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Compositing In Blender

Baskar Selvaraj Powers Up
170 College Labs In TN With FOSS!

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"FOSS can help our youth transform themselves into entrepreneurs"

"In India, open source software will have to come and stay in a big way, for the benefit of our billion people," *Dr A P J Abdul Kalam* once said. Dr Kalam's words will only come true when our education system includes Free and Open Source Software (FOSS) in the curriculum, believes *Baskar Selvaraj*, a FOSS evangelist, trainer, and the founder of *Linuxpert Systems*, a company established to provide training and support services to academic institutions using only FOSS.

In a span of just one year, he has influenced over 170 technical colleges in the state of Tamil Nadu to set up FOSS labs. *Vandana Sharma* of the *LINUX For You Bureau* caught up with him, to learn about his tryst with the world of Linux and open source, and what inspires him to spread the adoption of FOSS amongst Indian youth.

Q When was it that you were first introduced to the world of Linux and open source?

I got introduced to the world of Linux and open source in May 1998, when I first explored the Red Hat Linux 5.0 distribution provided along with an IT magazine.

Q How did this interest in FOSS turn into a passion and then a profession?

During my job as a systems administrator in my earlier job, I used a proprietary operating system and platforms, and encountered a lot of problems. So I explored alternatives on the GNU/Linux platform to solve those issues, and that made me take the plunge with FOSS. From then on, there has been no looking back at proprietary platforms!

Eventually, FOSS became a passion for me, and I left the organisation, where I had acquired eight years of experience, to start *Linuxpert Systems*, a company that provides training and support services for academic institutions using only FOSS.

Q Tell us more about your early initiatives for the spread and adoption of FOSS in India.

In 2003, students who came to me for project training requested that I give some guest lectures at their institutions, for the benefit of other students, in order to help them choose projects based on the Linux platform and other open source tools. Very soon this information started reaching other institutions on the student grapevine. This helped us to reach many more colleges in the state, and spread awareness about FOSS—not only in colleges, but also in other sections of society.

Q When was it that you started this initiative to set up FOSS labs in Tamil Nadu colleges? What inspired you to take this up?

After delivering several guest lectures in colleges, I started getting requests to conduct workshops on FOSS.

Here, I explored the possibility of providing hands-on experience to the participants by establishing a FOSS lab, so that later, those who participated would continue exploring FOSS tools that they had been trained on. In the past one year, we have established FOSS labs in over 170 universities, engineering colleges and technical institutions in the state of Tamil Nadu (from August 8, 2010 to August 13, 2011), installing FOSS on more than 6500 computers, free of cost.

If we compare the Indian scenario with what's happening abroad, students in many other countries make significant contributions to FOSS; but in India, I've noticed that many of our students have not even heard about this technology stack. As I strongly feel that most of the contributions to FOSS come from the academic community, I thought why not create opportunities—give our students the same level of opportunity to learn/work on FOSS tools/technologies, and eventually contribute to it.

"In India, open source software will have to come and stay in a big way for the benefit of our billion people," are the words once said by Dr A P J Abdul Kalam. This will only become true when our education system starts teaching students using a FOSS-based operating system and tools.

Q How was the initial response? Did you come across any challenges? And how did you surmount them?

The initial response from educational institutions was not as



Baskar Selvaraj at KCG College of Technology, Chennai, conducting a FOSS workshop



favourable as it is today. It was really challenging to convince faculty members in these institutions to go with FOSS. Besides, in 2003, the maturity level of FOSS didn't match the requirements of these institutions. Things have changed a lot since then, in the FOSS world too, with regard to the maturity of solutions.

Sometimes, I had to make many attempts at a single institution to make the faculty and institution heads understand FOSS and its benefits. To convince them to adopt FOSS, I would share with them a lot of information, which I had collected from various sources, especially the AICTE recommended software list (<http://www.aicte-india.org/downloads/Commercial%20Software.pdf>).

Q What has been the most motivating factor behind making you believe that this initiative would some day become a success story?

When I started receiving favourable responses to my academic initiatives, I began to believe that this initiative would soon catch on among young minds and also academic institutions.

Thereafter, I decided to spend most of my time interacting with students and the academic community, to take this FOSS movement to a national level—with the hope that this initiative would some day become a success story.

Q How do you motivate institutions or students to adopt FOSS?

The students are always curious to learn new things that they come across. So whenever I go to colleges, I usually take along various distros, live CDs and DVDs, and demonstrate the power of Linux OS/FOSS tools. I provide them with all the tools that I carry along, and request them to give these software a try.

In all my workshops, I usually request one of the student participants to install a Linux distro, so that the other students also get motivated by this.

As far as the institutions are concerned, I share with them case studies (many of which have been published in LFY) of educational institutions, about the FOSS initiatives taken by other educational institutions in India, and explain to them the benefits that the latter are enjoying by adopting FOSS. I also apprise them

about the growing job opportunities for professionals having skill-sets and expertise related to FOSS.

The welcome change that I observe nowadays is that almost all institutions have begun to evaluate FOSS alternatives for their academic requirements before going ahead with any recommended proprietary software.

Q What are the requirements for setting up a FOSS lab? What software and hardware are used? What is the approximate cost of the set-up?

There are no specific requirements for setting up a FOSS lab. In case the hardware configuration is a recent one, we do remote installation on individual computers, where we install over 6400 packages from the Fedora repository using the Kickstart method and our FOSS lab server. In case of older hardware, we set up the lab using LTSP (Linux Terminal Server Project). We install software equivalents for just about every proprietary application, i.e., office, multimedia, Internet, development tools, databases, programming languages, scientific and engineering software—almost everything that's required to fulfil their academic needs.

As a policy of the company, the first FOSS lab set-up is always done free of cost—and if the college or institution decides to implement FOSS throughout the campus or across departments, then we suggest they opt for our FOSS lab server, with support subscriptions.

Q What advantages does this kind of a set-up offer to institutions and learners?

Such a set-up offers several advantages:

- All the required software/documentation/tools (example: Wikipedia, distro archives, online manuals, remote installation/troubleshooting, etc) are available locally, for quick access, which helps conserve Internet bandwidth.
- They have a virus-free environment to work in.
- The FOSS lab server offers built-in networking functionality—DHCP, DNS, LDAP, Web server, Q-Mail for Intranet mail, Samba server, DSpace with video streaming, and support for NP-TEL videos, to name a few.



Another workshop in progress at S M K Fomra Institute of Technology, Chennai



Q Have there been instances when any of the students, faculty or institutions resisted working with a Linux-based OS, and wanted to go back to the proprietary software that they were familiar with?

I have seen very few such instances so far.

Q How did you deal with such situations or apprehensions?

This attitude was often changed later, after we conducted workshops and training programmes for such students and faculty members.

Q Are you planning to take this movement to other states as well, once you have covered the colleges in Tamil Nadu?

Yes, definitely. We have plans to take this movement to other states with the help of local and/or national ILUGs. Also note that we have over 50 universities, 500 engineering colleges, over 300 polytechnics, over 650 arts and science colleges in our state. Going forward, we have a plan of setting up at least 500-plus FOSS labs in the next three years. I am hopeful that this initiative will become even more successful when more local and national LUGs join in and work together.

Q Are government agencies or state authorities supportive of such initiatives, in general? What has your experience been so far?

No. Our initiatives are not supported by any government agency or state authority. But, the inclusion of FOSS in the regular curriculum by Anna University of Technology has helped us to reach over 200 engineering colleges in less than a year.

Q From the young learners' point of view, what advantages do you see in their getting exposed to FOSS at this age?

There are many. I would like to share the case study of a young learner, who is also a former student of mine. He started learning GNU/Linux and FOSS tools when he was in the first year of engineering, and went on to develop many tools, which are now a part of our FOSS lab server.

He made contributions to the Fedora project too, while he was in the second year of engineering. Now, he has his own start-up that provides consultancy for many companies—including ours.

As far as I know, I have never seen him attending any job interviews, either those arranged by his college, or on his own.

This throws up a message to young learners—FOSS can not only get our youth well-paid jobs, but also help them transform themselves into entrepreneurs.

Q You are an active member of ILUG-C. How long has your association been with the group and what have you contributed to it?

My association with ILUG-C has been from 2005. My most significant contribution has been in making many of my students and faculty members from various institutions join the ILUG-C mailing list, and become active members of the FOSS community.

Our academic initiative would not have become successful without the help of ILUG-C. In fact, it is ILUG-C which has made significant contributions towards promoting FOSS in academics since 2000, through its members. Most notable contributions have been made by Ravi Jaya and Baskar K (both are independent FOSS trainers), who have helped us a lot in our academic initiatives.

Q Many argue that FOSS' philosophy is about allowing people freedom of choice so that they can choose what they want to use on their computers. But isn't this movement in a way restricting their freedom of choice, and binding youth to work on software that may be 'free' for their institution in some way, but is imposed upon them—i.e., they are not allowed the freedom to make a choice whether to use FOSS or not?

The movement is in no way to restrict their freedom of choice and bind the youth or institutions. It is the youth or institutions that decide on whether to go with 'free' proprietary software provided by major corporations, which deny them 'knowledge freedom', or to go with FOSS, which allows them that. **END** 