Blender-aid v0.1 (released on Blender conference 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
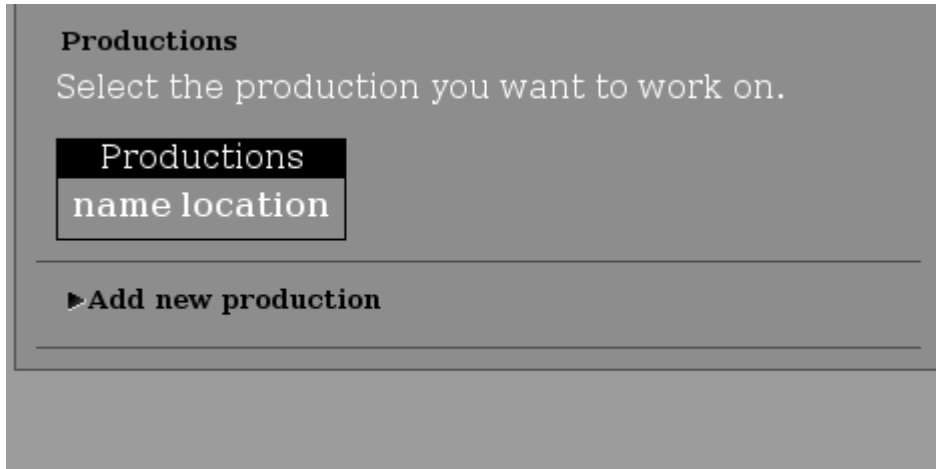- Python 2.5 with simplejson module installed

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.
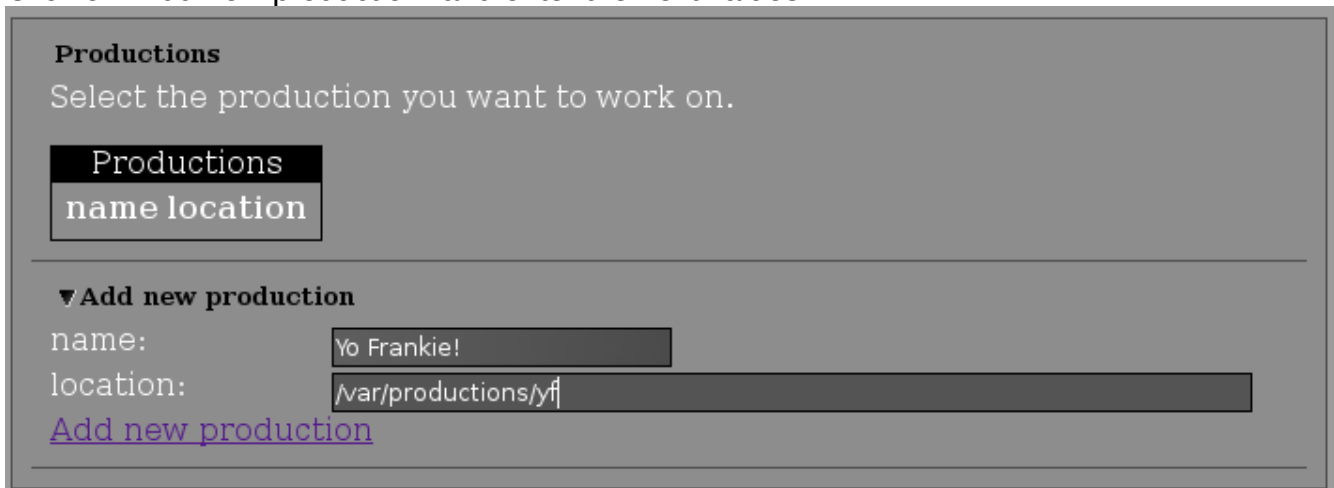
After the splash screen you will be on the next page

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

Click on "Add new production" and enter the next values

After clicking on the link "Add new production". 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 press in the table named productions on "Yo Frankie!" A new screen will be displayed.

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:

Production

name: Yo Frankie!
location: /var/productions/yf

⬆ Productions

🗋 Files   ▽ Scenes   🔗 Missing links

filter:

	Files
	location
🔧	chars/bird.blend
🔧	chars/butterfly.blend
🔧	chars/frankie_actions.blend
🔧	chars/frankie_momo.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
🖼	chars/textures/char_sheep_spec.jpg

263 item(s) found, displaying items 1 to 20   1 2 3 4 5 6 7 8 9 10 11 12 13 14

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 tabs.

- 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 tab

The files tab displays files from the selected production.
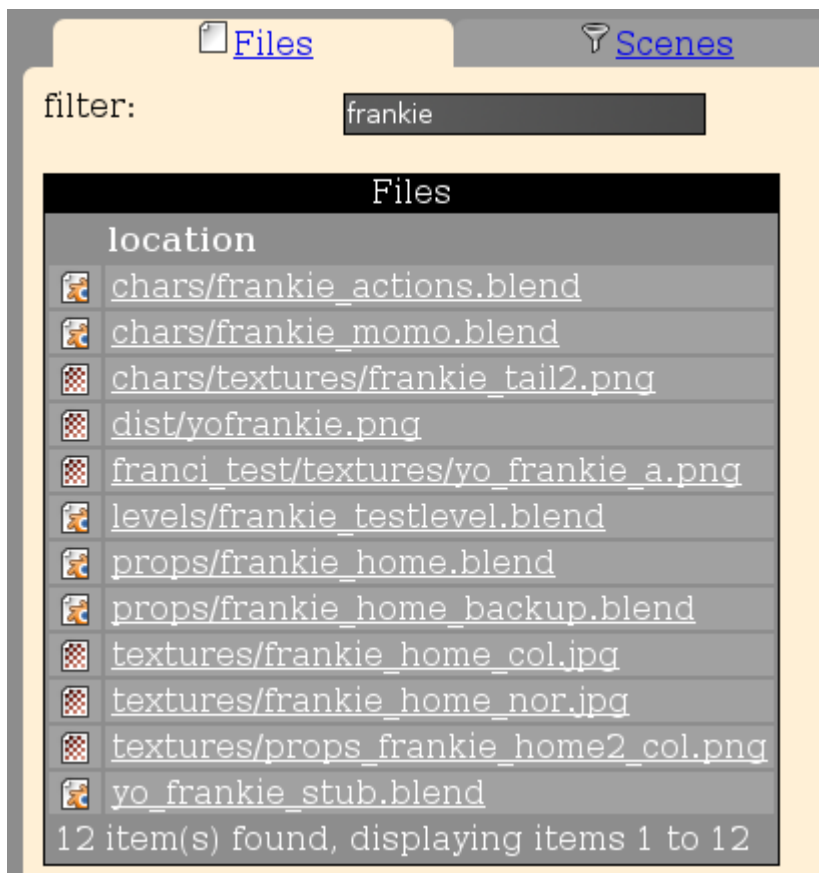
The filter can be used to search for a specific file. In the screenshot above only files containing "frankie" will be displayed.

Production-view Scenes tab

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

When clicking on Facets, you'll be able to view additional information of the scene.

Production-view Missing links tab

The following files are referenced, but not found.

Missing links	
missing file	**used by**
▣ franci_test/textures/prop_bridge_col.png	franci_test/cerf_volant.blend
▣ textures/level_lighthouse/yo_frankie_a.png	franci_test/cerf_volant.blend
▣ textures/level_lighthouse/bombo.png	franci_test/bumblebee.blend
▣ c:\Program Files\Blender Foundation\Blender2.48\.blender\yofrankie\bf_assets\textures\bombo.png	franci_test/bumblebee.blend
▣ ../chars/textures/flyingsquirrel_skin_col.png	franci_test/bumblebee.blend
▣ ../chars/textures/flyingsquirrel_skin_nor.png	franci_test/bumblebee.blend
▣ ../chars/textures/flyingsquirrel_skin_spec.png	franci_test/bumblebee.blend
▣ ../chars/textures/frankie_tail2.png	franci_test/bumblebee.blend
▣ ../chars/textures/radialblend_01.png	franci_test/bumblebee.blend
▣ ../textures/prop_beehive_nor.png	props/bee_hive.blend
15 item(s) found, displaying items 1 to 10 1 2	

When viewing the missing links tab 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.

File-view

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

```
Production
name:          Yo Frankie!
location:      /var/productions/yf
file:          chars/frankie_momo.blend Local link
refactor:      Move Rename
                                          ⟲ Productions  Back to Yo Frankie!

         Basic              Elements           References        Dependancy viewer
scene:         SCfrank_logic
startframe:    1
endframe:      5035
resolution:    640x480
output:        PNG
x-parts:       4
y-parts:       4
```
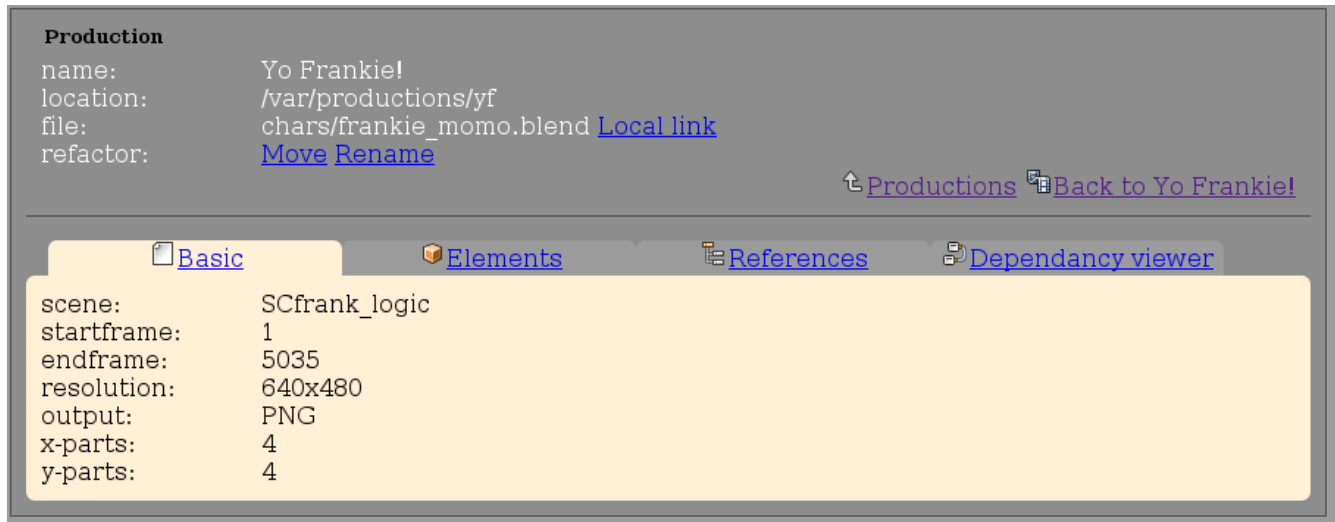
A file is show together with

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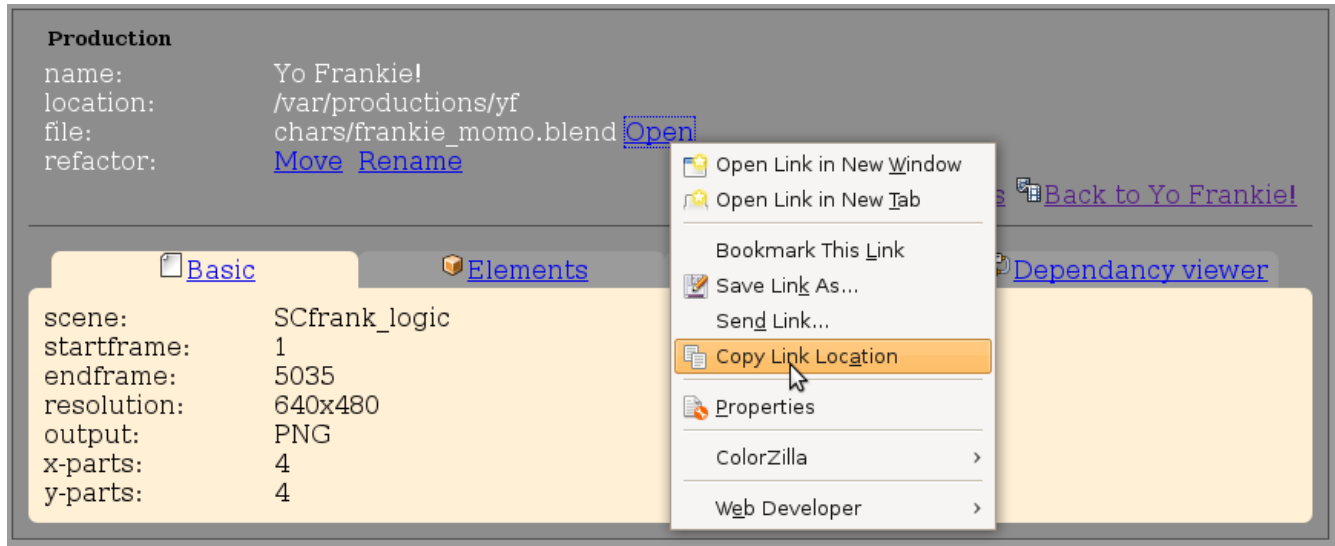
2. Depending on your OS start the run command (Alt-f2 on Ubuntu)
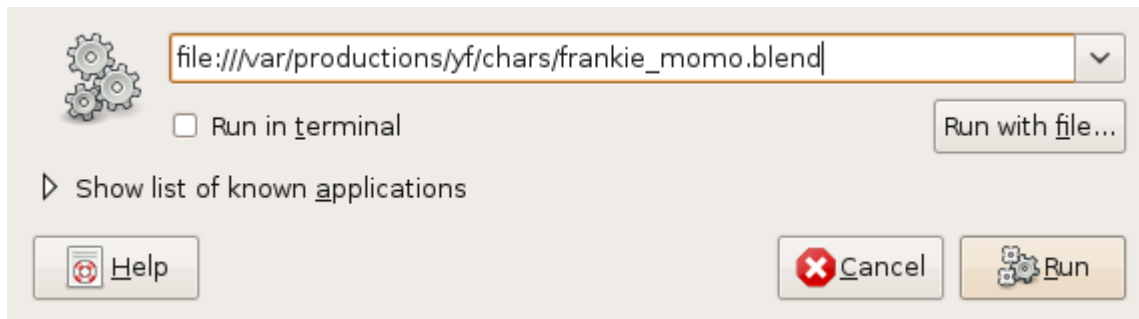
3. Press Paste

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

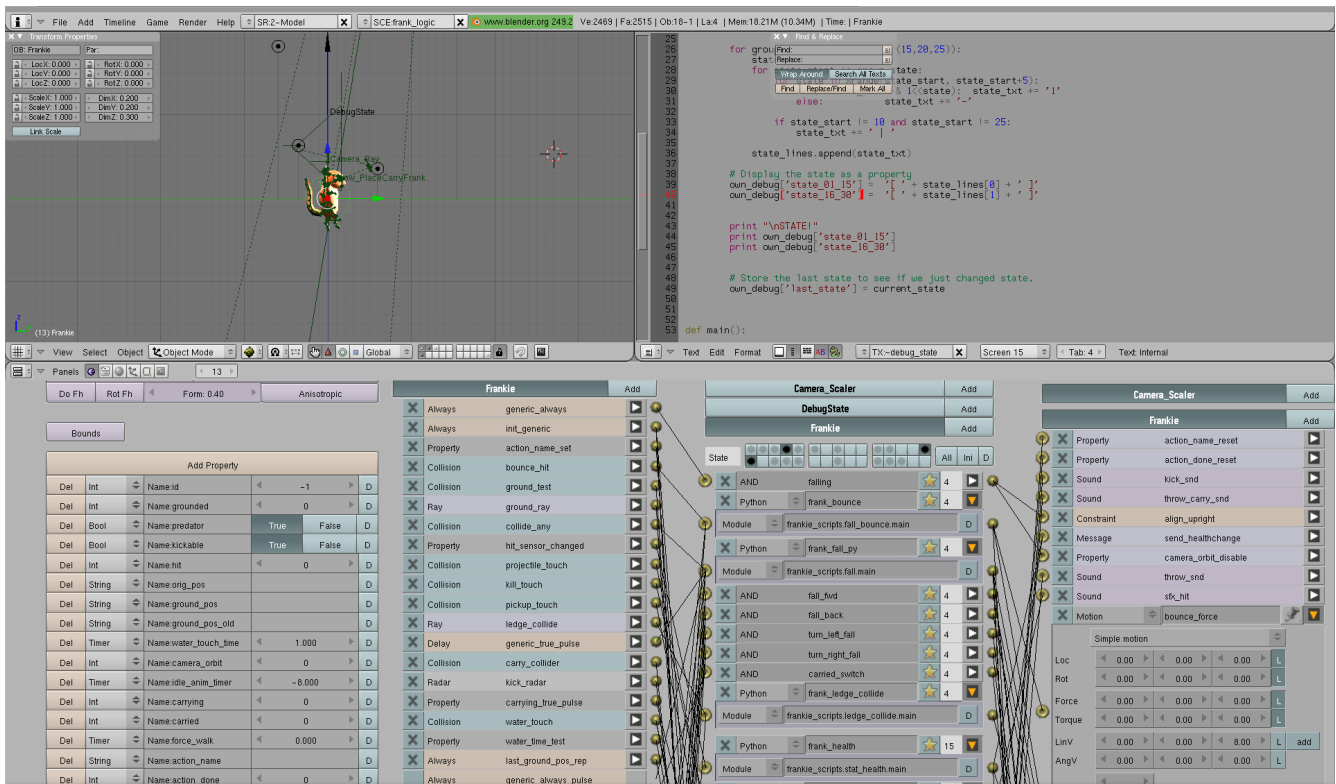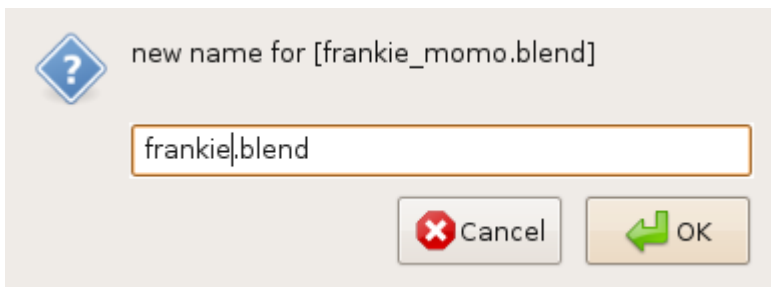| Tasks		
file	description	state
⚙ chars/frankie_momo.blend	Backup [chars/frankie_momo.blend]	Created
⚙ franci_test/cerf_volant.blend	Backup [franci_test/cerf_volant.blend]	Created
⚙ franci_test/cerf_volant.blend	Change library reference [frankie_momo.blend] to [frankie.blend]	Created
⚙ levels/level_nut.blend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

36 item(s) found

Cancel Continue (perform tasks)

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

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.

Production

name: Yo Frankie!
location: /var/productions/yf
file: hud/hudsheet.png Local link
refactor: Move Rename

⤴Productions ▣Back to Yo Frankie!

▢Basic   ▤References   ▣Dependancy viewer

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

	Basic	Elements	References	Dependancy viewer

filter: ▭

	type	name	actions
📷	SC	SCfrank_logic	Rename
●	MA	MAflyingsquirrel_eye	Rename
●	MA	MAfrankie_skin	Rename
●	MA	MAfrankie_theeth	Rename
●	MA	MAfranky_physics_mat	Rename
●	MA	MAmomo_skin_body	Rename
●	MA	MAmomo_skin_eyelid	Rename
●	MA	MAmomo_skin_eyes	Rename
●	MA	MAtail_alpha	Rename
●	MA	MAtail_col	Rename
🔶	OB	OB1	Rename
🔶	OB	OB2	Rename
🔶	OB	OBCamera_Ray	Rename
🔶	OB	OBCamera_Scaler	Rename
🔶	OB	OBDebugState	Rename
🔶	OB	OBFrankie	Rename
🔶	OB	OBFrankieInputJoy	Rename
🔶	OB	OBFrankieInputKB	Rename
🔶	OB	OBfx_blast	Rename
🔶	OB	OBLamp.002	Rename

63 item(s) found, displaying items 1 to 20   1 2 3 4

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

| | Basic | | Elements | | References | | Dependancy viewer |
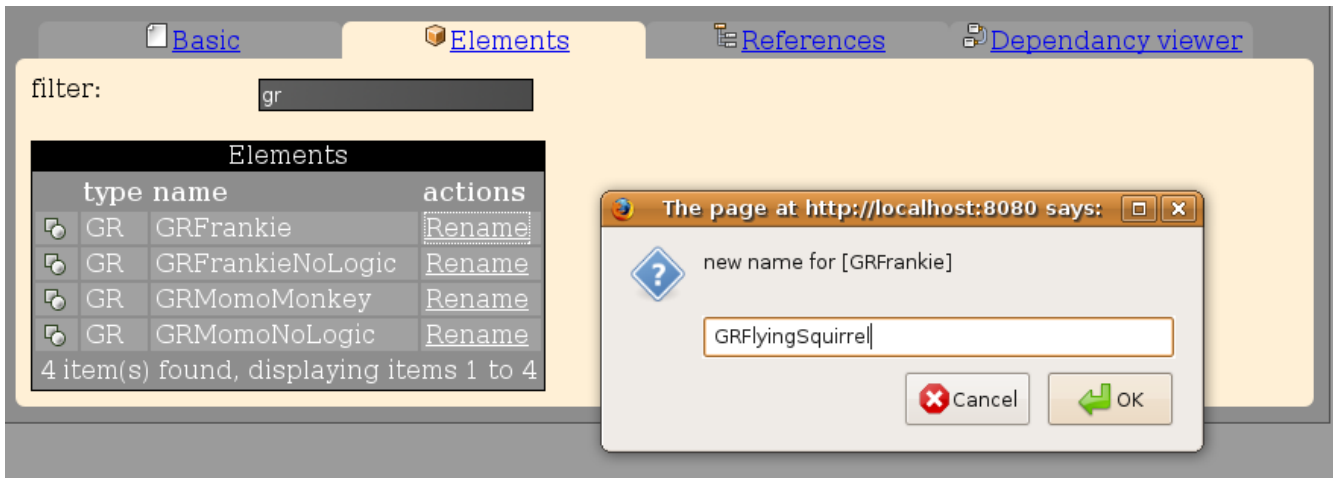
filter: gr

Elements

type	name	actions
GR	GRFrankie	Rename
GR	GRFrankieNoLogic	Rename
GR	GRMomoMonkey	Rename
GR	GRMomoNoLogic	Rename

4 item(s) found, displaying items 1 to 4

The page at http://localhost:8080 says:

new name for [GRFrankie]

GRFlyingSquirrel

Cancel   OK

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

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

30 item(s) found

Cancel Continue (perform tasks)

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
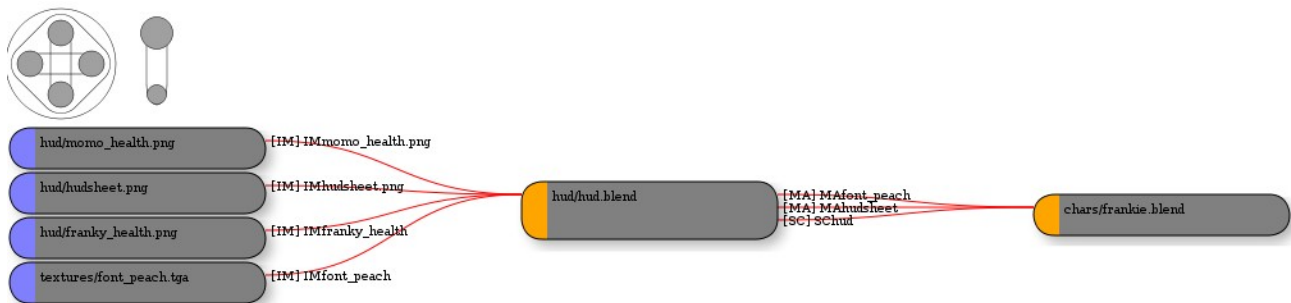
File-view References tab

The reference tab shows all links to other files and all links that other files have to the current selected file
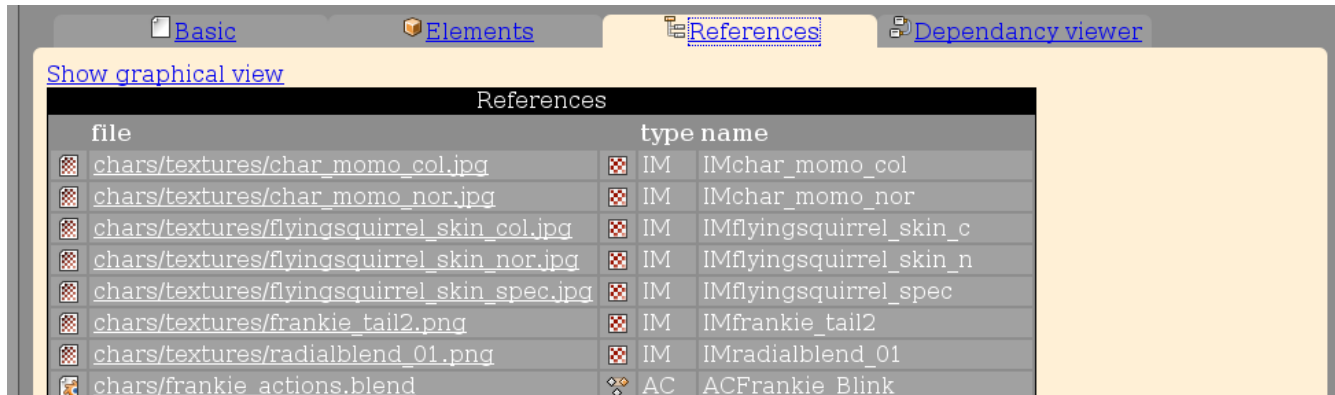
Skipped a part...
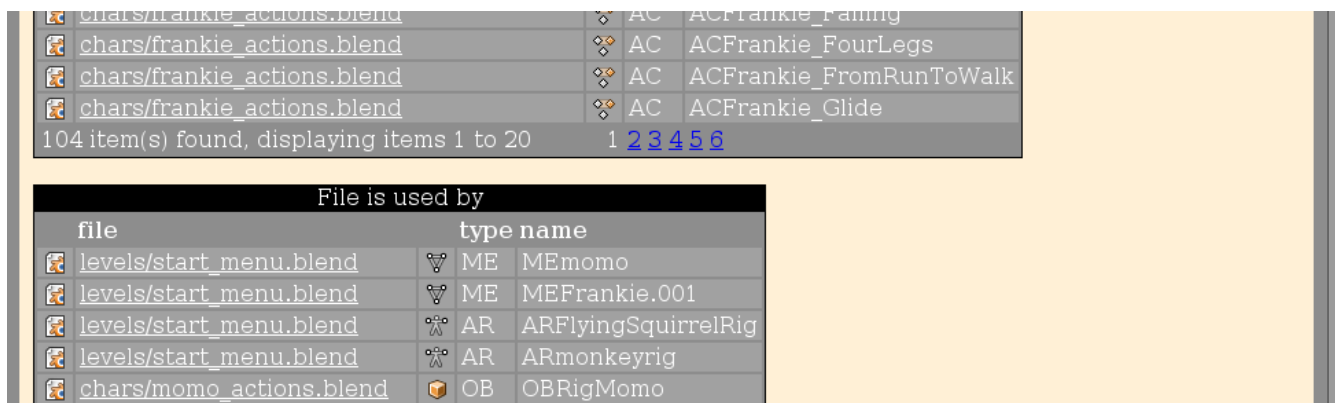
It also has the ability to show a graphical display of the file in with their direct neighbour files.


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 Dependancy 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.
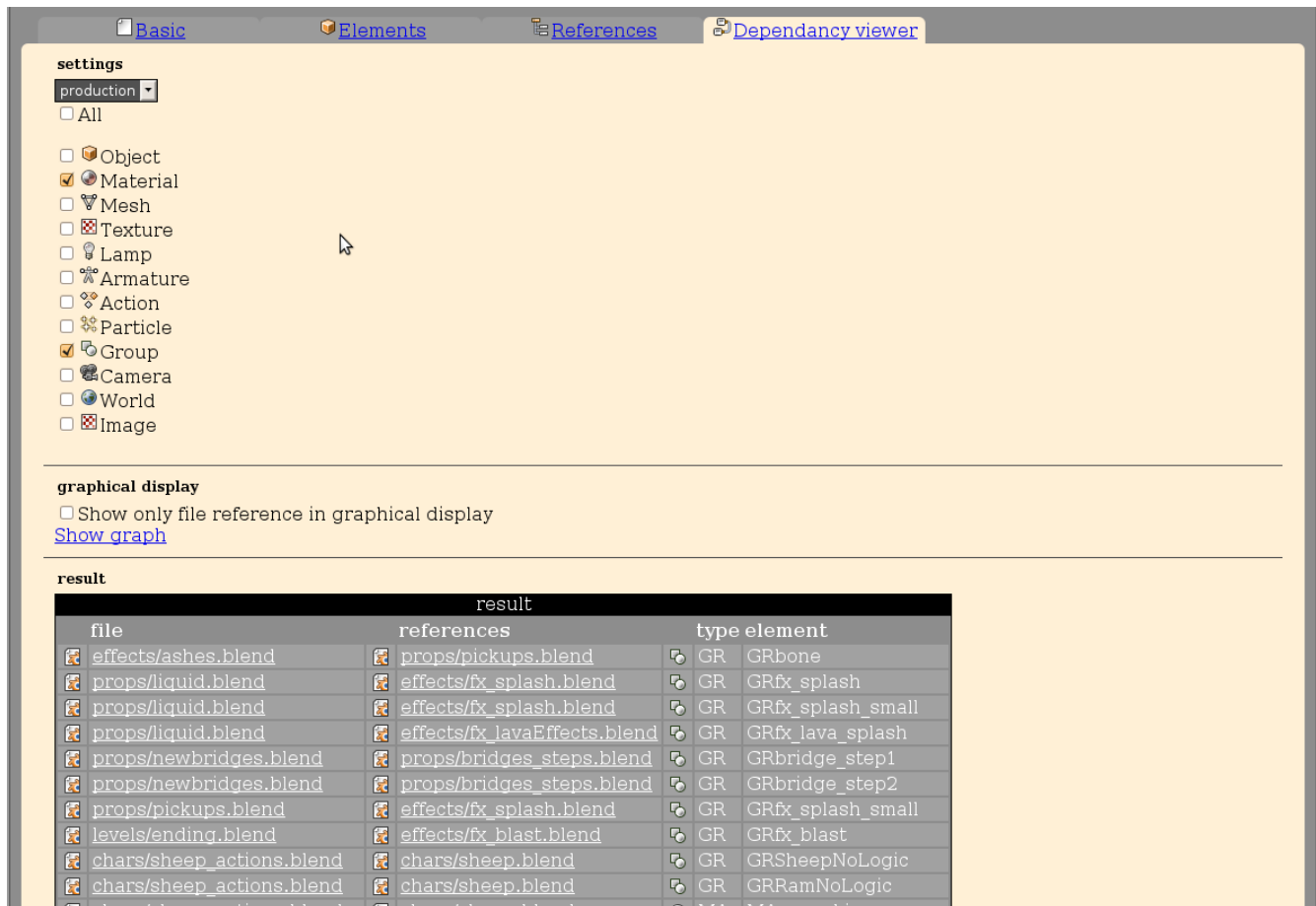

the dropdown list has 4 options. (neighbour, uses, used, production)

| 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)

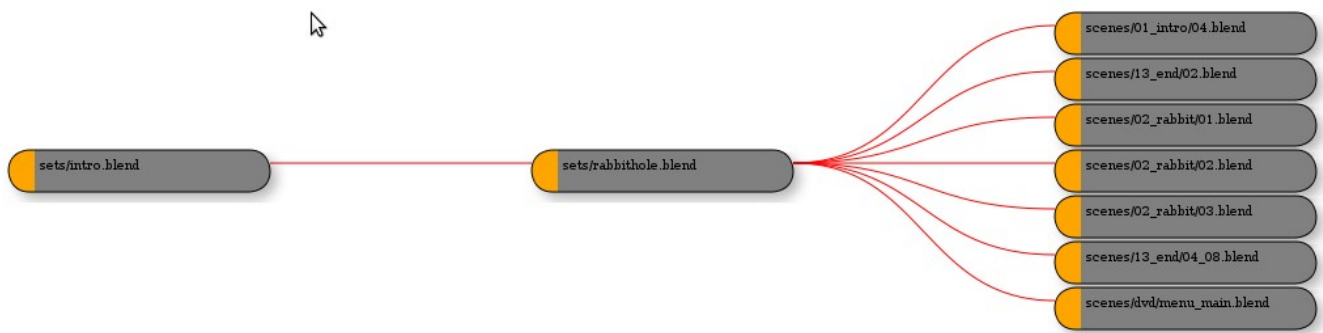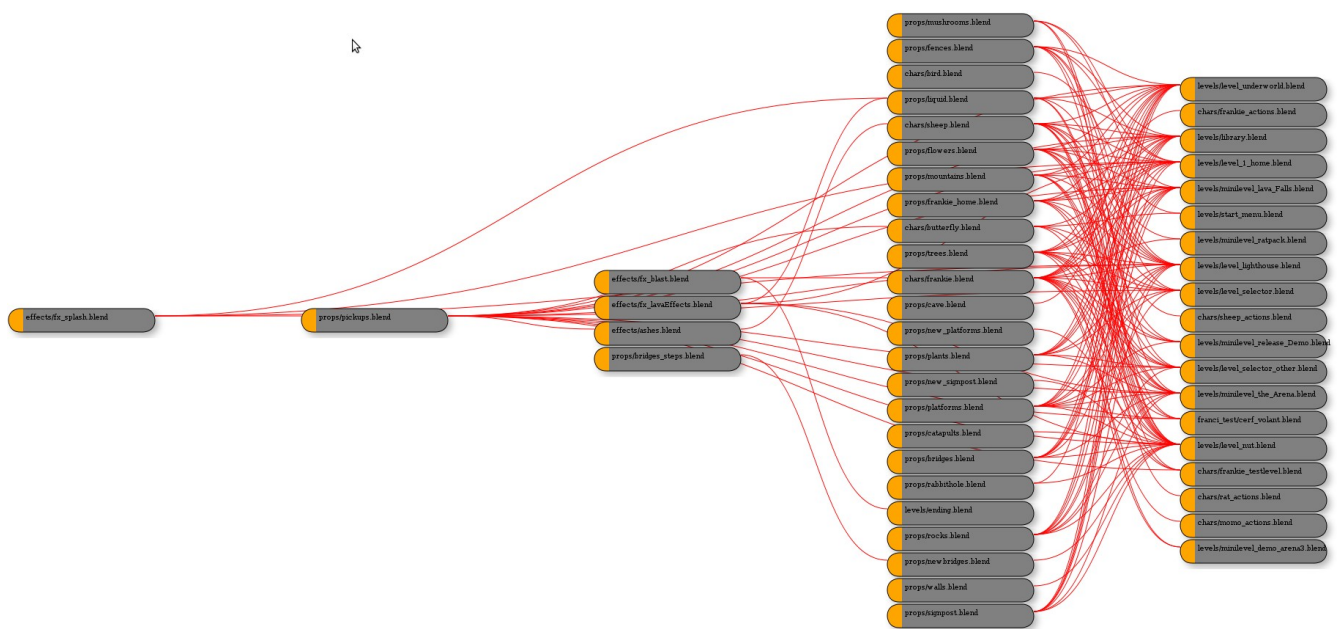| Production	Show all relations between all files from the production.
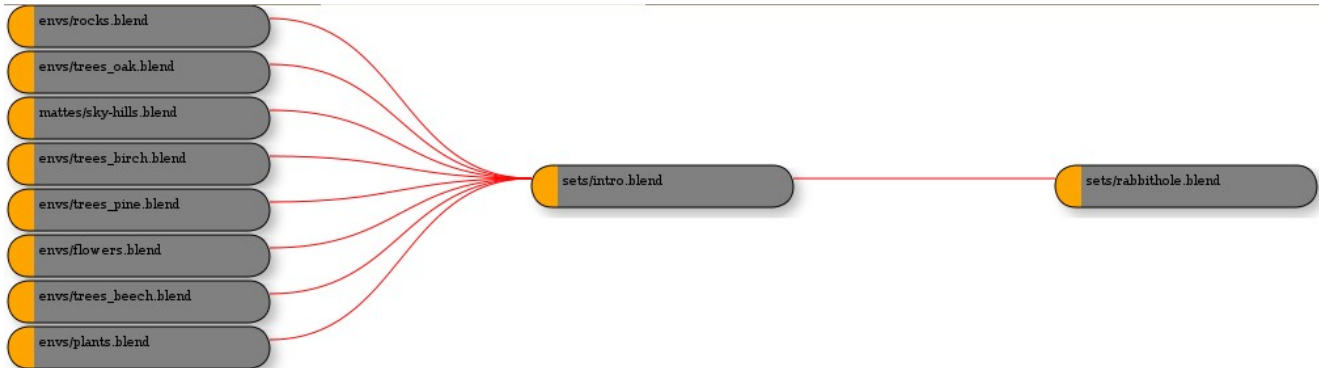
Neighbours of "sets/intro.blend"
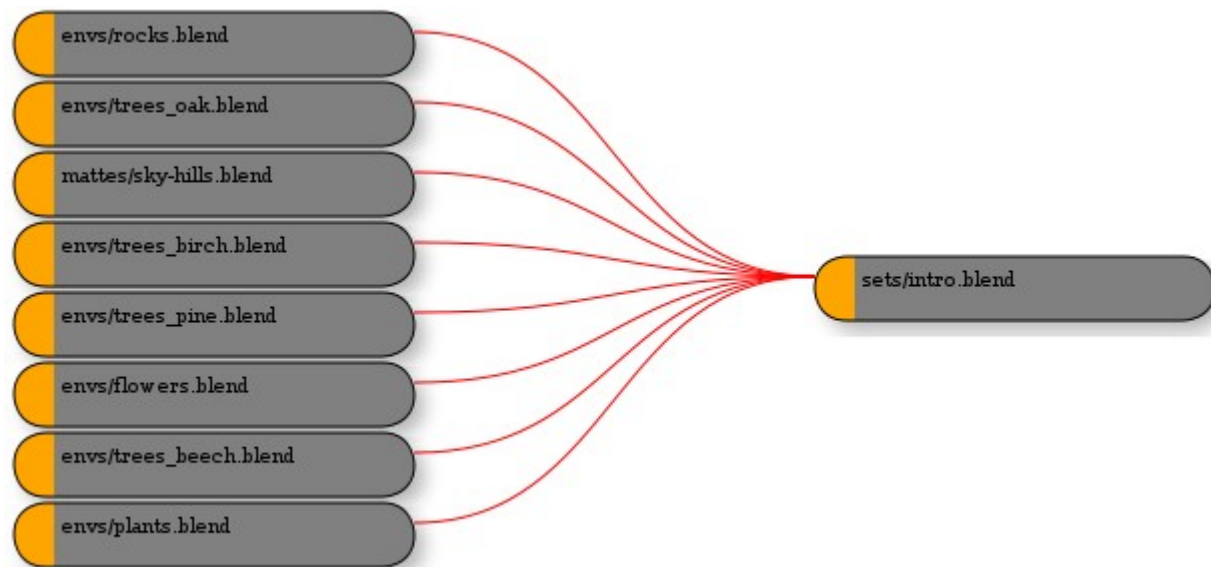
All uses of "sets/intro.blend"
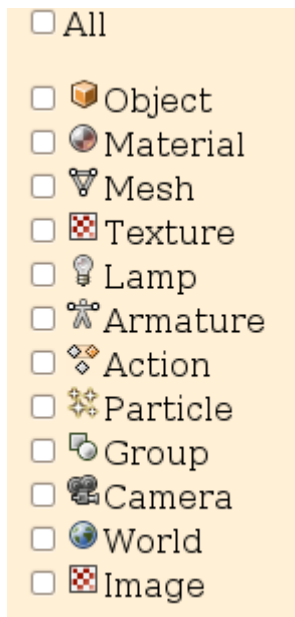
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All used of "sets/intro.blend"

View complete production

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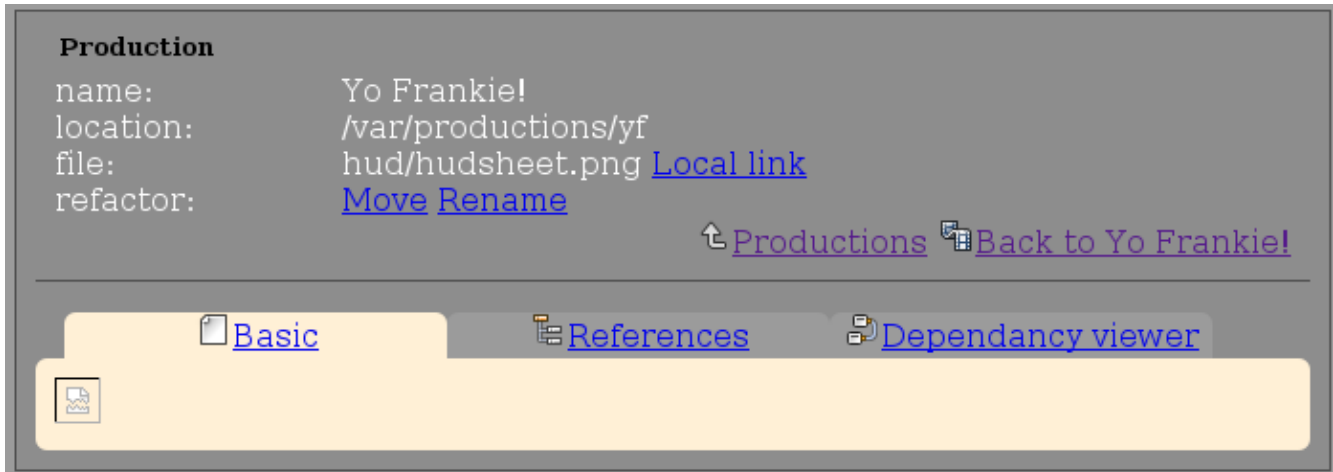
All

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

When all is selected the other selections are not shown.

FAQ

When displaying a picture, the preview is not shown. Clicking on the missing image icon, the file is shown

Reason:

Python Image Library is used for thumbnail generation. The thumbnail cannot be created when

a. Python Imaging Library is not installed

b. The file is not supported by Python Imaging Library

Solution:

a. Install the Python Imaging Library.

The system does not run on python 2.5 (ImportError: No module named simplejson)

When running on a python 2.5 system an additional library has to be installed. This library is called simplejson. It can be downloaded with the help of your distribution or from the python website: http://pypi.python.org/pypi/simplejson/

On python 2.6 simple json is not needed as the default json library is used.