FOSS adoption by the govt. of India

Atul Kumar Jha

CSS Corp. India

August 8, 2011
Then...

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ICT was not in picture.
Now...

Free and Open Source Software

FOSS Initiative Cell, Department of Information Technology, welcomes you to the world of Free and Open Source Software (FOSS). FOSS is stipulated by a liberal licensing policy that makes it possible to be obtained free of charge along with the source code, which can then be modified by the user as per requirements. Advantages like increasing interoperability, developing local capacity/industry, reducing costs, achieving vendor independence, enabling localization, reducing piracy/copyright infringements and increasing growth of knowledge-based society are among the compelling reasons for adopting FOSS. The power and reach of free and open source software can be judged from the fact that most of the internet functions today are mostly grounded on it including the all pervasive e-mails and Web Servers. In many cases it has been observed that FOSS is functionally and qualitatively equivalent to or even superior than the proprietary products.

Department of Information Technology is committed to developing, supporting and promoting Open Source to create an eco-system for an all round promotion of Free/ Open Source Software in India. The notable initiatives toward offering a low cost computing, flexibility and choice to the end users include BOSS desktop and server versions and EduBOSS for schools. BOSS – Bharat Operating System Solutions is a GNU/Linux based localized Operating System distribution that supports 18 Indian languages - Assamese, Bengali, Bodo, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Maithili, Malayalam, Manipuri, Marathi, Oriya, Punjabi, Sanskrit, Tamil, Telegu and Urdu. BOSS is numero uno choice for supporting Government and educational domains with NIC and Indian Navy among its notable users. BOSS has been certified by Linux Foundation and is expected to meet the stringent demands of governance. Currently BOSS is being used for e-governance applications in Chattisgarh and Kerala. Desktop and Server versions are available for free download from http://www.boss-linux.in

NRCFOSS - National Resource Centre for Free & Open Source Software was initiated in March 2005 by DT to contribute to the growth of Free/ Open Source Software and serve as the nodal point for all FOSS related activities in India. AUKBC Research Centre, one of the constituents of NRCFOSS, has made giant strides in HR development in the sphere of FOSS. A pool of FOSS trained teacher and student community has been generated across India through awareness campaigns, training programs and workshops. FOSS elective courses are now part of curriculum in several higher institutes of technical learning. Efforts are also on to develop SaaS (Software-As-A-Service) stack delivery model based on FOSS and Service Oriented Architecture (SOA) for Kernel services. In addition, setting up of GNU Compiler Collection (GCC) Resource Center at IIT Bombay, Centre of Excellence for Mobile Internet Applications and Services (CIMAS) at IIT Kharagpur, Centre of Excellence for Grid Computing and Services at IIT Kharagpur and Centre of Excellence for Satellite Communication at IIT Kharagpur for academic and research activities related to FOSS.

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  - National Resource Centre for Free/Open Source Software (NRCFOSS)
  - Open technology centre launched.
Flow of Presentation

- E-governance and ICT initiative.
Flow of Presentation

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  - NRCFOSS
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- E-governance and ICT initiative.
  - NRCFOSS
  - Open Technology Centre (with NIC)

Others

- Open Source drug discovery project.
Flow of Presentation

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  - NRCFOSS
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- Video
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- Others
  - Open Source drug discovery project.
- Video
- Q and A
National Resource Center for FOSS
Setup in Chennai in April 2005
Support and Funding from the Dept of Information and Technology
Objectives
- Bridge the digital divide
- Bring ICT to the masses
- Strengthen the Indian software industry with FOSS technologies
- Encourage community participation

Achievements
- Large deployments of Gnu/Linux
- Huge saving of revenue
- More than 100,000 students got introduced to FOSS
- FOSS Support centre established in many parts of country
Open Technology Centre

- Set up in March 2007 in Chennai
- A division of National Informatics Centre,
- With funding from DIT, MCIT
- Activities:
  - Assistance in National Policy on Open Standards for e-Governance
  - Recommending and promoting the adoption of Open Source Software Stack
  - Provisioning support mechanism for Open Source Software Stack
Success: Open Technology Centre

- NIC mail server - 2,00,000+ mailboxes
- E-procurement system (tendering) across states
- E-court project - 12000+ Linux laptops across India
- Common Integrated Police Application (CIPA)
- Trained around 100 teams on FOSS at various government departments
• Assam Electronics Development Corporation Ltd (AMTRON)
• Promotion of communication and information technology
• Technology hub for Assam and other north east state
Anundoram Borooah Award Scheme 2005
- Free computers (powered by Linux) awarded to deserving students
- Almost 1,00,000 Linux PCs distributed so far
- Loaded with Ubuntu Operating System + educational packages (scilab, GNUPlot, Dr. Geo, step and Kalzium)

FOSS labs set up in 1610 secondary schools
- 900+ schools, students are taught on the GNU/Linux platform
- 2,00,000+ students learn FOSS based computing every year
- More than 43.78 million INR (approx. 1 million USD) saved in five years
National Mission on Education through ICT

- Launched by the Ministry of Human Resources Development (MHRD)
National Mission on Education through ICT

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- Objective: to raise the quality of education in India
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Objective: to raise the quality of education in India

Outlay 1 billion USD in the current plan period, ending on 31 March 2012.
National Mission on Education through ICT

- Launched by the Ministry of Human Resources Development (MHRD)
- Objective: to raise the quality of education in India
- Outlay 1 billion USD in the current plan period, ending on 31 March 2012.
- Likely to continue in the next plan period also.
Bandwidth:
- 1 GBPs bandwidth to every one of 500+ universities and their affiliated colleges

Low cost access device

Content generation (FOSS effort at IIT Mumbai)
- Textbook Companion
- Spoken Tutorial
Objectives of MHRD's Tablet

- To make computing available for every student
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- To be able to connect to Internet
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- To be able to connect to Internet
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- Will unleash FOSS opportunities:
  - Training, GNU/Linux distribution for millions of students
IT minister with the device

- Low cost access device
Content generation (FOSS effort at IIT Mumbai)

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- Textbook Companion
- Spoken Tutorials
Textbook Companion

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- How it works:
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Spoken tutorial

- screencast + spoken explanation
Spoken tutorial

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- Dubbing in all the regional languages
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- Ten minute duration
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- Tools used: Recordmydesktop, Camstudio

Objective

Create more than 100,000 such videos.

Distribute it among all colleges/universities

Success Story: Many workshops have been conducted using Spoken-Tutorial screencast.

Scilab
Python
Orca
PHP/MySQL

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- Achievements

- Worlds largest Simultaneous deployment of FOSS initiatives in Education sector
- The IT practical examination in free software for about 15 lakh students, first of this kind in the world
- IT Mela 2008 conducted entirely on free software platform was introduced to encourage IT initiatives among students and teachers
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- Its vision is to provide affordable healthcare to the developing world.

- Discovering novel therapies for neglected tropical diseases like malaria, tuberculosis, etc.

- A CSIR-led Team India consortium with a global partnership.
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Videos

- Video
Q and A

Questions?