Working with Files

Recipe for a Scene

LightWave animations (or still images) always start as a Scene - basically, a collection of objects, lights, cameras, and images - which can move and change over some specified length of time.

Creating a basic LightWave scene involves the following steps:

1. Adding items (e.g., objects and lights) to a scene
2. Setting the starting position for all items in the scene
3. Setting the length of the scene
4. Placing items in key positions at certain points in time
5. Previewing the motions of the items
6. Setting and testing render settings
7. Rendering the final animation

Usually, you work on one item at a time, the current item, and you need to tell LightWave which item it is. But before you learn how to do that, you need to know that Layout items are grouped into four different types: objects, bones, lights, and cameras. When you work on any item, the edit mode buttons along the bottom (i.e., Objects, Bones, Lights or Cameras) are set to the current item's type.

Object and Scene Files

LightWave scenes can contain several things but normally they will consist of:

- A camera
- Lights
- Objects

Cameras, Lights, motion paths particles and all sorts of other things are contained within files with the extension .lws. Objects, however, are contained separately in files with the extension .lwo. This means two things. The first is that a scene file can be ASCII text and can even be edited by hand. The second is that objects are stored separately, making them more easily replaceable and flexible. It does also mean that saving a scene isn't enough to save changes made to objects, such as surfacing.

Content Organization

LightWave defaults to looking in certain directories under the Content Directory when you load scenes, objects, surfaces, images, envelopes, motions, previews, etc. By default, this is your `user/documents` folder. The Content Directory is LightWave's master directory; LightWave expects to find all of the appropriate subdirectories within this master directory.The Content Directory allows you to create a truly portable LightWave scene, including all object and image files. It essentially acts as a pseudo root directory. By saving all your object and image files in subdirectories below the Content Directory, your LightWave scene and related files can be moved from drive to drive, from system to system, and even platform to platform, and still load properly.

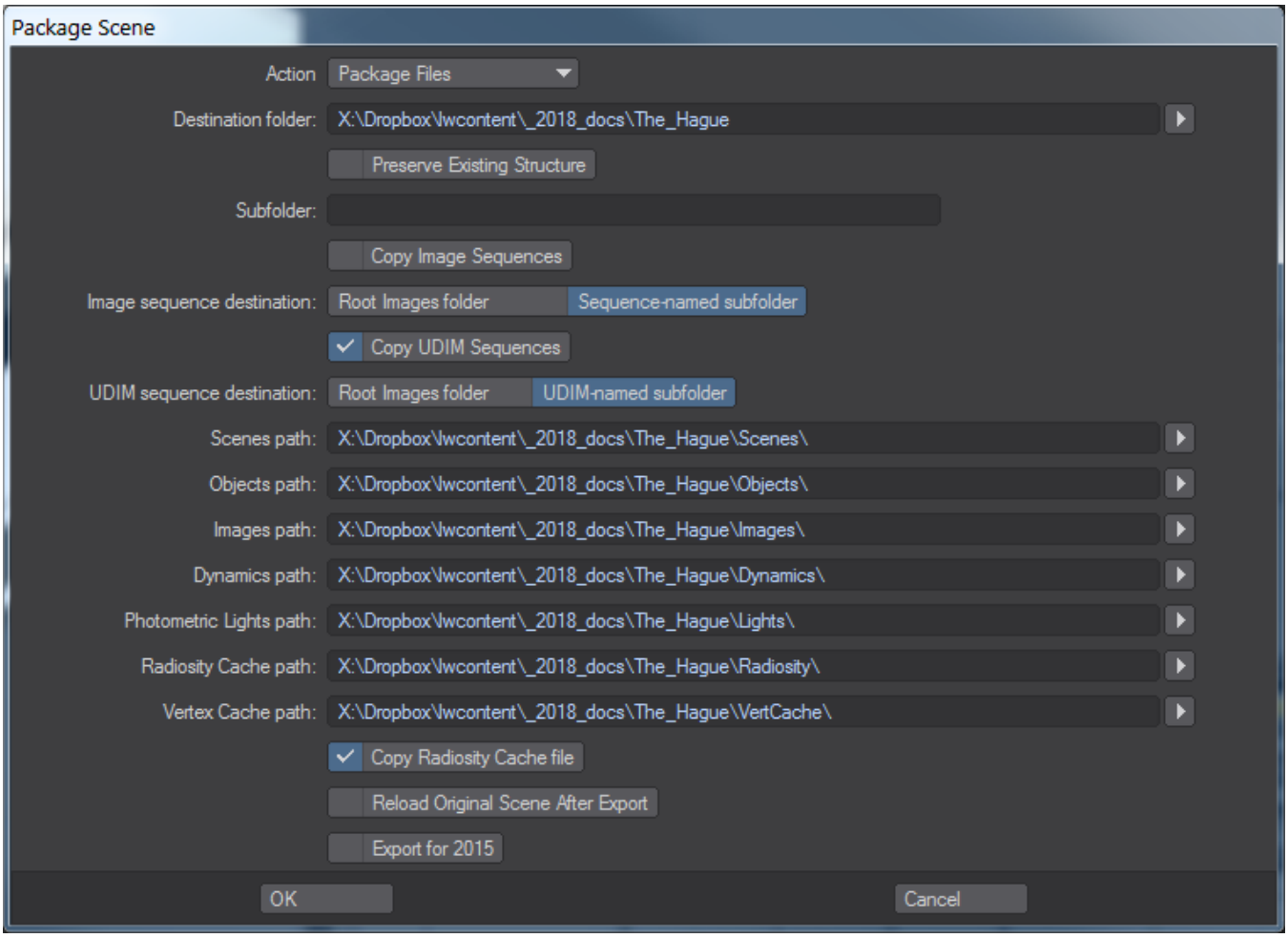
Portability is important because LightWave scenes are often rendered on multiple machines or shared for education or fun.

If you use LightWave in a network environment, it is imperative that you use the Content Directory correctly.

Content Directory

Package Scene

Package Scene, found in the Save menu, gathers information from your scene and locates the items into the specified directory. You can choose to **Package Files** for transporting it to a different hard drive location, either locally or on another machine; **Consolidate Files**, which will bring any files that are currently not in your content directory into it; or **Create a Zip Archive** of your scene. This last is like Package Files but with the addition of archiving the content directory.



Typing a path name works, just remember to hit Tab once you are finished typing

Package Scene is a Python script that will organize your scene content. It will also deal with .MDD, .BDD, and .PFX files, and works whether or not your content is actually in the current content structure. If a content element is currently loaded into your LightWave scene, Package Scene will find it.

> ⚠ VDB files and sequences are not copied with content directories

Select the destination folder and if you want a new level under that for each subdirectory, type the name in the Subdirectory box. The paths will be updated after tabbing or pressing the Enter key.

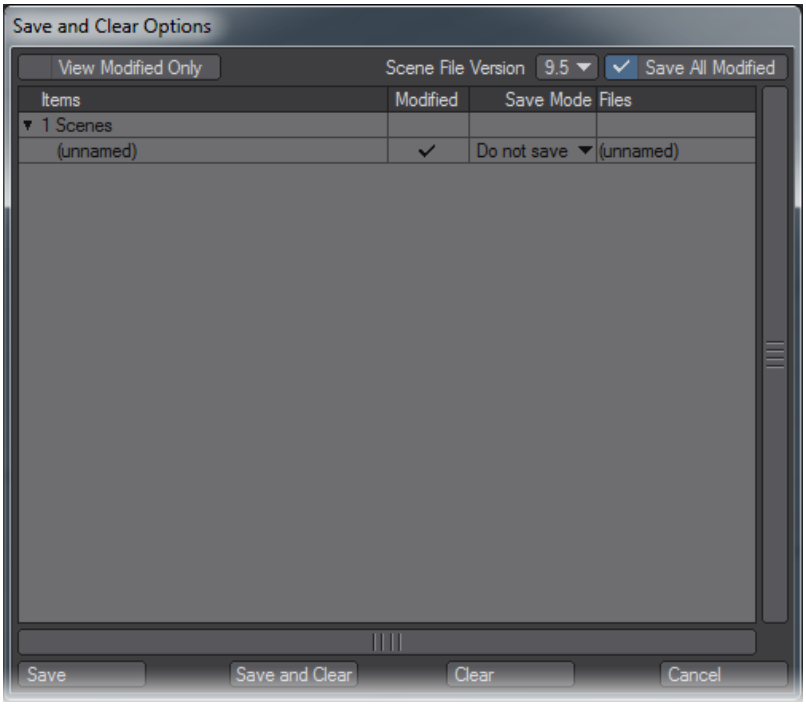
- **Preserve Existing Structure** - When checked, Package Scene will keep any specific content directory structure you are using, preserving subfolders and naming conventions
- **Copy Image Sequences** - Image sequences can often get very big so are often defined outside the normal content directory structure. If you'd like to keep the scene package integral, you can check this option to bring a scene's image sequences into the content directory structure. The choice of using a named subfolder for sequences is yours
- **Copy UDIM Sequences** - As above, but for UDIM image sequences.
- **Copy Radiosity Cache File** - If a cache has been generated it makes sense to include it with the package so it doesn't need to be regenerated.
- **Reload Original Scene After Export** - if you are using Package Scene to prepare files for sharing, it may be that you want to reload the original scene, if so check this option. If you want to make sure the Package has worked, you will probably want to use the packaged scene so leave this option unchecked.
- **Export for 2015** - Saves a version of the scene that can be loaded in LightWave 2015. The scene file version is converted to one 2015 can load and objects are saved in LWO2 format. Be aware that 2018 has many features that don't exist in 2015, from lighting to surfacing so further editing of the 2015 version of the scene will no doubt be needed.

After the interface in which you select the target directory for the export, the script:

1. Gets a list of all images and their paths.
2. Copies these images to the target directory.
3. Replaces all the images with their new location.
4. Changes the content directory to the target content directory.
5. Saves each object to the target location.
6. Saves the scene to a temp location.
7. Parses the scene file to find .MDD, .BDD, and .PFX references.

8. Finds and copies the dynamics files to their target location.
9. Rewrites the scene file, changing the respective dynamics paths, to the target location.
10. Loads the new scene file. This means at the end of operations, the user is now active in the newly exported and saved version of the scene, not the original scene from the original location.
11. If **Reload Original Scene** is checked, it will instead load the original scene.

Close/Save Window



- **View Modified Only** - shows only items that have had changes applied in the work session.
- **Scene File Version** - will save the file in the version selected. The version 6.0 entry covers LightWave versions 6.0 through 9.0.
- **Save All Modified** - will save all changes made in a session.
- **Items** - shows the items in a scene. Clicking on the arrow will expand or collapse the menu tree.
- **Modified** - shows which items have been changed.
- **Save Mode** - has different save options that are available by clicking in the Save Mode section.
    - Scene files: Do not Save, Save, Save As, Incremental
    - Object files: Do not Save, Save, Save As, Incremental
- **Files -** is the file path where the items will be saved. Double clicking there will open a save options window.
- **Save** - will save based on the options chosen above.
- **Save and Clear** / **Exit** - will save based on the options above and then either clear the scene or exit Layout.
- **Clear** / **Exit** - will clear the scene or exit without saving.
- **Cancel** - will close this window without performing any of the above operations.