Flash to Unity Usage Restrictions

Monday, September 02, 2013

Abstract:

This document lists the several restrictions an average user should take into consideration when using Flash to Unity. These restrictions limit and regulate the way the Flash project should be formatted and organized.

Table of Contents

Introduction 4
List of restrictions 4
    Restrictions on the project itself 4
    Restrictions on Movie Clips 5
    Restrictions on Textures 6

Introduction

Flash to Unity is a tool that allows game developers to import animations made in Flash to the Unity 3D Game Engine. Flash to Unity is thought to be a simple API that can be used to import sprites, animations, sound effects and scenes, as well as manipulating them, allowing for a complete tool that is able to create and manage every aspect of the game that's being created. As a Flash animation is quite an abstract construction and is prone to ambiguity, certain rules and restrictions have been put into place in order to be able to correctly parse and interpret each Flash project.

List of restrictions

Restrictions on the project itself

In order to ensure the project works correctly, these simple rules must be followed:

- The project must run at 30 FPS.
- The project must be saved as a single .XFL file. Flash to Unity needs the metadata generated by this format in order to function correctly.
- There must not be loose symbols on the project's root. Every symbol must belong to a folder.
- Assets must be organized as per the standard detailed later on this section. Flash to unity parses each project in a per-folder basis, so misplaced symbols may not be imported correctly.
- The user must never tamper with the generated XML files outside the Flash editor unless they know exactly what to do.
- Never use a 3D camera to display objects generated by Flash to Unity. This will heavily mess up the end results. If you need to render a 3D scene, use multiple cameras.

Restrictions on Movie Clips

For movie clips to be properly imported into Unity, they must abide by the following rules:

- If the movie clip is located at the animations folder, then it must comply with the name standard for movie clips.
- No movie clip should have two layers with the same name. Additionally, empty layers must not exist.
- The registration point for every animation must be set at point (0, 0) of the scene.
- There must be exactly one object per layer and key frame. You may use the “Distribute to Layers” option in order to separate objects.
- A layer must not change the symbol it contains.
- If the movie clip needs to have labels, then a layer named “labels” must be created. This layer will hold every label of the scene, and any label not on this layer will be ignored by Flash to Unity.
- If the movie clip were to have actions, then a layer named “actions” must be created. This layer needs hold every action to be executed, and any action not on this layer will be ignored by Flash to Unity.
- Currently, only three types of actions are supported by Flash to Unity: “Stop”, “GotoAndPlay” and “GotoAndStop”. Usage of any other action will result in undefined behavior. Only one action may be executed at any frame.

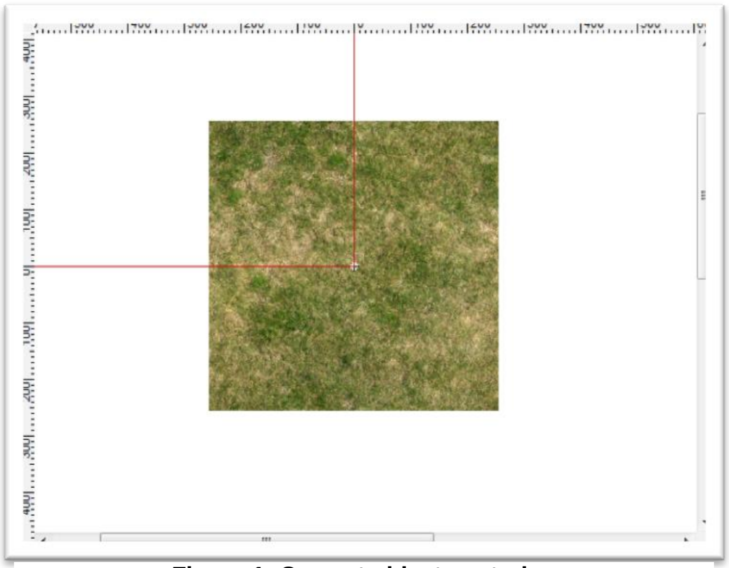


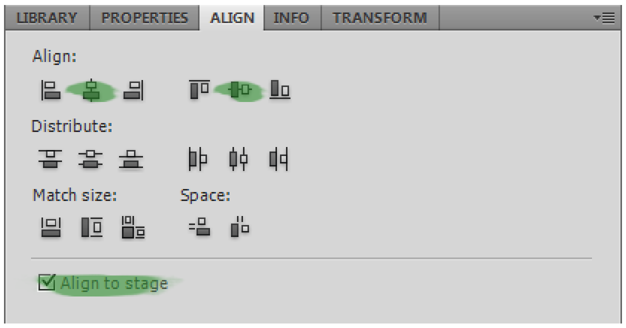
Figure 1: Correct object centering

- If sounds were to be included in the movie clip, then a layer named “sounds” must be created. This layer will hold every sound to be played. Flash to Unity does not support streaming.
- The type of the symbol must be “Movie Clip”. That is, one can’t use a movie clip as if it were a texture or a texture as if it were a movie clip.
- When the user wants to hide something, he or she must leave blank frames.
- Movie clips on the animations folder may only reference other movie clips on their same folder or graphics on the textures folder.
- Pivots may be used to animate, but they must be converted to key frames afterwards.

Restrictions on Textures

Similar to movie clips above, textures must also abide by a certain number of rules, detailed as follows:

- Every single frame of every single texture must be a key frame.
- No texture may reference elements that are not located at the assets folder.
- Every texture must reside directly on the textures folder. That is, the textures folder may not have any subfolders.
- Every single key frame of every single texture must contain a PNG image.
- All textures must be aligned to the center of the stage in both their X and Y axes. The user may manually align their components to the center of the stage. For this to happen, the user must go to the Align menu on Flash and click on the “Align to vertical center” and “Align to horizontal center” options, making sure the “Align to stage” option is checked.



Alignment menu. Appropriate options highlighted in green