

Public Sector Software Policy and Guidelines

Topic for discussion: Public software: Issues in current programme designs and software development/ Implementation for Public sector in the context of public software principles

South India Regional Workshop on
Software Principles for the Public Sector
(1-2, Feb 2010)
Hotel Monarch Luxur, Bangalore

Public Sector Software Principles (PSSP)

- Accountability to public
- Cost of access
- Impact of equity
- Providing universal services
- Encouraging community participation
- Openness and collaboration / Sharing

Free software

Free software is a matter of the users' freedom to run, copy, distribute, study, change and improve the software. More precisely, it refers to four kinds of freedom, for the users of the software:

- The freedom to run the program, for any purpose (freedom 0).
- The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help your neighbour (freedom 2).
- The freedom to improve the program, and release your improvements to the public, so that the whole community benefits. (freedom 3). Access to the source code is a precondition for this.

Challenges in Developing and implementing public software's

- ICT projects are time bound projects,
- overlapping or duplicating
- Testing, Maintenance and support plans for such softwares is not given importance.
- There is no common database on Public Softwares
- Some of the agencies don't have proper clarity on ICT Products & services for Public
- Most of the agencies are promoting licensed and priced softwares
- There is no mechanism/ platforms to provide suggestions for improvement /update
- The best practices on implementation are not followed.
- Developing agencies not adhering to standards

Possible Solutions

- Set proper objectives to promote the public software's
- Establish Coordinate agency to track all public software's
- Conduct a study on Needs assessment
- Providing trainings to grassroots level agencies / Govt departments
- Promotion of all ICT P&S in Indian Languages
- Introduce the low cost computers with free softwares to the public
- Instead of Free services, the agencies may offer nominal prices
- Promote partnerships to modify or improvise the existing products/ services for public
- In every such public software implementation, there should be clear plan for maintenance and support
- The best practices including the Information Security management systems have to be taken care
- Adherence to standards by the developing agencies such as W3C guidelines on usability, accessibility and SCORM kind of standards for content development.

Agencies Involved in Public Software

- Centre for Development of Advanced Computing (C-DAC),
- The National Informatics Centre,
- The Media Lab Asia,
- Academic Institutions (like IIT, IITs and IIMs), Wikimedia foundation,
- NISG, CGG, ISRO, INCOIS, NASSCOM Foundation,
- Digital green-Microsoft,
- Azim Premji Foundation
- M.S.Swaminathan Research Foundation

and many more

Some Products & Services for public Design – Development - Deployment by C-DAC



→ Development

- Fonts and tools for Local Languages
- BOSS GNU/Linux
- E-Learning Tools like e-Sikshak, QAF.
- ... many more other products and distributed to the Nation at free of cost and nominal prices.

→ Deployment

- Release of tools for public usage
- India Development Gateway portal for Rural community,
- Information Security Awareness programme,
- NRC for FOSS,
- DGF ICT tools and
- many e-governance projects such as Kaveri, PMSY

Aspects/Issues

Challenges to BOSS GNU/Linux adoption

- People are more familiar with proprietary solution environments. Hence a great deal of effort is required to make aware about the FOSS / BOSS and also convince the user (Govt).
 - C-DAC has conducted workshops at major cities of its presence.
 - Good response from the government departments
 - Participating in many events, sponsoring major FOSS events – for promotion of BOSS Linux.
 - Plans to launch TV commercials highlighting the advantages of BOSS.
- We need to insist upon the vendors to deliver drivers for Linux along with the devices they supply
- To mandate the vendors supplying devices / peripherals to Government, to package the drivers for Linux along with the peripherals they supply
- **Slow institutional adoption**
- Public perception is **Proprietary software is easier to install and more accessible and easy to get maintenance support**

What has CDAC done to popularize these applications Some positive happenings

- “ BOSS GNU/Linux Linux Support Centres” with an objective to setup support groups in all the C-DAC centres.
- C-DAC has also initiated discussions with many academic institutions for the support activities.
- A National help desk facility has been setup in C-DAC Chennai to answer all the queries related to BOSS Linux.
- The Support groups setup at C-DAC Centres will interact with the respective state governments in their regions for BOSS Linux adoption.
- News paper advertisements is populating BOSS.

Some positive happenings

- Govt of Punjab considering BOSS for schools under Sarva Shiksha Abhiyan programme involving 46000 desktops with BOSS spread across 4965 schools.
- CHiPS Chattisgarh: deploying BOSS Linux for its prestigious project- CHOiCE - across the state.
- Indian Navy adopting BOSS
- MOU signed with NIC for BOSS deployment in e-Gov applications across the country
- BOSS Linux being deployed in Thrissur & Palakkad districts by NIC (DC Suite in 101 villages)
- Organizations like BSNL, AP Govt, ECIL at Hyderabad, AP are ready to deploy BOSS GNU/Linux at their labs.

BOSS GNU/Linux Policy

- BOSS GNU/Linux closely follows the Debian policy w.r.t development. Its distributed under GNU GPL License. The Source code of developed applications is put back into public domain for others to modify. The source for all the versions of BOSS Linux is hosted on the BOSS Linux portal (<http://bosslinux.in>).
- With regard to community participation, C-DAC is planning to bring the community of voluntary developers. However we are yet to come out with a planned approach on the same.

Does CDAC have a stated policy supporting the production and sharing of public software'

- BOSS GNU/Linux is developed by taking software / source codes / components from open source under several licenses like GNU GPL, LGPL etc. Hence, use / modifications /distribution / deployment of BOSS Linux is governed by GNU GPL/LGPL and EULA of BOSS Linux. Intellectual property Rights in BOSS Linux will continue to be owned by respective owners/assignees.
- BOSS Linux closely follows the Debian policy w.r.t development. The Source code of developed applications is put back into public domain for others to modify. The source for all the versions of BOSS Linux is hosted on the BOSS Linux portal (<http://bosslinux.in>)

What suggestions do you have from your experiences for state governments?

- FOSS supports Open standards (which in turn prevents vendor lock-in, enhances interoperability, easy migration of applications from one platform to other, prevents obsolescence of data files), enables localization, helps in developing local industry (capacity building), vendor independence, it would be better if the state governments (For ex. Kerala, Chattisgarh) adopt a policy for promoting FOSS. This is inline with the Public sector principles of ensuring transparency, Public interest & welfare over private gain or profit, addressing issues of illiteracy / poverty etc.
- The monetary benefits that accrue due to adoption of FOSS could be used for other societal benefits
- The states should also make it mandatory for all vendors to include Linux drivers for all the devices / accessories they supply to the Government
- **Education sector** is key sector which could be used for adoption of FOSS. As the source code is available, it encourages staff and students to tinker and experiment with, and participate in the development of FOSS that may eventually lead to innovative solutions.
- C-DAC has installed BOSS Linux and setup BOSS Linux project labs in around 70+ engineering colleges / Polytechnics in different states.

What is required to be done to promote the adoption of software architecture that would support/enable universal access to ICTs

- The term “Universal access ” encompasses several elements including availability, affordability, and accessibility.
- The availability of BOSS Linux now facilitates the access to software in their local language to use the Internet and other information and communications technology (ICT) facilities.
- Community Information centres (CIC’s), and Internet cafes will benefit from BOSS Linux too as this software can be utilized to power these outlets and it is affordable and easy to install, use and support.
- The primary target groups for BOSS Linux are the government employees/ users, SME’s, schools, and the first time user. NRCFOSS also addresses the accessibility area in the current phase of the project by focusing on creation of tools in open source.

CDAC is a premier public institution promoting public sector software. What more is required from central and state governments to make public software universally available and used

- E-Gov practices/packages should be done using FOSS tools
- All packaged software should be compatible to FOSS tools this may made mandatory by the governments
- Closed collaboration is required b/w CDAC & Academic institutions on promoting PSP

Open Standards

- Open standards should follow the principles of availability, and maximize end-user choice.
- In addition, there should be no royalty, no discrimination, extension of subset and predatory practices, and certain practices should be followed to ensure that these principles are adhered to.
- By implementing open standards one can have more flexibility in their choice of technology, vendor and solutions.
- In an increasingly complex and heterogeneous IT environment, no single technology or vendor can offer solutions on everything and so the ability to mix and match and to interoperate is of critical importance.
- Information is now exchanged and stored electronically as never before. It is only by following open standards in the exchange and storage/retrieval of the data that an organization can be assured of access to that data, both now and later when the technology or vendor may be long gone. Examples of open standards are: HTML, TCP/IP, HTTP, SMTP, MIME, XML, PNG etc..)

Open Document

- Open document is a file format developed by OASIS for storing office documents created by applications such as spreadsheets, word processors, charts and presentations software.
- It makes use of a royalty-free, open and vendor-independent XML-based format. The format is based on the file format of OpenOffice.org, which was submitted to OASIS to form the basis for the standard.
- Open Document provides a single XML schema for text processing, spreadsheet, presentation, drawing, charting, and mathematical documents.
- One objective of open formats like Open Document is to guarantee long-term access to data without legal or technical barriers, and some governments have come to view open formats as a public policy issue.
- Since the Open document makes use of the XML format which is an Open standard, Open document supports Open standard.

Open Architecture

- **Open Architecture is** a type of computer architecture or software architecture that allows adding, upgrading and swapping components
- The benefits here for the customer are obvious. They are no longer tied to the product line of a specific manufacturer.
- Being able to shop among various manufacturers, the customer is able to get more competitive pricing for their system.
- Open Architecture thus supports Open standards and helps in preventing vendor lock-in.

Conclusion

- Portal should be created by a suitable agency to use software information on the publicly available softwares allowing the end users to provide their experience on the same portal about different public softwares through a CMS.
- For wider dissemination in the country, such solutions should be multilingual and also should take care of information security aspects.

Thank You