

To,
Secretary in Education, Information Technology, e- governance departments
<in various states of India and in the Central Government >

Sub – Adopting BOSS GNU/Linux system (or any other GNU/Linux system) to replace Windows XP, which has become obsolete

Dear Madam/Sir,

We commend the efforts and public investments seeking to establish ICT infrastructure in your state for operational efficiencies, transparency etc. A large part of such investments is typically on desktop computers and associated software. You may be aware that many of the computers in your departments may be operating on Windows XP, a proprietary operating system which will become obsolete consequent to the the impending stoppage of support for this platform from April 2014. There will be neither any technical support nor security updates from Microsoft for XP users. The alternative suggested by Microsoft is to upgrade to Window 8 incurring a cost of few thousands for each computer running Windows XP currently. In many cases, the hardware itself may need to be upgraded to be able to allow installation of Windows 8. The total costs of this option would perhaps easily run into hundreds of crores of rupees.

Tamil Nadu Government has opted for a technologically and economically superior option. In a GO dated 12th March (attached), the Information Technology Department of the state has asked all government departments to install BOSS Linux as the operating system. The GO also discusses the various benefits from this option.

1. BOSS Linux (Bharat Operating Systems Solution) is a Free and Open Source Software (FOSS) that has been developed by the “Centre for Development of Advanced Computing” (C-DAC), which is a Government of India institution. Adopting BOSS entails significant cost- saving, since BOSS does not need any license fee payment and can be installed on hundreds of computers at no cost. Upgrades are also free to share and hence free of cost. (An IIM-Bangalore study, estimates that on a conservative basis, India would save 20,000 crores each year by adopting FOSS).
2. The free GNU/Linux operating system is virus-resistant and hence downtime due to virus attacks can be avoided. This can reduce maintenance and support efforts and resources. A large number of computers in governmental institutions tend to remain unused due to virus issues and using GNU/Linux would increase infrastructure availability.
3. GNU/Linux system is very user friendly and can be learnt within a few days by users on their own. It is being used by crores of users all over the world, including across India. GNU/Linux system comes bundled with hundreds of software applications required in any office, including office suite, web browser, email client, text editor, image editor, PDF editor, desktop publishing etc. Drivers for hardware is also bundled for plug and play use. All these software applications are also free and open, hence there are no financial implications for their use. Hence the GNU/Linux operating system is a huge superset of the Windows operating system.

4. There are also other popular GNU/Linux distributions. Like BOSS, all are free to download, share, install. All are virus-resistant and easy to learn/use.
5. They provide support for typing all major Indian languages, which is a big advantage in government offices.

A detailed

In case your department wishes to follow the example of the Tamil Nadu IT department, and provide employees a software rich, virus free environment which is free of cost, do get in touch with CDAC or the Tamil Nadu Government. You can also get in touch with any organisation that works on Free and Open Source Software in your own state. In case you need any clarifications, do let us know.

Yours truly,
Signatories (PTO)

The Government Order from DIT, Tamil Nadu soft copy is available on-line at http://cms.tn.gov.in/sites/default/files/gos/it_e_1_2014.pdf)

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Comparitive table between Free and Open Source Software and proprietary software

No	Factor	Public Software (Free and Open Source Software)	Proprietary software
1	Economic	GNU/Linux is freely shareable. This can save public funds license fees on procuring proprietary software. An IIM study estimates this saving at 20,000 crores per year.	License fees has to be paid for each computer.
2	Economic	Software upgrade is also free	License fees has to be paid for each upgrade
4	Pedagogical	There are a large number of freely shareable educational tools on GNU/Linux, pertaining to mathematics, science, social sciences, language etc which can be used in schools.	There are no equivalent set of freely shareable tools easily available on proprietary platform.
5	Technological	Public software permits local customisation. The Indian language versions of GNU/Linux are available.	Such customisation is not possible. Only vendor can make changes to the software, which creates a 'vendor lock-in' against public interest
	Technological	One big threat to ICT programs in schools is virus/worms since Internet access is important part of learning and schools will access Internet. GNU/Linux is virus resistant and hence secure.	Popular proprietary software is susceptible to viruses . In most schools and educational institutions, many computers are unusable due to being affected by viruses.
7	Technological	There are tools, such as SCIM or IBUS which supports word processing in more than 50 languages, including all major Indian languages	Not available
8	Vocational opportunities	Vocational education by bundling useful free software tools like Scribus for desktop publishing , KdenLive for video editing , Audacity for audio editing , RecordMyDesktop for making videos , Blender for Animation , Gambass for programming etc.	Proprietary software is too expensive to afford. Hence it deprives the students of learning opportunities
9	Inclusive education	ORCA screen reader can help the visually handicapped use the computer and Internet.	Proprietary software Jaws is too expensive to afford for the system

10	Technological	All these tools can be pre-installed in a 'custom distribution' of GNU/Linux for a one-shot installation . Which makes it very easy to install and use	Such one-shot installation not possible. Each software has to be installed separately
11	Technological	Since it is made by thousands of people, upgrades are frequent, improving the product.	Proprietary software release is dependant on the vendor
12	Technological	GNU/Linux is extremely user friendly and used by millions of people around the world. OpenOffice is also used by millions around the world	Windows and MS Office is user friendly and used by millions of people around the world
13	Social	It encourages societies/countries to become self-dependant in producing software and to collaborate. It can be called ' swadeshi ' software	Most proprietary software is made in few countries which makes other countries dependant on them.
14	Pedagogical	GNU/Linux is shareable, which is aligned to the public education system fundamental principle of the sharing of all knowledge resources. It can be called ' Swatantra ' software	Proprietary software forbids its sharing and hence its principle is antithetical to public education. Proprietary software also forbids modification by anybody which is against the principle of participation, essential to public systems.
15	Pedagogical	Use of a variety of tools creates a rich and diverse environment. For eg for office automation OpenOffice, LibreOffice are available. For video editing KdenLive, Pitivi etc are available – this also shifts the emphasis from learning product to learning concept	Using a single tool makes user believe that the tool = learning. Computers = windows etc. which is detrimental to learning.
16	Political	FOSS source code is in the public domain and hence can be inspected/audited to ensure there is no malicious code	Proprietary software source code is not made available, hence it is not