

Patch Documentation

For Program	Flowblade
Type of Patch	Enhancement
Subject	Configurable Keyboard Shortcuts
Version	0.1
Date	17-Apr-2017
Patch Author	Steven van de Beek (svdbeek@rivinfo.com)
Description of the patch	<p>Allow the user to select different keyboard shortcuts. The shortcuts are stored in a file in the res/shortcuts directory and the appropriate file can be selected in the preference window. All changes are marked with # Apr-2017 - SvdB</p>

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Additional files

res/shortcuts/flowblade.xml

This file contains the default values for the shortcuts as configured in previous versions of flowblade. It is provided as sample file so users can adapt it and save it with a different filename, e.g. the name of their favourite other NLE.

This file cannot actually be selected in the preferences window with the current name 'flowblade'. The default values are hardcoded in the program in [xxxxxxxxxx]

shortcuts.py

Contains the main code to handle shortcuts. See details below.

Documentation files (This doc).

Modified modules

Details of the modified modules can be found on the following pages

app.py

appconsts.py

editorpersistence.py

keyevents.py

preferenceswindow.py

respaths.py

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Module

app.py

Description

To load the shortcuts.

Details

Added import shortcuts around line 96

main was modified around line 194

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Module

appconsts.py

Description

Added a few constants so they can be easily changed.

Details

Lines were added at the end of the file

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Module

editorpersistance.py

Description

Added events to load the shortcuts.

Details

import shortcuts around line 35.

shortcuts handling code was added in
update_prefs_from_widgets.

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Module

keyevents.py

Description

Added `_get_shortcut_action(event)` to retrieve the action code based on the key pressed.

Modified all functions that tested for particular `Gdk.KEY_` values to take action based on the action code.

Details

Most of the code was modified as per the description above. The original functionality was maintained, but the 'if' statements were adapted to use the new shortcuts mechanism.

Added import shortcuts and re.

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Module

preferenceswindow.py

Description

Added handling for the selection of available shortcut files.

Details

import shortcuts around line 32

`_shortcuts_panel()` and handling around lines 55 and 411.

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Module

respaths.py

Description

Added the path to the shortcuts directory

Details

Modified set_paths around line 55.

Added SHORTCUTS_PATH around line 77.

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Module

shortcuts.py

Description

New file. Contains the code to load the shortcuts file names and load the file. as well as generate the default shortcuts dictionary.

Details

`def load_shortcut_files()` -- To load the xml files in res/shortcuts. Called in app.py

`def load_shortcuts()` -- To read the required shortcut file or call the default shortcuts. Called in app.py

`def _keyboard_actions_defaults()` -- Generates the default shortcuts dictionary

Appendix A

The shortcuts xml files

Description

The shortcuts xml files contain the description of each shortcut and how it should be handled by the application. The format allows multiple shortcuts for the same action, either with different keys or using modifiers. Each particular key needs to be entered as a separate `<event>` line, as mentioned in the details below.

Details

```
<?xml version='1.0' encoding='utf-8'?>
<flowblade file='shortcuts' name='Flowblade' comment='Default values'>
```

This is the main tag. The file attribute is mandatory and must contain the keyword 'shortcuts'. The name attribute will be shown in the selection list in the preferences screen. The comment is for a short is description and is not currently used.

```
<author>
  <name>Steven van de Beek</name>
  <date format='dd-Mmm-yyyy'>16-Apr-2017</date>
</author>
```

The `<author>` tag is for info only. It may be used at a later date.

```
<shortcuts>
```

This is the start tag for all shortcut lines and is mandatory.

```
<event code='mark_in' name='Mark In'>i</event>
```

This is an example of a simple `<event>` tag. The code attribute contains a value that is used internally in Flowblade. Any unknown codes will simply be ignored as they will have no associated action.

You only need to put event lines in for shortcuts you want to change. They will override the default shortcuts but all codes not present in the loaded file will maintain their default shortcuts.

The name attribute is not currently used.

The value between the opening and closing tag is the key used for the shortcut.

This line has no modifiers associated, so only the letter 'i' will trigger the mark_in action.

```
<event code='to_mark_in' name='Go To Mark In' modifiers='Alt'>i</event>
<event code='to_mark_in' name='Go To Mark In' modifiers='Shift'>i</event>
<event code='to_mark_in' name='Go To Mark In'
modifiers='ALT+SHIFT'>i</event>
```

The above three lines show the use of modifiers and the fact that you can define multiple lines for the same code attribute. From the above you can see that 'to_mark_in' will be executed on any of the following key combinations: i, I and `<Alt>+I`

Please note the modifiers available are: Alt, Shift, Ctrl. Others may be added in future. Combinations MUST be written as Alt+Shift (i.e. with a + and no spaces). The order is not important (Alt+Shift means the same thing as Shift+Alt).

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```
<event code='prev_frame' name='Go To Previous Frame'  
modifiers='Any'>left</event>  
<event code='next_frame' name='Go To Next Frame'  
modifiers='Any'>right</event>
```

Here you see a special case of the modifiers attribute. The modifier 'Any'. This is currently only used for prev_frame / next_frame as it allows the associated keys to be recognized with any modifier actioned. This is used to vary the forward / reverse speed of clip scrolling using the keyboard.

```
<event code='edit_mode_insert' name='Change Edit Mode to Insert'>1</event>  
<event code='edit_mode_insert' name='Change Edit Mode to  
Insert'>kp_1</event>
```

By default the keypad numbers and the numbers at the top of the keyboard are handled differently. At the top of the keyboard they are called 0..9 but on the keypad they are called kp_0..kp_9. To allow both to be used for the same action, use 2 event lines, as in the above example

```
</shortcuts>  
</flowblade>
```

Some keys need to be referenced by their name. The following names are available:

insert, delete, home, space, end, page_up, page_down, up, down, left, right, f1..f12, kp_divide, kp_multiply, kp_subtract, kp_add, kp_enter, kp_decimal, kp_0..kp_9, enter, tab

NB: Since the mechanism does not delete any default keys unless they are overwritten with new values you will need to set a special event if you want particular shortcuts to stop working (For instance if you accidentally keep on hitting the wrong key and unwanted things happen).

Let's say you want the Mark Out to be linked to 'p' instead of 'o'.

If you just enter:

```
<event code='mark_out' name='Mark Out'>p</event>
```

then the current setting of 'o' will also still be active. To deactivate it, you would need to add the following line:

```
<event code='NONE' name='Disable o key'>o</event>
```

Whenever you change the shortcuts preference, the default values are reloaded and then whatever is available in the selected shortcuts file will replace what's already present or be added if it's a new shortcut.

This allows you to simple add or replace one or more keys to the default behaviour without having to copy all existing definitions.