



# Blend Shape With Zbrush

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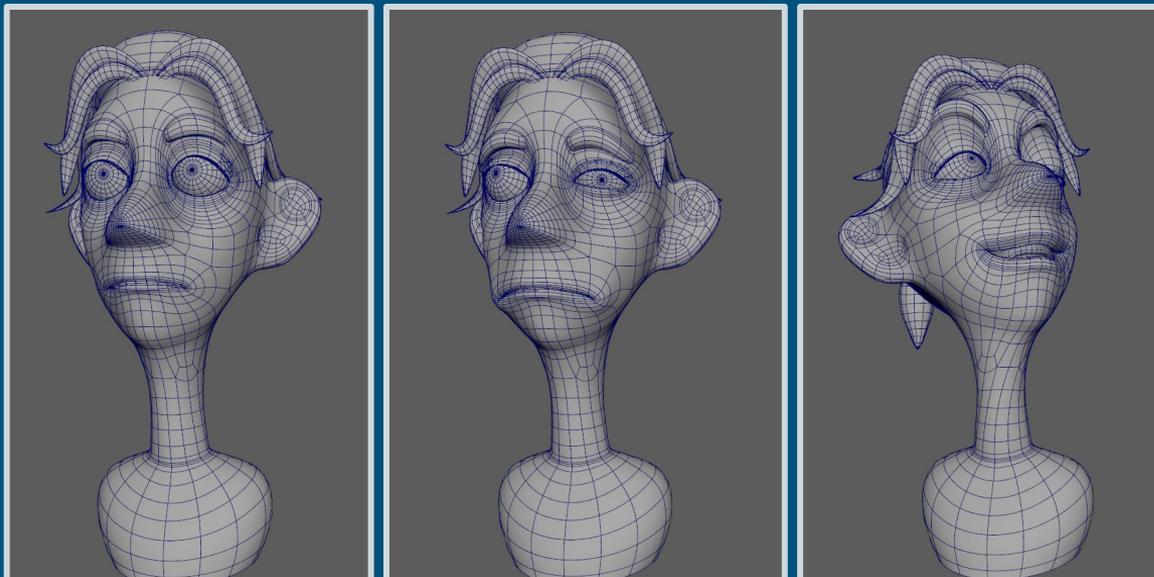
With Your Host Marchand Venter



# What are Blend Shapes?

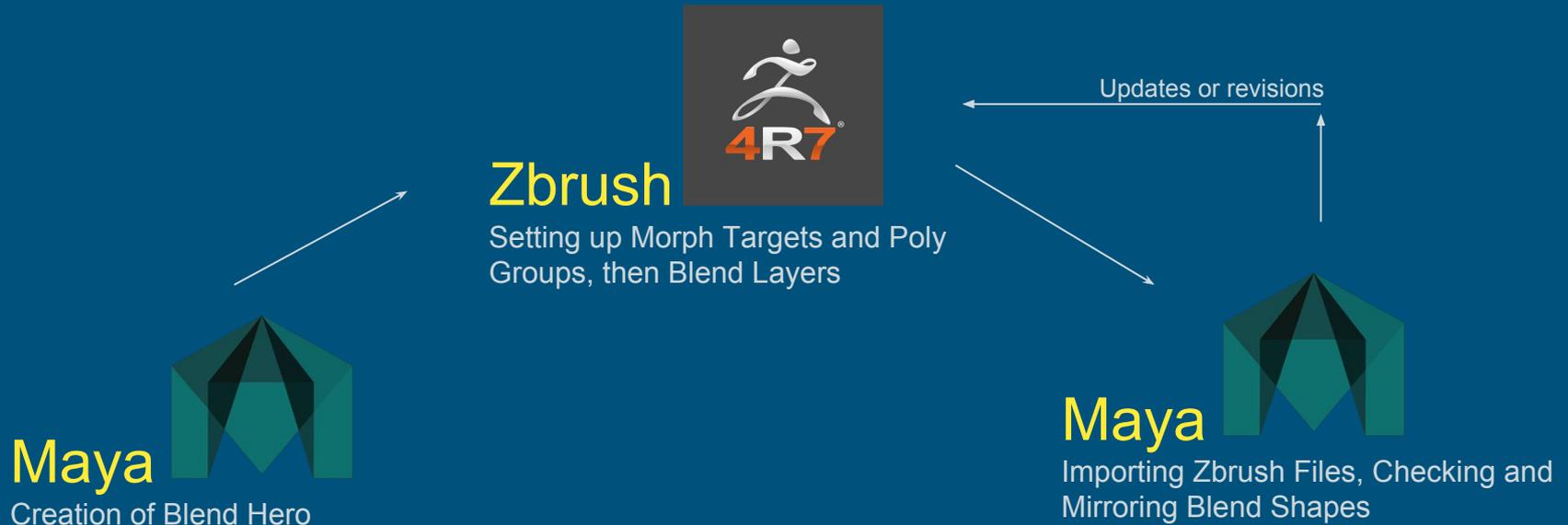
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Morph target animation, per-vertex animation, **shape** interpolation, or **blend shapes** is a method of 3D computer animation used together with techniques such as skeletal animation. In a morph target animation, a "deformed" version of a mesh is stored as a series of vertex positions.



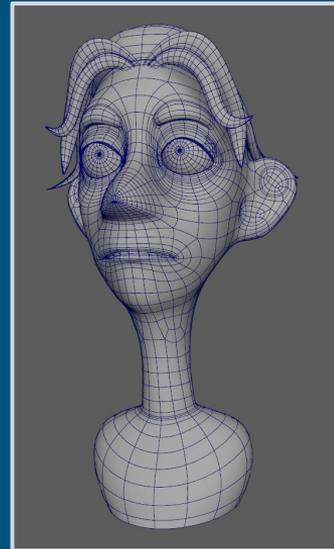
# The WorkFlow “Maya to Zbrush to Maya”

**Zbrush** can be an invaluable step, in creating **fast** and **iterative** blend shapes for animation.



## Step One MAYA “Hero Shapes”

The “Hero Shape” is the asset, in this case Viktor's head from *CUDDLEFISH 2016* that is the **default position** of the shape we are going to be using **deformers** on to create the version blend shapes.



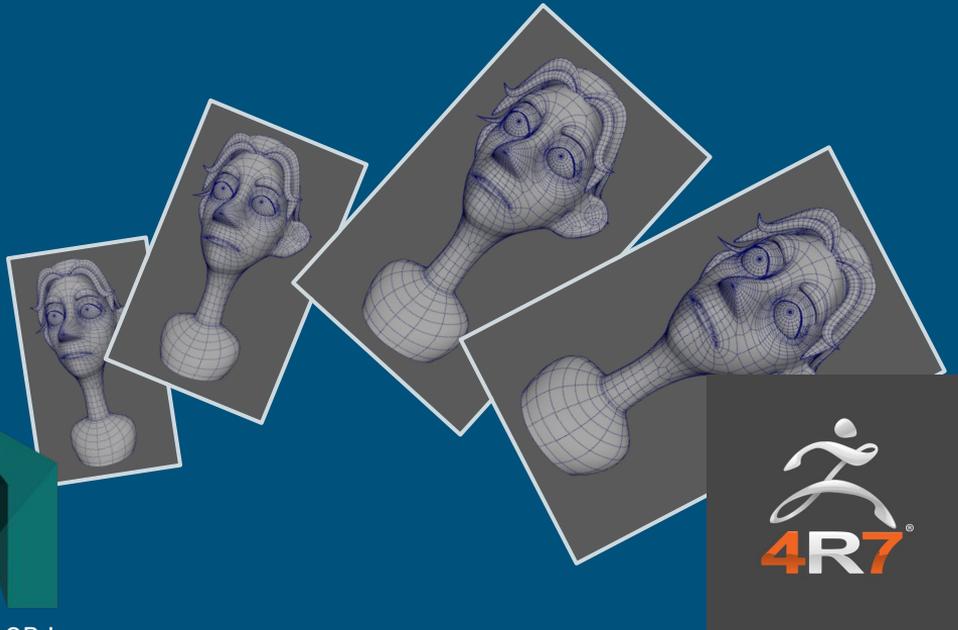
*Don't be afraid to rework, and REWORK your hero assets. Once you get to the blendshape process there is almost no going back in a production environment.*

## Step Two Zbrush “Importing your Hero as a Ztool”

Once you have your hero object, the next step is to send it to Zbrush. We will be using the OBJ files.



File > Export > OBJ

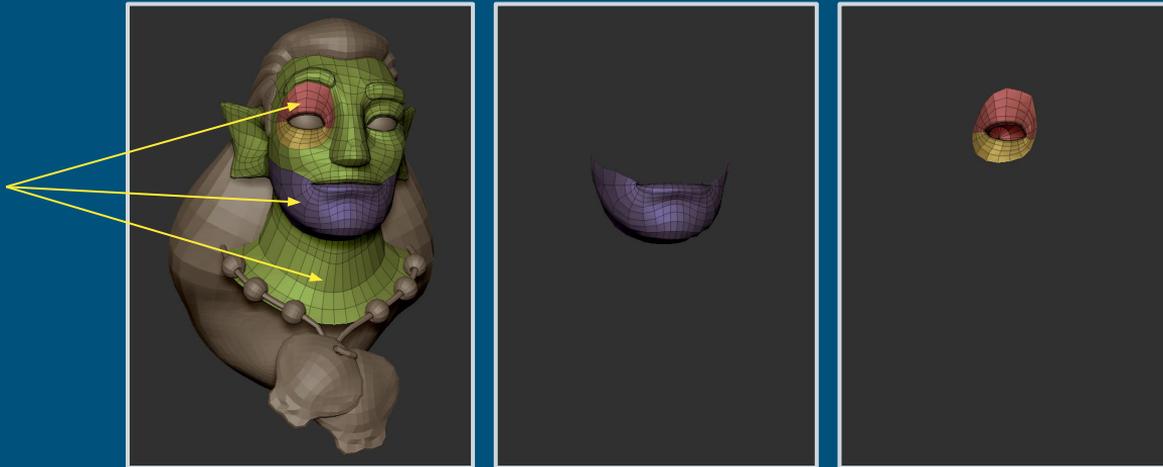


Tool > Import

## Step Three Zbrush “Poly Groups”

**Poly Groups** - Think as poly groups as a collections of faces that have been assigned into a subgroup. These groups can be used to easily hide, mask, and transform selected areas on your model without the need to have to select them over and over.

Poly Groups

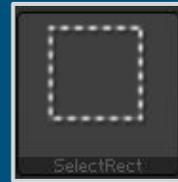
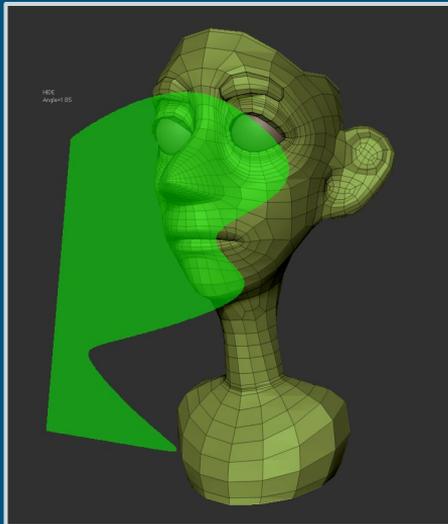


## Step Three Zbrush “Poly Groups”

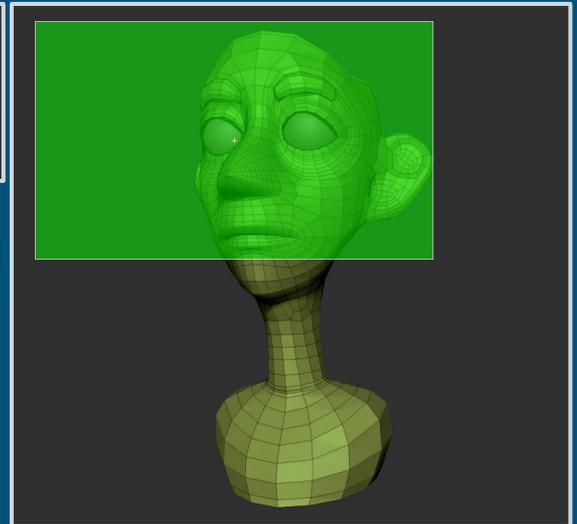
To create a poly group hide all the faces you do not want as part of the Polygroup. You can do this by using the **SelectRect** or **SelectLasso**. These brushes can be used any time in Zbrush by holding down **(Shift + Ctrl LMB) Green**. You may also with to invert your selections by using **(Shift + Ctrl LMB) + Alt. Red**.



PS equivalent  
Lasso selection tool



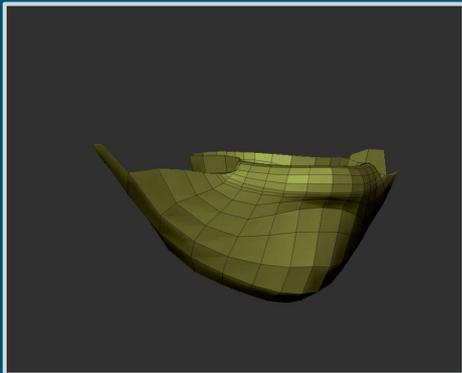
PS equivalent  
Rectangular Marquee tool



## Step Three Zbrush “Poly Groups”

Once you **only** have your intended polygroup selection visible you can now create a poly group.

Lower jaw is only thing visible



Tools > Polygroups



## Step Four Zbrush “Morph Targets”

**Morph Targets** - Think of Morph Targets as a save state or **checkpoint** in a video game. Once you have set a morph target you can use the **Morph Brush** to paint your way back to the saved “checkpoint” target.

We will be using these to reset any **unwanted movements** to their saved states. For example when we drop the jaw.

**Morph Brush**

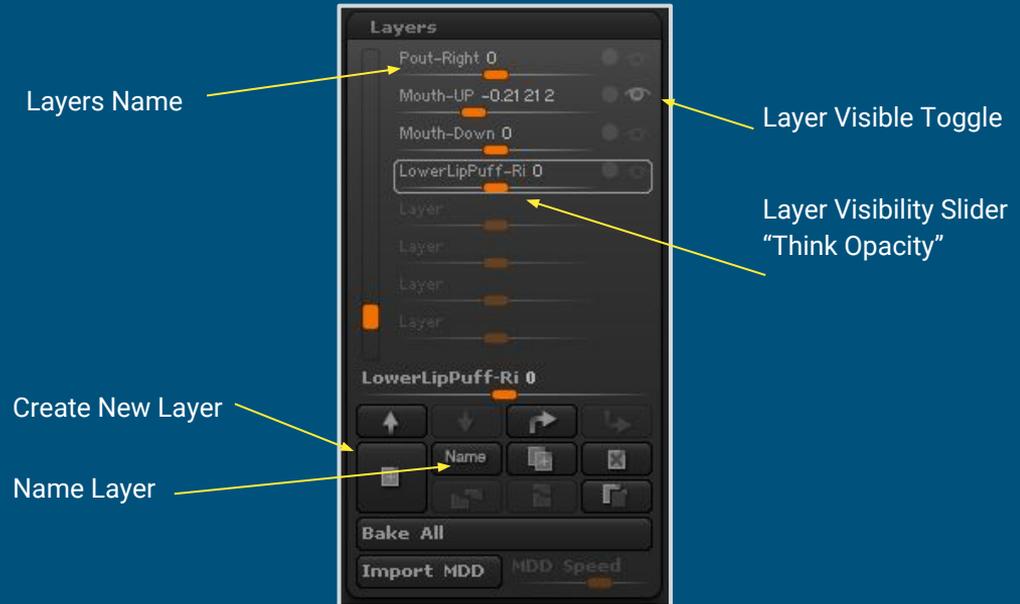


Tools > Morph Target



## Step Five Zbrush “Layers”

**Layers** - In Zbrush the layers work similar to other layering systems like in **Photoshop**, but the difference is that instead of pixels the layers are using **vertex positions**. You can not add or get rid of any vertexes but you can shift and move them in any way you want.



## Step Six Zbrush “Moving and Masking”

**Move Brush** - This is going to be your main brush. Use this brush to push and pull the surface of the model in order to create **new expressions**. Holding down “**Alt**” activates the **alternative** mode of any brush, in this case the move brush now acts like a “Dig brush”.



Process:  
Create New Layer > Name  
Use brushes like the Move brush to deform the head to the desired expression



## Step Six Zbrush “Moving and Masking”

**Mask Brush** - This brush is always activatable by holding down **Ctrl**. With the **Mask Pen Brush** “the default masking brush” you can lock down sections to prevent the other brushes **interfering** with an area.



### Masking Brush **Shortcuts**

Ctrl	Painting mask
Ctrl + Alt	Subtracting painting from mask
Ctrl + Drag off model	Clear mask
Ctrl + Clicking off model	Invert current mask



# Zbrush Process In Action Timelapse

## Overview

1. Bring OBJ into Zbrush
2. Set up Poly Groups
3. Store Morph Targets
4. Create Layer
5. Deform face using Brushes like Move and Mask
6. Export OBJ of Layers to Maya

[Long Version Complete with Voice Over here!](#)



Here is a speedup timelapse of the creation of some of Viktors Blend Shapes used in the film CUDDLEFISH 2016.

Step Seven

# Contact Info and Thanks

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## Thanks for Watching

Feel free to Contact me any time

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