

# Blender-aid v0.1 user manual

Blender-aid release December 2009

User manual

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## Introduction

Blender is a 3d content creation suite. It enables user to model, animate, shade and do post productions (composing) on 3d content. With Blender it is possible to create 3d games, 2.5d animations and 3d animations.

### ***What is Blender-aid?***

Blender-aid is a tool that helps you manage Blender productions. Blender focuses on the creation of content. Blender-aid focuses on managing the content of a production.

Big Buck Bunny consists of a lot of 3d content. This content is located in many files. Using Blender to manage content across files is difficult, especially when the content is not part of a single scene (= technical representation of a movie script).

### ***What can you do with it?***

The 2 main features of blender-aid are visibility and refactoring.

Visibility presents technical data of a production in different ways, like the links between files or the output settings of files. Presenting the data in a useful way lets you see where and why a file is used. With this information it is possible to answer questions like: "What scenes needs to be re-rendered when you modify a file or a part of a file?".

During the creation of a production changes happen. Blender-aid can perform complex refactoring tasks like renaming a file or moving a file to another folder location. Blender-aid will assure that the structure of the production stays intact.

### ***How does it work?***

Using Blender-aid is very simple. Just configure where your production is located on your computer. Blender-aid will inspect the files in the given location. With your web browser you can navigate through your production and perform refactoring tasks.

### ***When do you use it?***

Blender-aid has been designed for small teams working on blender animations or series. But feel free to use it and see what it can do for you. By using modern web and data warehousing techniques it enables you to quickly inspect and control your production.

## Features

This section explains the main (functional) features of the tool.

### Visibility

Blender-aid shows different aspects of the technical data of your production. Details are described below:

- View render settings of all production files
- View all production files used by a production file
- View all production files that uses a production file
- View all direct neighbours (users and used) production files
- View missing links in a production
- View list of elements from a blend file
- View filtered references and dependencies (table and graphic)

### Refactoring

Refactoring is the ability to change the structure of a production.

- Rename production file
- Rename element of blend file
- Move production file

## Installation

1. Download blender-aid package what can be found at <http://code.google.com/p/blender-aid/downloads/>
2. Unzip the downloaded file into a directory
3. Optional: Configure the settings (see configuration). This is only necessary when
  1. using windows or
  2. if one would like to use different settings.
4. Run the application in command line by typing: `python server.pyc` or `./server.pyc`

Make sure the user has read & write privileges to the database location (default `"/var/tmp"`).

## Configuration of settings

Currently only the web server listening port and the database location can be configured. The web server listens default to port 8080 on localhost. The default database location is `/var/tmp/sql.bin`. Windows users should change the default location of the database.

1. Open the file `settings.py`
2. Change whatever you like
3. Save the settings
4. Restart the `server.pyc`

## Technical dependencies

Blender-aid depends on the following software:

- Optional PIL (Python Imaging Library) for thumbnail generation
- Python 2.6 or
- Python 2.5 with [simplejson](#) module installed

## De-installation

To remove Blender-aid just delete the directory where it is installed. The only created file is `/var/tmp/sql.bin` (or otherwise when changed in `settings.py`)

## Functionality – web base

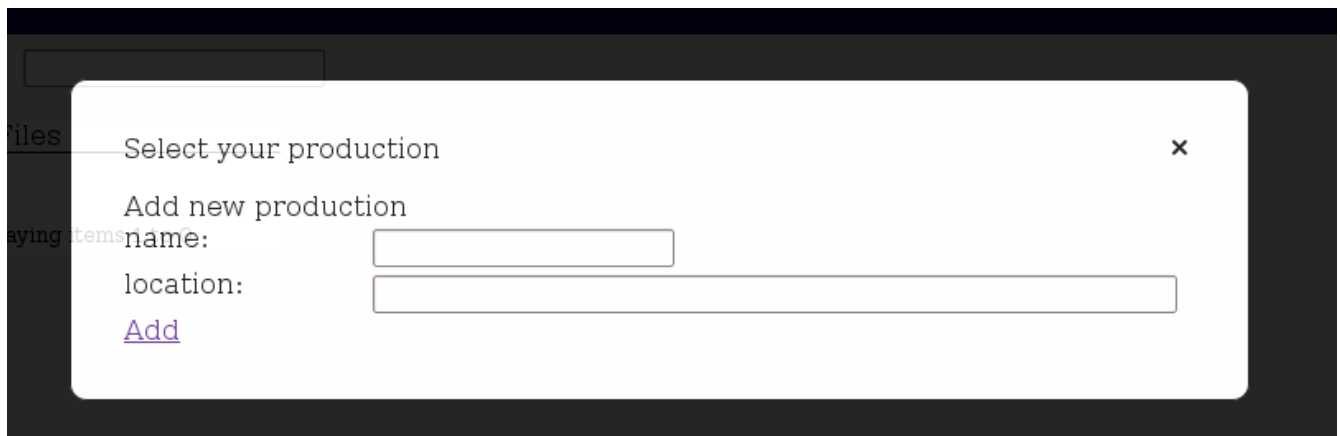
### *First configuration*

When the server is started. You can start a browser and browse to “<http://localhost:8080>”. This can be different when configured otherwise.

When first started the next screen will be displayed



The first thing what has to be done is to add some productions to the tool. Press “<< productions” in the upper right to open the production selection popup.

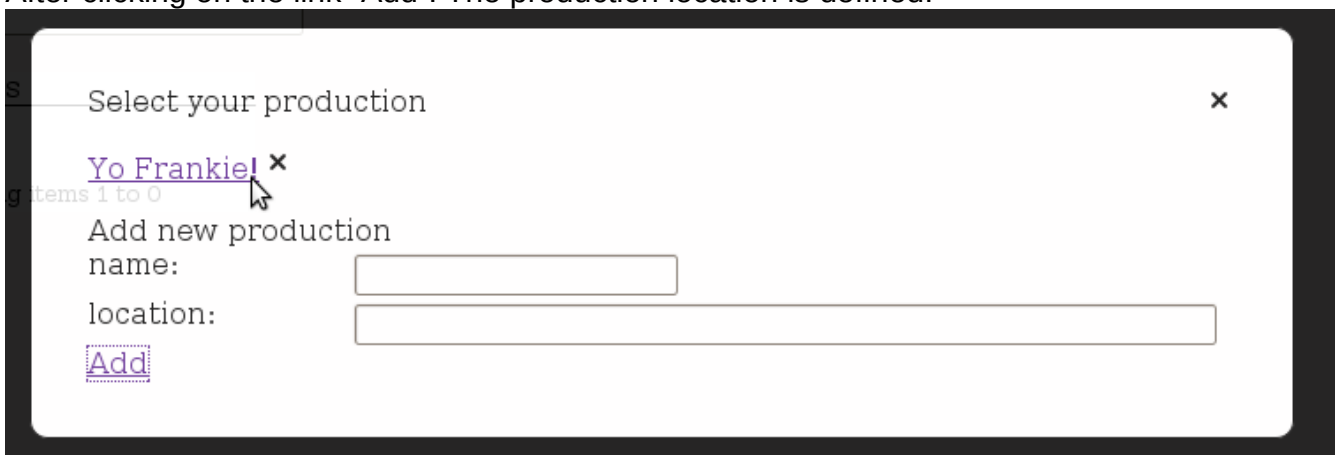


First we need to add our production location to the tool. For the next example I've downloaded Yo Frankie! And unzipped it to /var/productions/yf

Enter the next values



After clicking on the link “Add”. The production location is defined.



What has happened:

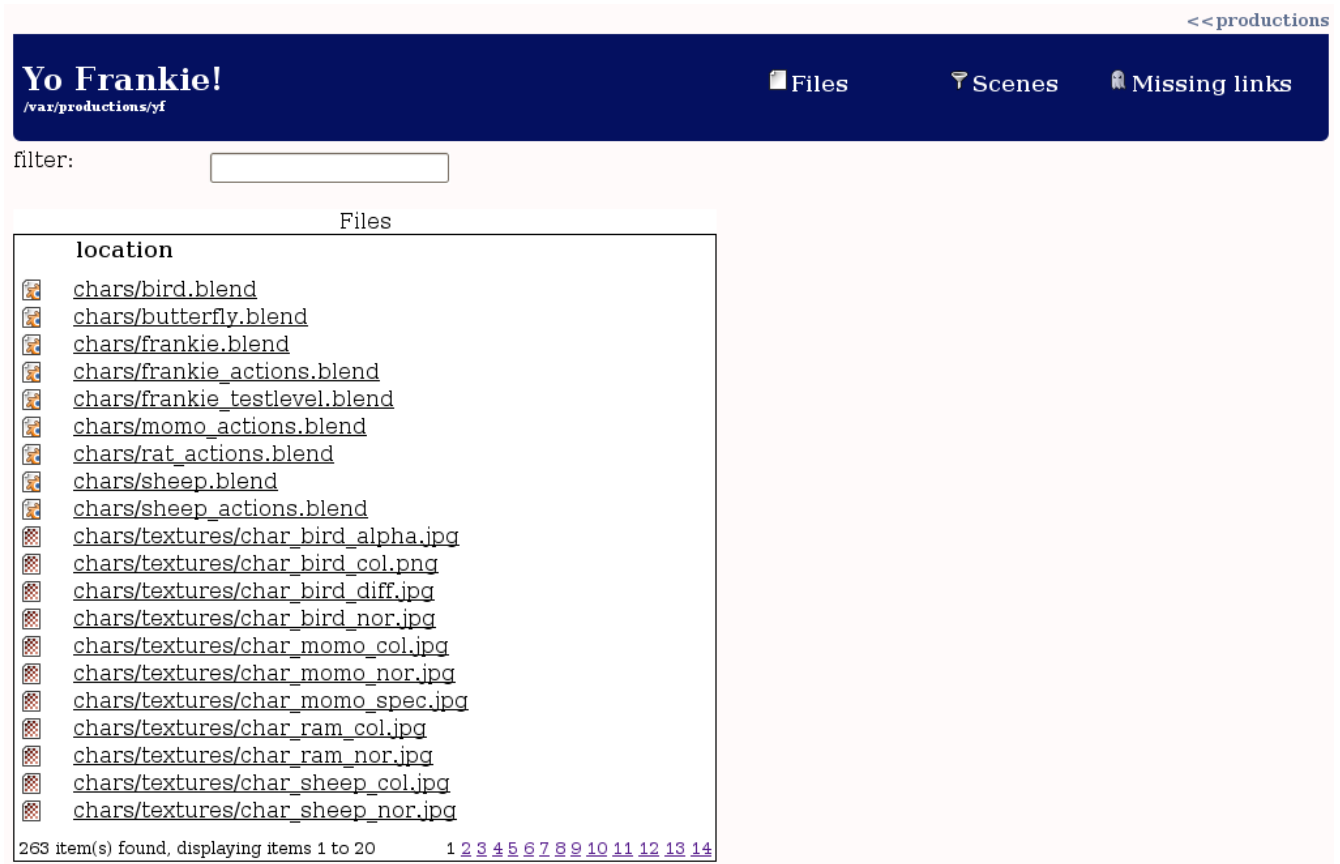
The location of the production “Yo Frankie!” on the location “/var/productions/yf” is not known by Blender-aid. Blender-aid will extract the technical data from this location and be able to display it to you.

Now click on your newly added production (“Yo Frankie!”) and the popup will close.

We have to wait for halve a minute or so, depending on the speed of your computer. Blender-aid inspects all production files and will store this information in a database. This process is called indexing. Indexing normally takes up to a few seconds, but when a lot of changes happen, it can take longer.

When indexing is done the screen will look like this:

Now you are ready to use the tool.



## Production-view

The production view is the screen as displayed above. It contains information of the selected production. The view contains 3 choices in the header.

- Files – displays a list of production files. It has a filter for quick finding of a specific production file.
- Scenes – display a list of all scenes in the production. It can be used to find and align render settings.
- Missing links – display a list of all missing links between files.

When pressing on a link in a tab you will be show detailed information of the file. This will be described in the File-view section

## Production-view Files












The files tab displays files from the selected production.



filter:

## Files

**location**

-  [chars/bird.blend](#)
-  [chars/butterfly.blend](#)
-  [chars/frankie.blend](#)
-  [chars/frankie\\_actions.blend](#)
-  [chars/frankie\\_testlevel.blend](#)
-  [chars/momo\\_actions.blend](#)
-  [chars/rat\\_actions.blend](#)
-  [chars/sheep.blend](#)
-  [chars/sheep\\_actions.blend](#)
-  [chars/textures/char\\_bird\\_alpha.jpg](#)
-  [chars/textures/char\\_bird\\_col.png](#)
-  [chars/textures/char\\_bird\\_diff.jpg](#)
-  [chars/textures/char\\_bird\\_nor.jpg](#)
-  [chars/textures/char\\_momo\\_col.jpg](#)
-  [chars/textures/char\\_momo\\_nor.jpg](#)
-  [chars/textures/char\\_momo\\_spec.jpg](#)
-  [chars/textures/char\\_ram\\_col.jpg](#)
-  [chars/textures/char\\_ram\\_nor.jpg](#)
-  [chars/textures/char\\_sheep\\_col.jpg](#)
-  [chars/textures/char\\_sheep\\_nor.jpg](#)

263 item(s) found, displaying items 1 to 20

1 [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) [12](#) [13](#) [14](#)

The filter can be used to search for a specific files.

## Production-view Scenes

The scenes tab has a advanced filter. You can match every files to criteria.

In the section Columns you'll be able to view additional information of the scene.

<< productions

Yo Frankie!

 Files
 **Scenes**
 Missing links

### Filter

☐ filter filename  and scene name .

☐ find scenes which uses 600x600 as resolution.

☐ find scenes with output not using 25% size reduction

☐ find scenes what saves to EXR

☐ find all scenes using less than 100 threads/xy-parts

☐ not saved in blender version 2.49

☐ display only active scenes

### Columns

☒ basic file and scene information (filename, scene name)

☐ blender information (blender version, pointersize, endianness, compression)

☒ scene output information (resolution, size, output type)

☐ scene frame information (frame step, start frame, end frame)

☐ scene optimalization information (rt, xparts, yparts)

blendfile	scene	resolution	size	output
<a href="#">chars/bird.blend</a>	SCScene	1920x1920	50%	PNG
<a href="#">chars/butterfly.blend</a>	SCScene	800x600	100%	TGA
<a href="#">chars/butterfly.blend</a>	SCtest_group	800x600	100%	TGA
<a href="#">chars/frankie.blend</a>	SCfrank_logic	640x480	75%	PNG
<a href="#">chars/frankie_actions.blend</a>	SCfrank_logic	640x640	75%	PNG
<a href="#">chars/frankie_testlevel.blend</a>	SCScene	800x600	100%	JPEG
<a href="#">chars/momo_actions.blend</a>	SCScene	800x600	100%	JPEG
<a href="#">chars/rat_actions.blend</a>	SCScene	800x600	100%	JPEG
<a href="#">chars/sheep.blend</a>	SCsheep_logic	1920x1080	25%	PNG
<a href="#">chars/sheep_actions.blend</a>	SCsheep	1920x1080	25%	PNG

Production-view Missing links

When viewing the missing links you'll be shown a table with all missing links in the production. At the moment these links are only missing file links. In the future this can be enhanced with missing elements.

<<productions

Yo Frankie!  
/var/productions/yf

FilesScenesMissing links

The following files are referenced, but not found.

Missing links			
missing file	used by	actions	
franci_test/textures/prop_bridge_col.png	<a href="#">franci_test/cerf_volant.blend</a>	<a href="#">Fix it</a>	
textures/level_lighthouse/yo_frankie_a.png	<a href="#">franci_test/cerf_volant.blend</a>	<a href="#">Fix it</a>	
textures/level_lighthouse/bombo.png	<a href="#">franci_test/bumblebee.blend</a>	<a href="#">Fix it</a>	
c:\Program Files\Blender Foundation\Blender2.48\blender\yofrankie\bf_assets\textures\bombo.png	<a href="#">franci_test/bumblebee.blend</a>	<a href="#">Fix it</a>	
../chars/textures/flyingsquirrel_skin_col.png	<a href="#">franci_test/bumblebee.blend</a>	<a href="#">Fix it</a>	
../chars/textures/flyingsquirrel_skin_nor.png	<a href="#">franci_test/bumblebee.blend</a>	<a href="#">Fix it</a>	
../chars/textures/flyingsquirrel_skin_spec.png	<a href="#">franci_test/bumblebee.blend</a>	<a href="#">Fix it</a>	
../chars/textures/frankie_tail2.png	<a href="#">franci_test/bumblebee.blend</a>	<a href="#">Fix it</a>	
../chars/textures/radialblend_01.png	<a href="#">franci_test/bumblebee.blend</a>	<a href="#">Fix it</a>	
../textures/prop_beehive_nor.png	<a href="#">props/bee_hive.blend</a>	<a href="#">Fix it</a>	
textures/ivory.png	<a href="#">props/catapults.blend</a>	<a href="#">Fix it</a>	
C:/Program Files/Blender Foundation/3d downloads/yofrankie_bge/blender_game_engine/textures/Untitled.tga	<a href="#">levels/level_underworld.blend</a>	<a href="#">Fix it</a>	

12 item(s) found, displaying items 1 to 12

When clicking on “Fix it” a popup will appear with possible links what can be made. These options are sorted by relevance

FilesScenesMissing links

Select the link

file	match
<a href="#">textures/prop_bridge_col.png</a>	100 %
<a href="#">chars/textures/char_bird_col.png</a>	50 %
<a href="#">chars/textures/frankie_tail2.png</a>	50 %
<a href="#">chars/textures/radialblend_01.png</a>	50 %
<a href="#">dist/yofrankie.png</a>	50 %
<a href="#">effects/lightball.png</a>	50 %
<a href="#">effects/shadow.png</a>	50 %
<a href="#">franci_test/textures/bombo.png</a>	50 %
<a href="#">franci_test/textures/yo_frankie_a.png</a>	50 %
<a href="#">hud/franky_health.png</a>	50 %


207 item(s) found, displaying items 1 to 10

123456789101112131415161718192021

The relevance is determined by the name of the file (missing texture link) or by the usage of the file (missing blend link)  
After selecting an option the next screen will appear to fix the link

## Re-factoring

### Tasks

file	description	state
 franci_test/cerf_volant.blend	Change library reference to [textures/prop_bridge_col.png]	Created
1 item(s) found		

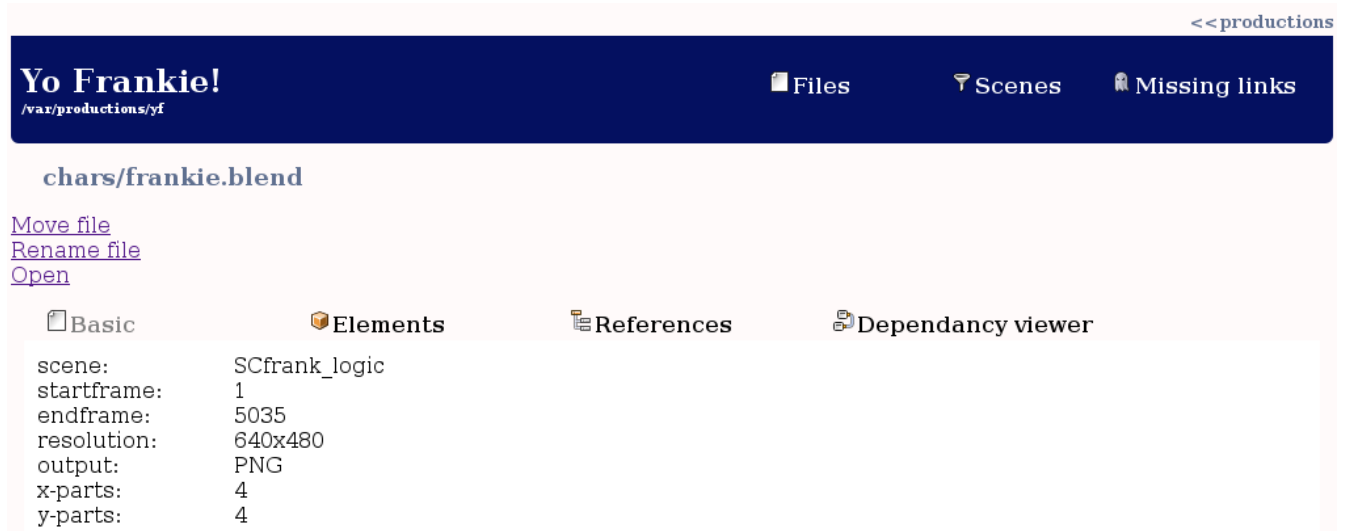
[Cancel](#) [Continue](#)

Press continue to perform these tasks or press cancel to return to the production-view

After continue the tasks will be performed and you will be asked to rollback or commit the changes. Before you continue, please test the result. After a commit or rollback you will be show the production-view

## File-view

When clicking on a file in the production view you will get information about the file. This section describes this.



A file is show together with

- Local link – location to the file on the local file system for quick opening of the file
- Rename – Rename the file.
- Move – Move a file to another location in the production

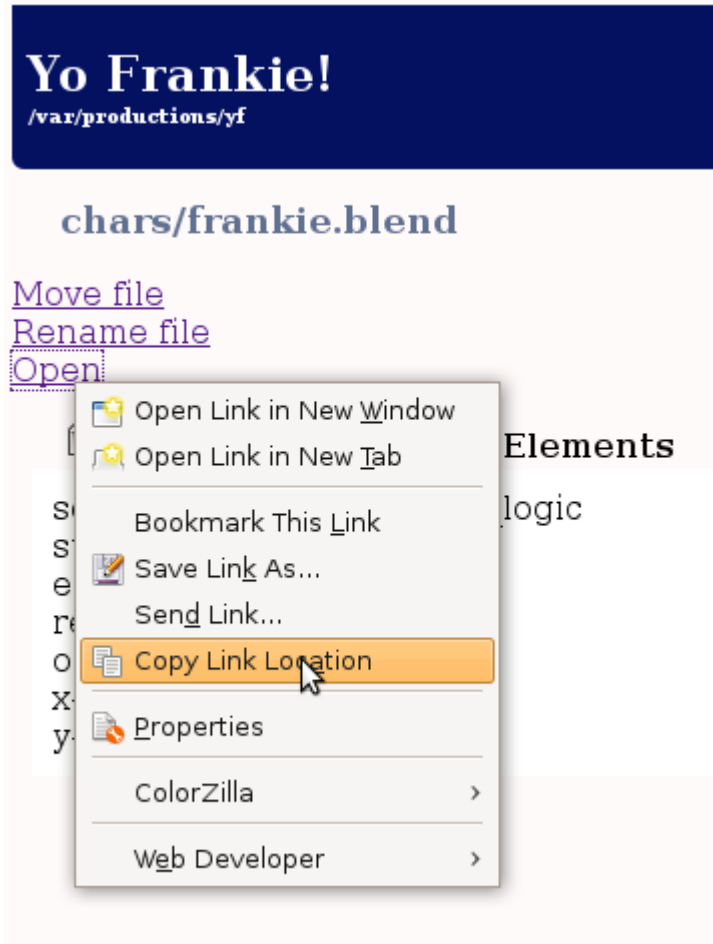
Next to this information 4 tabs are displayed:

- Basic – some basic information about the file.
- Elements – the elements inside a blender file
- References – references between files
- Dependancy viewer – advanced production reference viewer

## File-view Local link

With local link it is possible to quickly open the file on your system. Due to security reasons this has to be done using the following steps.

1. Press other mouse button on the link and choose Copy Link Location.



2. Depending on your OS start the run command (Alt-f2 on Ubuntu)

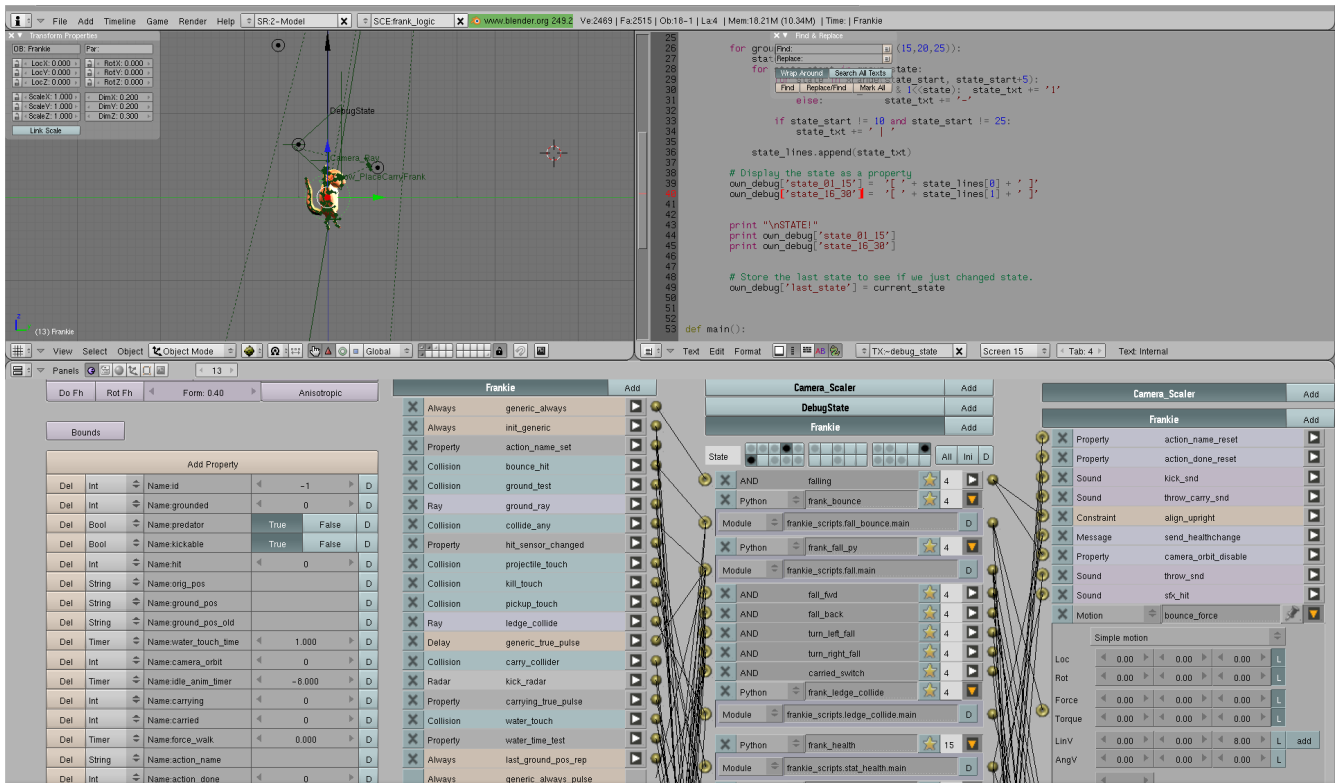


3. Press Paste

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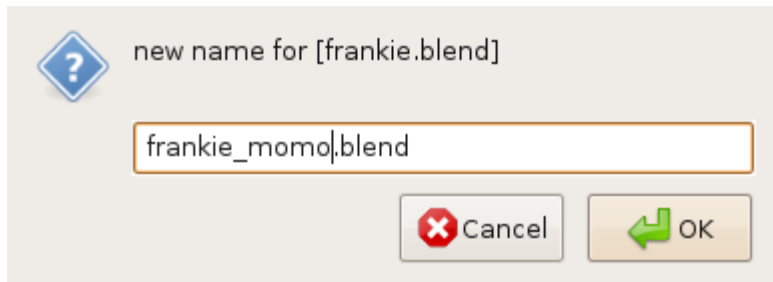
### 4. Press Run

blender will be started with the file depending on the configuration of your machine.



### File-view Rename file

When pressing on rename file a popup will be shown asking you to enter the new filename



Enter new name and press OK. A screen will be displayed showing you what will be done

## Re-factoring

### Tasks

file	description	state
❏ franci_test/cerf_volant.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/level_nut.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/minilevel_release_Demo.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/level_1_home.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/library.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/minilevel_the_Arena.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/minilevel_ratpack.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/minilevel_demo_arena3.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/minilevel_lava_Falls.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/level_selector.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/level_selector_other.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/level_underworld.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/level_lighthouse.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ levels/start_menu.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ chars/momo_actions.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ chars/frankie_actions.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ chars/frankie_testlevel.blend	Change library reference [frankie.blend] to [frankie_momo.blend]	Created
❏ chars/frankie.blend	Rename [frankie.blend] to [frankie_momo.blend]	Created

18 item(s) found

[Cancel](#) [Continue](#)

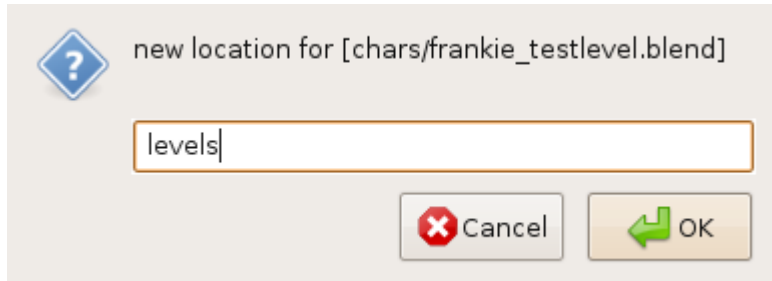
Press continue to perform these tasks or press cancel to return to the file-view

After continue the tasks will be performed and you will be asked to rollback or commit the changes. Before you continue, please test the result of the rename. After a commit or rollback you will be show the production-view



## File-view Move file

When pressing on move file a popup will be shown asking you to enter the new location



Enter new location and press OK. A screen will be displayed showing you what will be done

### Re-factoring

Tasks		
file	description	state
⊗ chars/frankie_testlevel.blend	Move file [chars/frankie_testlevel.blend] to [levels/frankie_testlevel.blend]	Created
1 item(s) found		
<a href="#">Cancel</a> <a href="#">Continue</a>		

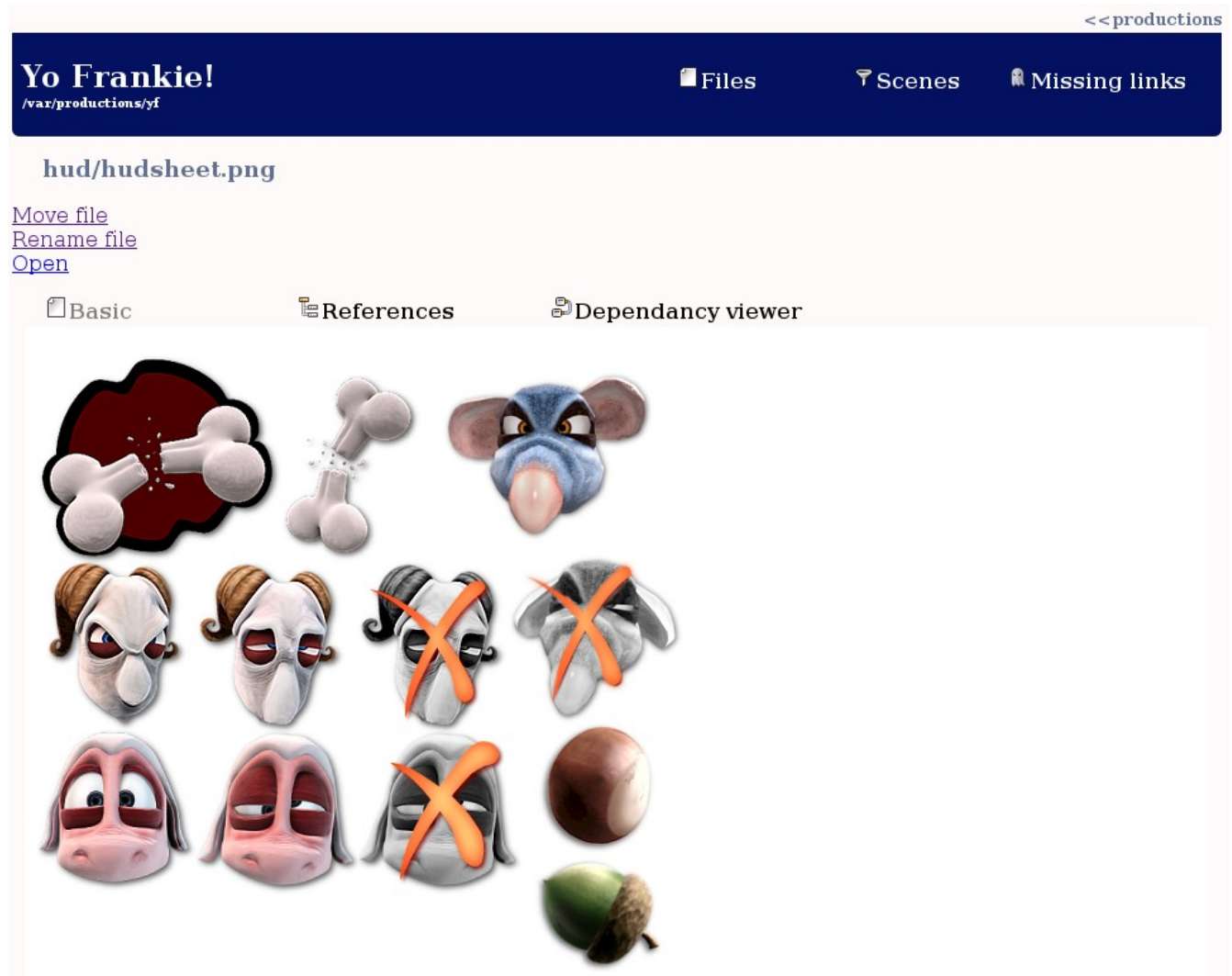
Press continue to perform these tasks or press cancel to return to the file-view

After continue the tasks will be performed and you will be asked to rollback or commit the changes. Before you continue, please test the result of the rename. After a commit or rollback you will be show the production-view

## File-view Basic tab

The basic tab will display some basic information of the file. When the file is a texture a thumbnail will be displayed. For a blend file render information of the active scene will be shown.

When clicking on the image, the image will be downloaded or opened in your browser depending your browser-settings.



## File-view Elements tab

The elements tab is only visible for blend files. It shows blender elements inside the file

# Yo Frankie!

/var/productions/yf

chars/frankie.blend

[Move file](#)  
[Rename file](#)  
[Open](#)

Basic

Elements

Refs

filter:

Elements

	type	name	actions
	SC	SCfrank_logic	<a href="#">Rename</a>
	MA	MAflyingsquirrel_eye	<a href="#">Rename</a>
	MA	MAfrankie_skin	<a href="#">Rename</a>
	MA	MAfrankie_theeth	<a href="#">Rename</a>
	MA	MAfranky_physics_mat	<a href="#">Rename</a>
	MA	MAmomo_skin_body	<a href="#">Rename</a>
	MA	MAmomo_skin_eyelid	<a href="#">Rename</a>
	MA	MAmomo_skin_eyes	<a href="#">Rename</a>
	MA	MAtail_alpha	<a href="#">Rename</a>
	MA	MAtail_col	<a href="#">Rename</a>
	OB	OB1	<a href="#">Rename</a>
	OB	OB2	<a href="#">Rename</a>
	OB	OBCamera_Ray	<a href="#">Rename</a>
	OB	OBCamera_Scaler	<a href="#">Rename</a>
	OB	OBDebugState	<a href="#">Rename</a>
	OB	OBFrankie	<a href="#">Rename</a>
	OB	OBFrankieInputJoy	<a href="#">Rename</a>
	OB	OBFrankieInputKB	<a href="#">Rename</a>
	OB	OBfx_blast	<a href="#">Rename</a>
	OB	OBLamp.002	<a href="#">Rename</a>

63 item(s) found, displaying items 1 to 20

1
2
3
4

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It has a filter to quickly find a specific element in the file. And the possibility to rename an element

When rename is clicked a popup will appear asking for a new name



Enter new location and press OK. A screen will be displayed showing you what will be done

Press continue to perform these tasks or press cancel to return to the file-view

After continue the tasks will be performed and you will be asked to rollback or commit the changes. Before you continue, please test the result of the rename. After a commit or rollback you will be show the production-view

## Re-factoring

### Tasks

file	description	state
franci_test/cerf_volant.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/level_nut.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/minilevel_release_Demo.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/level_1_home.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/library.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/minilevel_the_Arena.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/minilevel_ratpack.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/minilevel_demo_arena3.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/minilevel_lava_Falls.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/level_selector.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/level_selector_other.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/level_underworld.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
levels/level_lighthouse.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
chars/frankie_testlevel.blend	Change element reference [GRFlyingSquirrel] to [GRFrankie]	Created
chars/frankie.blend	Rename element [GRFlyingSquirrel] to [GRFrankie]	Created

15 item(s) found

[Cancel](#) [Continue](#)

## File-view References tab

The reference tab shows all links to other files and all links that other files have to the current selected file

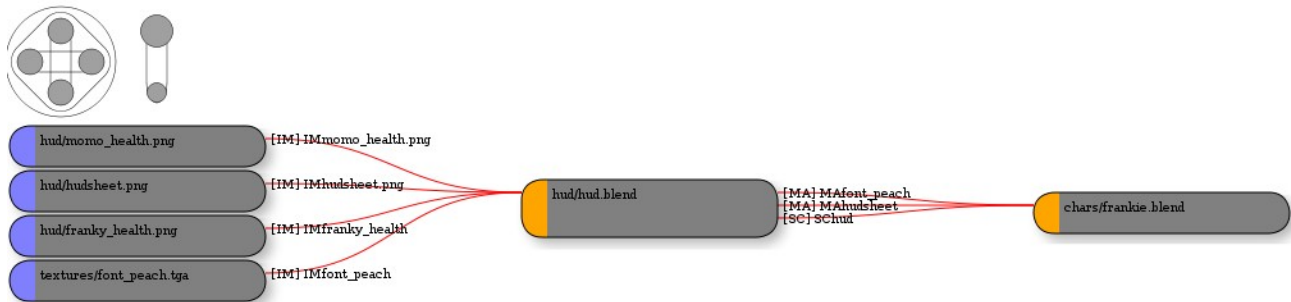


[Show graphical view](#)

References		
file	type	name
<a href="#">textures/generic_redrock_nor.jpg</a>	IM	IMgeneric_redrock_nor.p
<a href="#">textures/stone_cliff_tile_001_col.jpg</a>	IM	IMstone_cliff_tile_001_
2 item(s) found, displaying items 1 to 2		

File is used by		
file	type	name
<a href="#">levels/level_underworld.blend</a>	GR	GRcave_entrance
1 item(s) found, displaying items 1 to 1		

It also has the ability to show a graphical display of the file in with their direct neighbour files.



The buttons on the top-left enable you to move and to zoom the graphical display.

TODO: how to read the graphical display.

File-view Dependency viewer tab

The dependancy viewer tab is an advanced version of the references tab.

It has filter options of certain blender elements (show only groups, or groups and materials) and it has the ability to look broader than only direct linked files. It also has a function to view all references in the total production.

BasicElementsReferencesDependency viewer

settings

neighbour

☐ All

☐ Object

☒ Material

☐ Mesh

☐ Texture

☐ Lamp

☐ Armature

☐ Action

☐ Particle

☒ Group

☐ Camera

☐ World

☐ Image

graphical display

☐ Show detailed file reference information

Show graph

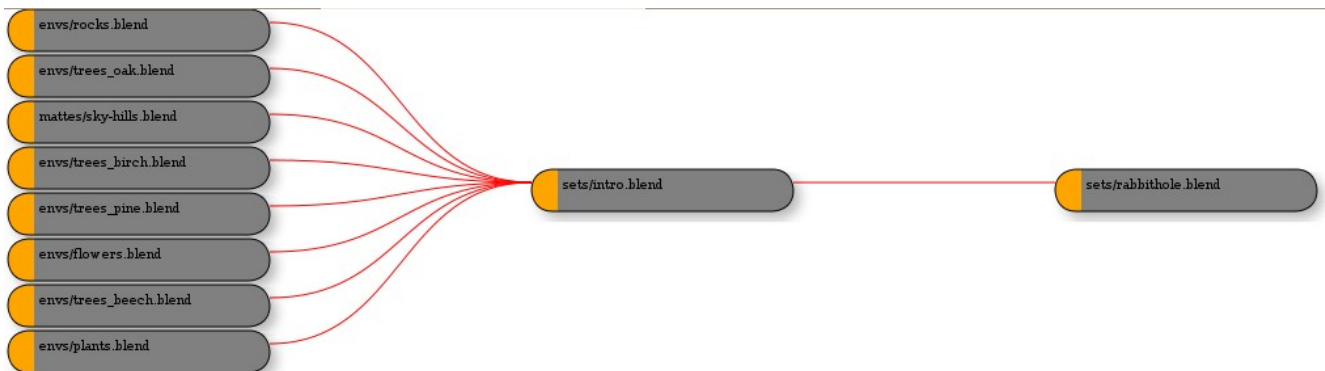
result

file	references	type	element
<a href="#">franci_test/cerf_volant.blend</a>	<a href="#">chars/frankie.blend</a>	GR	GRFlyingSquirrel
<a href="#">levels/level_nut.blend</a>	<a href="#">chars/frankie.blend</a>	GR	GRFlyingSquirrel
<a href="#">levels/level_nut.blend</a>	<a href="#">chars/frankie.blend</a>	GR	GRMomoMonkey
<a href="#">levels/level_nut.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAfrankie_skin
<a href="#">levels/level_nut.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAtail_col
<a href="#">levels/level_nut.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAtail_alpha
<a href="#">levels/level_nut.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAflyingsquirrel_eye
<a href="#">levels/level_nut.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAfrankie_theeth
<a href="#">levels/minilevel_release_Demo.blend</a>	<a href="#">chars/frankie.blend</a>	GR	GRFlyingSquirrel
<a href="#">levels/minilevel_release_Demo.blend</a>	<a href="#">chars/frankie.blend</a>	GR	GRMomoMonkey
<a href="#">levels/minilevel_release_Demo.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAfranky_physics_mat
<a href="#">levels/minilevel_release_Demo.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAmomo_skin_body
<a href="#">levels/minilevel_release_Demo.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAmomo_skin_eyelid
<a href="#">levels/minilevel_release_Demo.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAmomo_skin_eyes
<a href="#">levels/minilevel_release_Demo.blend</a>	<a href="#">chars/frankie.blend</a>	MA	MAfrankie_skin

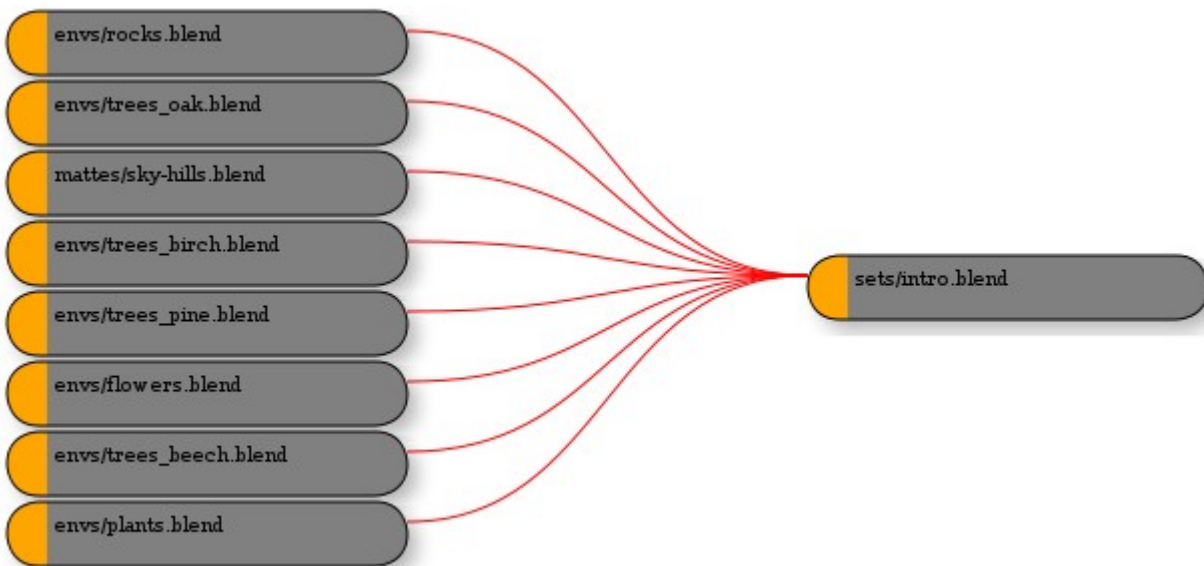
the dropdown list has 4 options. (neighbour, uses, used, production)

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Neighbour	Shows only direct relations to and from the selected file. (example: texture, character, scene, when character is selected)
Uses	Will show all relations (and files) the selected file depends on. (example: texture, character, when character is selected)
Used	Will show all relations (and files) what depends on the selected file (example: character, scene, when character is selected)
Production	Show all relations between all files from the production.



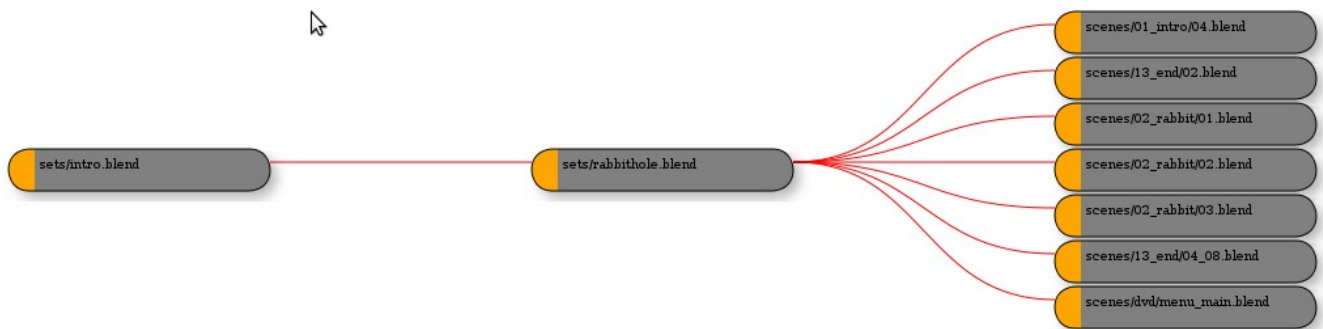
Neighbours of “sets/intro.blend”



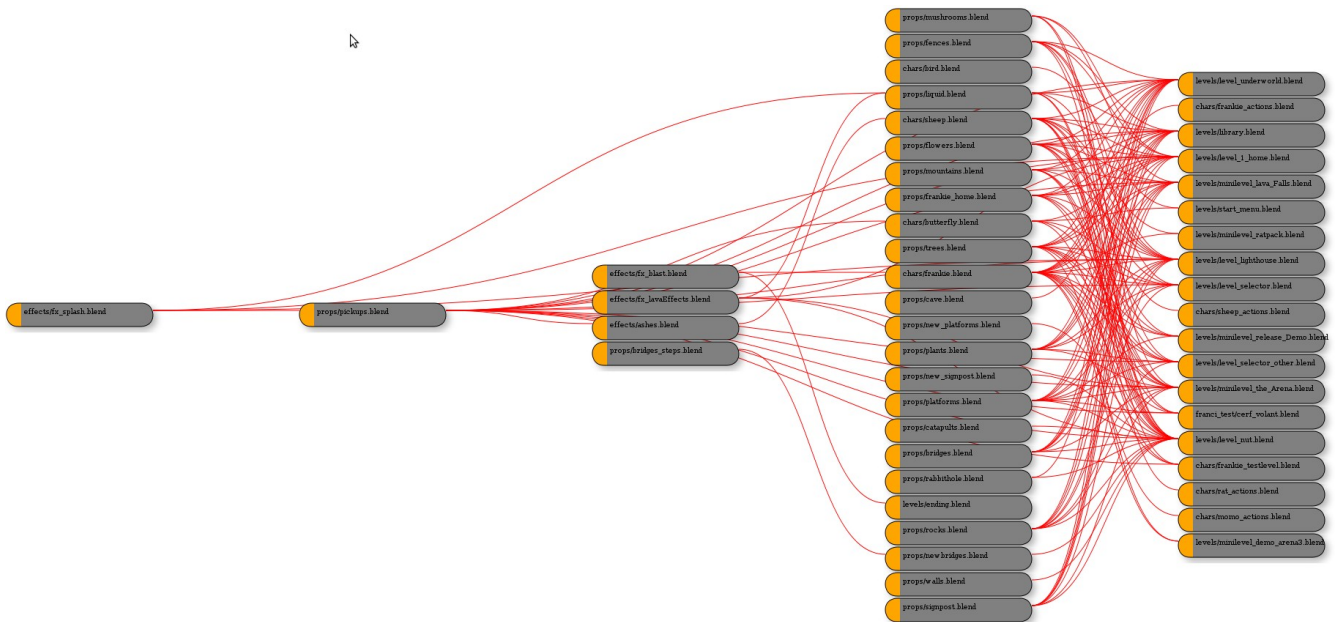
All uses of “sets/intro.blend”



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All used of “sets/intro.blend”



View complete production

Beneath the dropdown list it is possible to filter the relations (not show unselected relations)



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- ☐ All
- ☐  Object
- ☒  Material
- ☐  Mesh
- ☐  Texture
- ☐  Lamp
- ☐  Armature
- ☐  Action
- ☐  Particle
- ☒  Group
- ☐  Camera
- ☐  World
- ☐  Image

When “All” is selected the other selections are not shown.