Tagarela Lip Sync System for Unity

Compatible with Unity 3D 4 and above – developed by Rodrigo Pegorari – 2013
More info in my blog http://rodrigopegorari.net

Make your 3d characters talk in few steps

Tagarela is an editor and runtime solution to create facial animations to your 3d characters.

The main focus of the project is to create an easy-to-learn/easy-to-implement system, trough a funny and small keyframe editor.

The system uses vertex manipulation to create the interpolation between blend shapes. Shapes can be created in your favorite 3d application, like 3dsMax, Maya or Blender.

Using the built-in WYSIWYG Animation Editor, you can edit your animations by adding and dragging keyframes, setting the morph shape sliders to create new expression, while you see the transformations and hear the audio in the exact keyframe position. All was prepared to make the editing fast and funny.

The current version supports 2 kinds of animations:

- Using an audio file: the animation will follow the audio current play-time to prevent latency.
- Custom animation length: will play based on unity timer, and don´t play an audio.

Features:

- Built-in keyframe editor
- Audio waveform image preview
- Real time preview in Unity scene editor
- Shift+drag to easily clone a keyframe
- Simple call Play("yourfile") to run your animation
- Audio animations are sync to audio.time, to avoid latency

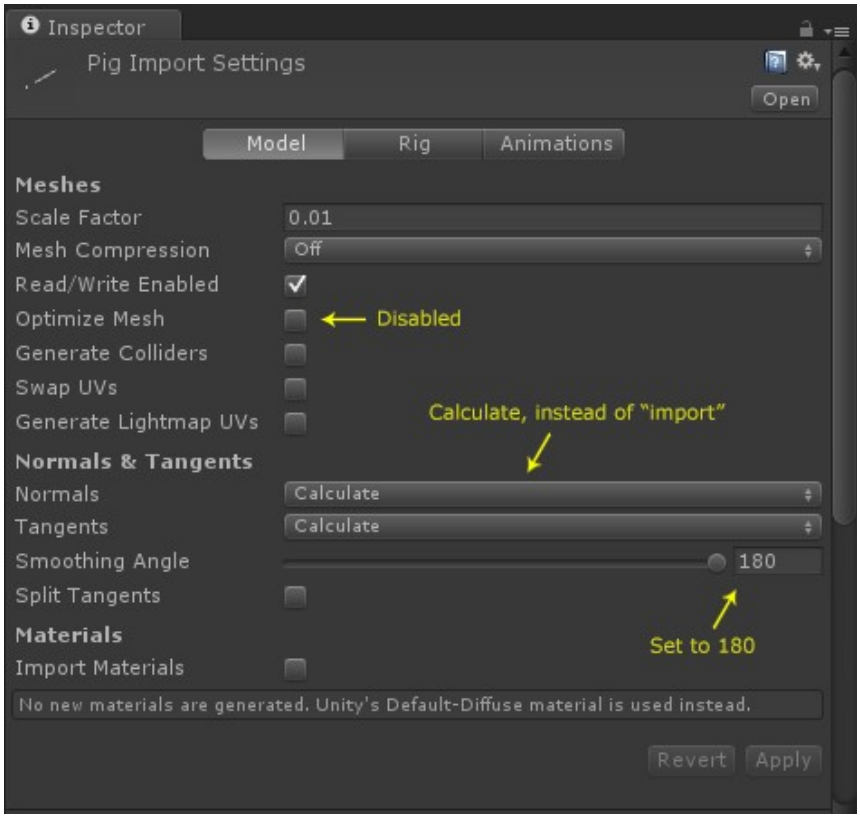
1 - Import into your Project

Import the .unitypackage file to your project. You can try the example file to understand how it works. All files included are free to use how you prefer, at your own risk.

2 - Check if the 3d models have the same number of vertices / triangles

To use Tagarela, you need to certify that your 3d models have the same number of vertices / triangles, and the same vertex id in your 3d software.
In some cases, after import the models to Unity, you may realize that number of vertices / triangles between the morph targets in the editor are different. If this happens, here goes some tips and tricks to be sure that we have same numbers of triangles for all imported models:

- place all models inside one .fbx instead of one fbx per model;
- on Inspector Panel of your 3d model (selected in the Project Panel), disable the option "Optmize Mesh";
- and under the option "Normals & Tangents" (located in the same inspector panel) change the value of the option "Normals" from "Import" to "Calculate", and set the "Smoothing Angle" slider to 180.



3 – Setting Tagarela

Select an object from your Scene. Add Tagarela through the menu Component > Tagarela > LipSync.
a) Main Object: this is your main object (located in scene) that the Tagarela component will control. Can be the same object where the component is located. This object must have a "Mesh Filter" component.

b) Neutral Mesh: select the neutral mesh in your project. In most cases will be the same Main Object.
c) Select the Blend Shapes, and click "Add".
d) Is necessary to add audio files in order to synch an animation with audio.

If the above settings are ok, you can click the "Open Editor" button.

3 – Coding

There are 3 basic functions to use Tagarela:

```
void Play(int index)
void Play(string fileName)
void Stop()
```

You can play the animations, by locating your object and calling this functions, like:

```
yourObject.GetComponent<Tagarela>().Play(1);
yourObject.GetComponent<Tagarela>().Play("animationFileName");
yourObject.GetComponent<Tagarela>().Stop();
```