Ars at Akademy with Bruno Coudoin of GCompris

Bruno Coudoin, the lead developer and original author of GCompris was kind of answer a few questions about his work.

By Troy Unrau | Last updated July 31, 2007 8:11 AM CT

At Akademy 2007 in Glasgow, Ars Technica had the opportunity to sit down with the lead developer of the open source educational suite GCompris. GCompris is a suite of educational activities geared towards early childhood which features more than 100 educational activities ranging from computer usage skills to language and science. Bruno Coudoin, the lead developer and original author of GCompris, was kind enough to answer a few questions about his work.

GCompris was started in 2000 as a fully GPL software project. Since then, it has grown to include over 100 activities in the fields of computer usage, algebra, science, geography, reading, games, and a few other miscellaneous activities. Coudoin estimates that the project has had 20 major contributors over the last 7 years, and the content (including voice acting) has been fully translated into 15 languages. Additional translations exist to lesser degrees of completion.

Coudoin received a complimentary OLPC XO laptop to help him revise his software for use in the XO's unique Sugar interface. He is in the process of adapting GCompris activities so that they can be launched on the XO without requiring the full GCompris program to be running first. This will make it possible for teachers to customize which activities that are provided on the XO without having to modify the source code of GCompris. Both GTK and Python are already on the OLPC, but Coudoin has had to make other adjustments to his code in order to accommodate the project. For instance, Coudin had to build a copy of the GNOME canvas library into his own source tree in order to reduce external GNOME library dependencies.

Coudin may have been better served by using a different painting system altogether. The GCompris activities currently use hardcoded PNG graphics which are being scaled by the GNOME canvas library. Although work is underway to convert the graphics to the more resolution independent SVG format, problems remain. The canvas renders the SVG images to pixmaps during the painting stage, so resizing the GCompris window causes pixelization because the canvas just rescales the rendered pixmaps rather than re-rendering the SVG.

Considering these problems, I asked Coudin why he chose GTK for his project. Coudoin explained that GTK was chosen because none of the major alternatives, like the Qt toolkit, were available under the GPL when the GCompris project originally began. The decision, he says, wasn't made on the basis of technical considerations.

Coudoin notes that the OLPC XO laptop is available free to developers who wish to ensure application compatibility, and he encourages anyone doing open source educational development to test and port their software.

GCompris is shipped as open source software for free software operating systems, however he also funds further development by selling shareware copies of GCompris for Windows. In particular, he mentioned school divisions buying hundreds of licenses for their Windows computers. One of the positive side effects of this model is that these school divisions now have a lower barrier of entry should they decide to ditch proprietary software altogether in the future and adopt an open source platform.

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