LWS Importer 1.0 - User Guide

LWS Importer gives you the ability to import Lightwave scene files directly into Unity without having to first convert them into .fbx files each time you want to see your changes.

This can dramatically speed up workflow and, combined with **LWO Importer*** to convert your model files, is part of a complete solution for using Lightwave with Unity.

Usage
Simply import LWS Importer into your Unity project. Unity will now be able to read any .lws files contained in your Unity projects Assets folder. Once imported, select the .lws asset in Unity's project explorer and in the Editor Inspector window press the *Build* button to create the Unity scene. For additional options see the *Import Options* section below.

Feature Details
- Supports .lws files created in all versions of Lightwave, up to and including Lightwave 2019.1 (the latest at time of writing).
- Imports all keyframes applied to position, rotation and scale and builds a Unity Timeline file to store and manipulate the animation.
- Converts all of Lightwave keyframe interpolation types: TCB, Hermite, Bezier, Linear and Stepped, into Unity equivalents.
- Full hierarchy and naming is preserved and will appear just as in Lightwave.
- Deactivated objects will also be inactive in Unity.

The following Lightwave scene objects are imported and converted into their Unity equivalents:
- Model Layers*
- Bones - LWS Importer will map them to any associated meshes* vertex weight maps.
- Cameras - Perspective with correct field of view. Orthographic with correct frame size.
- Lights - Color and intensity.
- Nulls.

Import Options

Import
In the Import section, these settings are applied when the file is imported. If these values are changed, the file will need to be reimported before any changes are applied.

Optimise Keyframes - When checked, any keyframes that are the same value as those surrounding it will be removed.

Build
In the Build section, these settings are applied when the scene file is built.

Create Timeline - If the .lws scene file contains key-framed animation then, by default, LWS Importer will import it and create a Timeline asset to hold this animation data. If you do not wish to create the Timeline asset then uncheck this box. LWS Importer will now create a scene with no animation and the positions/rotations/scales of all the objects will be taken from their first keyframe.
If there is no animation data in the scene file, then this option will be disabled.

Use Frame Range From - choose the frame range to use for the Timeline. This can come from Lightwaves scene preview, the render frame range, or a custom frame range as specified by the user. When Custom range is selected, you can input the Start and End frames to use.

Draw Bones - when checked a BoneHandles component will be attached to each bone GameObject to make it visible in the Editor window.

Overwrite scene - By default this is set to none. In this state, the Build scene button will create a new scene that will subsequently need to be saved. If you drag a pre-existing scene file onto here, then LWS Importer

will overwrite this file when building the scene, providing for a more streamlined workflow. As ever, caution must be applied as this may result in accidental loss of data if you save over a scene file that you don't intend to.

Create New Unity Scene - press this button to create a new Unity scene from the imported Lightwave scene. If a scene has been specified in the previous Overwrite Scene File option, this button will change appearance slightly and read *Overwrite Unity scene: <scene name>,* to make it clear what is going to happen when you press it.

Output - This area will give you a summary of any issues that have been encountered when importing/ building the Lightwave scene.

* requires **LWO Importer** (minimum version 1.62) to import the .lwo model format. If **LWO Importer** is not installed or there is a problem locating the model file then an empty Gameobject will be created. Any animation will be preserved.

Limitations

- Only Position, Rotation and Scale keyframes are imported and converted. Other animated properties like MorphMixer keyframes, animated material properties etc are not (yet) supported.
- Boned animation of models that are composed of subpatch or Catmull-Clarke surfaces is not currently fully supported.
- Pre/Post behaviour of individual channels is ignored.

Troubleshooting

- Scene materials/lighting etc can sometimes look 'bad' after editing a lightwave model that is part of an imported scene. Solution: It's likely you need to reimport (right-click on the file in Unity's Project explorer window, then select Reimport) and then build the scene again.

Please email feature requests and bugs to: *info@virtualescapes.no*
If you have a .lws file that you think **LWS Importer** should be able to import but it is not doing, send me an email, ideally with the .lws file attached and I'll do my best to debug the problem and get it working!