

DUPLICATE OBJECT FINDER OPERATIONAL NOTES

Current Version 1.0.0

INTRODUCTION

Duplicate Object Finder (DOF) is a simple tool designed to find multiple copies of FS9 or FSX scenery objects. It does this by searching through your FS installation using the Scenery List and collecting information about objects. The results are displayed in a list for information. It is also possible to print this list.

Although in some cases the presence of duplicate objects represents a potential issue this is not necessarily the case. We need to make it very clear that finding duplicates should not automatically result in a hunt for and removal of them from your system. There are many good reasons why objects may be duplicated and removing them could affect the scenery you have on your system in ways that you really do not expect.

The main benefit of this tool is for those developing software or object libraries who may want to understand what objects are on their system and where they are duplicated. Further extensions of this program will encompass the extended functionality found in our Library Object Manager. The development of this tool came about as we worked on the extension of Airport Design Editor functionality.

VERSION HISTORY

1.0.0 This is the initial public release of Duplicate Object Finder

REQUIREMENTS

- Microsoft Flight Simulator 9 (FS9) or Flight Simulator X (FSX)
- Microsoft Dot Net Framework 3.5
- This application comes with ScruffyDuck program libraries (.dll) that may appear to be the same as those in our other applications. Due to the continuous development of these, different applications may require different versions of our libraries. Therefore always keep the libraries with the application they are distributed with.

INSTALLATION

Before installing the program please take the time to read the enclosed general agreement for use. If you are not happy with these terms then please do not install.

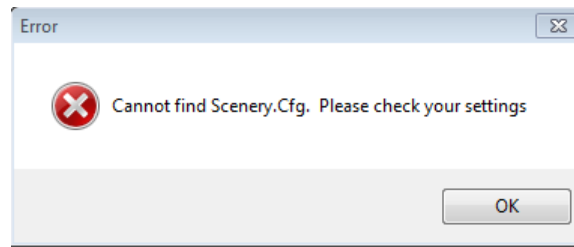
Create a new folder for this application and copy the entire contents of the distribution package into it. DOF does not use the registry, nor does it place any files outside the folder you create. You may want to create a shortcut to DOF and place it on your desktop for convenience.

REMOVAL

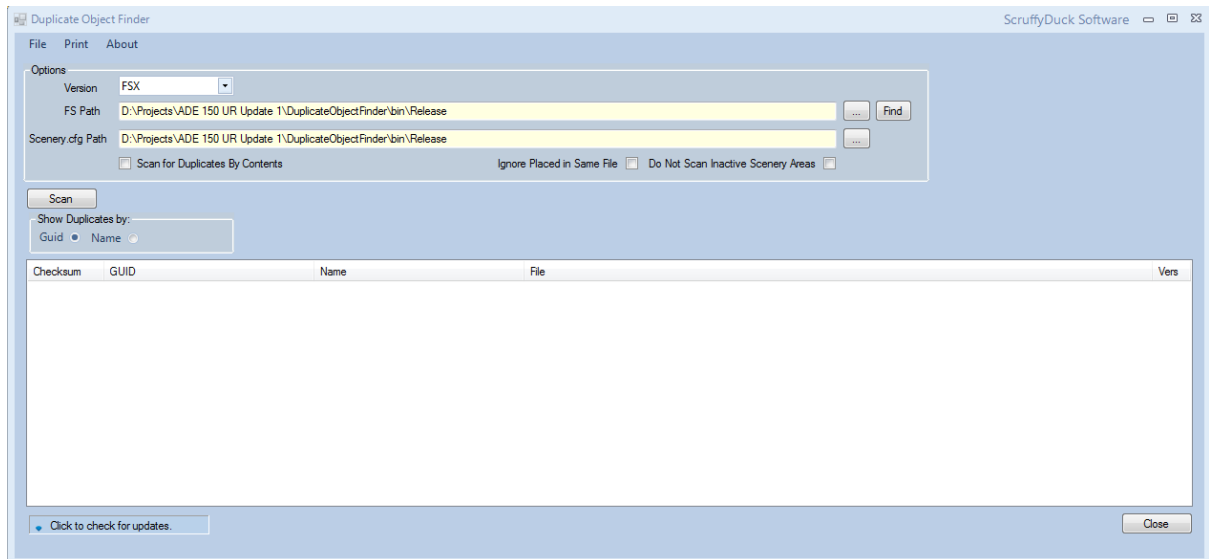
Just delete the folder and all its contents

GETTING STARTED

Double Click DuplicateObjectFinder.exe or your shortcut. After a moment the program will start. The first time you run the program you will see this message:



This just means at this point is that you have not set up the paths DOF needs to work. Click OK and the main application window should appear:

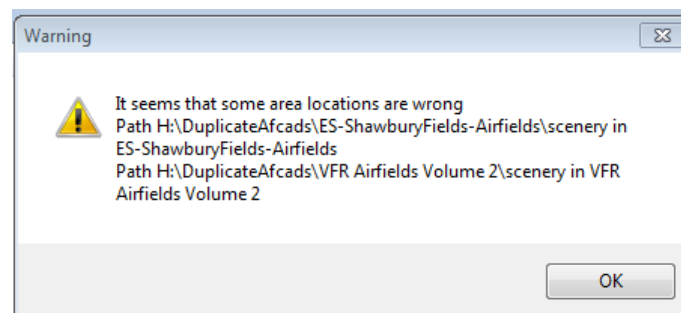


The program will start for FSX. If you have only FS9 then just select it now from the version drop down list. You will see the above message about Scenery.cfg again.

Click the Find button to get your FSX (or FS9) path. DOF should be able to find it. If it can't then there may be an issue with your Registry entry. If necessary you can use the small '...' button to find it manually. You will see the error message about the Scenery.cfg path again.

Now click the small '...' button next to Scenery.cfg Path and find the folder containing your active Scenery.cfg. This will vary depending on which version of FS and what Operating System.

If you have set this correctly and there are any issues with your Scenery.cfg then you might see a message like this:



In this case my Scenery.cfg contains information about scenery areas that are missing. This will not affect the way that DOF works but you might want to check and correct any areas listed in such a message. You will get this message each time you start DOF so it might become irritating if you do not fix the problems!

DOF should now be configured. If you have FSX and FS9 you will want to configure the FS9 paths now. Change to FS9 in the version drop down and repeat the above.

DOF remembers your paths so you should only need to do this once.

USING DUPLICATE OBJECT FINDER

Before starting you have some choices over how to check for duplicate objects.

- By default the program will search for duplicates by GUID (the unique reference that identifies each object) and by the Name of the object. This is the fastest way to proceed.
- Duplicates by Content. In most cases duplicates by GUID or Name will be sufficient. However you can carry out the search by content. To do this check Scan for Duplicates by Contents. This will create a Checksum for each object. This is a number generated by looking at the contents of the file. It ignores name and GUID. So scanning by contents would show duplicate objects that are the same but have different names or GUIDs. Be aware that this makes the scan slower since it has to generate the checksums for each object on your system
- Ignore Placed in Same File. There are many cases where the code that places an object is in the same Bgl file as the object itself. This usually has the effect of restricting the area over which the object can be used (sometimes called Geo-Locking). Developers will often do this with specific objects that they use in their developments. ADE provides a specific way to do this as part of Scenery Development. We would recommend that you do ignore these because otherwise you may see a lot of duplicates that are intentionally there. Be aware though that the process of checking for these will slow the scan down since more work has to be done in the identification process.
- Do Not Scan Inactive Scenery Areas. You may have set some of your scenery areas as inactive in the Scenery Settings. You may not want to scan these for duplicates since they are not part of your active installation. Checking this option ensures that inactive areas are skipped.

We recommend that you start with a simple GUID/Name scan. Click the Scan button.

After a period of time that will depend on the performance of your computer and the number of files you have that contain objects, you will see a list of duplicates appear in the list. Be aware this can take several minutes. If you have duplicates then you will see something like this:

Checksum	GUID	Name	File	Vers
13ce3f0f-6771-4e1a-8a19-f94bfae41012				
0	13ce3f0f-6771-4e1a-8a19-f94bfae41012	sm_resortbld_bigorange	d:\microsoft games\microsoft flight simulator x\scenery\cities\stmaarten\...	FSX
0	13ce3f0f-6771-4e1a-8a19-f94bfae41012	sm_resortbld_bigorange	d:\microsoft games\microsoft flight simulator x\addon scenery\scenery\st...	FSX
2d95f02a-1b58-4582-9490-d8ea812d8e9e				
0	2d95f02a-1b58-4582-9490-d8ea812d8e9e	sm_vor	d:\microsoft games\microsoft flight simulator x\scenery\cities\stmaarten\...	FSX
0	2d95f02a-1b58-4582-9490-d8ea812d8e9e	sm_vor	d:\microsoft games\microsoft flight simulator x\addon scenery\scenery\st...	FSX
2e942e81-d459-44a5-b2d4-169f41a064cc				
0	2e942e81-d459-44a5-b2d4-169f41a064cc	sm_sign	d:\microsoft games\microsoft flight simulator x\scenery\cities\stmaarten\...	FSX
0	2e942e81-d459-44a5-b2d4-169f41a064cc	sm_sign	d:\microsoft games\microsoft flight simulator x\addon scenery\scenery\st...	FSX
3aa41825-f5a6-4188-9448-7022a1645b0c				
0	3aa41825-f5a6-4188-9448-7022a1645b0c	baggageCartOpen	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FSX
0	3aa41825-f5a6-4188-9448-7022a1645b0c	baggageCartOpen	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FSX

The list is grouped by Guid. Note that the Checksum is shown as zero. This is because we did not have the Scan for Duplicates by Content checked. We can see that there are some duplicates. The

first ones (and a good way to test) I got by copying the StMaarten.bgl file from the City folder into Addon Scenery\scenery. This lets me check the scanner is working. Clicking the Show Duplicates by Name button results in a different list. It is possible to get duplicates by GUID and not by Name and so on – the lists will not always be the same:

Show Duplicates by:
☐ Guid ☒ Name

Checksum	GUID	Name	File	Vers
886ae1465bbf47378446d87a378cd856				
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
0	886ae146-4737-5bbf-7ad8-468456d88c37	886ae1465bbf47378446d87a378cd856	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FS9
b00b46621c41468-b72f730f68f5562				

Here the first entry is quite big. Because these objects were created for FS9 (although they are being used in FSX) they have no friendly name in the model and we get the GUID instead. Here it would seem that the same object is in a number of different files. This might seem a lot of duplication. However we earlier talked about objects that are in the same file as their placement code. If we now check the box to Ignore Placed in Same File we get a different picture:

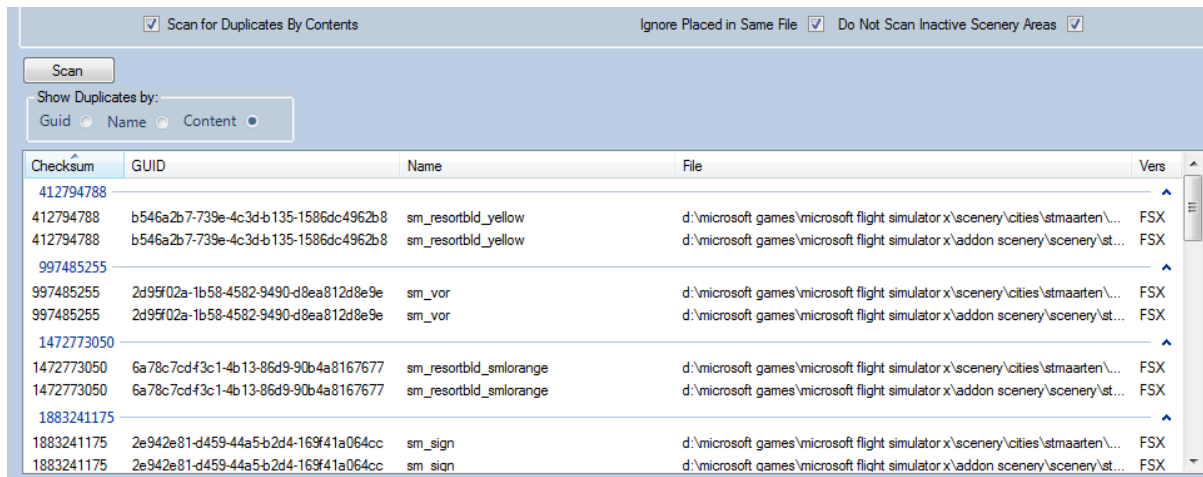
☐ Scan for Duplicates By Contents ☐ Ignore Placed in Same File ☒ Do Not Scan Inactive Scenery Areas ☒

Scan

Show Duplicates by:
☐ Guid ☒ Name

Checksum	GUID	Name	File	Vers
baggageCartClosed				
0	ac7e49ce-75a1-44da-885f-b34786142a83	baggageCartClosed	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FSX
0	ac7e49ce-75a1-44da-885f-b34786142a83	baggageCartClosed	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FSX
baggageCartOpen				
0	3aa41825f5a6-4188-9448-7022a1645b0c	baggageCartOpen	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FSX
0	3aa41825f5a6-4188-9448-7022a1645b0c	baggageCartOpen	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FSX
Bush_pilot				
0	1e3f7492-8ebb-49af-815e-78bed9497761	Bush_pilot	d:\microsoft games\microsoft flight simulator x\scenery\global\scenery\va...	FSX
0	f413b73a-126c-43af-a5a8-6ddabc6b6ff4	Bush_pilot	d:\microsoft games\microsoft flight simulator x\scenery\global\scenery\va...	FSX
floating_log_04				
0	b01ae9b5fc13-48c8-abb0-92be4150099d	floating_log_04	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FSX
0	81f50a7c-6a60-4c8b-87c7-41c8818eaf24	floating_log_04	d:\microsoft games\microsoft flight simulator x\fsaddon\tongass_fjords\to...	FSX

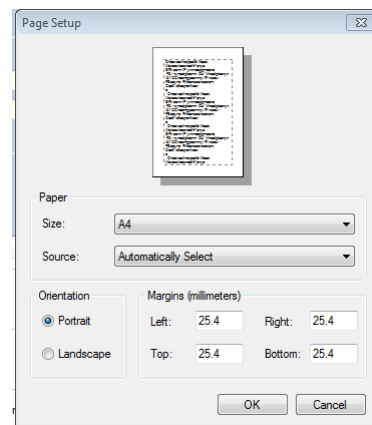
And all those FS9 duplicate objects are gone. Finally check the Scan for Duplicates by Contents box and Scan again. This is the slowest way to do things so it may take a while. The result now is grouped by Content and a new button shows in the Show Duplicates By box:



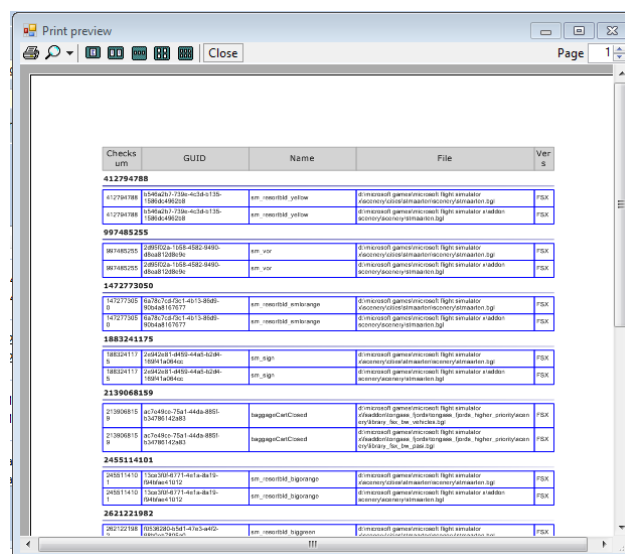
This is pretty much all there is to using Duplicate Object Finder. However you might want to print off the list for easier reference. DOF has a simple print function that we hope to improve over time.

This is accessed from the Print Menu and gives rise to three options:

- Setup. This opens a simple Page Setup Dialog:



- Print Preview. This opens a simple preview where you can look at the printout:

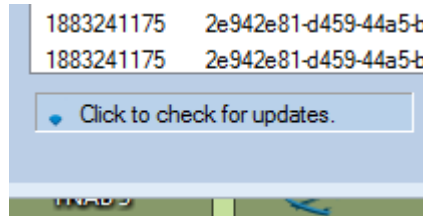


You may view the pages from here and also print to your default printer.

- Print. Well that will print the report! Be aware that this sends the output at once to your default printer. So you might want to work via the Print Preview option.

CHECKING FOR UPDATES

DOF has a built in Update checker that can be accessed from the small display near bottom left of the application:



Please click this now and again so that we can let you know when there are updates. Because DOF is a new program we expect to update it quite often for a while.

CONTACT AND LEGAL BITS

Duplicate Object Finder is released under the ScruffyDuck Software General License Agreement. A copy of this is included with this package. Note that it is Freeware but may not be used for Commercial purposes without a Commercial License.

Support is provided via the Airport Design Editor Support Forum at <http://www.fsdeveloper.com> or by direct email to jon@scruffyduck.co.uk. Whilst we do try to respond to emails as quickly as possible we do ask that support queries are directed to the forum.