

File Reference Editor

Manual Version 1.03

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Ralf Sessler

Dimension 3D

E-Mail: d3d@sesseler.de

Internet: d3d.sesseler.de



Important Information

Copyright

File Reference Editor is © Copyright 2013-15 by Ralf Sessler. All rights reserved.

Acknowledgment

File Reference Editor is based on wxWidgets.

Disclaimer

There is no warranty beyond the legal minimal warranty. In no case, the author shall be liable for any damage on hardware or software caused by using *File Reference Editor*.

1. Overview

File Reference Editor is an editor for references to external files used in DSON or Poser content files. The editor lists all references and allows to edit them, either directly or with several useful tools.

Supported Content Types

File Reference Editor supports the following content types:

- Poser content and scene files for Poser 4 and up
- DAZ Studio 4.0 and 4.5 content files in DSON format (DUF, DSF)
- DAZ Studio material scripts in ASCII format (DS, DSA)

If applicable, compressed and uncompressed files are supported.

References and file names in Unicode format are supported. However, there may be limitations in Unicode support for some applications. Poser will not work correctly for Unicode characters in file names before Poser 9.

Note: The references are analyzed based on the knowledge of the author about the file formats. It has been tested with a large number of files. Nonetheless, there might be cases where *File Reference Editor* doesn't detect some references in a content file.

Supported Reference Types

File Reference Editor may detect the following file references:

- Content files: other content files (DAZ Studio, Poser)
- Source files: files used to create content (DAZ Studio)
- Texture files: images or movies used in materials (DAZ Studio, Poser)
- Sound files: audio used by talk designer (Poser)
- Geometry files: waveform geometry files (Poser)
- Binary morph files: files with morph data (Poser)
- Script files: Python scripts (Poser) or DS scripts (DAZ Studio)

Supported Applications

To locate files from references with relative path, *File Reference Editor* uses the configuration of the following application versions:

- DAZ Studio: 3, 4 / 4.5 / 4.6
- Poser: 7, Pro, Debut, 8, Pro 2010, 9, Pro 2012, 10, Pro 2014

In addition, upcoming versions will be supported as well, provided they use the same scheme to store the configuration for their content directories.

2. User Interface

This chapter gives an overview of the user interface. See the following sections for more information about how to use the different parts.

The window of *File Reference Editor* consists of the following parts:

- File buttons: on the top, there are buttons to open, close, and save a content file
- Tool buttons: to the left are buttons for different tools to work with file references
- File reference list: the main part of the window is the list with the file references
- Search area: the search area has several options to search and replace in file references
- Options button bar: at the bottom are buttons for various options

2.1. Generic Options

On the top, there are buttons for content files:

- Open: opens a content file
- Recent: opens a content file from the list of most recent used files
- Close: closes the actual content file
- Save: saves the actual content file
- Save As: saves the actual content file with a different name

Note: You can also open a file by drag'n'drop or by naming a file in the command line.

At the bottom, there are buttons for options and information:

- Folders: opens the dialog for content directories
- Options: opens the dialog for options
- Info: opens the dialog with application information
- Help: opens the manual
- Exit: closes the application

The status bar shows the following information (from left to right):

- File name: the name of the actual content file
- File type: the application type of the actual content file
- Content type: the content type of the actual content file
- File version: the file version of the actual content file
- The number of file references in the file reference list

2.2. Reference List

The reference list has the following columns:

- Reference: the file reference
- Type: the content type (based on the extension)
- References: the number of keys where a reference is used
- Found: the number of files found for a reference

2.3. Tools

The tools can be accessed from the buttons on the left side and from the context menu of the file reference list. Some tool buttons open a menu with several options.

- Resolve: resolves the file reference, i.e. locates the file(s) it is referring to
- Locate: searches all content folders for a file
- File: replaces a reference by a file from the file system
- Rename: renames the file for a reference and adjusts the reference
- Move: moves the file for a reference to a different folder and adjusts the reference
- Absolute Path [Path]: converts the reference into an absolute path, if possible
- Relative Path [Path]: converts the reference into a relative path, if possible
- Full Path [Path (Poser only)]: replaces a shortened reference with the full reference
- Resolve GetStringRes(...) [Path (Poser only)]: replaces a string resource by its value
- Revert [Path]: reverts the reference to the initial value
- Toggle Extension [Extension]: toggles between alternate extensions
- Found Extension [Extension]: sets the extension of a file found for the reference
- Revert Extension [Extension]: reverts the extension to the initial value
- Found Files [Context]: opens a list window with all files found for a reference
- Referring Keys [Context]: opens a list window with all keys where a reference is used

2.4. Search Area

The search area has the following parts:

- Search button: searches for some text in the references
- Replace button: replaces some text in the references
- Ignore case checkbox: switches between case sensitive and insensitive search
- Selection checkbox: switches between search and selection mode
- Search input field: input for text to search for
- Replace input field: input for text to replace by
- Scope selector: drop-down selection for search scope
- Set button: replaces the full scope

3. Using File Reference Editor

File Reference Editor provides several tools to facilitate the work with file references in content files for DAZ Studio and Poser. After loading a content file, it shows all file references in a list.

Note: Most tools are either applied to the references selected in the list or to all references if none is selected. However, some tools are restricted to selected references to prevent mistakes. These are the tools to replace, rename, or move files and those to revert to the initial state.

3.1. The File Reference List

The file reference list contains all references found in a content file. The references are shown as they are in the content files, only encoded characters are translated into the real characters. If the same reference is used several times, it is listed only once. The *References* column shows how often a reference is used. You can sort the list by each column with a click on the column header. In addition, the references can be sorted by path, by name, and by extension when you right click on the *Reference* column.

You can modify the references in the list directly. Click twice on a reference to edit it. You may do almost any changes, except for the following:

- quotation marks are not allowed
- tab stops are replaced by spaces
- spaces at the beginning or the end are removed
- empty references are not allowed

Referring Keys List

If you select "Referring Keys" from the context menu of a reference in the list, a list window opens that displays all keys in the content file where the reference is used. For each key, all parent keys are shown as well. Even if you are not familiar with the file format of DSON or Poser files, this might give you an idea wherefore the reference is used.

For Poser files, the key for the reference and the keys and values of its parents are shown. If a key has a display name, this name is used instead of the value.

For DSON files, the structure of sets and lists is depicted by { ... } for sets and [...] for lists. For sets, the keys are shown. If there is no key for the reference itself, it is shown by an underscore _ as a placeholder. Finally, if a list element is denoted by an identifier, this is named as (...).

If you want to change a file reference only for some of the referring keys, you can select them in the referring keys list and select "Split" from its context menu. This removes the selected keys from the actual list entry and creates a new entry in the reference list for them. To split a single key, you can also double click on it.

3.2. Finding Files

The purpose of a file reference is to refer to a file that should be located on the file system. Most references use a relative path that is based on the content directories known by the interpreting applications. Hence, a file reference may actually refer to several files on a particular system or even to no file at all, be it a relative or absolute reference. Because content directories may differ for most users, content files for distribution should use only relative paths in references.

Resolve

The *Resolve* method assumes that the file reference is correct. It first tries if the reference points to a file if it is interpreted as an absolute path. If this is not the case, it is interpreted as a relative path and searched for in all content directories. For Poser content files, if the reference consists of the file name only, the other references are searched for a reference with the full path. In addition, the path of the content file itself is searched as well.

Locate

The *Locate* method ignores the path and does a full search in all folders of the content directories for the file name. This may take a while. During the search, a progress dialog is shown that displays which folder is actually searched. You may skip the actual content directory with the "Skip" button or stop the search with the "Cancel" button or by closing the progress dialog. Like for *Resolve*, it is also tested if the reference points to a file if interpreted as an absolute path or if a reference with a file name only is one of the special cases for Poser content files.

Found Files

No matter if you use *Resolve* or *Locate*, the "Found" column displays how many files were found for each reference. A file may be found several times and in four different kinds:

- *n*: a number without braces means how often the exact file name and extension was found
- (*n*): a number in round braces means how often the file name was found with an alternate extension, i.e. an extension for the same content type
- [*n*]: a number in square brackets means how often an image file was found with a different extension (only if enabled in the options)
- <*n*>: a number in angle brackets means how often a reference was found that contains a path, if the actual reference has no path (Poser only)

Found Files List

If there are found files for a references, you can double click on the reference or select "Found files" from the context menu to open a list window with all found files. Double click on a file to replace the reference with it.

From the context menu, you have the following options:

- Replace: replaces the reference with the selected file
- Replace as relative path: replaces the reference with the selected file and converts it to a relative path
- Replace extension: replaces the extension only
- Open file: opens the file with the default application
- Open folder: opens the folder where the file is located
- Copy file path: copies the full file path to the clipboard

3.3. Changing Files

The following tools are applied to references together with real files on the file system.

Replace File

With the "File" button or "Replace File" from the context menu, you open a file selection dialog to select a file that is used to replace the selected reference.

Note: Be careful when using this tool on several files at once, because you get a file selection dialog for each reference.

Rename File

With the "Rename" button or "Rename File" from the context menu, you open a file selection dialog to select a new file name and / or folder for the actual reference. This moves and / or renames the file on the file system and adjusts the file reference accordingly. Because this tool is applied to a real file, it can be used only if the reference is an absolute path pointing to an existing file.

Note: Be careful when using this tool on several files at once, because you get a file selection dialog for each reference.

Move File

With the "Move" button or "Move File" from the context menu, you open a folder selection dialog to name a target location. All selected files are moved to this folder and the references are adjusted accordingly. Because this tool is applied to the real files, files are moved only if the reference is an absolute path pointing to an existing file.

3.4. Changing Path or Extension

While the file name is the main part of a reference that should be changed only for errors, the path and the extension may be modified in some cases without changing the references itself.

Absolute Path

This replaces the reference by an absolute path, if possible. It selects the first file that was found for a reference on the file system. If there are already found files, these are used. Otherwise, the *Resolve* method is applied first.

Note: See the previous section about how to select a particular file if more than one file was found for a reference.

Relative Path

This replaces the reference by a relative path, if possible. There are two strategies to do this. First, all known content directories are tested if the path of the reference starts with one of them. Second, the path of the reference is searched for specific path names that usually indicate the first folder or the parent folder for content directories like the "Runtime" folder.

Full Path

If a reference in a Poser content file consists of the file name only without path, this replaces the reference by the first reference with path that was found. This can be done only after the other reference was found with the *Resolve* method to find files (see above).

Resolve GetStringRes(...)

If a reference in a Poser content file is given by a string resource, this tool replaces it by the actual reference the resource stands for. This is a relative path.

Revert

You may discard any changes and revert a file reference to the value it had when you opened the file or when you saved the file the last time.

Toggle Extension

This toggles the extension between two alternatives. For Poser content files and for Waveform geometry files, this are the extensions for compressed and uncompressed files. For Python files, this are the extensions for compiled and uncompiled files. For DSON files, this toggles between DSF and DUF.

Found Extension

This replaces the extension by the one of the first file that was found for a reference. This requires that there already are found files and that no file was found with the same extension.

Revert Extension

This reverts the extension to the value it had when you opened the file or when you saved the file the last time.

3.5. Search and Replace

There are several ways to use the search and replace features depending on the options. First, there are two different search modes. If "All" is enabled, search and replace are applied to all selected references. Otherwise, search is done step by step. The upper input field in the search area is for the term that is searched for, the lower input field for the term that the search term is replaced by.

Search All

With "All" active, search and replace are applied to all selected references in the list or to all references, if none is selected. The "Search" button selects all references where the search term is found and deselects all other references. In other words, the search result consists of the references that are selected in the list after the search. The "Replace" button replaces all occurrences of the search term by the replace term. The selection is not changed in case you want to do another replace action on the same references.

Search Step by Step

With "All" disabled, the search is done step by step starting either from the first reference or the first selected reference. The search direction is always top down. The "Search" button searches for the next occurrence of the search term and selects it, if one is found. The "Replace" button replaces all occurrences of the search term by the replace term in the first selected reference and then searches for the next reference, where the search term occurs. If nothing is found, nothing is selected.

Set

The "Set" button replaces the selected reference or a part of it by the replace term. Which part is replaced depends on the search scope (see below).

Search Options

If "Ignore case" is checked, the search is done case insensitive, otherwise the search term must match the reference case sensitively.

With the scope selection, you can restrict all search and replace actions to one of the following parts of a file reference:

- Full path: the whole reference is used
- Path: only the path (the part before the last path separator) is used
- Full name: the file name including the extension is used
- Name: the file name without the extension is used
- Extension: only the extension (without the extension separator) is used

4. Configuration

4.1. Folders

The folders dialog lists all content directories for supported applications. The first column shows the folder, the second which applications will use this folder. You can select, for which applications the content directories should be searched when resolving or locating file references.

With the *Mark* button, you mark all directories that are active for the currently selected applications. These directories are also marked when you open the folders dialog.

The *Refresh* button reloads the content directory configuration for all applications. Please note that this change is in effect even if you cancel the folders dialog thereafter.

4.2. Options

The options dialog allows you to decide about the following options.

Generic

If "Keep backup when overwriting files" is enabled, one backup is kept when you save to a file that already exists. However, any existing backup is overwritten.

With "Ask before closing modified files" checked, you get a confirmation dialog when you close a file that was modified. You may save the file, discard the changes, or keep the file opened.

If "Adjust asset id when saving DSON files" is selected, the id in the asset info is set to the new file name when you use "Save as" for a DSON file. However, this sets only the id in the asset info.

The option "Non-persistent list dialog" controls if the list dialogs for found files and referring keys are persistent or not. A non-persistent dialog will close automatically if it is no longer the active window, i.e. if you select another window. For persistent dialogs, you may have any number of list windows open at once.

File References

If "Automatically resolve references" is active, the *Resolve* method to search for files is applied initially and each time when a reference was changed. This is useful to always know if a reference is valid and actually points to at least one existing file. Resolving file references is usually fast enough that this option should not cause remarkable delays.

With "Search alternate extensions for images" enabled, searching for files includes alternate extensions for image files, e.g. a JPG file might be found for a PNG reference.

Enable "Select folders for locate" to select the folders where locate should search for files.

List Windows

When opening list windows for found files or referring keys, you can set a maximum number of lines that the dialog should display. If there are more items, the list uses a scroll bar.

Version History

Version 1.0, 21.05.2013

Initial version

Version 1.01, 04.07.2013

Bug Fixes:

- DUF files with quotation marks in strings were not read (e.g. files with Reality data)
- Poser 10 / Pro 2014 Runtimes were not found on Mac
- Possible crash after locate

Changes:

- New option to select folders for locate

Version 1.02, 10.03.2014

Bug Fixes:

- large numbers (+/-4.2e+9) were stored wrong

Changes:

- added HD morphs to file references

Version 1.03, 22.02.2015

Bug Fixes:

- files didn't load if there is no space between a number and the following closing bracket