

# Content Gatherer

Manual Version 1.03

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# Important Information

## Copyright

*Content Gatherer* is © Copyright 2013-15 by Ralf Sessler. All rights reserved.

## Acknowledgment

*Content Gatherer* 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 *Content Gatherer*.

# 1. Overview

*Content Gatherer* is a stand-alone application for Windows and Mac OS to analyze file references used by content files for DAZ Studio and Poser. It lists the references to external files used by the content files and locates these files in the file system based on the content directories used by Poser or DAZ Studio. Furthermore, it allows to create file lists in text format and ZIP archives from the content files and their references.

## Supported Content Types

*Content Gatherer* 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 4 shared configuration files (dsx)
- DAZ Studio layered images (dsi)
- DAZ Studio material scripts in text format (ds, dsa)
- Poser Python scripts for DSON importer

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 *Content Gatherer* doesn't detect some references in a content file.

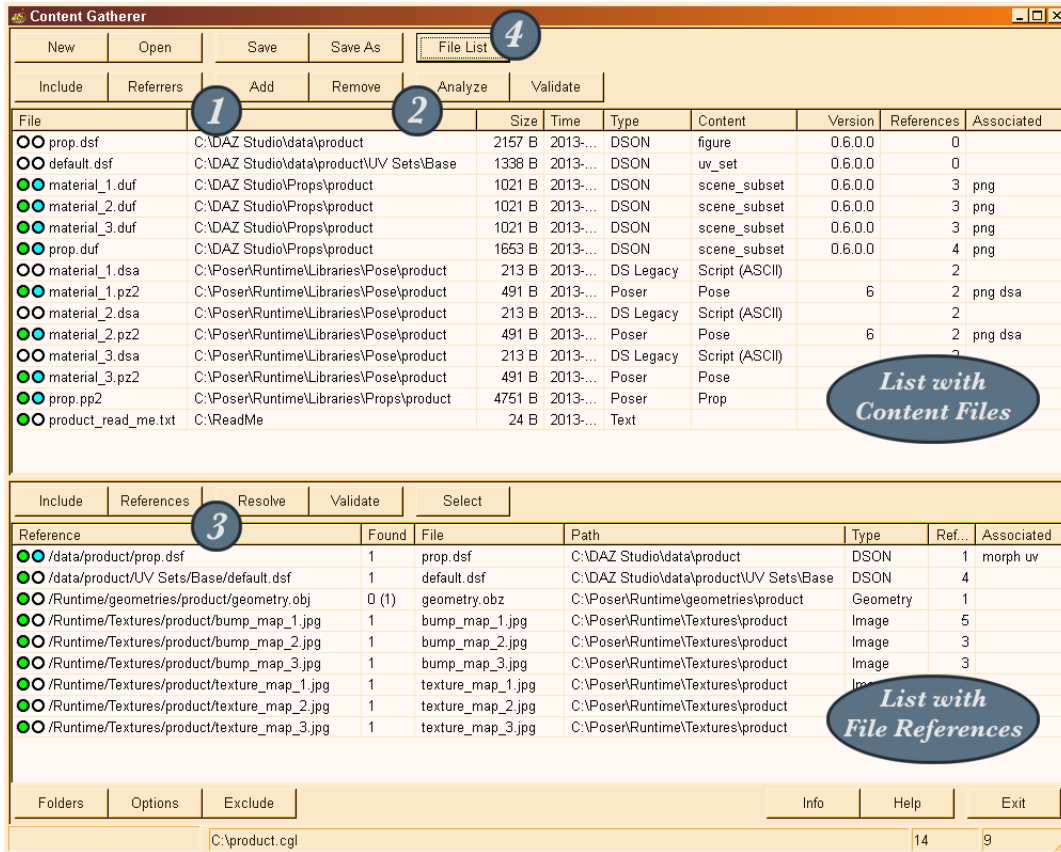
## Supported Applications

To locate files from references with relative path, *Content Gatherer* uses the configuration of the following application versions:

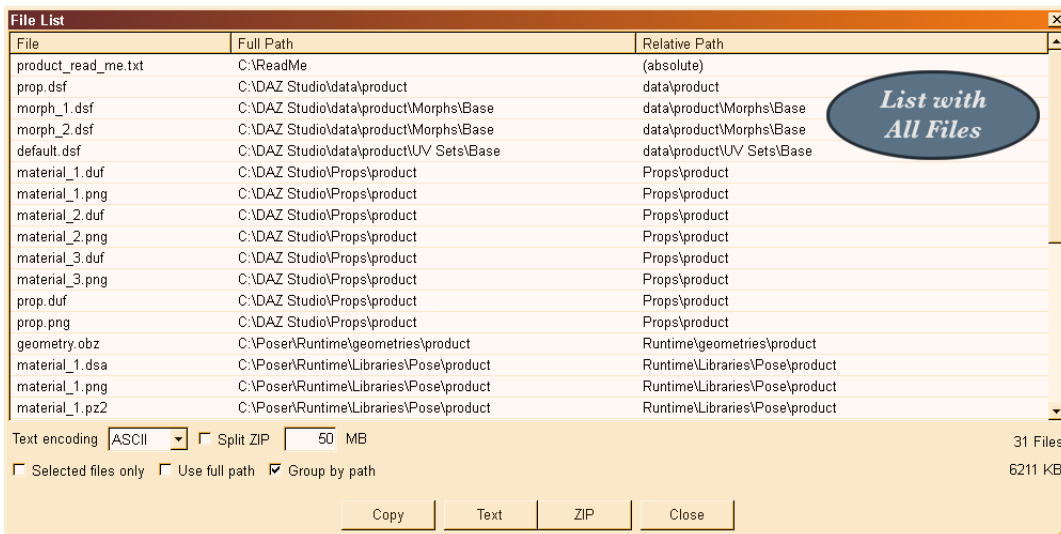
- DAZ Studio: 3, 4 / 4.5 / 4.6
- Poser: 7, Pro, Debut, 8, Pro 2010, 9, Pro 2012, 10, Pro 2014

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

# 1.1. Quick Start



The *Content Gatherer* is used as follows. (1) First, you add one or several content files. This is done with the "Add" button or by *drag'n'drop*. The added files are shown in the top *list with content files*. (2) Then, you click on the "Analyze" button to scan the content files for file references. These references are shown in the bottom *list with file references*. (3) To locate the file reference, you click on the "Resolve" button. If several files are found, you may select one of them with the context menu. Because referenced files may contain file references themselves, you may need to repeat step 2 and 3. (4) Finally, you may open the *list with all files* using the "File list" button. Here, you see all files and may save them as a list in text format or pack them into a ZIP archive.



## 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 *Content Gatherer* consists of the following parts (from top down):

- Buttons for content lists
- Buttons for content files
- List with content files
- Buttons for file references
- List of file references
- Buttons for options
- Status bar

### 2.1. Generic Controls

On the top, there are buttons to manage *Content Gatherer* list files:

- New: closes the actual content list file and clears the content file list
- Open: opens a content list file
- Save: saves a content list file
- Save As: saves a content list file with a different name
- File List: opens a dialog with all files included in the actual content list

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

- Folders: opens the dialog for content directories
- Options: opens the dialog for options
- Exclude: opens the dialog for excluded files
- 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):

- Progress bar: progress when processing files
- File name: the name of the opened Content Gatherer list file or the currently processed file
- The number of content files in the content file list
- The number of file references in the file reference list

### 2.2. Content File List

The upper list contains all files that were added to the actual content list by the user. In addition, it shows all files from the file reference list that may contain references themselves. The content file list has columns with the following information:

- File: the file name and extension
- Path: the folder where the file is located
- Size: the size of the file
- Time: the time when the file was last modified
- Type: the type of the file
- Content: the content type for content files
- Version: the file version for content files
- References: the number of file references used by a content file
- Associated: the files or folders that are associated with a content file

To work with the content file list, the following buttons above it are used:

- Include: opens a menu to change the inclusion of files and associated files
- Referrers: marks the files that refer to the select files in the file reference list
- Add: opens a file selection dialog to add one or several files to the content file list
- Remove: removes the selected files from the content file list
- Analyze: reads the selected files and analyzes them for file references
- Validate: determines if the selected files have been modified after they were analyzed

### **2.3. File Reference List**

The lower list contains all references that were found in content files. It allows to select a file on the file system to be used for the reference. References are added and removed automatically based on the content files in the content file list. The file reference list has columns with the following information:

- Reference: the file reference
- Found: the number of matching files found for a reference
- File: the name and extension of the file selected for a reference
- Path: the folder of the file selected for a reference
- Size: the size of the file
- Time: the time when the file was last modified
- Type: the type of the file
- Referrers: the number of content files that use a file reference
- Associated: the files or folders that are associated with a content file

To work with the file reference list, the following buttons above it are used:

- Include: opens a menu to change the inclusion of files and associated files
- References: marks the references used by the selected files in the content file list
- Resolve: locates the files for the references in the content directories
- Validate: determines if the selected and the found files still exist on the file system
- Select: opens a menu to select files by different means

After resolving file references, the context menu can be used to select a particular file.

## 3. Using the Content Gatherer

The *Content Gatherer* can be used to analyze and archive content files for DAZ Studio and Poser together with all files that depend on them.

### 3.1. File References and Associated Files

Content and scene files for DAZ Studio and Poser may rely on several additional files that are required to use the content. These files may be named explicitly in the content file, which is called a *file reference*. Or they may be identified based on the file name, extension, or location, which is called an *associated* file or folder.

*Content Gatherer* may detect the following file references:

- Content files: other content files (DAZ Studio, Poser)
- 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)

*Content Gatherer* recognized the following associated files:

- Binary morphs: PMD files with the same file name as a scene file (Poser)
- .PNG thumbnails: PNG files with the same file name including extension (DAZ Studio)
- PNG thumbnails: PNG files with the same file name (DAZ Studio, Poser)
- RSR thumbnails: RSR files with the same file name (Poser 4)
- Poser meta-data: XMP files with the same file name (Poser)
- DS scripts: material scripts for DAZ Studio that accompany Poser content files
- DS scripts / JPG/PNG image: files belonging to a DSX file
- Morphs folder: folder with morph files (DAZ Studio)
- UV Sets folder: folder with UV set files (DAZ Studio)
- Tools folder: folder with tool files (DAZ Studio)
- Projections folder: folder with projection files (DAZ Studio)

File references are usually given with a relative path and have to be located based on the content directories known by the application. It is possible that more than one file may match a relative path, that the file is missing, or that the file has a different but compatible extension. That's why the *Content Gatherer* has the files reference list, where you can select the correct file if several files were found.

On the other hand, an associated file just exists or doesn't exist. So, the *Content Gatherer* simply lists them as part of the content file.

**Note:** The *Content Gatherer* requires that the content files are correct, i.e. that the file references are valid and pointing to existing files and that all associated files exist.

## 3.2. Files and References

The *Content Gatherer* helps to analyze which files are used by one or several content or scene files for DAZ Studio or Poser and all files that are required or used by them. There are three types of files: content files, file references, and associated files (see previous section). The latter may be content files themselves, i.e. they may contain file references or have associated files.

The *Content Gatherer* uses two lists to hold these files. The upper list contains all files that were added directly by the user, either with the "Add" button or by drag'n'drop. This may be any kind of files, but only supported file types can be analyzed for file references. In addition, all files that were derived from a file reference or an association, but may contain file references, are also listed here.

With the "Analyze" button, content files are analyzed for the file references they contain. This is done for those files that are selected in the list. If no file is selected, all content files are analyzed, but only if the file wasn't analyzed before or if the file has been modified after it was analyzed.

The lower list contains the file references found by analyzing the content files. Because file references are usually defined by a relative path, the actual file has to be detected by searching the content directories of the Poser and/or DAZ Studio applications. Thus, file references may be ambiguous, there may be several matching files, or the file may be missing, even for an absolute path.

**Note:** The file references are displayed in the list in a unified way to prevent duplicate entries.

With the "Resolve" button, the file references are resolved, i.e. are located on the file system based on the defined content directories. This is done for the selected references or for unresolved references otherwise. The "Found" column shows the number of files that were found for each reference. A number in round braces means that one or several files with a different extension were found, where the application should use the file nonetheless, because it is the same content type, and the extension differs only to denote e.g. a compressed file. A number in square braces means image files with the same name, but a different extension were found. The first found file that matches a reference is selected as the file to be used for this reference.

With a right click on a reference, you open a menu that displays all found files, where you can select which one to use for this reference. In addition, you can use the menu opened by the "Select" button to change for all or selected references at once which file to use as follows:

- Folder: selects a file if it is in the named content directory
- Application: selects a file if it is in one of the content directories of this application
- Image: selects a file if it has the named extension / the same extension as the reference
- Compressed/Compiled: selects a file if the extension is for a compressed or compiled file
- Not Compressed/Compiled: selects a file if the extension is for an uncompressed or uncompiled file
- Best: selects the first file with the correct or compatible extension
- None: deselects the current file



**Note:** For supported file types, the file selected for a reference will be added to the content file list and may need to be analyzed as well. When selecting a different file, the old file will be removed together with all references, if the file was already analyzed.

Finally, files may have associated files. These are detected always when you add a file to the content file list or select a file for a reference. The "Associated" column shows which associated files were found.

For both lists, you can validate the files with the "Validate" button. This tests if the file still exists and if it was modified since it was added or analyzed. If a file hasn't been analyzed yet, the file time and size is updated immediately. Otherwise, it is marked as outdated by using a red background color.

If you want to know how content files and references are related, you can use the "Referrers" and "References" buttons. Each of these buttons selects those files that are related to the files selected in the other list.

### **Including or Excluding Files**

Because the *Content Gatherer* allows to create file lists and ZIP archives from all files that were added, referenced, or associated (see next section), you may choose to include or exclude particular files.

The icons in front of each file or reference depict if a file (first circle) or its associated files (second circle) are included or not as follows:

- white: inclusion is not applicable
- bright red: the reference couldn't be resolved
- dark red: the file doesn't exist or no file is selected for a reference
- bright green: the file is included
- dark green: the file is excluded
- bright cyan: the associations are included
- dark cyan: the associations are excluded

A right click on the icon opens a menu to change the inclusion or exclusion of a file and its associations. It is also possible to change the inclusion state for each associated file separately. Excluded associations are put in braces in the "Associated" column.

With the "Include" buttons, you open a menu that allows to change the inclusion state for all or several files or references at once in each list.

### **3.3. File List**

The "File List" button opens the file list dialog that shows all files that are marked for inclusion in the content file list and the file reference list. These files can be copied to the clipboard with the "Copy" button, saved as a file list in text format with the "Text" button, or archived in a ZIP file with the "ZIP" button. On the right side below the list, you see the number of files and their total size.

For text files, you can choose one of the following encodings:

- UTF-16: Unicode characters with a size of 2 bytes for each character; this is used by most text editors that support Unicode
- UTF-8: Unicode characters with a size of 1 byte for each character; this is used internally by the Poser and DSON file formats
- Latin-1 (aka ANSI): the character set used by most text editors on Windows systems
- ASCII: the ASCII character set

For Latin-1 and ASCII, characters are replaced by a question mark if they are not part of these character sets.

When creating a ZIP file, you may split it into several archives based on a maximum size for each ZIP file. However, this may cause files to be excluded if they are larger than the given limit. The limit is defined as megabyte (1 MB = 1,048,576 byte).

In addition, there are the following generic options:

- selected files only: only the files selected in the list are used
- use full path: the absolute path is used instead of the relative path
- group by path: in text format, the file names are grouped for each path

### 3.4. Content Gatherer List Files

You can save the content of the lists in *Content Gatherer* as a Content Gatherer list file for later use. The saved file includes all files and their state like the inclusion of files and associated files or the files found and selected for a file reference.

## 4. Options and Configuration

The options and other configurations define how *Content Gatherer* behaves.

**Note:** Most options will be in effect the next time you analyze content files or resolve file references. They don't change existing results.

### 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 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

### Generic

If "Analyze files when added" is enabled, all content files that are added to the content file list are analyzed immediately. If "Resolve references when added" is enabled, all file references that are added to the file reference list are resolved immediately. Please note that this may take some time.

With the option "Validate files after opening" checked, all content files and file references are validated when you open a Content Gatherer list file to ensure you don't miss any changes.

Enable "Search alternate extensions for images" if you want to look also for files with the same name but a different image extension (e.g. JPG instead of PNG) when resolving file references.

If "Move marked referrers/references to top" is checked, the *Referrers* and *References* buttons sort the according list to move all marked files to the top of the list.

### File References

Depending on how you use *Content Gatherer*, there may be certain kinds of references that you are not interested in. The following references may be ignored when analyzing a content file:

- DSF data assets: This are files that are used to identify a particular asset of a target figure, e.g. the geometry of an object or the UV set in a material file.
- Shader builder scripts: This are the scripts that are used to define special shader types.
- DSX support assets: This are the support assets in a DSX file.
- Poser scripts: This are calls to other content files in Poser files, e.g. to inject morphs.

### Found Files

For the files that were found when resolving a file reference, the following information may be included in the selection context menu in addition to the file name:

- the file time
- the file size
- the applications that know the content directory

## 4.3. Excluded Files

There might be file references that are present in all content files of a particular kind, but that are not of relevance when using *Content Gatherer*. In the exclude list, you may define these files. With "Add", you add the entered file to the list, with "Remove", you remove all selected files.

The files in the list are matched with the end of the file reference, i.e. an exclude entry ".png" would exclude all PNG files, an exclude entry "/camera.obj" would exclude all files with the name "camera.obj", while "camera.obj" would also exclude e.g. "film\_camera.obj".

Initially, the exclude list contains several default objects for camera, light, and some others used in Poser scenes and content files. You may disable the exclude list by checking "Ignore exclude list".

# 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

## **Version 1.02, 10.03.2014**

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