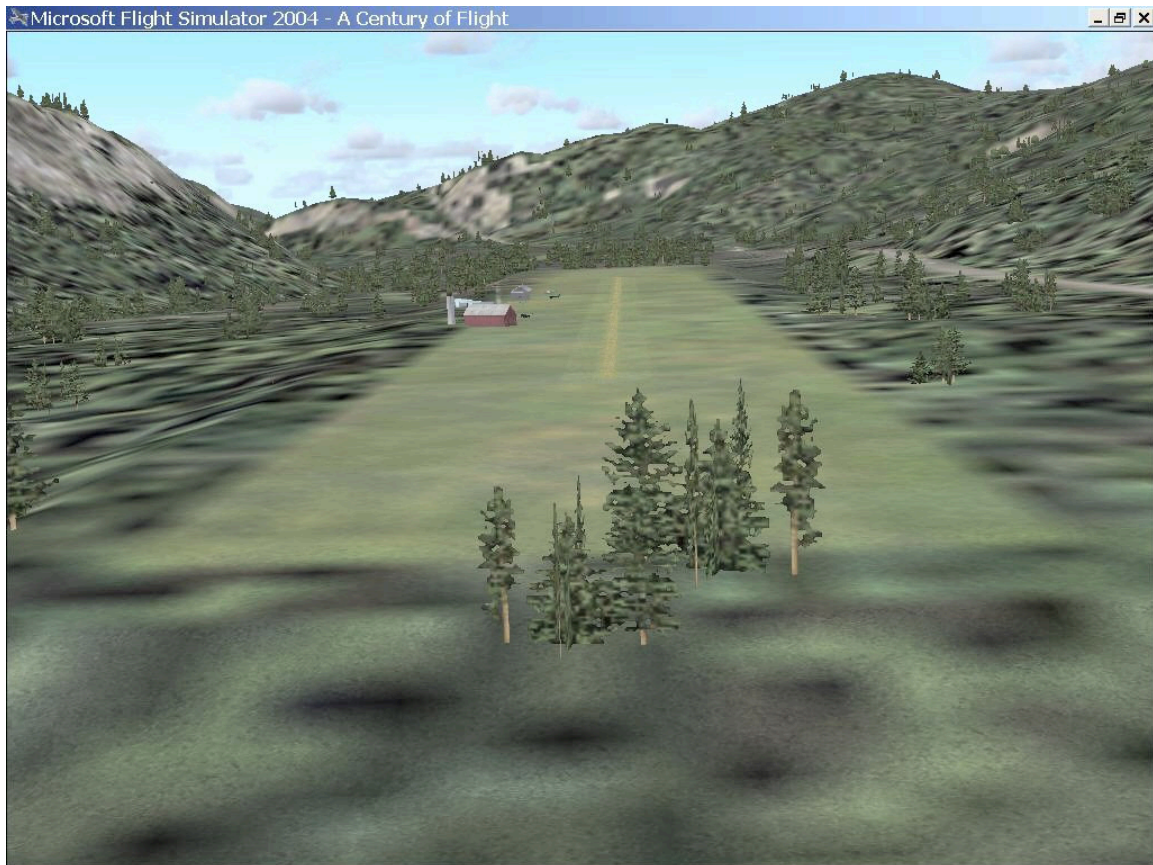


Using ExcBuilder to Remove Objects

An Illustrated Tutorial by David "Opa" Marshall

Does the following screenshot look familiar?



Perhaps not the particular airport, but we have all seen the autogen trees (or buildings) which are right in the glide path. I for one do not want to have my wings clip those trees or any other protruding object during my approach or departure.

There is an easy solution to this problem – one which you can do even if you have no experience creating or altering scenery. I believe you will find it is very easy and fun to do and will provide a real sense of accomplishment. Give it a try.

I have included most of the files you will need to create an “exclusion” but you will need to download the ExcBuilder program by **Paavo Pihelgas**. At Avsim.com the filename is “**excbuilderv2.zip**”.

Create a work folder anywhere you wish. Unzip the ExcBuilder program into this folder.

Copy and paste the following files which you received with this tutorial into that same work folder.

bglcom.exe bglcomp.xsd and compile.bat

Your work folder should now have the following files in it:

bglcom.exe
bglcomp.xsd
compile.bat
ExcBuilderV2.exe
Readme for ExcBuilderV2.txt
And a couple of graphic files which can be deleted

You will also need to have FSUIPC.dll by **Pete Downson** installed in your modules folder. This allows ExcBuilder (and many other programs) to communicate with FS2004 to get such information as coordinates. You can find this module at Avsim.com and Flightsim.com if you do not already have it installed. The current Version is 3.48 – “**fsuipc.zip**”. It need not be registered for ExcBuilder to work correctly.

Before proceeding, check to see if you already have **MSXML4** installed. Several other programs use this so you may already have it. The easiest way to check is to go to the Start/Settings/Control Panel/Add-Remove Programs dialogue of XP.

If you don't see MSXML 4.0 SP2 Parser listed then you will need to install the msxml.msi package which is included with this tutorial. Just click on the .msi file and it will offer to install it for you.

If you do see it listed then do not attempt to install msxml.msi again.

The Concept

The concept of creating an exclusion is really very simple. You will be marking the coordinates of a rectangle – using an aircraft in FS2004.

The ExcBuilder program will translate the coordinates of that rectangle into an XML file.

An XML file is basically a text file that contains all the exclusion information in a very precise format. Any XML file can be opened and viewed using Notepad.

The BGLCOMP program will then convert that XML file into a BGL file which FS2004 can “read” and act upon. The resulting file will have the same name as the XML file but will have a BGL extension.

This is a screenshot of the ExcBuilder dialogue screen.

ExcBuilder

File Settings Info

Exclusion area

Northwest point

Lat: 41.7967862577758 FSC

Lon: -87.76700839336 FSC

Exclusion type

☐ All objects

☐ Beacon objects

☐ Effects

☒ Generic buildings

☐ Library objects

☒ Taxiway signs

☐ Trigger objects

☐ Windsocks

Source code

```
<?xml version="1.0"?>
<FSDData
  version = "9.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation="bglcomp.xsd" >
  <ExclusionRectangle
    latitudeMinimum = "41.7743385642401"
    latitudeMaximum = "41.7967862577758"
    longitudeMinimum = "-87.76700839336"
    longitudeMaximum = "-87.7353302110117"
    excludeGenericBuildingObjects = "TRUE"
    excludeTaxiwaySignObjects = "TRUE"
  />
</FSDData>
```

☐ Delete source after compilation?

Generate source code

Save source and generate .bgl

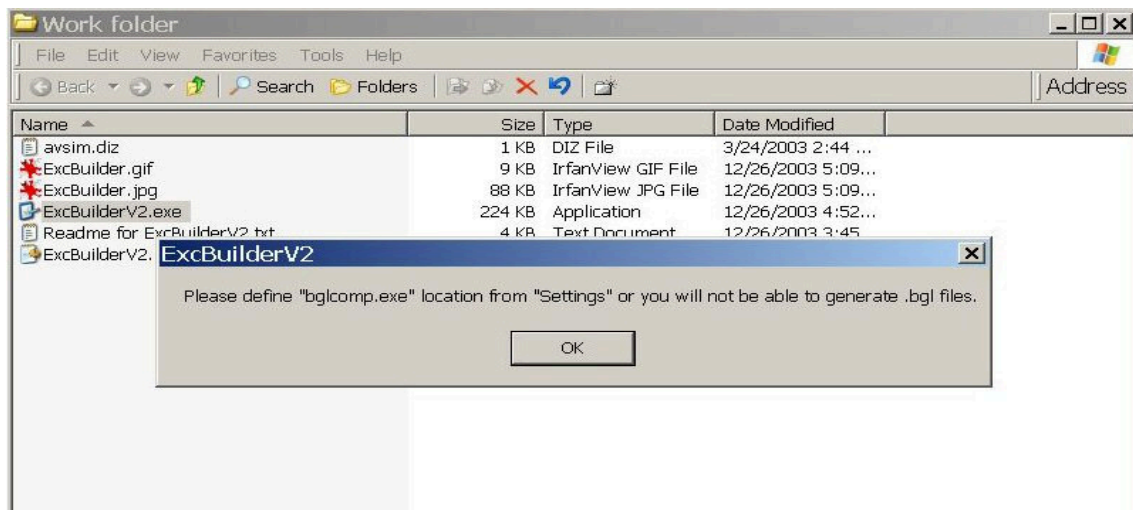
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All Rights Reserved.

You can easily see the “rectangle” we need to create.

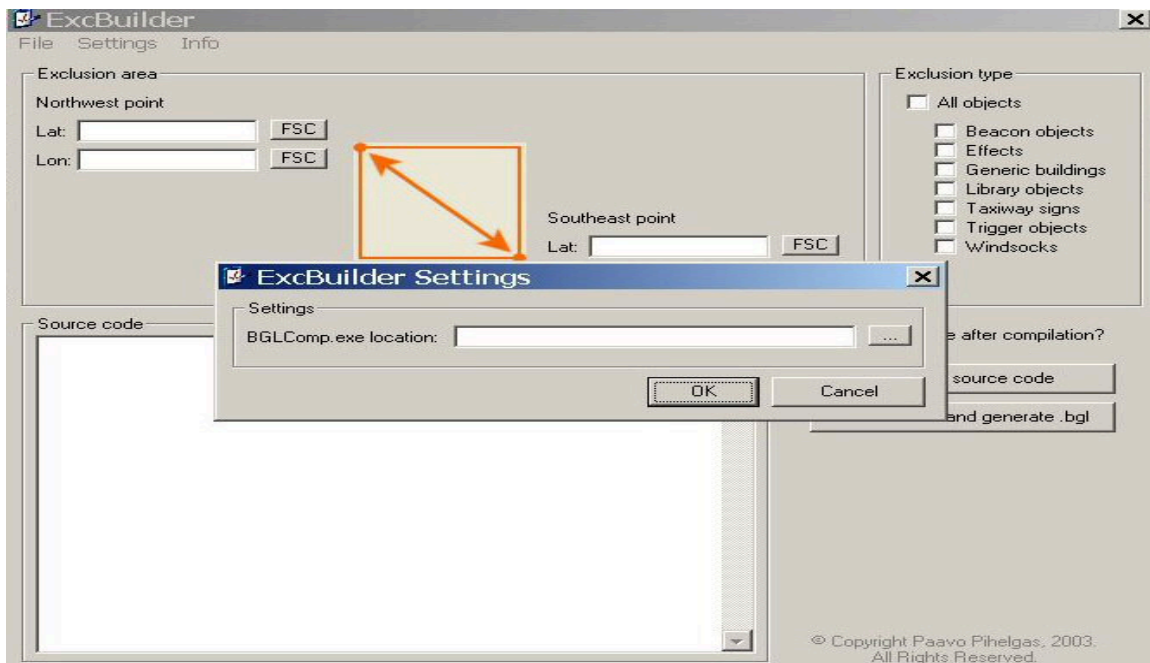
Let's Get Started

Click on ExcBuilderV2.exe to start the program.

Because the program does not yet know where BGLCOMP.exe is located, you will get a reminder screen as follows.



Hit Ok and when the main dialogue screen has loaded, click on “settings” to bring up the following screen.



Here you can type in the complete path to bglcomp.exe or use the browse button just to the right of the location entry form to browse to your work folder and the bglcomp.exe file. That is the easiest and safest way.

After you have done this you will now have one more file in your work folder and it will be named ExcBuilderV2.ini. All it does is hold the information telling where bglcomp.exe is located. It can be opened and read using notepad also.

Ok – you have set everything up and are ready to be creative!

Start up FS2004. Select a relatively small aircraft such as a Cessna – it really does not matter which aircraft you use however.

Go to the airport or location in question.

Now change to SLEW mode by hitting Y – be sure your NUM LOCK key is set to off. Using your arrow keys on your keypad, slew to a position near the object(s) that you wish to exclude. I find it easier to do all this if I am in Spot View – top down. You do not need to be on the ground.

When you get near the area you wish to work on, hit your Space Bar. This will automatically place you aircraft pointing North. ExcBuilder will **not** work properly unless the aircraft is oriented to the North when making your first coordinate placement. I cannot emphasize that enough – you **must** be facing North.

Adjust your position as necessary to mark the Northwest corner of the rectangle. Hit your space bar one more time just to be sure you are indeed facing North.

Minimize FS2004 and on the ExcBuilder screen add the coordinates for the Northwest corner by hitting the FSC button to the right of the Latitude and Longitude entry screens. That will automatically place the information for the Northwest corner of the rectangle.

Now Maximize FS2004 and using the slew commands, move your aircraft to the Southeast point of the area you wish to exclude. Hit the spacebar once again just be sure you did not wander from a Northerly orientation.

Minimize FS2004 once again and using the FSC buttons, enter the coordinates for the Southeast corner of the rectangle.

You can now close FS2004 but you may wish to leave it open in case you have made an error and need to start over again.

Now select which type of objects you want to exclude. If in doubt, select “all objects”.

I uncheck the “delete source after compilation” box as I don’t want to have the program erase the XML file it will create.

Then select “Generate source code”. The large white box will then fill in with a graphical depiction of the XML file. (The first screenshot of the dialogue screen also illustrates this).

Now select “Save source and generate bgl”.

A screen will open asking you for the name of the XML file and where it should be saved.

You can give it an easily recognized name like `exclude_cougar_trees.xml` now or after it has been saved as “exclude” you can rename it.

I recommend that you save it into your work folder. The program should now compile a BGL file also, but on my computer, for some strange reason the ExcBuilder program does not complete its work and create a BGL file.

No problem as this phase is easily done manually.

You can close the ExcBuilder program as its work is done.

You should now see a new file in your work folder with an XML extension. This is the source data that you just created and saved.

Click on `compile.bat` and it will compile this XML file into a BGL file that FS2004 can read and use.

Use caution when compiling using this method as the batch file will attempt to compile **all** XML files it finds in the work folder and that may not be what you desire. I suggest checking to see that you have only one XML file in the work folder before using the compile.bat.

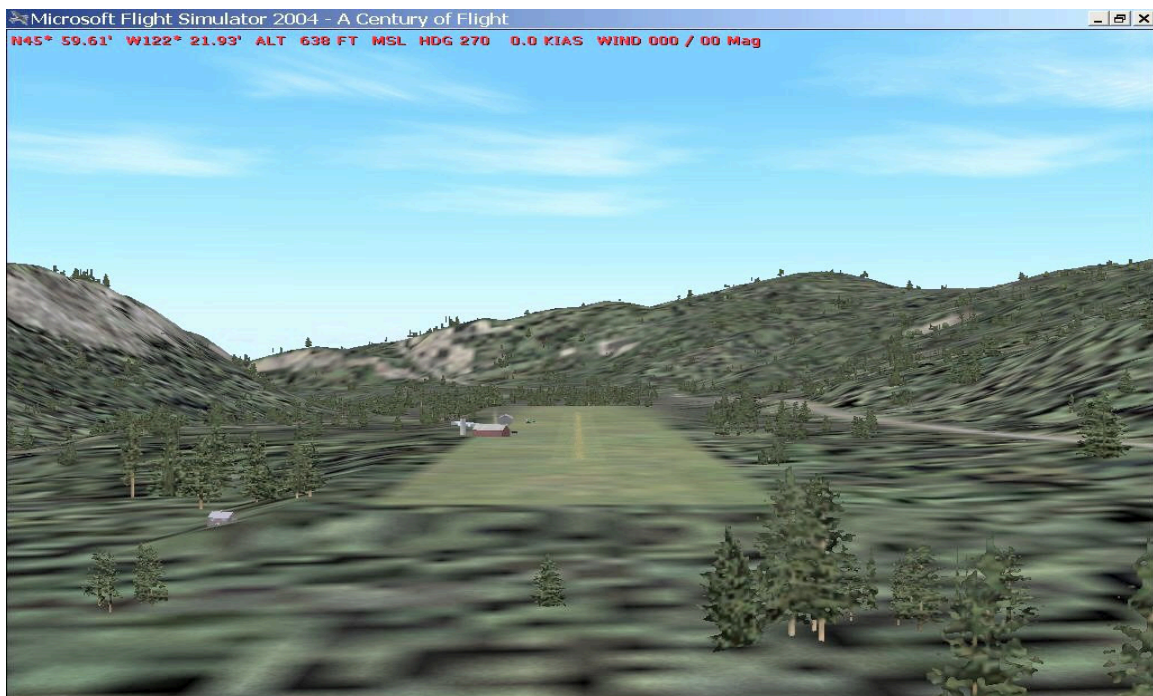
I prefer using the compile.bat method as if there are any errors during the compiling process, they will be displayed before the batch file finishes. It will not tell you what the errors are but at least you will know why it did not create the BGL file as expected.

Most errors result from not having the aircraft facing North when marking the Northwest and Southeast corners of the rectangle.

OK – you have now created an exclude file with a BGL extension – what do you do with it? Simply copy and paste it into the scenery subfolder of the addon airport in question or if it is for a default airport you can simply paste it into your addon scenery/scenery subfolder. You will need to restart FS2004 so it will index this new BGL file.

What have we accomplished?

Here is a screenshot of the same airport but with the exclude file added.



No more tall trees to dodge! That wasn't so hard now was it?

If you are interested, the airport in the screenshots is a small GA field which I enhanced using the RWY12 program. It is located at Cougar, Washington near Mt. St Helens and makes a fine starting point if you are exploring the volcano. The airport ICAO code is WN10.

The file name at **Avsim.com** is "**WN10.zip**". For your convenience I have included a copy of the exclude file I made for my own use. It is named "exclude_cougar_trees.BGL" and is in the folder named "BGL Example" which is a part of this tutorial package.

You will find the XML file in this folder also if you wish to open it with Notepad and examine its structure.

If you install the WN10 package, just copy the exclude file and paste it into the scenery subfolder. You do not need the XML file.

I hope you found this short tutorial useful. There are many airports around the world where autogen trees and/or buildings show up right in the approach and/or takeoff path. They are just waiting for you to exclude them!

As an example, try approaching the San Diego International Airport in San Diego, California – runway 27. I have never flown (in real life) into this airport, but I find it hard to believe that the FAA would have allowed construction of large office buildings directly in the flight path of landing aircraft.

What are you waiting for?

Credits: **Paavo Pihelgas** for the ExcBuilder program.

Microsoft for Bglcomp, MSXML4 and FS2004 programs

Just so you know; I struggled for many days with the ExcBuilder program and was about to give up on it until I discovered that my aircraft **must** be pointing North to begin the process. Unfortunately the instructions did not stress this.

NOTES: This program creates excludes that remove autogen objects only. It will not remove objects that are a part of any addon scenery.

This program was tested using XP Home OS with Service Pack II and FS2004 with update to Version 9.1 – Build 40901.01.

Bglcomp.exe and bglcomp.xsd may actually reside anywhere on your computer. You may already have them installed as several other programs require them. However for purposes of this tutorial you have been asked to place a copy of them in the “work” folder.

The Bglcomp and MSXML4 files are readily available at the Microsoft Website.

Questions and/or constructive comments may be directed to:

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To see a complete listing of projects I have uploaded to Avsim.com, just follow this link.

<http://library.avsim.net/eseach.php?CatID=fs2004&Name=&FileName=&Author=David+Marshall&DLID=&Sort=Added&ScanMode=0&Go=Change+View>