Meeting Report for Wednesday, October 7, 2015: Photo-editing Software. (archive of Message #6743)

Visiting speaker A. Richard Miller - from Miller Microcomputer Services (http://www.MillerMicro.com), and the leader of the Natick FOSS (Free, Open-Source Software) Users Group (http://www.NatickFOSS.org) - gave a presentation on FOSS photo-editing tools and photo-management programs, many of which will run on Windows, Apple OS-X and (also-FOSS) Linux operating systems.

Dick pointed out that any computer program is only one example of a type of program, and that proprietary programs usually are matched by at least as many FOSS programs of that type, generally sharing the same concepts and tools. Some of these FOSS programs will have equal or superior performance; they may be developed by one amateur programmer, or by large teams (think Google, Red Hat, IBM, NASA) for professional use. Comparisons are available on-line, in magazines, and at meetings such as those of the FOSS User Group.

Dick demonstrated two large on-line repositories of many of the better FOSS programs: the Ubuntu Software Center for his preferred Ubuntu Linux, and the even larger Synaptic Package Manager. (Each FOSS program is a "package" of lesser modules, many of which are shared rather than duplicated; a package manager automatically determines which modules need to be added or, when uninstalling a program, which of its modules should not be deleted.) He showed that many such programs are free downloads from the web (and are open-sourced so many programmers can maintain and enhance them and the rest of us can benefit). This is not only more efficient than the proprietary model of a "complete" program; it (and all those free, immediate-download programs) also encourages FOSS programmers and users to think in terms of mix-and-match solutions.

Dick then chose a few free, open-source, photo-relevant programs to describe in more detail:
1) The GIMP (http://www.gimp.org/) - Probably the closest FOSS match to Photoshop; each is powerful but large, complex, and wants a relatively powerful computer.
2) Darktable (http://www.darktable.org/) - After Photoshop users pay about $700 for that, they often pay about $150 each for accessory programs like Lightroom. FOSS offers Darktable, instead.
3) Krita (https://krita.org) - KDE's less-demanding graphics editor and digital painting application.
4) MyPaint (http://mypaint.intilinux.com/) - Great for artists, especially using a digitizing tablet.
5) Scribus (http://www.scribus.net/) - Scribus is a publishing program with good image editing capabilities. Turn your photographs into a book - or at least, a lovely magazine article.
6) Inkscape (https://inkscape.org/en/) - A vector-graphics editor.
   Jill Miller described using Inkscape to add drawing features and property-bound mapping to Google Map photo images, for landscape-design work.
7) Shutter (http://shutter-project.org/) - A flexible tool to grab full or partial screenshots, Shutter can be used to grab on-line images for your further manipulation with the other tools.
8) And then there's Fotoxx (http://www.kornelix.com/fotoxx.html), a photo editor and photo manager and slide show and more, for Linux only). Dick likes Fotoxx so much (for its power, wide range of tools, ease of use, and immediate response on less-powerful computers) that he volunteers to help develop it, so some of its monthly upgrade features are of his design. He ran Fotoxx in Ubuntu Linux - to demonstrate some of the useful tools that will be found in much the same form in most proprietary

programs and in most of the FOSS programs named above, plus a few special capabilities of its own.

Dick emphasized that photo editors make so-so photographs much better - both by undistorting (correcting) what the camera captured, and/or by distorting it for artistic purposes. He displayed photographs he had taken recently, to point out opportunities to improve each picture, and showed us Fotoxx tools for:

1) Straightening-up a photograph that was accidentally taken with the camera tilted. Correcting for perspective (trapezoidal distortion) usually requires a different "perspective" tool (and he did demo that), but just straightening-up one particular vertical feature often is enough correction to be acceptable.

2) Brightening, and bringing out visual interest in a dark area. One example he showed selectively enhanced woods and leaf detail from a too-dark background behind a map kiosk on a walking trail. Fotoxx offers some combined tools (say, brightening in selected areas, plus image-sharpening) for user adjusting - plus two pre-selected combinations named "Voodoo 1" and "Voodoo 2" that often are great one-click solutions. Other image processing programs often have such an automated-correction offering. One can try each, and easily "undo" the result if it isn't sufficiently improved. Dick contributed to the design of Voodoo 2, and showed that it sometimes gives an even better result than Voodoo 1."Try both", he advised. "They're free - and they're quick." Should neither satisfy, you can custom-set for that image, seeing the changes as you move sliders. For that automated, area-specific brightening (and contrast), in Fotoxx try Zonal Flattening. (And in any Fotoxx operation, tap the F1 function key to read that section of the Fotoxx User Guide.)

3) Trimming (called cropping in many programs), to limit your image to the area of interest. Because trimming removes pixels, it also makes the file size somewhat smaller.

4) Resizing the photo, after any trimming, usually makes it a lot smaller - and more appropriate for the display resolution of your device, for the size of photo print that you intend to make, or not to strain the download time and storage capacity of your friend's Inbox.
At the start of Dick's presentation, a situation occurred that showed how an excess pixel resolution is just wasted, and can cause problems. The default resolution of the overhead projector in our room is greater than the display resolution of Dick's laptop. In this case, the mismatch kept the overhead projector image from "mirroring" properly. He re-set the pixel resolution of the overhead projector to match his laptop display, to fix that problem. The visual clarity for the audience was still fine.

5) Enhancing or correcting color: Dick had examples where incandescent lighting gave "white" an orange off-tone. Photo editors let you "White Balance" by clicking on a white or neutral part of the image. Sliders (or dragging points along "color curves") allow you to make other color changes, as well.

6) Achieving artistic effects by modifying a photo. For example, Dick showed that restricting the color palette can make a photograph appear to be a painting, where the number of colors is reduced to be similar to what an artist would have by manually mixing a palette of colors. A photo of a bumblebee on a daisy took on the look of a watercolor painting. Fotoxx offers many such "effects"; again, they can be tried quickly and many offer a wide range of adjustment.

7) Layers can be used to add or move sets of images upon other sets. A commonly known example of layer use is Walt Disney Studios' use of stacked 'cels' (originally, painted onto transparent sheets of celluloid) to make up each frame in its animated cartoons. (Fotoxx uses less-constrained Areas; a full-window area is a layer.)

Other tools in Fotoxx include a slide show, and very powerful, near-instant selection of photos from a folder or from all folders within, say a /Pictures folder. On Dick's moderate-power netbook, it could pick a complex-search set from 36,000 images (say, ones with filenames including ".v0" for ones he'd edited, and with either a user-defined Tag of "Jill" or taken between 2012 and 2014) in about three seconds. Then it could add the selected images into an Album (a small table-of-contents of the set, plus some user settings), which can run a feature-rich slide show while the images all remain in their original folders.

Is some feature missing from Fotoxx? Download a FOSS program with that feature, or a Photoshop plug-in, and run it as a plug-in within Fotoxx. Modules calling modules; that's FOSS.

Some members stayed past our usual 11:30 AM end time to ask questions and to watch these artistic effects.

We thank Dick and Jill Miller for sharing their knowledge with us!

Postscript by Gary: I found that basic descriptions of the FOSS programs can be found on http://en.wikipedia.org, as well as on the program websites. For example,http://en.wikipedia.org/wiki/Krita.

(report drafted by Gary Patrick, and completed by A. Richard Miller; originally issued as Message #6743) archived here as an aid to finding this report in the future.