Krita

1. Introduction

Krita, part of KOffice, can do everything you want with images - or it will be one day. Everything from photo retouching, image editing, and last but not least creating original art on your computer as if you were working with real paint and brushes, pencils, pen and ink. Every day Krita becomes a little better, a little more useful. We're working on it, anyway. We, that is, Adrian, Bart, Boudewijn, Casper, Cyrille, Michael and Sven. It could be you, too — whether you'd like to help with some artwork for the user interface, cool ideas for the todo, helpful bug reports, usability reviews or even actual code, you won't be snubbed by us.

Krita is as much yours as it is ours. It should be fun, innovative, experimental — first and foremost a pleasure to use and to hack on.

In this version, Krita includes a more or less complete colormanagement system — useful for photographers, graphic designers and artists, whether their work is meant for publication on the Web or in print.

1.1. About this manual

This manual describes Krita in as much detail as the author was able to write during long compiles of Krita. In other words, it's not complete. The invitation to join us and help out extends to the manual, too! I'm assuming you've got a good working knowledge of KDE and of your operating system. The first chapter will give you a quick tour of Krita's cool features; the other chapters tediously expend on that information.

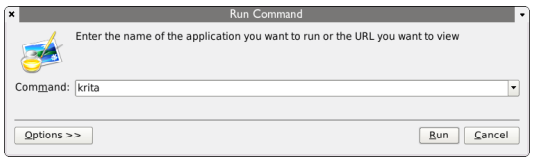
1.2. About the author

Hi! I'm Boudewijn Rempt — current maintainer of Krita. I was educated as a linguist, retrained as a database developer, work as a Java hacker, study theology and I've always liked to paint and sketch a little. Conspicuously absent in my life have been two important things for a developer of an image app: mathematics and experience with graphic design. That means that I'm probably not the best person to explain the niceties of using an image editor or a paint application to you. If you catch me in an error, please don't hesitate to mail me: boud@valdyas.org.

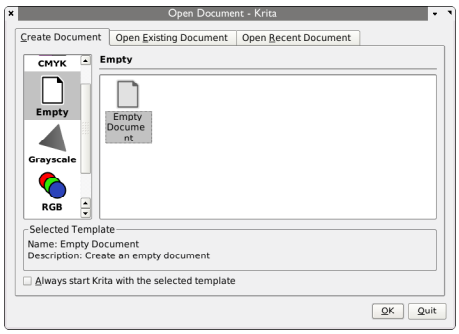
2. Showing Off

So, let's show off. You can start Krita either on its own or from the KOffice shell. Let's just start it. In your KDE menu's, Krita should be placed either under Graphics or under Office — it depends a bit on who packaged KOffice for you. Or do what I do: press ALT-F2 (which opens the *minicli*), type krita and press ok.

A little later, you'll be greeted by a dialog with two tabs:



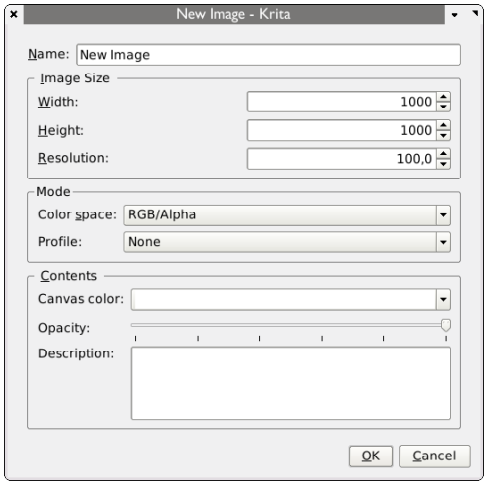
This is standard for KOffice: you can create a new document, choose a document from among your files or select a document you had opened in an earlier session.



We've got a bunch of templates here, ordered by color model. Krita is a very flexible

application and can handle many different types of images: CMYK images for printers, RGB images for the web, RGB images with high channel depths for photographers, watercolor images for painters -- and more. For now, choose Empty. That will allow us to see the New Image dialog box:

Here you can give your document a name, determine the dimensions and the resolution. The combination of width/height and resolution determines how

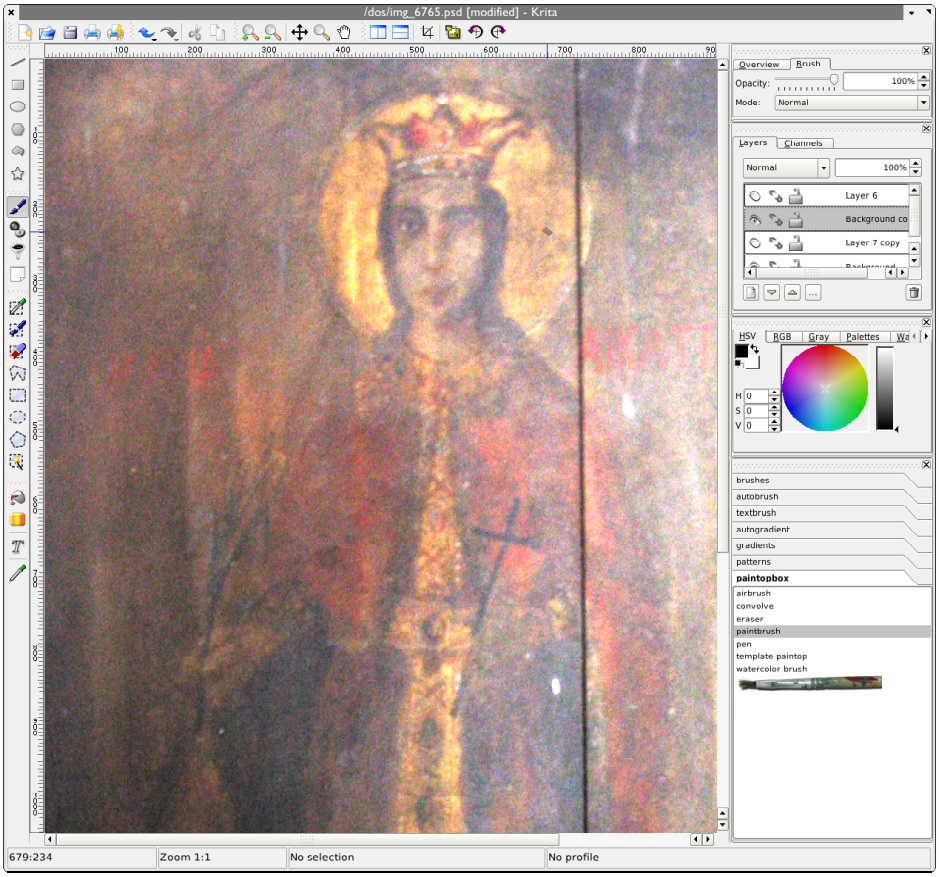


big your image will be on screen or on paper: if your image has a resolution of 100x100 dpi, and your image is 1000x1000 pixels big, then, if everything is configured correctly, your image will be exactly 10 inches long and 10 inches wide if you check with a ruler, no matter the resolution of your screen or of your printer — if shown at 100%. However, life is seldom so well-regulated that this actually works out. For now, just think pixels, not inches.

The next group of options is a lot more interesting than resolution: Krita is an enormously flexible application and you can work with many kinds of images. For this tutorial, just select RGBA (8 bit/channel).

3. On the face of it

Krita has a fairly standard layout. On the left are a number of toolbars: for shape



tools, paint tools, selection tools and fill tools. On the top are the commong KOffice toolbars, canvas tools and transformation tools.

By default, there are a number of dock windows on the right hand side. You can tear these windows from the view to use them as floating palettes. The top docker contains a navigation overview tab and the current tool properties. The next docker has two tabs: one for managing the layers and one for managing channels.

The third docker contains all the various methods for selectin color Krita offers. This set is extensible using plugins.

Finally, there is the painter's toolchest. This doesn't contain tabs, but drawers, and each drawer allows you to select some painting tool or material, such as brush shapes or gradients. Or, indeed, a certain brush, a particular pencil or perhaps an eraser.

Note the distinction between the tools in the toolbar and the art materials in the painter's toolbox: you can use any brush or pencil with all the toolbox tools, such as freehand drawing or a shape such as the box or the start.

In the above image, you don’t see Krita’s menu layout — that’s because I use the MacOS-like menu-bar-on top feature of KDE. Krita has the following menus:

- File
- Edit
- View
- Image
- Adjust
- Layer
- Select
- Filter
- Tools
- Settings
- Help

Some of these menus are standard in KOffice, some are particular to Krita. The Image menu contains commands that change the entire image, like converting all layers to another color model or resizing or scaling the image. The Adjust menu contains commands that change the color values of the current layer. The Layer menu is like the Image menu, but the commands only work on the current layer. The Select menu contains commands to create and manipulate selections. The filter menu contains all the filters you have installed. These work on the current layer. The Tools menu is common to KOffice and contains KOffice-wide plugins. The Settings menu is again common to KOffice and allows you to manipulate the toolbars, shortcuts and configuratio of Krita.

4. Files

5. Serious about color

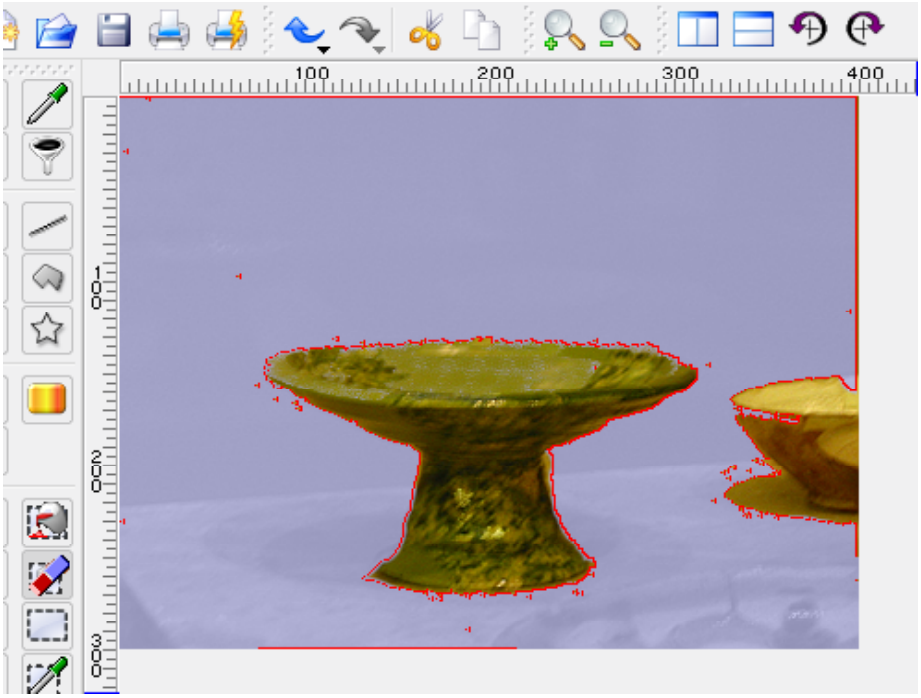
The days are long gone that people had to work with black and white or black and green displays; these days we all have a color monitor, so we can display pixels in color. However, if you put two screens side to side, you'll notice that there's often a

lot of difference in the way they display colors. Even white, especially white, is often not the same thing at all. On one screen it can be a dirty yellow, on another screen a sickly bluish. Very seldom it is a creamy milk-white. The same holds, unfortunately, for scanners, printers and digital camera's. So, if you want to see the right color on screen and on paper, the colors that you saw when taking your snapshot, you'll have to compensate.

Krita can do this for you: in Krita, a color is (almost) never just a set of numbers, one for each color channel; it's a set of numbers with information attached. And that extra information is contained in a profile: your image has a profile, your scanner has a profile, your camera should have a profile and your screen has a profile. When passing information from your image to your screen, the profiles are checked and the correct color is computed. This may cause a little slowness, now and then, but the result is that you can work with colors, instead of almost meaningless rgb triplets.

6. Selections

You can select a part of an image masking off the rest. This is handy when you want to cut, copy or just modify a part of the image without affecting the rest. Krita handles selections with a mask where each pixel is given any of 256 levels between



selected and unselected. Yes, that is right, you can have fractionally selected pixels. And by working on individual pixels you can effectively "paint" your selection.

The selection mask is visualized with unselected pixels having a blueish tint, and selected pixels looking like normal. Fractionally selected pixels are shown as something in between. Additionally a red border is drawn around the selected areas. Fractionally selected pixels are inside the border, so even inside the red border you can possibly see the blueish tint on some pixels.

6.1. Making a selection

A whole range of tools exist to make selections. From rectangles, ellipses and freehand to the more exotic like color range select. When you make several selections they add up. So a rectangle select followed by an ellipse select select both areas. Later you can subtract from the selection with say the select-eraser.

To get back to normal (no active selection) choose Select -> Deselect.

To select all pixels choose Select -> Select All

You may think that those two actions give the same result, but it is much more efficient to have no active selection than to have selected everything.

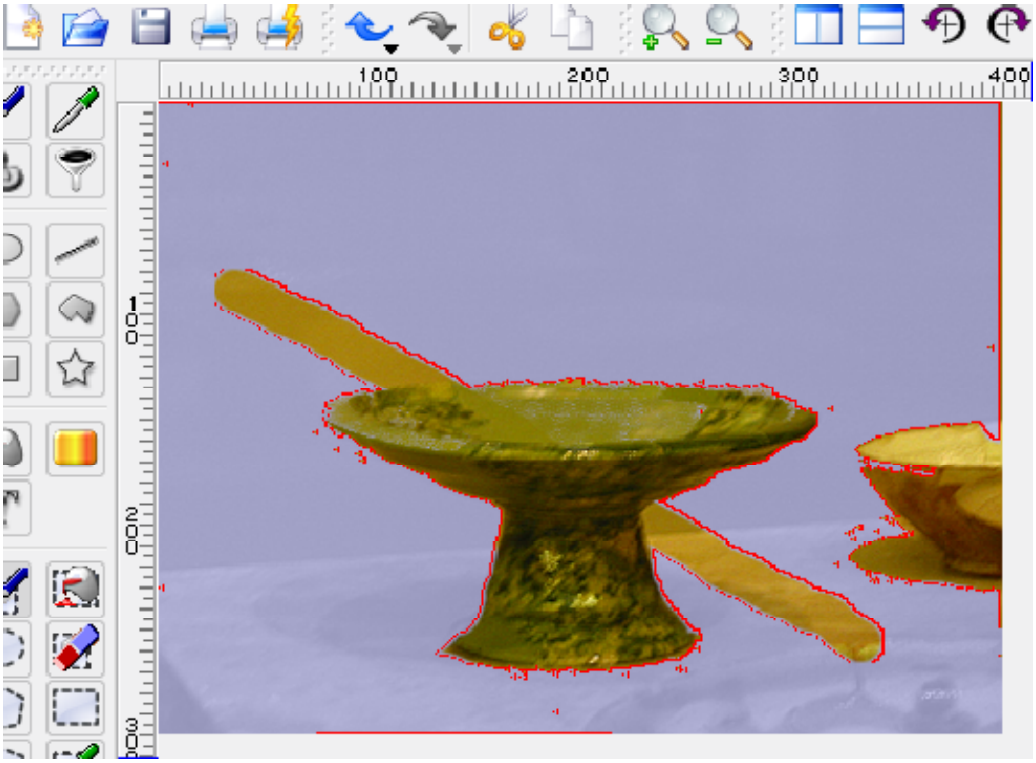
After having deselected you can bring it back by choosing Select - > Reselect

6.1.1. Painting your selection

As said above you can essentially paint you selection, and just like when you paint normally you can choose to paint your selection freehand or guided with rectangles, ellipses etc. You also have the choice of different paint tools like pen, brush, airbrush etc. Choose the guide tool, and the paint tool in the toolbox, and go ahead and "paint" your selection.

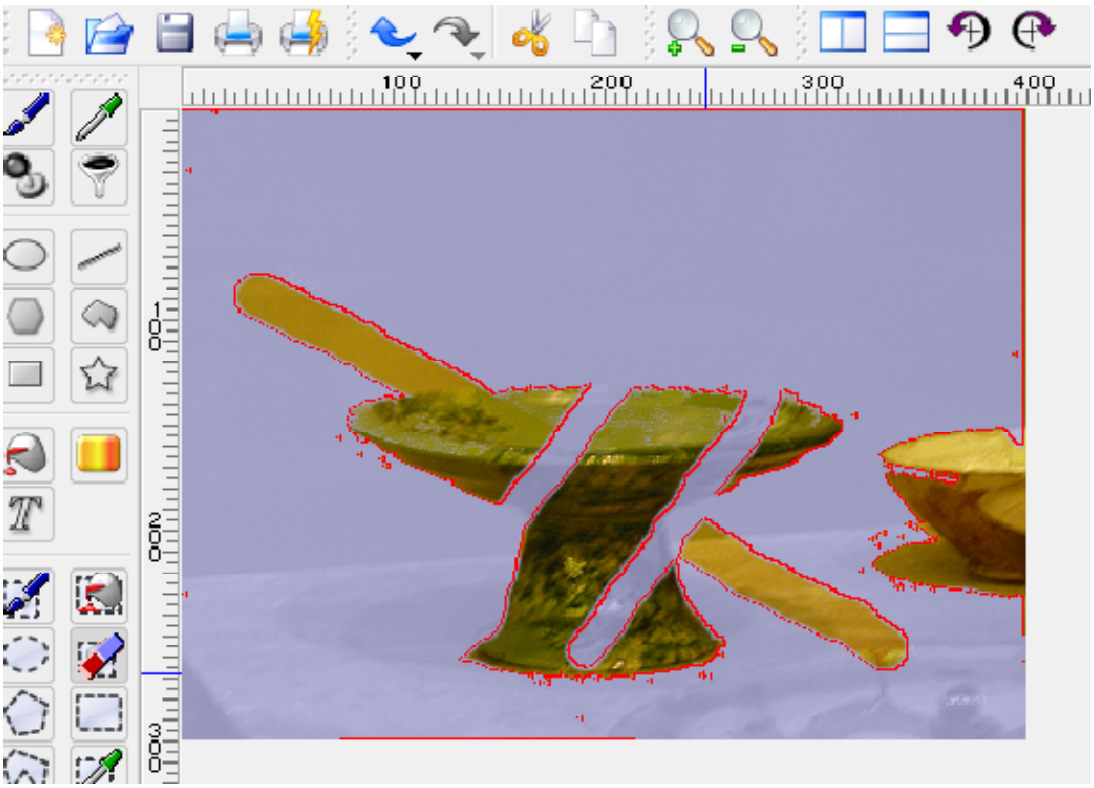
The guide tools work just like you are used to. So holding down shift while drawing a rectangle or an ellipse still forces them to be a square or a circle

respectively.



6.1.2. Unselecting

All the selection paint tools have an option to add or subtract from the selection. This means that you can use alle your familiar tools to both select and unselect. There is also a true selection eraser among the selection paint tools.

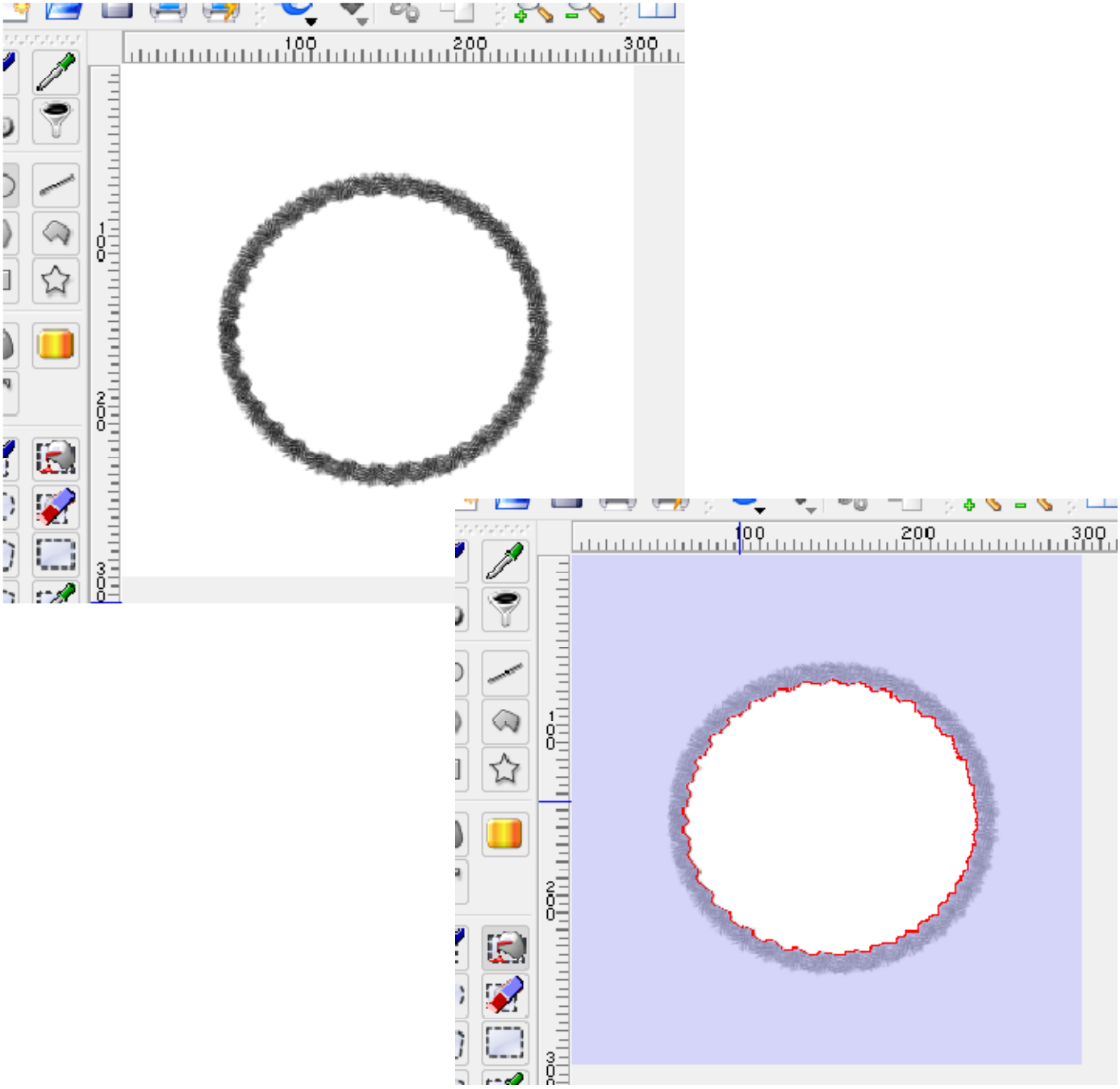


6.1.3. Making a new selection

When you want to make a new selection, replacing the currently active, you first need to deselect the active selection. Choose Select->Deselect

6.1.4. Selecting a contiguous area (aka magic wand)

To follow the analogy of painting your selection Krita also provides a equivalent to filling a contiguous area. Some paint applications call this selection tool the magic wand tool. What it does is select the nearby pixels as long as they have nearly the same color as the pixel you click on. The selection floods out from the point you



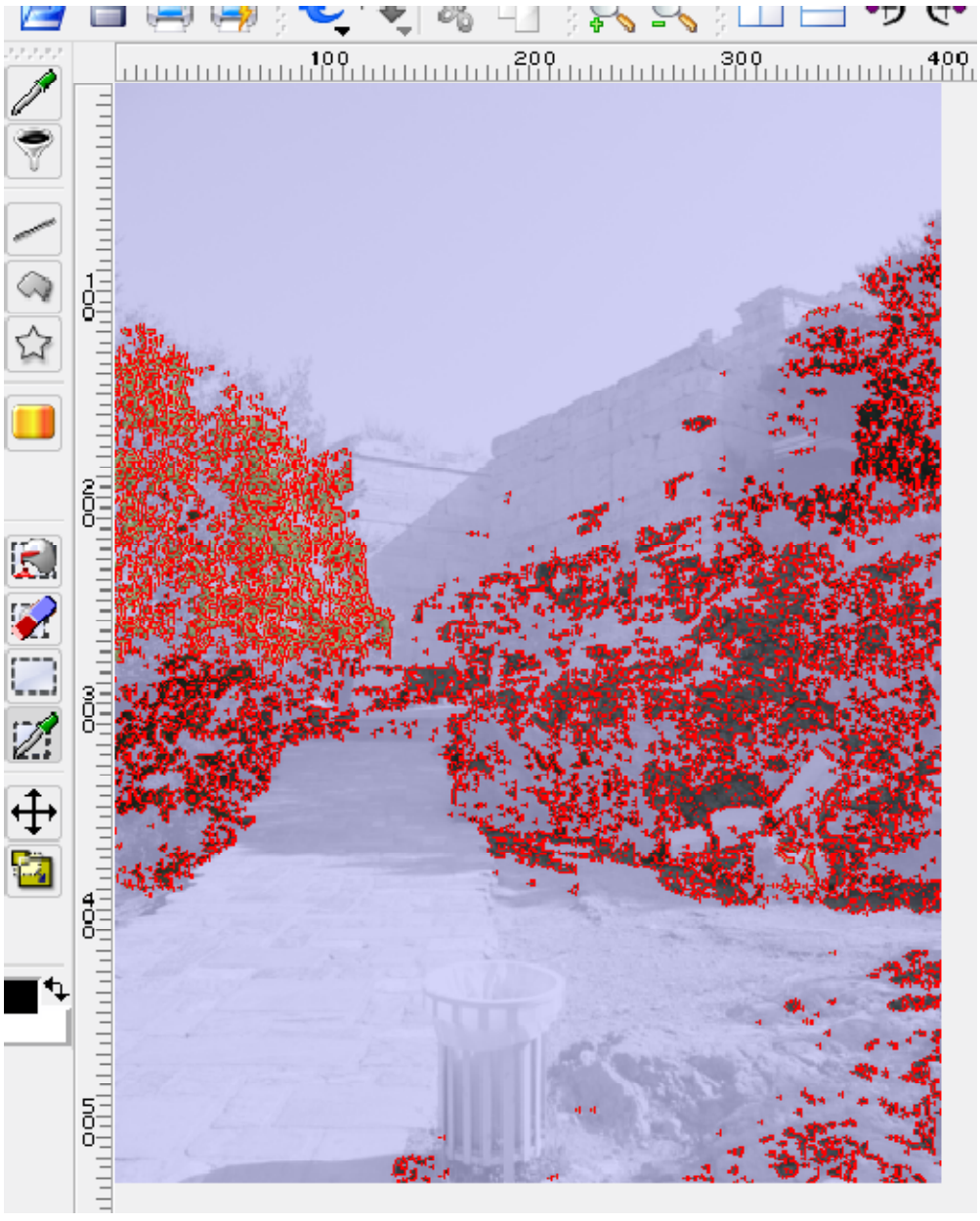
click on.

In the fuzziness option you can set how different the colors are allowed to be before the flooding stops.

6.1.5. Selecting similar colors

The Select Similar tool lets you pick a pixel and then select all pixels that have a similar color. pickng a color in one corner of the image may select a pixel in another corner if they have similar color.

In the fuzzines option you can set how similar the colors must be to be selected.



6.1.6. Inverting the selection

In some cases it is easier to specify your selection the other way around. That is, first you select the parts that ultimately should not be selected and then then you choose Select - > Invert

What invert does is that for every pixel it flips the selection level so to speak, by setting it to 256 minus the current selection level. Thus what was selected becomes unselected and vice versa.

7. Messing with images

8. Painting

9. Layers

10. Filters

11. Hacking Krita

12. Configuring Krita

13. Help!

Stuff doesn't work, sometimes. Krita can crash, sometimes — not all that often, these days, but still. So you'll need some help. The first thing to do is try to determine what was going on, exactly. Then you can either create a bug report: go to the Help menu and select Report Bug. That way we know exactly which version of Krita you are using. Please try to make reasonably sure that your problem hasn't been reported already! You can also, if it's just that you cannot figure out how to do something that you can do using Photoshop using Krita or some other question mail the Krita developers at our mailing list, or mail me directly: boud@valdyas.org.