

# FOSS adoption by the govt. of India

Atul Kumar Jha

CSS Corp. India

August 8, 2011

# Then...

- IT was new and adoption was challenge.

# Then...

- IT was new and adoption was challenge.
- There was no governing body to encourage/promote FOSS.

## Then...

- IT was new and adoption was challenge.
- There was no governing body to encourage/promote FOSS.
- E-governance was still in it's infancy.

## Then...

- IT was new and adoption was challenge.
- There was no governing body to encourage/promote FOSS.
- E-governance was still in it's infancy.
  - No government policy/vision for promoting E-governance.

## Then...

- IT was new and adoption was challenge.
- There was no governing body to encourage/promote FOSS.
- E-governance was still in it's infancy.
  - No government policy/vision for promoting E-governance.
  - Earliest adoptions were on non-free platform.

## Then...

- IT was new and adoption was challenge.
- There was no governing body to encourage/promote FOSS.
- E-governance was still in it's infancy.
  - No government policy/vision for promoting E-governance.
  - Earliest adoptions were on non-free platform.
- ICT was not in picture.

# Now...



[Skip to main content](#) | [Skip to navigation](#) | [Accessibility Options](#) | [Screen Reader](#) | [Glossary](#) | [Abbreviations](#) | हिंदी | [Select Theme](#) [A-](#) [A](#) [A+](#)

You are here : [Home](#) > [Research & Development](#) > [R & D in Information Technology](#) > [Free and Open Source Software](#)



## 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 e-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.bosslinux.in>

NRCFOSS - National Resource Centre for Free & Open Source Software was initiated in March 2005 by DIT 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

- Home
- About DIT
- DIT Organisations
- Electronics & IT Industry
- e-Governance
- Multimedia Resources
- Cyber Laws & Security
- Infrastructure & Governance
- HRD/Knowledge Management
- Research & Development
- Acts & Policies
- Documents & Publications
- Trade & Investment
- International Co-operation
- Contact Us





## Now...

- There is a change in governments approach in adopting Open Source.

## Now...

- There is a change in governments approach in adopting Open Source.
  - National Resource Centre for Free/Open Source Software (NRCFOSS)

## Now...

- There is a change in governments approach in adopting Open Source.
  - National Resource Centre for Free/Open Source Software (NRCFOSS)
  - Open technology centre launched.

# Flow of Presentation

- E-governance and ICT initiative.

# Flow of Presentation

- E-governance and ICT initiative.
  - NRCFOSS

# Flow of Presentation

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

# Flow of Presentation

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

# Flow of Presentation

- E-governance and ICT initiative.
  - NRCFOSS
  - Open Technology Centre (with NIC)
  - Assam state government
  - National Mission on Education through ICT (NME-ICT).



# Flow of Presentation

- E-governance and ICT initiative.
  - NRCFOSS
  - Open Technology Centre (with NIC)
  - Assam state government
  - National Mission on Education through ICT (NME-ICT).
  - Kerala state government ICT initiative.

# Flow of Presentation

- E-governance and ICT initiative.
  - NRCFOSS
  - Open Technology Centre (with NIC)
  - Assam state government
  - National Mission on Education through ICT (NME-ICT).
  - Kerala state government ICT initiative.
- Others

# Flow of Presentation

- E-governance and ICT initiative.
  - NRCFOSS
  - Open Technology Centre (with NIC)
  - Assam state government
  - National Mission on Education through ICT (NME-ICT).
  - Kerala state government ICT initiative.
- Others
  - Open Source drug discovery project.

# Flow of Presentation

- E-governance and ICT initiative.
  - NRCFOSS
  - Open Technology Centre (with NIC)
  - Assam state government
  - National Mission on Education through ICT (NME-ICT).
  - Kerala state government ICT initiative.
- Others
  - Open Source drug discovery project.
- Video

# Flow of Presentation

- E-governance and ICT initiative.
  - NRCFOSS
  - Open Technology Centre (with NIC)
  - Assam state government
  - National Mission on Education through ICT (NME-ICT).
  - Kerala state government ICT initiative.
- 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

# Success: AMTRON

- 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 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

- Launched by the Ministry of Human Resources Development (MHRD)
- Objective: to raise the quality of education in India

# 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.

# 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.

# NMEICT: Three Thrust Areas

- 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 MHRDs Tablet

- To make computing available for every student



# Objectives of MHRDs Tablet

- To make computing available for every student
- To be able to connect to Internet

# Objectives of MHRDs Tablet

- To make computing available for every student
- To be able to connect to Internet
- To listen and watch educational videos

# Objectives of MHRDs Tablet

- To make computing available for every student
- To be able to connect to Internet
- To listen and watch educational videos
- To carry out simple computations

# Objectives of MHRDs Tablet

- To make computing available for every student
- To be able to connect to Internet
- To listen and watch educational videos
- To carry out simple computations
- To connect to the Cloud

# Objectives of MHRDs Tablet

- To make computing available for every student
- To be able to connect to Internet
- To listen and watch educational videos
- To carry out simple computations
- To connect to the Cloud
- Priced at 50 USD

# MHRD's Tablet Softwares

- GNU/Linux, Android

# MHRD's Tablet Softwares

- GNU/Linux, Android
- Useful softwares to students, e.g., Scilab, Python, gEDA

# MHRD's Tablet Softwares

- GNU/Linux, Android
- Useful softwares to students, e.g., Scilab, Python, gEDA
- Will unleash FOSS opportunities:



# MHRD's Tablet Softwares

- GNU/Linux, Android
- Useful softwares to students, e.g., Scilab, Python, gEDA
- 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)

- Textbook Companion

# Content generation (FOSS effort at IIT mumbai)

- Textbook Companion
- Spoken Tutorials

# Textbook Companion

- It is a documentation project

# Textbook Companion

- It is a documentation project
- How it works:

# Textbook Companion

- It is a documentation project
- How it works:
  - Choose any standard textbook

# Textbook Companion

- It is a documentation project
- How it works:
  - Choose any standard textbook
  - Code worked out examples into Scilab/python others.



# Textbook Companion

- It is a documentation project
- How it works:
  - Choose any standard textbook
  - Code worked out examples into Scilab/python others.
  - Get the correctness certified by the subject expert

# Textbook Companion

- It is a documentation project
- How it works:
  - Choose any standard textbook
  - Code worked out examples into Scilab/python others.
  - Get the correctness certified by the subject expert
  - Get honorarium

# Textbook Companion

- It is a documentation project
- How it works:
  - Choose any standard textbook
  - Code worked out examples into Scilab/python others.
  - Get the correctness certified by the subject expert
  - Get honorarium
  - Summer internship option.

# Textbook Companion

- It is a documentation project
- How it works:
  - Choose any standard textbook
  - Code worked out examples into Scilab/python others.
  - Get the correctness certified by the subject expert
  - Get honorarium
  - Summer internship option.
- Licence:

# Textbook Companion

- It is a documentation project
- How it works:
  - Choose any standard textbook
  - Code worked out examples into Scilab/python others.
  - Get the correctness certified by the subject expert
  - Get honorarium
  - Summer internship option.
- Licence:
  - Textbook companion released under CC license.

# Spoken tutorial

- screencast + spoken explanation

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration



# Spoken tutorial

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

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- Objective

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- Objective
  - Create more than 100,000 such videos.

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- Objective
  - Create more than 100,000 such videos.
  - Distribute it among all colleges/universities

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- 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.

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- 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



# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- 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

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- 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

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- 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

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- 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
- Licence:

# Spoken tutorial

- screencast + spoken explanation
- Dubbing in all the regional languages
- Ten minute duration
- Tools used: Recordmydesktop, Camstudio
- Cover videos on most free software
- Honorium to contributors
- 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
- Licence:
  - Spoken tutorial released under CC

# IT@school Kerala government ICT initiative

- IT@School is a project of Department of General Education, Government of Kerala

# IT@school Kerala government ICT initiative

- IT@School is a project of Department of General Education, Government of Kerala
- Setup in 2001, to foster the IT education in schools

# IT@school Kerala government ICT initiative

- IT@School is a project of Department of General Education, Government of Kerala
- Setup in 2001, to foster the IT education in schools
- Achievements



# IT@school Kerala government ICT initiative

- IT@School is a project of Department of General Education, Government of Kerala
- Setup in 2001, to foster the IT education in schools
- Achievements
  - Worlds largest Simultaneous deployment of FOSS initiatives in Education sector

# IT@school Kerala government ICT initiative

- IT@School is a project of Department of General Education, Government of Kerala
- Setup in 2001, to foster the IT education in schools
- 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@school Kerala government ICT initiative

- IT@School is a project of Department of General Education, Government of Kerala
- Setup in 2001, to foster the IT education in schools
- 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

# IT@school Kerala government ICT initiative

- IT@School is a project of Department of General Education, Government of Kerala
- Setup in 2001, to foster the IT education in schools
- 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
  - Winner of National e-governance Award for the Best Project and also the winner of World is Open Award 2008

## Others: OSDD (Open Source Drug Discovery)

- Open Source Drug Discovery

## Others: OSDD (Open Source Drug Discovery)

- Open Source Drug Discovery
- A CSIR-led Team India consortium with a global partnership

## Others: OSDD (Open Source Drug Discovery)

- Open Source Drug Discovery
- A CSIR-led Team India consortium with a global partnership
- It's vision is to provide affordable healthcare to the developing world

## Others: OSDD (Open Source Drug Discovery)

- Open Source Drug Discovery
- A CSIR-led Team India consortium with a global partnership
- It's vision is to provide affordable healthcare to the developing world
- Discovering novel therapies for neglected tropical diseases like malaria, tuberculosis, etc



## Others: OSDD (Open Source Drug Discovery)

- Open Source Drug Discovery
- A CSIR-led Team India consortium with a global partnership
- It's vision is to provide affordable healthcare to the developing world
- Discovering novel therapies for neglected tropical diseases like malaria, tuberculosis, etc
- The Government of India has committed Rs. 150 crores (USD 38 million) towards this project

- Video

# Q and A

- Questions?