

# File Photos

maddog learns a lesson about deprecated formats but finds a workable solution.

By Jon "maddog" Hall

Often I talk about documents and the importance of open formats, mostly oriented toward formats like the Open Document Format (ODF) standard versus Microsoft's OOXML specification.

Recently I was nostalgic and decided to look at some old photographs. At one point in my life, I took a lot of pictures with a 35mm film camera. To cut the cost of developing the pictures, I chose to have slides made instead of prints. Of course, slides are not that convenient to view because you have to set up a slide projector and screen.

About 1995, two things happened. I started doing more with computers at home, thanks to the Linux project, and I started having Kodak PhotoCDs made with my slides. A Kodak PhotoCD could store up to 100 different pictures in up to six different sizes. I sent the film to be processed at Kodak, requesting that the images also be put on a CD. The PhotoCD was delivered in a jewel case with "cover art" that included a thumbnail image of the photos, which were numbered so I could easily find pictures. Kodak created other PhotoCD items, such as a portable CD player that attached to the TV, so I could view pictures on the screen.

The format of the PhotoCD images was proprietary. Kodak supplied a program that could read the PhotoCD, manipulate the images, and store the picture in some other format, usually using some type of compression (e.g., JPEG). Of course, the program only worked on Microsoft Windows. Fortunately, there was a great program called `xpcd`. The authors had reverse-engineered the PhotoCD format to read the Kodak CD (whose filesystem was in ISO 9660 format), extract the images, and display them. `xpcd` could even do simple manipulations, such as "rotate," before storing the picture in a different format.

I forgot to mention that the largest format for the PhotoCD was 4096x6144 pixels and (depending on the image) a JPEG of 8MB. A lot of people (particularly people with today's professional digital cameras) will say that an 8MB image is not that large. But this was 1995, and main memory was not US\$ 10 a gigabyte. My little Linux system had only 8MB of main memory, but it did (of course) support demand-paged virtual memory. I would tell `xpcd` to read a picture off the CD, and it would do that relatively quickly. Then I would tell `xpcd` to rotate the image, and the PC would sound as if it were internally hemorrhaging. Fortunately, I

was soon able to afford an 8MB memory uplift, and my picture manipulating became much faster.

In the late 1990s, I got a digital camera, and my PhotoCDs were relegated to a bag. Recently, I decided to look at some pictures I took in 1995. I got out the PhotoCDs and searched the programs in my distribution's software repository for "PhotoCD." Nothing.

There were programs for JPEGs, GIFs, PNGs, and many other formats, but not PhotoCDs. Uh-oh. I had thousands of pictures on those PhotoCDs!

Google to the rescue – more or less. With Google, I found out that Kodak was no longer producing PhotoCDs and had "deprecated" the format, meaning that they had stopped supporting their program, and they didn't even have old binaries of the program on their site. Kodak had a few documents describing the features of a "PhotoCD," but very little additional information.

Using Google search, I found a couple of user sites talking about PhotoCDs, including a site for my old friend `xpcd`. Unfortunately, the last version of `xpcd` had been updated in 2004, and a simple configure and make created a lot of errors that (at that point) I really did not want to investigate.

Fortunately, I also found `pcdtojpeg`, a command-line program that would easily convert PhotoCDs to JPEGs. The `pcdtojpeg` program compiled relatively easily, and I was saved! From now on, I will always make sure I have copies of the sources for both `pcdtojpeg` and `xpcd` on all of my computers. In the future I might spend some time on `xpcd`, get it to work on my system, and contribute that back. I might also spend some time creating a "pcdtoraw" program and convert all the Kodak PhotoCDs I have. Of course, this will come after all the rest of my projects in the queue . . .

In the meantime, anyone want a portable PhotoCD player that outputs only to an analog TV? ■■■

