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Looking at Open Source Software Through Arabeyes

**By Frederick Noronha ** **   March 16, 2005

Mohammed Sameer of Cairo is just 24 and a pharmacy graduate. But he's one of the thirteen or so active young people who are working hard to open new vistas to the world of computing, especially in Asia. Called Arabeyes, this team is working to make computing more relevant to the hundreds of millions using Arabic lettering across the globe.

Arabeyes… a new way to look at computer software

In a world where computers were created for a left-to-right flowing script like English, the languages of Asia (and less so of Africa, since many use the Roman alphabet) pose significant problems when getting people to work with computers. Arabic gets written from right to left. Indic scripts, such as Hindi, are written on top, below and in-front of a base alphabet. Added to that, various computer terms must be translated in a way the user understands.

Now these challenges are being met.

Arabeyes and New Opportunities

Located online at arabeyes.org, the network Sameer is part of describes itself as a "meta project that is aimed at fully supporting the Arabic language in the Unix/Linux environment". The project aims at making itself home base to standardization of the Arabization process in the world of computers. What makes it interesting is that Arabeyes relies on voluntary contributions by computer professionals and enthusiasts scattered across the globe.

If successful—and it's arguably already on that road—the project could benefit a large pool in West Asia. "I suppose (it would potentially benefit) all people using Arabic or Arabic-lettered languages in the Middle East and for the Urdu-speaking people (of South Asia). Then, there are people speaking languages like Pashto too (using a similar script)," explained Sameer. "This could be a pool of maybe 225 to 400 million people (depending on how you define it)," Sameer told this correspondent in an interview.

When did Arabeyes start and where? Who are its members? And how far has it progressed? Sameer had an interesting story to tell while visiting India recently.

What makes it different is that unlike other 'Arabized' products, this

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one looks at Free Software, sticks to a 'free' approach for computing, and works on the ideals of 'open source' communities. GNU/Linux, the computer operating system around which Arabeyes is based, is among the most famous examples of free software and open source development.

In the past, attempts at Arabizing Unix—a multi-task and multi-user computer operating system, that came before GNU/Linux—were mostly done by Arab computer science students studying outside the Arab world. Once their studies ended, their projects were abandoned.

This time round, there's no problem of sparse code or fighting to re-invent the wheel. So, rather than creating new computer applications, their goal is to incorporate modifications and additions to existing "common everyday-use applications". This becomes possible in the world of Free Software, which offers the freedom to run, study, redistribute and improve its crucial software code.

Sameer says it has currently "100% Arabized" Gnome, and has touched about 99% in terms of KDE Arabisation. (Gnome and KDE are the two most popular desktop environments used in the world of Free Software. In graphical computing, a desktop environment offers a graphical user interface—or GUI—solution to operate a computer. It provides icons, toolbars, applications, applets, and abilities like drag-and-drop. This gives each desktop environment a distinctive 'look-and-feel').

Free Software

OpenOffice.org 1 has also been completely translated, and they are now working on OpenOffice.org 2. OpenOffice.org is an office application suite for computers that is compatible and also a direct competitor to Microsoft Office. Unlike the latter, it is free software. FireFox, the revolutionary web browser which today millions are seeing as an option

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to the dominant Internet Explorer, is also in the process of being translated.

Like other Free Software projects that thrive on the Internet, Arabeyes has its contributors coming in from different countries and regions. Youcef Rabah is an Algerian PhD student in Cosmology. Mohammed Elzubeir is from the Sudan. Ossama Khayat is from Lebanon and studied in Kuwait. Nadim Shaikli is of Iraqi origins. There are 13 volunteers listed on the http://www.arabeyes.org/people.php page of the project, ranked in terms of the "CVS commits" (or, roughly, software improvements) they've made. We're reminded that "chances are if someone has a high number of commits, they are working very hard." Mohammed Sameer is ranked a decent fourth.

Team-leader Nadim Shaikli is one of the core team members, and with the aid of another member introduced Arabic to Vim—the multi-platform text editor from the Free Software world. Currently they're re-working on their 'Akka' project (which is basically a software layer on top of the console, or almost old-fashioned non-graphical monitor, which is however still used by many, especially on older computers).

"We are trying to create an Arabic spellchecker, called Duali. But it's

still not complete," says Sameer. Duali, named after the legendary founder of Arabic grammar (Abul Aswad al Du'ali - d. 688), is a spellchecker that is designed to accommodate the Arabic language. It is extendible to other non-Arab based languages as well. Other tools being "Arabized" are also listed on their website.

How did Sameer find the Arabeyes team? Simply while trying to locate solutions for his own computing needs. One of the first projects of the Arabeyes team was Akka, a tool for Arabizing Linux and Unix consoles. Akka allows you to read and write in Arabic in your plain-text 'console' (as the old-fashioned monitor was called), using any existing software without any change.

Solutions like Akka and QaMoose were just what he was looking for. QaMoose allows you to access an English/Arabic user-defined dictionary via the web.

Making a Difference

Their team has over 500 registered users, but approximately 13 are active contributors on a daily basis.

Could such a small group even dream of making a difference to the way a few hundred million people use their computers? "Two people, (Free Software Foundation guru) Richard M Stallman and (the father of the Linux kernel) Linus Torvalds, did change the life of millions (in terms of computing). They were two; we are 13. If they can do this, I hope we too can achieve something," said Sameer with cautious optimism.

Asked why Arabs wouldn't simply take the easy option of using proprietorial software—which is made by companies like Microsoft, and is widely used across the globe, but is a costly solution in the poorer parts of the planet—Sameer laughs, "That's a religious question," he joked. His reference, of course, is to the fact that campaigners for Free Software have strong preferences and points of view, and refer to their choices for Free Software and the freedom it offers as being "religious options".

"We're really focusing on open source software." Free or Open Source is any computer software distributed under a license which allows users to change or share the software freely. By contrast, proprietary software means that some individual or company holds the exclusive copyrights on a piece of software, while at the same time denying other people the access to the software's source code and the right to copy, modify and study the software.

Sameer said he had been contacted by people from South Asia too, who wanted a solution for the Urdu language that is also written from right-to-left. Unfortunately, he says, they lost contact.

Urdu is a language which originated in India, emerging out of interaction between Indian languages and the tongues spoken in the courts of the rulers of the sub-continent—from the time of the Delhi Sultanate to the Mughal Empire and its succeeding states. The language of the court, and of literature, was usually Persian, while that of religion was Arabic, the language of the Qur'an. This process of the mingling of these languages and the local dialects led to the development of everyday speech that sounded much like today's Urdu

and Hindi. There is still a spectrum of dialects spoken in the streets of cities from Lahore and Karachi to Delhi and Calcutta and in the villages all over the region.

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Like Arabic, it also uses a right-to-left script, making it face common challenges when attempting to computerize across various software programs.

"At Arabeyes, we would like to know the state of Urdu. I think Farsi (from Iran) would also benefit from this work, the Farsi people have been very helpful for the last few years," said Sameer.

What's his tip for those wanting to work in the field of localization, or adapting computers to local languages? "They should really understand the language needs, and then they will start hunting around for what's missing and what's not. And then, I don't know. But I'd really be glad to help anyone," he added.

Sameer has been using computers "since I was in primary school" when his Atari-manufactured computer was used for the programming language Basic, that became widespread on home microcomputers in the 1980s. "My father helped me. He knew this was the thing I loved. And although I studied and obtained a degree in pharmacy, I hardly know anything about it anymore," Sameer said, demonstrating his enduring adoration of working with computers.

Sameer is one of the admins responsible for the Egyptian Linux user group website. Linux, being a computer operating system that depends largely on volunteers, has a concept of volunteer-run 'user groups' that spread awareness about it worldwide. Egypt has two major Linux user groups or LUGs—called the Eglug and Linux-Egypt.

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