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Now you have created your first \*.BSV file. Try it with a virginal “scene2.bin” file using BscriptView.

The whole brainy.BSV file looks like this:

[illegible]

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## Part 2

Part 2 will deal with changing of information in existing files. The tutorial cannot give you the way how to find the information and how to change it for your needs, but to reproduce your changes.

## What do you need?

You must know e.g. what in `tree.klz` has to be changed and in which way.

## Increase the BSV file

You can place your changes made to the files `tree.klz`, `scene.4ds`, `cache.bin` and `scene2.bin` (maybe you have to delete something in given scripts to make your scripts work) into BSV file.

In part 1 of the tutorial I mentioned, that there are some placeholder (234 bytes) right after the Mission folder definition. Now we have a closer look at these placeholder.

The BSV file in general starts like this

1. Name of the ADDin (20 bytes): Brainy Test
2. Mission folder (20 bytes): freeridenoc

After this the following structure follows:

|   |        |   |
|---|--------|---|
| OptTREE                                 | (Byte) | flag 00 or 01, tree.klz                         |
| TreePosNb                               | (Byte) | number of positions to be changed in tree.klz   |
| OptCACHE                                | (Byte) | flag 00 or 01, cache.bin                        |
| CachePosNb                              | (Byte) | number of positions to be changed in cache.bin  |
| OptSCENE4DS                             | (Byte) | flag 00 or 01, scene.4ds                        |
| Scene4dsPosNb                           | (Byte) | number of positions to be changed in scene.4ds  |
| Scene2Bin                               | (Byte) | flag 00 or 01, scene2.bin                       |
| Scene2BinNb                             | (Byte) | number of positions to be changed in scene2.bin |
| Info As String * 226 Byte (always "00") |        |   |

You can see, for every file a flag specifies, if the file has to be modded or not. So, if you don't have changes for tree.klz put "00" and so on.

The following example will show you how to include your changes into BSV file:

You want to change information in tree.klz. There is only one position to change and you want to change scene.4ds at two positions. Then our BSV file will start like this:

- ```

1. Name of the ADDin (20 bytes): Brainy Test
2. Mission folder (20 bytes): freeridenoc
01 01 -> tree.klz has to be changed at one positions
00 00 -> cache.bin has not to be changed at no positions
01 02 -> scene.4ds has to be changed at two positions
00 00 -> scene2.bin has not to be changed at no positions

```

Info String \* 226 byte (till now has to be "00")

[illegible]

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After this the general structure which have to follow n\*times looks like this:

SearchStringLength (Byte)

NbBytesToPut (Byte)

|               |                     |
|---------------|---------------------|
| searchstr(16) | As String * 16 Byte |
|---------------|---------------------|

PutStr(256)      As String \* 256 By

So in our example the bytes for changing tree.klz have to follow:

SearchStringLength: 08

NbBytesToPut: 44

Searchstr: b1 00 8f 41 81 00 00 21 00 00 00 00 00 00 00, your search string to find the right position in tree.klz to put your new bytes in. In our example we only need 8 byte, the other are put to “00” and not used

[illegible]

Your bytes to put into tree.klz at search position. In our example we only need 68 byte, the other are put to "00" and not used.

There are no bytes to change in `cache.bin`, therefore we can ignore that

But there are two changes for scene.4ds available.

Now the same data structure for scene.4ds has to follow, but two times because there are two positions to change.

First change:

SearchStringLength (Byte)

NbBytesToPut (Byte)

|               |                     |                                         |
|---------------|---------------------|-----------------------------------------|
| searchstr(16) | As String * 16 Byte | first string to search in scene.4ds for |
|---------------|---------------------|-----------------------------------------|

|             |                      |                                                   |
|-------------|----------------------|---------------------------------------------------|
| PutStr(256) | As String * 256 Byte | string to put at the search position of scene.4ds |
|-------------|----------------------|---------------------------------------------------|

Second change:

SearchStringLength (Byte)

NbBytesToPut (Byte)

|               |                     |                                          |
|---------------|---------------------|------------------------------------------|
| searchstr(16) | As String * 16 Byte | second string to search in scene.4ds for |
|---------------|---------------------|------------------------------------------|

|             |                      |                                                          |
|-------------|----------------------|----------------------------------------------------------|
| PutStr(256) | As String * 256 Byte | string to put at the second search position of scene.4ds |
|-------------|----------------------|----------------------------------------------------------|

There are no bytes to change in the original scene2.bin file, therefore we can ignore it.

At this point all information given in tutorial part 1 starting with 4. **TestSceneMod** has to follow.



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## Part 3

As I mentioned in part 1 of the tutorial, the BSV file can also include additional information and data in order to add models, sounds, maps or tables.

**But be careful:** The name of the file you include into BSV has to be unique, if not an existing file in this folder will be opened and your data will be put into at the first position, what will mostly destroy the existing file.

Now we have a look at the end of the brainy.bsv file of part 1.

Regarding to 9. of part 1, BSV file is terminated by some placeholders (24 bytes). Here we can place the information to add files into different Mafia folders.

Let's have a closer look at the 24 bytes:

1. 00 00 00 00 Number of models (\*.4ds) included in BSV file, to put into models folder
2. 00 00 00 00 Number of sound files included in BSV file, to put into sound folder
3. 00 00 00 00 Number of maps included in BSV file, to put into maps folder
4. 00 00 00 00 Number of files included in BSV file to put into table folder (1)
5. 00 00 00 00 Number of files included in BSV file to put into table folder (2)
6. 00 00 00 00 Number of files included in BSV file to put into the mission folder of modded scene2.bin

Every file we want to include has to have the data structure:

- Name of the file (20 bytes)
- length of the file (4 bytes)
- data of the file

So, for example you have two new model and one new map file, than the overall structure looks like this:

1. 02 00 00 00 (two model files)  
Name of first model file (20 bytes)  
length of the file (4 bytes)  
data of the file  
Name of second model file (20 bytes)  
length of the file (4 bytes)  
data of the file
2. 00 00 00 00 (No files to put into sound folder)
3. 01 00 00 00 (one map file)  
Name of the map file (20 bytes)  
length of the file (4 bytes)  
data of the file
4. 00 00 00 00 No files to put into table folder (1)
5. 00 00 00 00 No files to put into table folder (2)
6. 00 00 00 00 No files to put into the mission folder of modded scene2.bin

For every file, model, sound, map, etc. it's always the same procedure.

How to put files into BSV is given as an example for two model files.

### ADD new models into folder "models"

Maybe you have created a new model (\*.4ds) and you refer to in scene2.bin, than it has to be in the models folder of Mafia otherwise it would not work. So we include the model description in the BSV file. While processing ADDin the model will be extracted and put into Mafias model folder automatically.

#### What do you have?

Fortunately a new amazing model. In this tutorial I choose two very simple ones, zzwall 1.4DS and zzwall 2.4DS

Now we have a look at the end of the build brainy.bsv file of part 1.

Regarding to 9. of part 1, BSV file is terminated by some placeholders (24 bytes).

The first 4 bytes hold the number of models we will include into the BSV file, for this example 2 (zzwall 1.4DS and zzwall 2.4DS) . If you don't have any models just put "00 00 00 00" and jump over to "Add sounds".



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But we have two, so these bytes look like

**02 00 00 00**

After these bytes the model description has to follow

**Name of the model file:** 20 bytes, name of the first model file: zzwall 1.4DS

**7A 7A 77 61 6C 6C 20 31 2E 34 44 53 20 20 20 20 20 20 20 20**

**Size of the file:** The size of zzwall 1.4DS file

**3c 02 00 00**

**Data of the file:** The data of zzwall 1.4DS file itself

34 44 53 00 1d 00 00 00 71 4a 52 d2 c2 01 01 00 01 10 84 00 cd cc cc 3d cd cc cc 3d cd cc cc 3d 00 00 00 3f 00  
00 00 3f 00 00 00 3f 00 00 00 00 00 00 00 00 00 00 00 00 00 0c 40 52 53 54 52 4f 50 31 2e 42 4d 50  
01 00 01 00 00 2a 00 00 4a 2d a2 40 ec 72 17 40 d0 9f a9 3e 00 00 80 3f 00 00 80 3f 00 00 80 3f 00 00 80 3f 00  
00 00 00 00 00 00 00 00 00 00 00 00 09 08 43 75 62 65 32 5b 38 5d 00 00 00 01 00 00 7a 45 0b 00 90 b8 80 bf 50  
15 5c 3f d8 17 a5 be 10 08 0c bf e0 eb 0b 3f 58 24 0c bf 00 00 00 00 00 00 00 00 d0 4d 6f bf 98 88 fb be c0 17  
a5 be 20 cf 0b bf 88 24 0c bf 68 24 0c bf 00 00 00 00 00 00 00 00 08 32 87 bf 50 15 5c 3f ee 42 15 3f 00 41 0c  
bf e0 eb 0b 3f 00 ec 0b 3f 00 00 00 00 00 00 00 c0 3f 7c bf 98 88 fb be 0a 43 15 3f b0 07 0c bf 88 24 0c bf e0  
eb 0b 3f 00 00 00 00 00 00 00 c0 3f 7c bf 98 88 fb be 0a 43 15 3f b0 07 0c bf 88 24 0c bf e0 eb 0b 3f 00 00  
00 00 00 00 00 d8 5c 41 3f c8 16 5c 3f 4c 44 15 3f 88 cf 0b 3f 38 25 0c 3f c0 24 0c 3f 00 00 00 00 00 00 60 83 53 3f  
00 60 83 53 3f a0 85 fb be 52 44 15 3f 48 08 0c 3f 38 eb 0b bf 20 25 0c 3f 00 00 00 00 00 00 00 00 60 83 53 3f  
a0 85 fb be 52 44 15 3f 48 08 0c 3f 38 eb 0b bf 20 25 0c 3f 00 00 00 00 00 00 00 00 60 83 53 3f  
15 a5 be 28 08 0c 3f 38 25 0c 3f 18 eb 0b bf 00 00 00 00 00 00 00 00 76 60 3f a0 85 fb be f8 14 a5 be 28 41  
0c 3f 38 eb 0b bf 58 eb 0b bf 00 00 00 00 00 00 00 00 76 60 3f a0 85 fb be f8 14 a5 be 28 41 0c 3f 38 eb 0b  
bf 58 eb 0b bf 00 00 00 00 00 00 00 00 01 0c 00 00 00 01 00 02 00 01 00 03 00 02 00 02 00 04 00 05 00 03 00  
06 00 05 00 05 00 07 00 08 00 06 00 09 00 08 00 08 00 0a 00 00 00 09 00 01 00 00 00 00 00 02 00 05 00 05 00  
08 00 00 00 01 00 06 00 03 00 06 00 01 00 09 00 01 00 00 00

After that the second model description follows and so on if you have more than 2 models to be included.

**Name of the model file:** 20 bytes, name of the first model file: zzwall 2.4DS

**7A 7A 77 61 6C 6C 20 32 2E 34 44 53 20 20 20 20 20 20 20 20**

**Size of the file:** The size of zzwall 2.4DS file

**3c 02 00 00**

**Data of the file:** The data of zzwall 2.4DS file itself

34 44 53 00 1d 00 00 00 71 4a 52 d2 c2 01 01 00 01 10 84 00 cd cc cc 3d cd cc cc 3d cd cc cc 3d 00 00 00 3f 00  
00 00 3f 00 00 00 3f 00 00 00 00 00 00 00 00 00 00 00 00 00 0c 40 52 53 54 52 4f 50 31 2e 42 4d 50  
01 00 01 00 00 2a 00 00 4a 2d a2 40 ec 72 17 40 d0 9f a9 3e 00 00 80 3f 00 00 80 3f 00 00 80 3f 00 00 80 3f 00  
00 00 00 00 00 00 00 00 00 00 00 00 09 08 43 75 62 65 32 5b 38 5d 00 00 00 01 00 00 7a 45 0b 00 90 b8 80 bf 50  
15 5c 3f d8 17 a5 be 10 08 0c bf e0 eb 0b 3f 58 24 0c bf 00 00 00 00 00 00 00 00 d0 4d 6f bf 98 88 fb be c0 17  
a5 be 20 cf 0b bf 88 24 0c bf 68 24 0c bf 00 00 00 00 00 00 00 00 08 32 87 bf 50 15 5c 3f ee 42 15 3f 00 41 0c  
bf e0 eb 0b 3f 00 ec 0b 3f 00 00 00 00 00 00 00 c0 3f 7c bf 98 88 fb be 0a 43 15 3f b0 07 0c bf 88 24 0c bf e0  
eb 0b 3f 00 00 00 00 00 00 00 c0 3f 7c bf 98 88 fb be 0a 43 15 3f b0 07 0c bf 88 24 0c bf e0 eb 0b 3f 00 00  
00 00 00 00 00 d8 5c 41 3f c8 16 5c 3f 4c 44 15 3f 88 cf 0b 3f 38 25 0c 3f c0 24 0c 3f 00 00 00 00 00 00 60 83 53 3f  
00 60 83 53 3f a0 85 fb be 52 44 15 3f 48 08 0c 3f 38 eb 0b bf 20 25 0c 3f 00 00 00 00 00 00 00 00 60 83 53 3f  
a0 85 fb be 52 44 15 3f 48 08 0c 3f 38 eb 0b bf 20 25 0c 3f 00 00 00 00 00 00 00 00 60 83 53 3f  
15 a5 be 28 08 0c 3f 38 25 0c 3f 18 eb 0b bf 00 00 00 00 00 00 00 00 76 60 3f a0 85 fb be f8 14 a5 be 28 41  
0c 3f 38 eb 0b bf 58 eb 0b bf 00 00 00 00 00 00 00 00 76 60 3f a0 85 fb be f8 14 a5 be 28 41 0c 3f 38 eb 0b  
bf 58 eb 0b bf 00 00 00 00 00 00 00 00 01 0c 00 00 00 01 00 02 00 01 00 03 00 02 00 02 00 04 00 05 00 03 00  
06 00 05 00 05 00 07 00 08 00 06 00 09 00 08 00 08 00 0a 00 00 00 09 00 01 00 00 00 00 00 02 00 05 00 05 00  
08 00 00 00 01 00 06 00 03 00 06 00 01 00 09 00 01 00 00 00

If you don't have any new sounds, maps or table files in addition, than terminate the BSV file with 20 bytes set to "00"

00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00