Free software gets an education

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Companies, organisations and citizens spend billions a year on licensing fees for proprietary software. Could that money not be put to better use developing free software alternatives and local expertise?

For that to happen, teachers, software developers, researchers, IT managers and citizens in general need to be educated about what free (also known as libre or open source) software is, how to use it and how to get the most benefit from it. But until now educational content and training resources about software that is free to use, copy, change, study and distribute have been woefully hard to find.

An EU-funded project has started to change that. Inspired by the community-driven development model that has led to such enormously successful initiatives as the contributor-edited online encyclopaedia Wikipedia, the researchers behind the SELF project have created an online platform to develop and collaboratively distribute educational materials about free software.

Just as Wikipedia has become one of the leading sources of information on the internet, the SELF team hopes their platform will turn into a leading resource for anyone looking to gain a better understanding of free software. The platform allows contributors to add and update a wide variety of educational materials, from simple articles to structured courses, and to collaborate on developing new training resources on diverse applications and subjects, from the Linux operating system to complex scientific programmes.

SELF project coordinator Wouter Tebbens says the team was driven to launch the project when they realised that a lack of educational resources was holding back the adoption of free software in Europe and elsewhere, despite its many advantages over proprietary alternatives.

The “free” in free software refers to freedom of use, modification and distribution, resulting in programmes that tend to be more adaptable, scalable, transparent and (frequently) more cost-effective than their proprietary counterparts.

“We identified four factors holding back the adoption of free software: Firstly, there is a lack of awareness about what free software is. Secondly, there is a perceived lack of technical support for free software products. Thirdly, teachers and trainers are mostly unprepared to teach it. And, fourthly, they didn’t have the necessary resources,” Tebbens, the president of the Amsterdam-based Free Knowledge Institute, explains.

By addressing the latter issue, in particular, the SELF team are confident that the other obstacles will also be overcome. With educational materials at their fingertips through the SELF platform, university and school teachers, vocational trainers, IT managers and software developers will have fewer excuses not to learn about free software and provide students and staff with training in it. That, in turn, should raise general awareness about free software’s benefits and uses, and, ultimately, increase the adoption of free applications and tools in both the public and private sectors.

“Our target audience is anyone with a role in teaching or training, as well as anyone in the software development community,” Tebbens says.

World first for community-created teaching materials

The SELF platform, which is obviously built using free software, is the

first platform in the world that allows users to generate, update and distribute educational materials collaboratively, the project coordinator says. In essence, it merges the community-driven approach of Wikiversity – an educational information repository set up by the Wikimedia Foundation, creator of Wikipedia – with the e-learning capabilities of free software learning management systems such as Moodle.

“We have incorporated the best of both worlds, while adding some innovations of our own,” Tebbens says.

Among the innovations are a way to judge the quality of the content on the SELF platform through a popularity ranking system, middleware to allow materials in different formats to be shared, and a P2P file-sharing architecture that lets contributors host resources on their own servers.

The platform evidently does not need to be used solely for educational materials dealing with technology, but could be used to create and share any kind of educational content.

“We have seen interest from organisations outside the consortium who want to put it to other uses, and because it’s free software they are free to do so,” the SELF coordinator notes.

The consortium’s own work in the free software field is due to be continued by a new organisation that Tebbens says will be similar to the Wikimedia Foundation and will rely on donations and funding from partners to operate and maintain the SELF platform.

“Many of the SELF project partners want to continue with this for several reasons. The Open University of Catalonia (UOC), for example, wants to use it to maintain its course materials in collaboration with other partners, while an Indian partner, the Tata Institute of Fundamental

Research, is using it as a testbed for its semantic knowledge engine," Tebbens explains.

To raise awareness about their work, the project partners launched the Free Knowledge, Free Technology conference, the first edition of which took place in Barcelona in July 2008, attracting representatives of the software development and educational communities from around the world. They have also published a book titled 'Introduction to Free Software' that has been incorporated into a UOC master's course.

"The response to the project has been very good… I think we are opening a lot of people's eyes to the importance of combining teaching and technology," Tebbens says.

In that awakening, he hopes people will take the project's motto to heart: "Be SELFish, share your knowledge!"

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