# Free software to produce art: let's be pragmatic

## Production of art for the non-expert free software user

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I have my kids to blame, that is certain. There I was, last Christmas, in this auditorium, listening to the crunching of popcorn from my son on my left, and the slurping of soda from my daughter on the right, trying to behave like a responsible father. The lights had dimmed and we were being inflicted with the inevitable advertisements and trailers. When, at last, the fan fair that accompanied the main feature at the cinema trumpeted out of the speakers an anticipating hush spread around the audience. Even my daughter took a break from her munching. The opening titles burst on the screen announcing the continuing adventures of a big green troll and his donkey friend. Shrek 2 had begun!

### Filmmakers use of free software

I confess—I enjoyed it. Films that promote escapism in a professional and enjoyable way always go down with me, but this film also gave me satisfaction knowing that it epitomises the successful model of free software. It is a well-documented fact that Dreamworks used Linux machines to produce the IT power to render the film, and they built on free software to create the products to do so. Many other animation film studios in California have gone down the same route. This is an example of free software at work. The benefit to the studios is obvious—to be able to produce higher quality work for lower price. The benefit to my kids is also evident in their enjoyment of their evening's entertainment and—yes I admit it—mine too.

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However, the studios can only do this because they have the millions to spend on developing the free software to produce the high quality animations. Also, as they do not distribute the software, they have no obligation to publish their enhancements to the world. It is their right under the license to do so, and I for one, do not have a problem with that. This does mean, however, that mere mortals like you and me are denied the opportunity to create a masterpiece of fantasy filming with wonderful characters of the same high standards, though being honest, apart from the lack of software there's still the possibility I could lack the cinematic skills to pull such a project off. Whatever the reason I (and probably you) need to set our sights lower as far as computer generated art is concerned.

### Horses for courses

There are those in this world who have enormous amounts of expertise in image manipulation, who live to adjusting their photographs so all unwanted flaws are eliminated and all slightly off colours are corrected, even to such detail that is not distinguishable to the naked eye, just so someone glancing at their work would find their life subconsciously

enhanced by examining something so pleasing to the eye. These people, in the free software world, talk about "3D imaging in blender" and "gimp scripting" and other mysteries. Then you have people like me. When these image experts go on about the various detailed attributes of pictures you can witness my eyes glaze over and then you can watch the conversation soar above my head. Should a photograph be taken of me at that point the print would almost certainly show my eyes to be red, though in that case it is unlikely to be the "Red Eye Effect" photographers like to talk about but rather that they are simply bloodshot.

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Detailed image manipulation and expert minutia picture enhancements is beyond the scope of this article. I am instead focusing on a simpler art. The ability to produce simple charts, diagrams and pictures in documents, or creating simple logos to cheer up an otherwise dull article. It is worth emphasizing that *cheering* it up is what it does. Almost every article in this magazine is punctuated by small pictures and diagrams, and in fact, I believe I would not be letting out any secrets by informing you the editors of this magazine are unhappy accepting articles unless they have sufficient artwork scattered throughout them. A magazine that simply presents pages of tightly typed words may have rich content but it is a struggle to read. Pictures and diagrams, even irrelevant ones, break the monotony of a page and make the intake by the reader a more enjoyable experience.

## Art programs for the non-expert

This leads to questions like "What free software products are out there for me?" and "Which one is best for what I want to do?". To contribute an answer to these questions, I would like to go through some of the products I have used to generate pictures, leaflets and illustrations sharing my experiences of them with you.

OpenOffice.org Draw (http://www.openoffice.org/product/draw.html): I surprisingly use this

An unrelated picture placed here makes this article nicer to look at

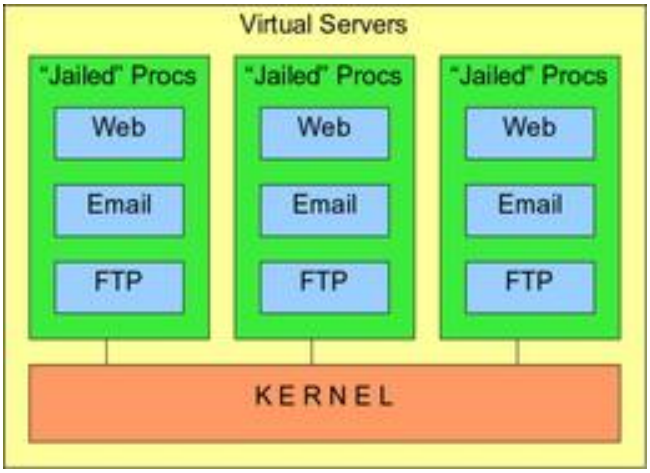
a lot. Although not a drawing tool as such—more of a desktop publisher—it's often all I need to produce my materials. For most of the artwork I need to produce, the photos or pictures already exist and all that is needed is for them to be arranged with appropriate arrows, lines and captions. OpenOffice.org Draw is more than up to this task, and I find it both intuitive and simple to use. It can also handle the creation of simple charts and diagrams, which can also be integrated into a document. Where OpenOffice.org Draw scores very well though is when a number of images, diagrams and charts from different sources need to be combined to create an overall picture.

Spreadsheet applications like Gnumeric (http://www.gnome.org/projects/gnumeric/) and OpenOffice.org Calc (http://www.openoffice.org/product/calc.html) are ideal for quickly generating graphs and charts from data. It is a relatively trivial exercise to enter headings and a figure into a table, select it and click on the chart icon, then after playing about with a few settings in a pop up box you can create an eye-catching method of making your point.

On a side note I would like to point out I am aware that KDE (http://www.kde.org) has equivalents to these applications, and I have nothing against them. For the KDE users out there, there are products like Kivio (http://www.thekompany.com/projects/kivio/), Karbon14 (http://www.koffice.org/karbon/) and Kspread (http://www.koffice.org/kspread/). Each has both advantages and disadvantages to the above.

A charcoal effect created using ImageMagic

A simple diagram created using OpenOffice.org Draw




ImageMagic (http://www.imagemagick.org/script/index.php) has a relatively simple interface and is useful if you want to create an overall effect to an entire picture. I don't use it very often, and what it does can also be achieved with Gimp (see below). However, I find it useful when I want to use special effects like "charcoal draw".

Gimp (http://www.gimp.org/)... my list would not be complete without the Gimp. This is the free software community's answer to products like Adobe Photoshop. There's a lot this program can do, and plug-ins that can be obtained to enable you to do even more. If you are interested in serious image manipulation then you'll be interested in the Gimp. I use Gimp, but at a much more basic level than it can be. As I mentioned above I tend to have the pictures for my artwork pre-made and I simply assemble them with little need for manipulating them. However, I sometimes need to "touch up" the pictures slightly, or blank something out. Also, when I'm done laying them out with OpenOffice.org Draw, I often need to rescale or resize the entire image. While using the Gimp for this maybe going a bit far, I'm not concerned, after all, using a sledge hammer to crack a nut may be overkill, but it does cracks nuts exceedingly well.

## Some examples

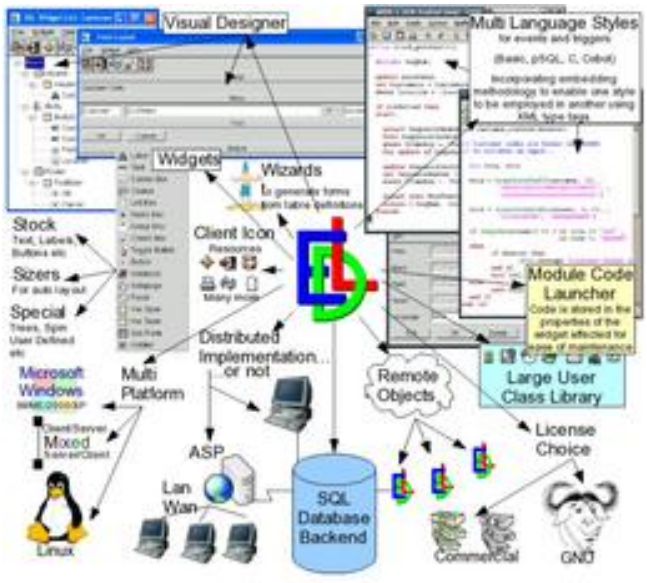
It's a mistake to limit yourself to using only one product when producing artwork. Each program is useful for performing the specialised task it was designed for, it may be capable of performing other tasks, but more often than not that it is better to employ other products for duties the first is not specialised in. In short, use the right tool for the right job.

As my first offering I would like to submit an image from a previous article I wrote for Free Software Magazine. This is a very simple one, and was generated using OpenOffice.org draw. It is simply a series of coloured rectangles with text in them. After creating it I exported it as a "PNG" file, then used Gimp to alter the resolution and size as required by the magazine. Although it's not mind-boggling spectacular I believe it achieved its purpose.

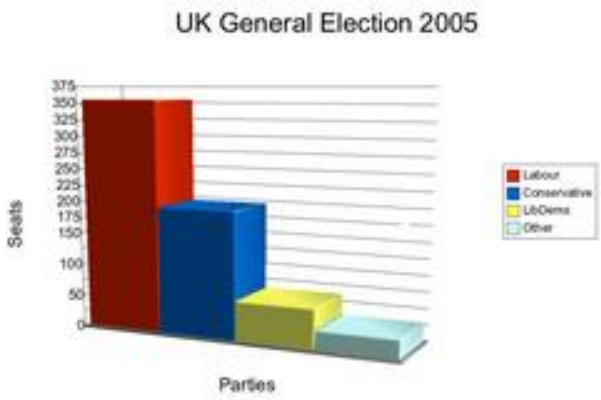
For my second example I would like to show an image I used for some marketing at an exhibition. It's meant to be a mindmap, it worked so far as it attracted attention and people spent a long time looking at it. How much they understood, or were inspired by it, I don't know though. All in all I'm not proud of it, although it did communicate what I wanted it to in an informative manner, it's too cluttered to be effective. I am a programmer, not a marketer, so I think I have an excuse, and I am sticking to it. I'm only including it here to show what can be achieved.

I collected the images that made up the mindmap from a number of sources, they are mainly freely-licensed images from the internet. The screen-shots were taken using the GNOME screen-shot applet (the ones that look as though they came from Microsoft XP didn't, I actually used fvwm configured with the "Redmond XP" theme on Linux). I ac-

A more complex image from various sources but combined using OpenOffice.org Draw




A chart generated in seconds using OpenOffice.org Calc




tually created the central logo using OpenOffice.org Draw, though other drawing applications are probably better for that type of operation. Once I'd obtained all the images I used OpenOffice.org Draw to combine them all, put in the arrows and insert extra boxes and text.

The election graph took seconds to create. I simply entered the recent election results into eight cells of an OpenOffice.org Calc spreadsheet, selected it, used the wizard to generate the charts by selecting appropriate options as I progressed, added titles, changed the colours and admired my work. Once again though, I exported the chart as a "PNG" and used Gimp to modify its resolution and size. The produced effect by far exceeds the amount of effort put in, and although this can be expected from products which you have to pay for, it's fantastic to see this from free software.

## Tips for generating quick artwork

Generating artwork in this manner is as easy as riding a bicycle. However, just like riding a bicycle it can be difficult if you haven't done it before. The first few times you tend to end up on the ground often with the bicycle on top of you. Even when you have the basics mastered the best way to take corners and avoid puddles still need to be learned. The same applies here, knowing how to do something is different from knowing how to do it well. I'm no expert here, and there's no replacing experience, but I think I can provide some tips for the beginner that might help.

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1. Think big. For instance, when I generated the election chart, after OpenOffice.org Calc had created it I then expanded it to fit the entire screen. If I hadn't done that, the lines in the final image would have been more jagged and the writing less clear. All in all, when using an application to generate a part of an image make sure it generates a big image and reduce its size later as this will create a final result with far better detail.
2. Minimise the amount of transformations. Although it's best to generate the image in one application, and then resize and scale it in another application and so on, it is worth noting that every time you transform an image you lose some detail, therefore don't load it into an application, play about with it, or save it in another format more often than you need to.
3. Don't be too proud to use resources available to you if they do the task, whatever they are. I've come across people using Gimp to do tasks that take OpenOffice.org Draw a fraction of the time just because they want to

use Gimp and feel it's the cooler product. This is being dogmatic for the sake it. Whatever the best tool is for the job—whether it be OpenOffice.org, or Koffice, or anything else—use it.

## Conclusion

Free and open source software offer mountains of code that produce charts, images and pictures. The difficulty is not finding a program to do the job but in choosing the best program for the task. Perfectionists would insist on high-end tools and produce a high-end perfect picture. However, for the rest of us the free drawing utilities that come in OpenOffice.org and similar products are frequently more than enough to produce required pictures and effects that we common folk require. The free software community no longer have an excuse to not decorate their work accordingly. So come on. Get your imagination out of store. Let the Van Gogh inside you loose. We've made the world a better place to be with the software we produce, let's use it to enrich content with the proliferation of dragons, donkeys and other art to make the world a prettier place to be as well.



## About the author

Edward Macnaghten has been a professional programmer, analyst and consultant for in excess of 20 years. His experiences include manufacturing commercially based software for a number of industries in a variety of different technical environments in Europe, Asia and the USA. He is currently running an IT consultancy that specialises in free software solutions and is based in Cambridge UK. He maintains a blog at http://eddy.edlsystems.com.