹
参考	2020/4/18 12:33	文件夹
截图	2020/4/19 20:15	文件夹
map_dingwei.txt	2020/4/19 22:04	文本文档
model_dingwei.txt	2020/4/19 22:04	文本文档

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shape
- Decimation Master
- FBX Export/Import
- Intersection Maske
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector S
- Transpose Master
- UV Master
- ZBrush To Photosh
- ZColor
- ZWrap
- Start ZWrap
- Start ZTexTransfer

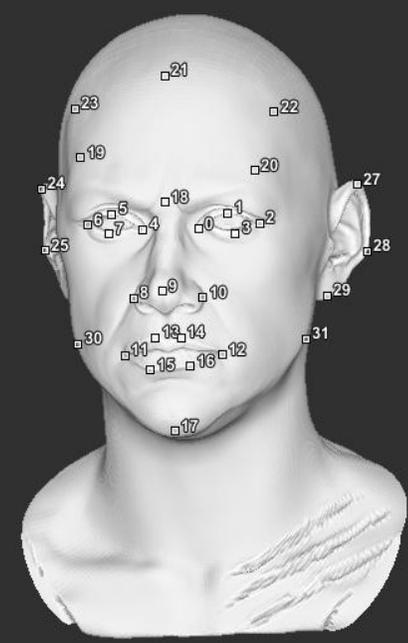
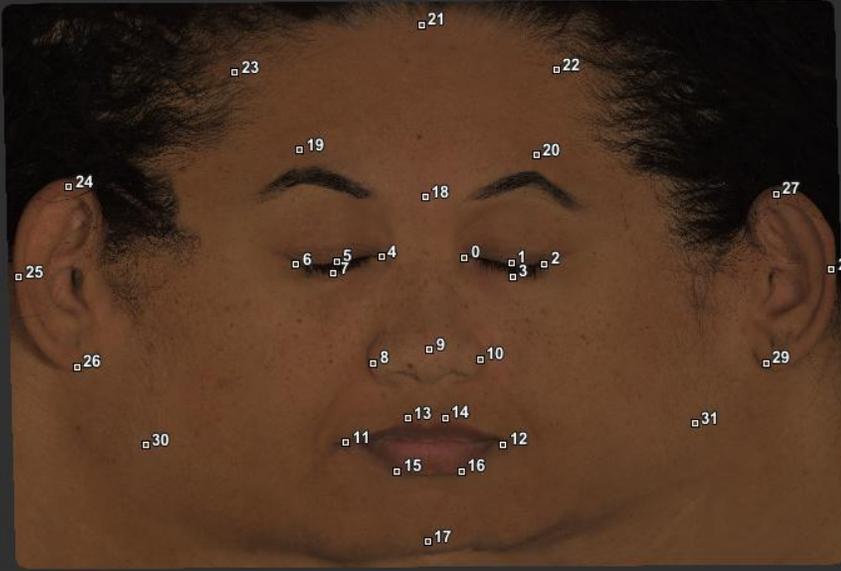
ZWrap 1.1.3

View License

Click on the model to add point correspondences. CTRL + click to remove a point. Drag and drop a point to change its position.

Load Save Reset >X< >Y< >Z< >P< Load Save Reset >X< >Y< >Z< >P< Sync Views

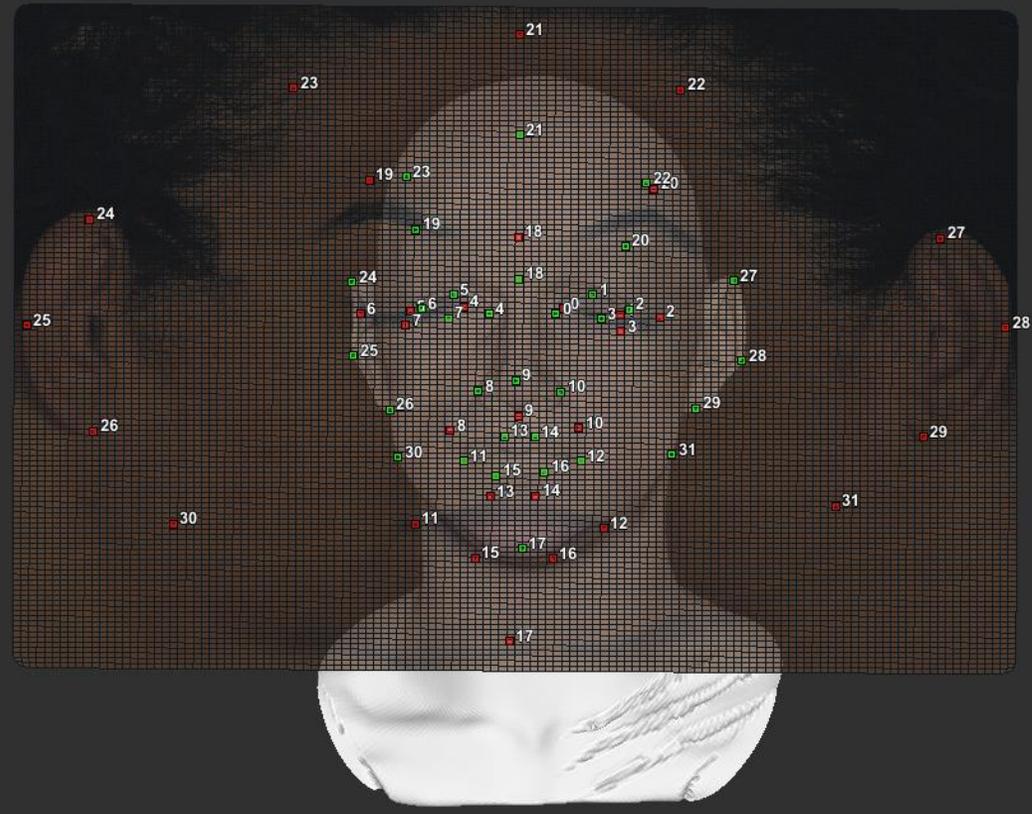
**因为面片是备份的，是和原来完全相同的，导入数据文件完全匹配；高模也没有改动，这样就保证了颜色贴图 and 置换贴图在肌理上是完全吻合的。接下来，我们继续解算就好了**



Select Points Wrapping

Done Cancel

## 2.开始解算



Select Points **Wrapping** 1.点击Wrapping Done Cancel

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shape
- Decimation Master
- FBX Export/Import
- Intersection Maske
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector S
- Transpose Master
- UV Master
- ZBrush To Photosh
- ZColor
- ZWrap
  - Start ZWrap
  - Start ZTexTransfer

### ZWrap 1.1.3

View License

Start Wrapping

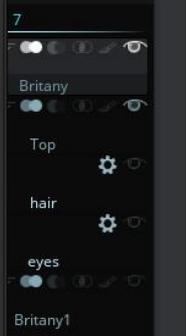
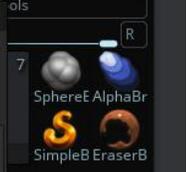
Preferences Rigid Alignment Match Scale

ZWrap

Wrapping process is finished!

OK

Select Points Wrapping Done Cancel



**Zplugin**

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shapes
- Decimation Master
- FBX Export/Import
- Intersection Masker
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector Shapes
- Transpose Master
- UV Master
- ZBrush To Photoshop
- ZColor
- ZWrap

W ZWRAP

Start ZWrap

Start ZTexTransfer

Alpha Brush Color Document Draw Edit File Layer Light Macro Marker Material Movie Picker Preferences Render Stencil Stroke Texture Tool Transform Zplugin Zscript light\*\* xzl

LightBox Edit Draw Move Rotate Scale Mrgb Rgb SubTool Master Projection Master Range 0 Floor Dynamic Angle Of View Best Flat SmoothNormals Preview Fast Activate Symmetry

QuickSave Completed successfully in 2.71 seconds.

Zadd Zsub Rgb Intensity 100 Focal Shift 0 Draw Size 6 Dynamic Z Intensity 25 BrushMod FillObject LazyMouse LazyRad

Standard

Dots

Alpha Off

ClayBuilCurveT

ZRemes

hPolish

TrimDyr

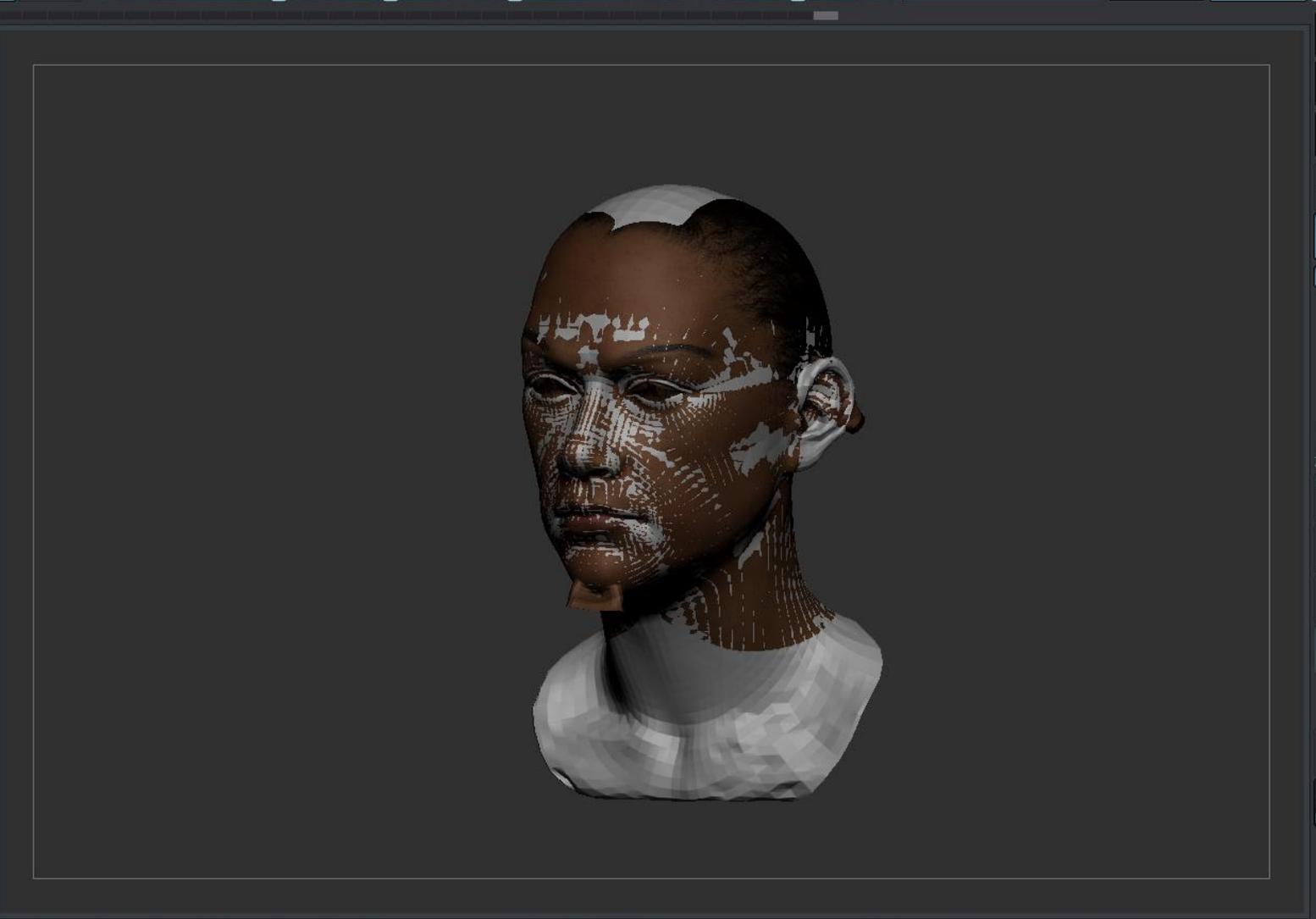
SnakeHi

Move Tc

SelectLa

MaskLa

MaskRe



Standar Move Flatten Clay Pinch ClayTub Morph Inflat Polish CurveT Inflat ZRemes Armatur SkinSha Blinn Metal 0

Clone Make PolyMesh3D

GoZ All Visible R

Lightbox Tools

Britany, 48 R

Britany 7 SphereE AlphaBr

Britany 7 SimpleB EraserB

Subtool

Visible Count 7

Britany

Top

2 hair

2 eyes

Britany1

List All

New Folder

Rename AutoReorder

All Low All High

Copy Paste

Duplicate Append Insert

Delete Del Other Del All

Split

Merge

Boolean

Remesh

Project

Dist 0.02

ProjectAll Mean 25 PA Blur 10

Zoom

AAHalf

Actual

L.Sym

Local

XYZ

ZModel

Line Fill

PolyF

Transp

Obst

Dynamic

Solo

BasicMi

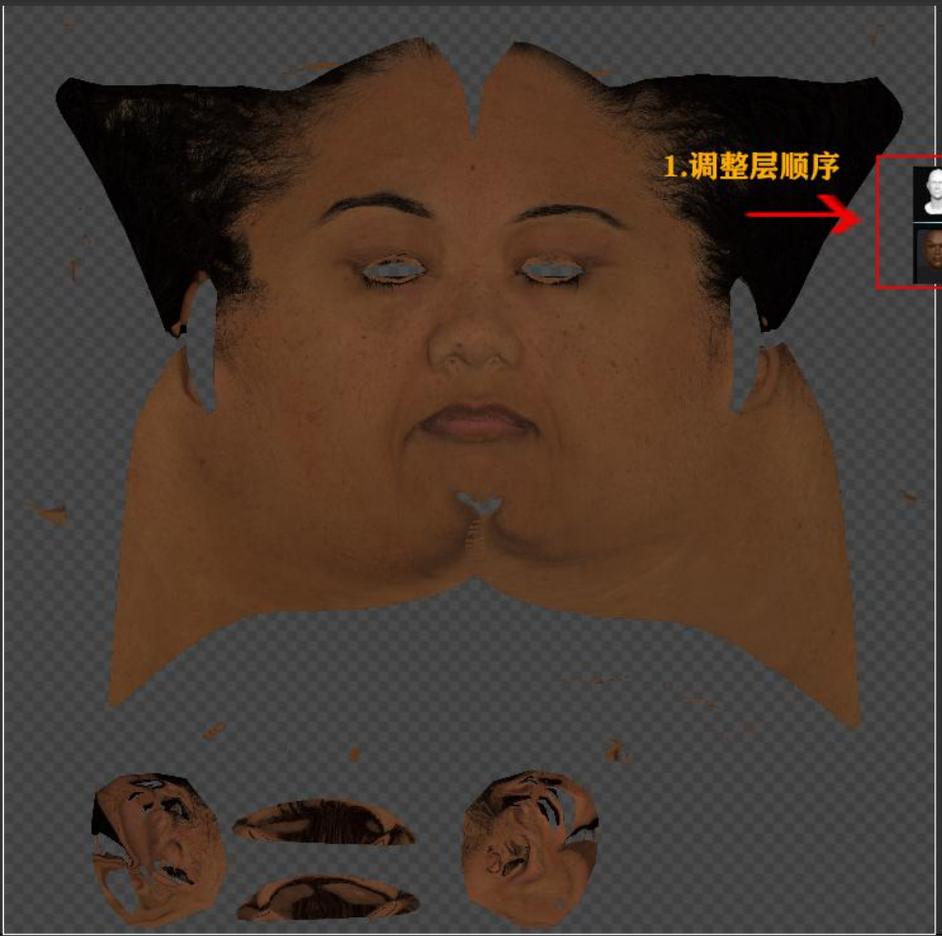
Project

3. 投射

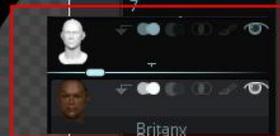


Start ZTexTransfer

2. 开启投射面版



1. 调整层顺序



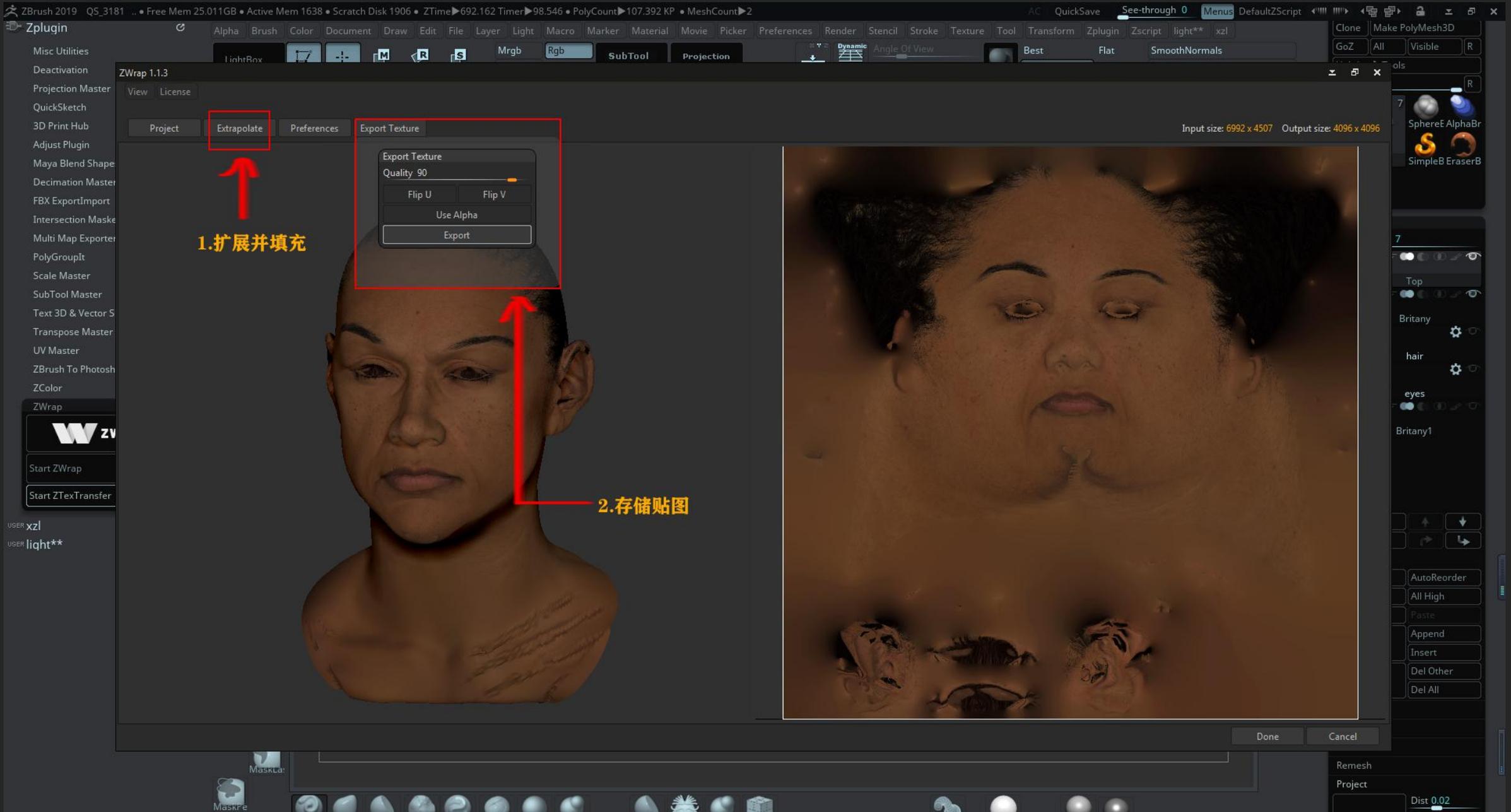
- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shape
- Decimation Master
- FBX Export/Import
- Intersection Maske
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector S
- Transpose Master
- UV Master
- ZBrush To Photosh
- ZColor

ZWrap

Start ZWrap

Start ZTexTransfer

USER xzl  
USER light\*\*



1. 扩展并填充

2. 存储贴图

Input size: 6992 x 4507 Output size: 4096 x 4096

Done Cancel

Remesh

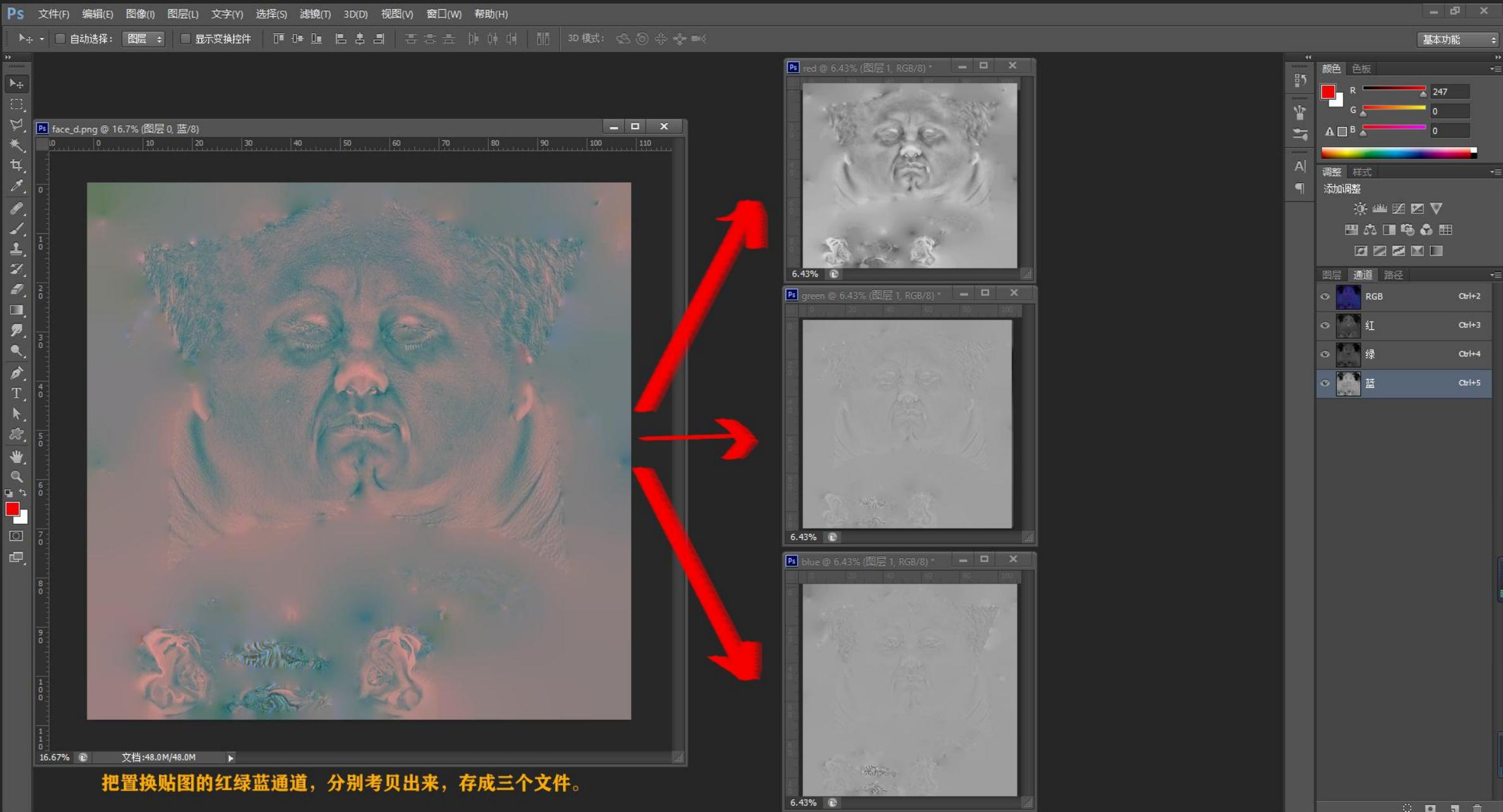
Project

Dist 0.02



到现在为止，就完成了贴图的投射工作。因为面片过大，导致出现了一些小的问题。包括置换，颜色贴图，在工作当中，一定会再进行精修，一些没投射好的地方，进入MARI修，是不错的选择；在ZB里也可以配合一些带有皮肤肌理的笔刷修一下。正常情况下，完成整个过程不会超过一个小，加上后期修改，两到三个小时，就可以做出一张精细的脸。

接下来，我们将使用生成的置换贴图，在ZB里做出皮肤微表面的肌理。



把置换贴图的红绿蓝通道，分别考贝出来，存成三个文件。

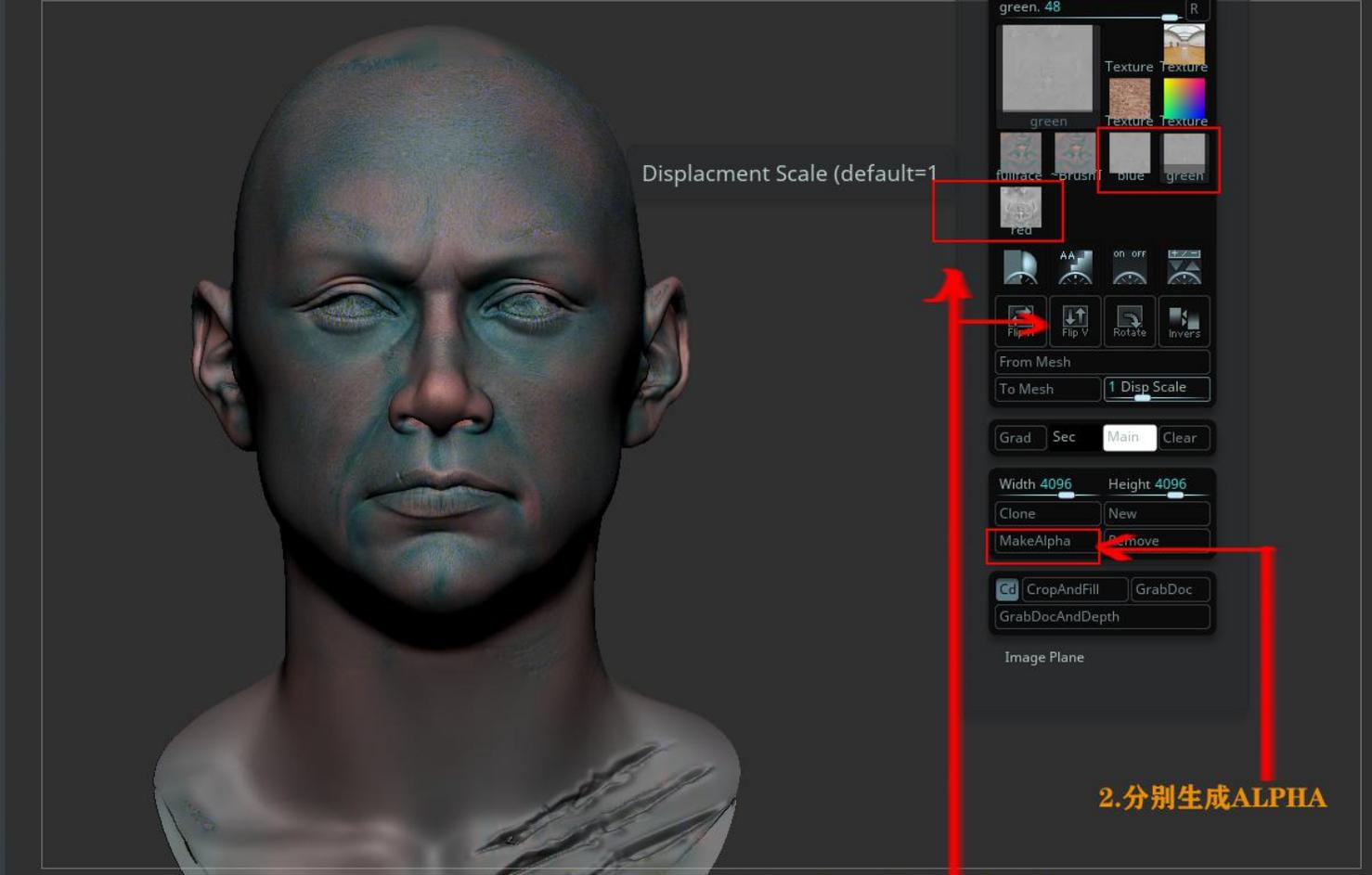
### Zplugin

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shapes
- Decimation Master
- FBX Export/Import
- Intersection Masker
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector Shapes
- Transpose Master
- UV Master
- ZBrush To Photoshop
- ZColor
- ZWrap
  - Start ZWrap
  - Start ZTexTransfer
- USER xzl
- USER light\*\*
- ClayBuil CurveTL
- ZRemes
- hPolish
- TrimDyr
- SnakeHi
- Move Tc
- SelectLs
- MaskLst
- MaskRe

Alpha Brush Color Document Draw Edit File Layer Light Macro Marker Material Movie Picker Preferences Render Stencil Stroke Texture Tool Transform Zplugin Zscript light\*\* xzl

LightBox Edit Draw Move Rotate Scale Mrgb Rgb SubTool Master Projection Master Range 0 Floor Dynamic Angle Of View PERSP Align To Object

Displacment Scale (default=1.0f) Zadd Zsub Rgb Intensity Focal Shift 0 Draw Size 13 Dynamic Z Intensity 25



1. 将三张图片导入到ZB中，并反转垂直方向

2. 分别生成ALPHA

### Tool

Load Tool Save As

Load Tools From Project

Copy Tool Paste Tool

Import Export

Clone Make PolyMesh3D

GoZ All Visible R

Lightbox▶Tools

Top. 48 R

Top 7 Sphere AlphaBr

Top 7 SimpleB EraserB

Subtool Visible Count 7

Top

2 hair

2 eyes

PM3D\_Plane3D2

PM3D\_Plane3D1

List All

New Folder

Rename AutoReorder

All Low All High

Copy Paste

Duplicate Append

Insert

Delete Del Other

Del All

Split

Merge

Standar Move Flatten Clay Pinch ClayTub Morph Inflat Polish CurveTL Inflat ZRemes Armatur SkinSha Blinn Metal 0

- Misc Utilities
- Deactivation
- Projection Master
- QuickSketch
- 3D Print Hub
- Adjust Plugin
- Maya Blend Shapes
- Decimation Master
- FBX Export/Import
- Intersection Masker
- Multi Map Exporter
- PolyGroupIt
- Scale Master
- SubTool Master
- Text 3D & Vector Shapes
- Transpose Master
- UV Master
- ZBrush To Photoshop
- ZColor
- ZWrap
  - Start ZWrap
  - Start ZTexTransfer
- USER xzl
- USER light\*\*
- ClayBuilCurveTu
- ZRemes
- hPolish
- TrimDyr
- SnakeHi
- Move Tc
- SelectLa
- MaskLa
- MaskRe

Alpha Brush Color Document Draw Edit File Layer Light Macro Marker Material Movie Picker Preferences Render Stencil Stroke Texture Tool Transform Zplugin Zscript light\*\* xzl

LightBox Edit Draw Move Rotate Scale Mrgb Rgb M SubTool Master Projection Master Range 0 Floor Dynamic Angle Of View BPR Best Flat SmoothNormals Preview Fast Activate Symmetry

Zadd Zsub Rgb Intensity Focal Shift 0 Draw Size 13 Dynamic Z Intensity 25 BrushMod FillObject LazyMouse LazyRad



按Shift键同时开启两个小窗，分别指定对应的贴图 and Alpha

Top

- Subtool
- Geometry
- ArrayMesh
- NanoMesh
- Layers
- FiberMesh
- Geometry HD
- Preview
- Surface
- Deformation
- Masking
- Visibility
- Polygroups
- Contact
- Morph Target
- Polypaint
- UV Map
- Texture Map
  - Texture On
  - Clone Txtr
  - New Txtr
  - Fix Seam
  - Transparent 0 Antialiased
  - Fill
  - Create
- Displacement Map
  - Disp On
  - Clone Disp
  - Mode
  - Intensity 0
  - Apply DispMap
  - Create DispMap
  - Adaptive DPSubPix 0
  - SmoothUV Mid 0.5
  - Flip V Scale
  - 3 Channels 32Bit
  - Create And Export Map
- Normal Map
- Vector Displacement Map
- Display Properties
- Unified Skin

ZModel Line Fill PolyF Transp Boost Dynamic Solo BasicMi



Standar Move Flatten Clay Pinch ClayTub Morph Inflat Polish CurveTu Inflat ZRemes Armatur SkinSha Blinn Metal 0



1.新建Red图层，我们先从红通道开始投谢

2.打开目标变形记录

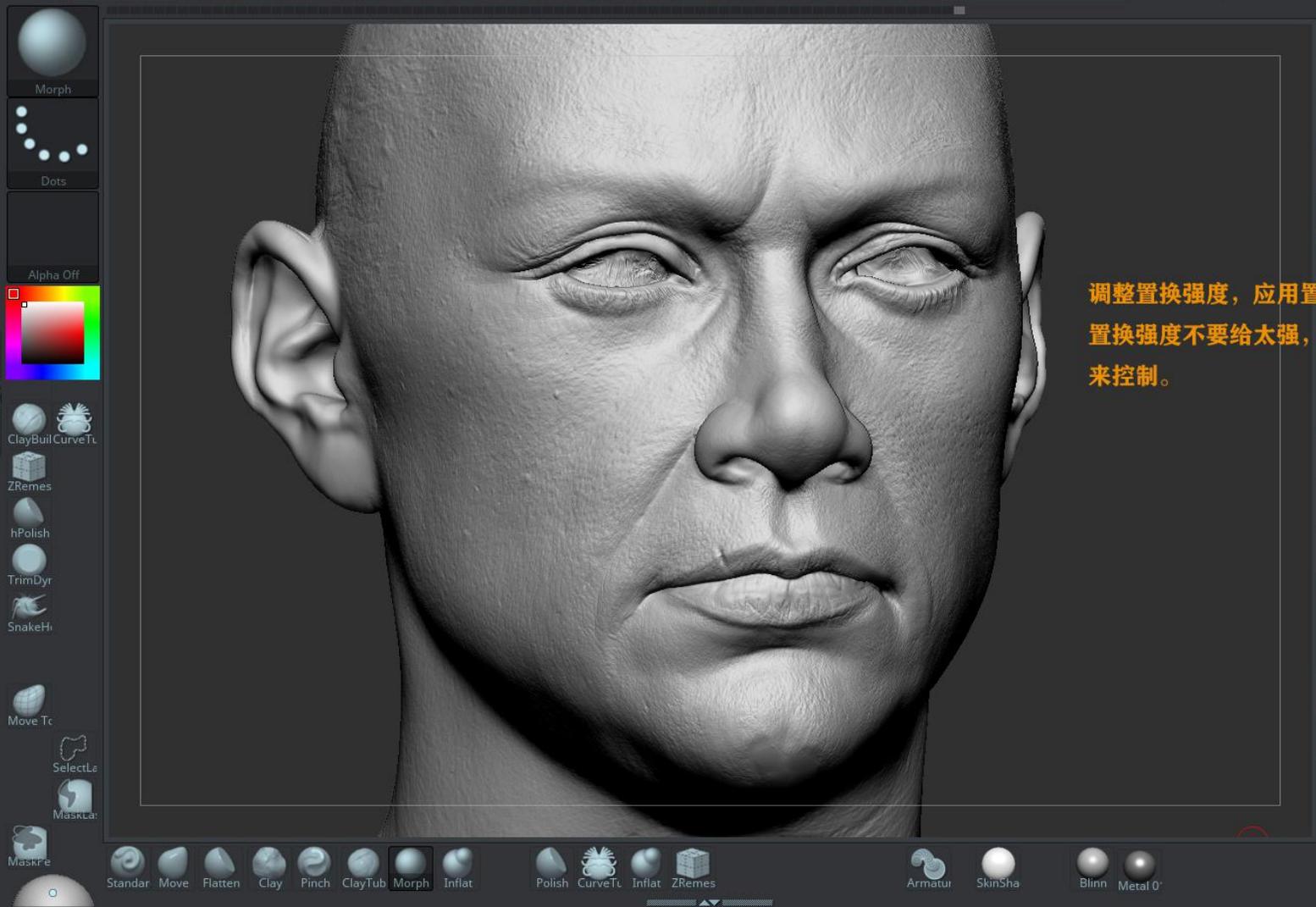
**Zplugin**

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Alpha Brush Color Document Draw Edit File Layer Light Macro Marker Material Movie Picker Preferences Render Stencil Stroke Texture Tool Transform Zplugin Zscript light\*\* xzl

LightBox Edit Draw Move Rotate Scale Mrgb Rgb SubTool Master Projection Master Range 0 Floor Persp Angle Of View Align To Object Best Flat SmoothNormals Preview Fast Activate Symmetry

Zadd Zsub Rgb Intensity 100 Focal Shift 0 Draw Size 16 Dynamic Z Intensity 13 BrushMod FillObject LazyMouse LazyRad



调整置换强度，应用置换贴图  
置换强度不要给太强，用图层来控制。

**NanoMesh**

Layers

- Red 1
- Layer
- Layer
- Layer
- Layer
- Layer

Red 1.6

↑ ↓ ↶ ↷

Name

Bake All

Import MDD MDD Speed

FiberMesh

Geometry HD

Preview

Surface

Deformation

Masking

Visibility

Polygroups

Contact

Morph Target

Polypaint

LIV Map

Texture Map

Texture On

Clone Txtr

New Txtr

red Fix Seam

Transparent Antialiased

Fill

Create

Displacement Map

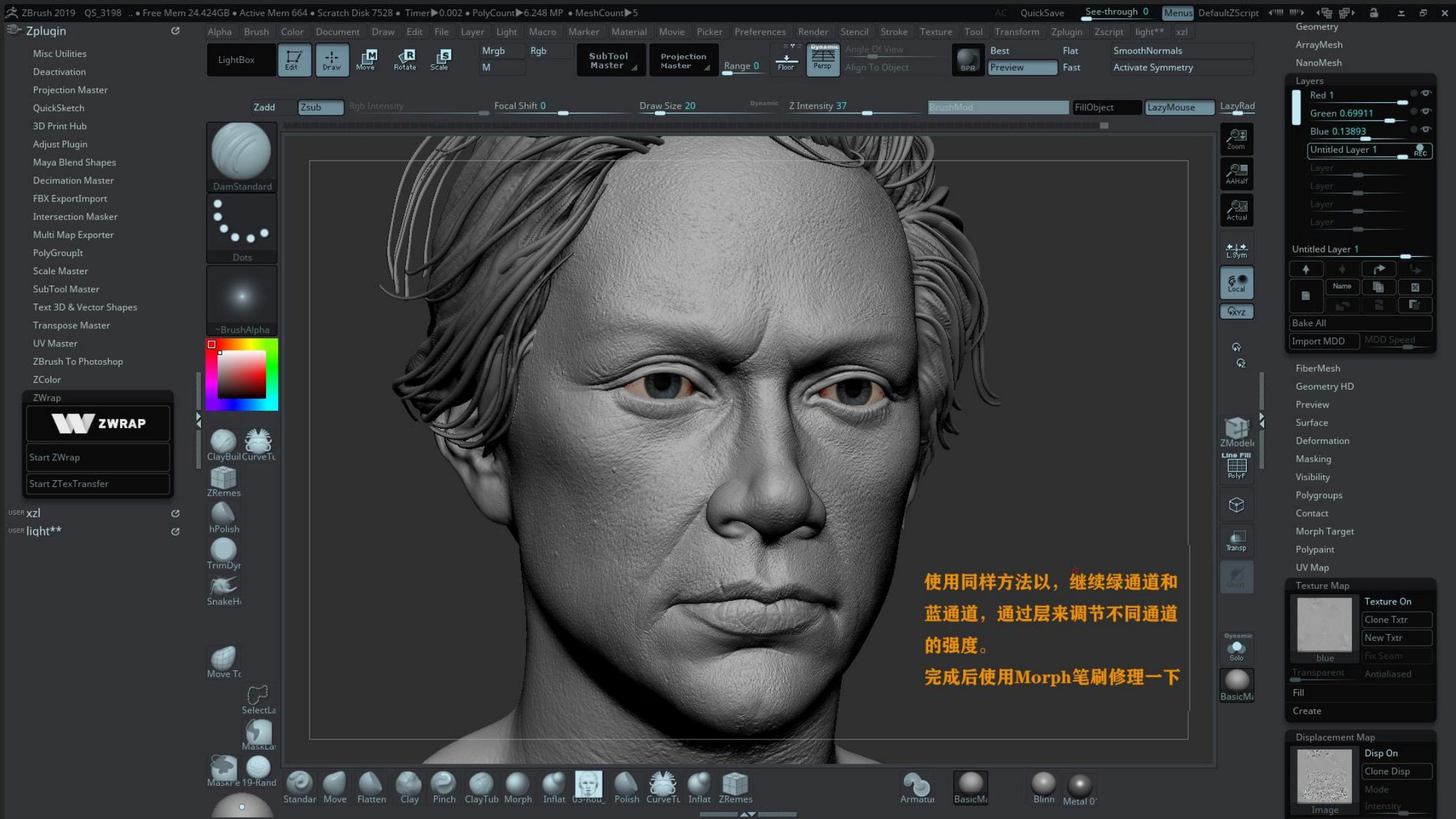
Disp On

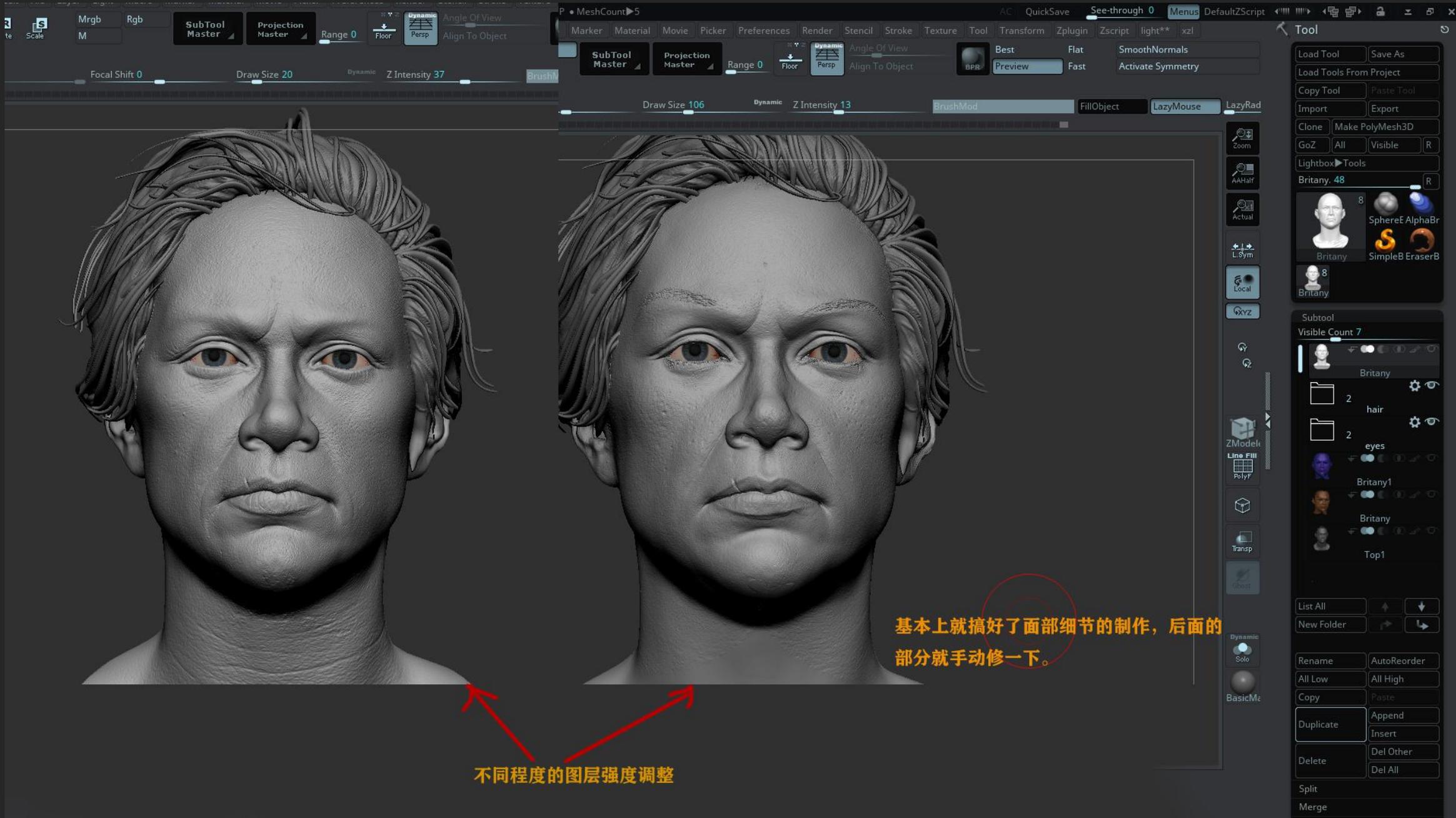
Clone Disp

Image Intensity

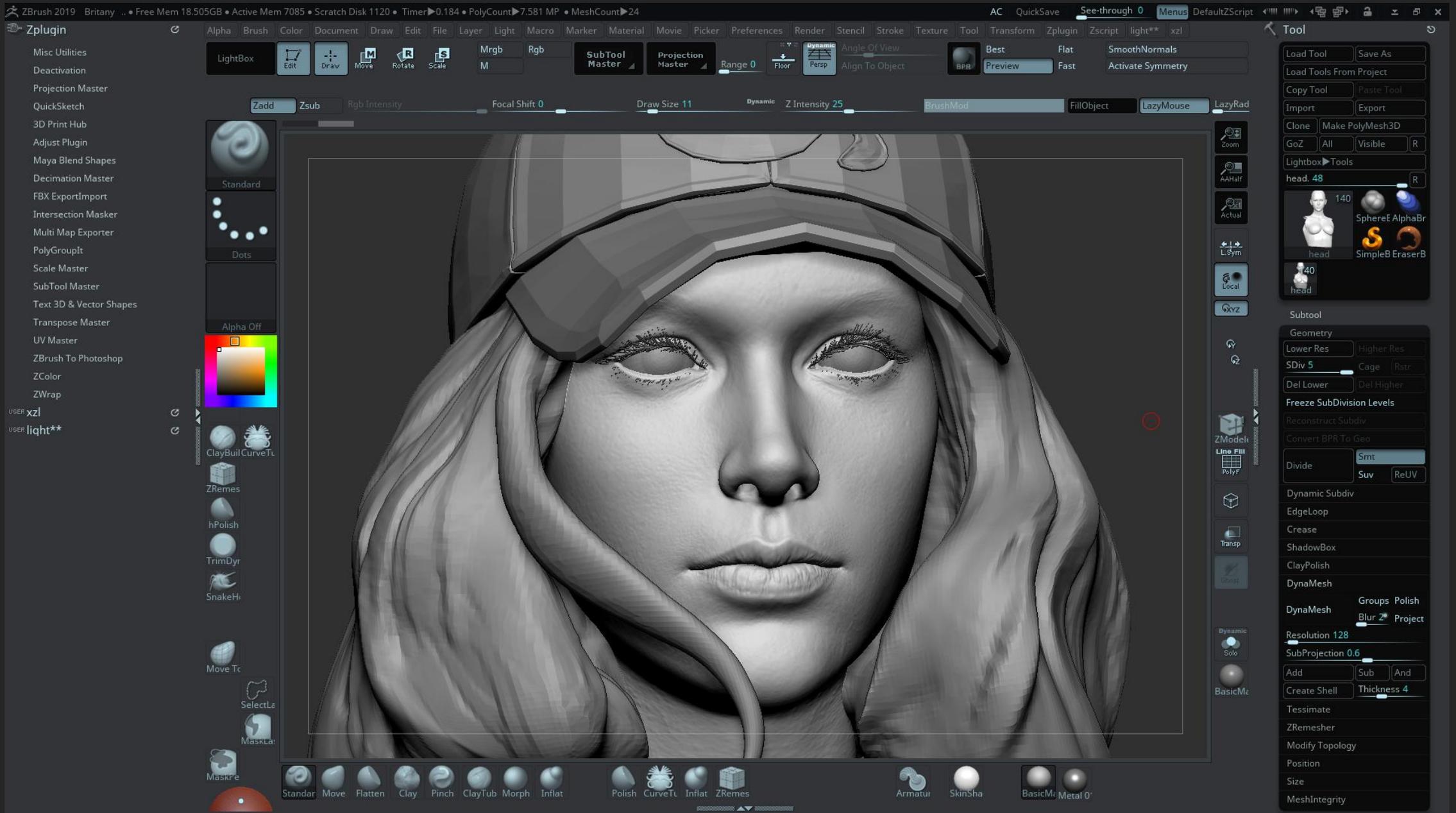
Apply DispMap

Standar Move Flatten Clay Pinch ClayTub Morph Inflat Polish CurveTl Inflat ZRemes Armatur SkinSha Blinn Metal 0





皮肤的颗粒感的强弱，使用图层控制非常方便，可以随时进行强度修改



Zplugin

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USER xzl  
USER light\*\*

Standard

Dots

BrushAlpha

ClayBuil CurveTl

ZRemes

hPolish

TrimDyr

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Move Tc

SelectLa

MaskLa

MaskRe

Alpha Brush Color Document Draw Edit File Layer Light Macro Marker Material Movie Picker Preferences Render Stencil Stroke Texture Tool Transform Zplugin Zscript light\*\* xzl

LightBox Edit Draw Move Rotate Scale Mrgb Rgb SubTool Master Projection Master Range 0 Floor Dynamic Angle Of View Best Flat SmoothNormals Preview Fast Activate Symmetry

Zadd Zsub Rgb Intensity 100 Focal Shift 0 Draw Size 5 Dynamic Z Intensity 13 BrushMod FillObject LazyMouse LazyRad



Standard Move Flatten Clay Pinch ClayTub Morph Inflat Polish CurveTl Inflat ZRemes Armatur SkinSha BasicMe Metal 0\*

Tool

Load Tool Save As

Load Tools From Project

Copy Tool Paste Tool

Import Export

Clone Make PolyMesh3D

GoZ All Visible R

Lightbox Tools

head2.49 R

head2 21 SphereE AlphaBr

SimpleB EraserB

Britany 8 head2 21

Subtool

Geometry

Lower Res Higher Res

SDiv 4 Cage Rstr

Del Lower Del Higher

Freeze SubDivision Levels

Reconstruct Subdiv

Convert BPR To Geo

Divide Smt

Suv ReUV

Dynamic Subdiv

EdgeLoop

Create

ShadowBox

ClayPolish

DynaMesh

DynaMesh Groups Polish

Blur 2 Project

Resolution 128

SubProjection 0.6

Add Sub And

Create Shell Thickness 4

Tessimate

ZRemesher

Modify Topology

Position

Size

MeshIntegrity

ZWrap的使用就简单的讲到这里。在制作这个范例的过程中，素材没有仔细的查找，导致最后的效果并不理想，在制作之前应该试一下素材的置换贴图的强弱，并进行调整；高模阶段也做的马马虎虎，结构存在问题；放置点检查发现了对应点位偏移较大，也嫌麻烦没处理；总之一堆的小问题，大家学习的时候，主要关注一下流程吧，不要过于关注于其它方面。希望这个教程能给大家在制作上有一点启发，制作出精美的作品

The End