

# **FOSS Policies – *An insight***

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# Introduction

Under ideal circumstances, a specific policy favouring FOSS is not required. However, policy-makers have turned to FOSS policies in order to solve specific problems within their countries. Related to the benefits of FOSS as described earlier, some common indicators of these problems include:

- Local software economy dominated by monopolies
- Pressure from foreign trading partners to reduce copyright infringements
- Large foreign exchange outflows to import software
- Inadequate and stagnant local ICT capacity
- Lack of ICT tools in local language

In this paper, I will first take you through the strategies countries follow in the adoption of FOSS. The following section covers some policy initiatives around the world to give an idea of global trends in FOSS and finally we look at a policy that India could take up.

## Strategies for adopting FOSS

There are numerous strategies for achieving any conceivable policy goal. Each strategy has its own advantages and drawbacks. This section discusses considerations affecting strategy formulation, and some of the more commonly used strategies with their advantages and drawbacks.

No strategy should be taken and implemented without careful consideration of the local environment. Issues such as language, economic development, legal environment and cultural attitudes can make a particular strategy impossible.

To date, FOSS promotion strategies via government procurement throughout the world fall into four broad categories. They are:

1. Mandating FOSS
2. Preferring FOSS
3. Mandating Open Standards
4. Best Value

## Mandating FOSS

This is the most radical approach as it mandates the usage of FOSS systems throughout the government sector. In some countries, this means replacing the entire existing proprietary infrastructure, which involves large implementation and training costs. Although a number of proposals (legislative or otherwise) to this effect have been submitted, to date few have passed. The high costs and risks involved are the main deterrents in this approach.

Other countries have chosen the less painful route of mandating FOSS for all new procurement. More conservative approaches such as this are somewhat more common. Countries that mandate the change of only a proportion of the infrastructure over to FOSS include Brazil (80 percent of all systems), South Korea (20-30 percent of all systems) and Thailand.

This approach greatly promotes FOSS usage and capacity in the local economy. However, the criticism is that this is done at the expense of the proprietary software industry. Certain economically advanced countries have also criticized such policies as being protectionist and against the spirit of free trade. China has a policy of blocking of foreign software usage in government offices. This does not mandate FOSS per se but it has a strong stimulating effect. The policy considers locally packaged FOSS systems as local software, even if the international FOSS community produces the majority of its components.

## Preferring FOSS

Recognizing the difficulty of switching the entire government infrastructure over to FOSS, many governments have moderated their approach by preferring FOSS solutions for the new procurements. When all traditional commercial measures are equal (functionality, TCO, risks, stability, etc.) then the FOSS solutions are selected in recognition of the social benefits, which can be hard to quantify.

This approach has the benefit of being easier and less risky to implement. It is also more flexible, allowing procurements to be decided on a case by case basis, taking into account factors such as the possible lack of a local developer pool. However, the weaker mandate may not be enough to counter the advantage that proprietary software enjoy when there is an established proprietary system.

### **Preferring FOSS: South Africa**

Sections 10.1 and 10.2 of South Africa's OSS strategy states:

Government will implement OSS where analysis shows it to be the appropriate option. The primary criteria for selecting software solutions will remain the improvement of efficiency, effectiveness and economy of service delivery by Government to its citizens.

OSS offers significant indirect advantages. Where the direct advantages and disadvantages of OSS and PS (Proprietary Software) are equally strong, and where circumstances in the specific situation do not render it inappropriate, opting for OSS will be preferable.

# Mandating Open Standards

Mandating open standards often has a complementary effect on FOSS systems. One of the most effective ways in which software vendors lock in their users is the use of proprietary standards. FOSS systems are at a disadvantage in a mostly proprietary software environment due to the lack of interoperability. The mandating of open standards would level the playing field and introduce increased competition, not just between proprietary software and FOSS but also between different proprietary software solutions. However, this often requires modifying procedures and legacy documents that are still stored using proprietary standards.

The two areas often targeted by open standards advocates are documents and web standards. Text documents and spreadsheets are typically stored in proprietary formats and may not be retrievable without the proper proprietary software, thus impeding the free exchange of information. Proprietary, closed web standards are ironic, since the World Wide Web is primarily based upon open standards. However, the dominance of a single web browser and its complementary web development tools from the same vendor have resulted in many Web sites being created using non-standards compliant HTML tags that are only accessible using Internet Explorer even though it would take minimal effort to make these sites cross-platform.

## Mandating Open Standards: Commonwealth of Massachusetts, USA

### Commonwealth's Position

- Effective and efficient government service delivery requires system integration and data sharing.
- Technology investments must be made based on the total cost of ownership and best value to the Commonwealth. Component-based software development based on open standards allows for a more cost-effective build once, use many times approach.
- Open systems and specifications are often less costly to acquire, develop and maintain and do not result in vendor lock-in.

### Policy Statement

- All prospective IT investments will comply with open standards referenced in the current version of the Enterprise Technology Reference Model.
- Existing IT systems will be reviewed for open standards compatibility and will be enhanced to achieve open standards compatibility where appropriate. Open standards solutions will be selected when existing systems are to be retired or need major enhancements.

In some cases, mandating open standards would initially preclude certain proprietary software vendors from participating until such time that they add proper support for open standards in their products.

Emphasis on open standards is strongest in countries with mature ICT industries and infrastructure. The European Union, the United Kingdom and certain states within the United States and New Zealand are among the governments supporting open standards.

## Best Value

This approach focuses mostly on the economic value of FOSS, de-emphasizing the national and social benefits of wide scale FOSS adoption. This approach is the least controversial and is the standard policy in most countries.

However, due to the relative newness of FOSS and lack of general awareness, there have been calls for legislation or policy that explicitly places FOSS on the same level playing field as established and reputable proprietary software. Multiple legislative initiatives were started at the state level in the United States but, to date, none have passed. Any policy or legislation that explicitly requires that FOSS be considered on an equal footing with proprietary software is strongly opposed by proprietary software companies and intensely lobbied against.

## Global Policies and Initiatives at the National Level

Government	Branch / Agency	Action	Date	Status	Details
<i>Australia</i>	Tax Office	Advisory	Feb 2004	Approved	The Australian Tax Office will consider OSS alongside proprietary solutions
	National Office for Information Economy	Advisory	Aug 2004	Proposed	The Government will continue to encourage the use of open source software solutions by developing a range of tools to help Government agencies make informed decisions to suit their IT needs. Open source software was identified in the Government's 2002 "Better services, Better Government" e-government strategy as providing opportunities for innovation, sharing of information technology, and potentially new market opportunities for small Australian businesses
	Legislative	Preference	Sep 2003	Proposed	Proposed amendment requiring Public Service Agencies prefer OSS "wherever practicable"

Government	Branch / Agency	Action	Date	Status	Details
	Information Management Office	R&D	Apr 2005	Approved	A document outlines OSS options for government agencies. It does not promote OSS; procurement decisions should be made on the standard criteria of fitness for purpose and value for money
<i>Brazil</i>	Executive / National Institute of IT	Advisory	Nov 2003	Approved	The gov't initiative urges ministries and other agencies to use OSS, as well as evaluate how Brazil could benefit from open-software
	Executive	Mandatory	Jan / Jun 2005	Proposed	The government of Brazil says it will switch 300,000 government computers from Microsoft's Windows operating system to open source software like Linux. "President Luiz Inacio Lula da Silva is studying a draft decree which, if approved, would make [OSS] compulsory for federal departments"
	Legislative	Mandatory	Oct 2003	Proposed	The bill PL-2152/2003 mandates that all software used within the federal administration and public entities be OSS. The bill is to be reviewed with four other past proposals, three of which have been previously voided
	Executive	Preference	May 2005	Approved	Brazil launched PC Conectado, an attempt to sell 1 million low-cost computers. Proprietary software was excluded from the project; "We chose free software... because we believe it is a policy to spur national industry"
	Ministries / Executive	Preference	Aug 2004	Approved	Twenty percent of all computers used by the Brazilian ministries are running Linux and other open source software. In a few months this number should grow to 100 percent. Through its Digital Inclusion Program, Brazil wishes to democratize the use of

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					computers
	Federal Government	R&D	Aug 2004	Approved	The government signed a cooperative agreement with an OSS company to create a Technology and Knowledge Dissemination Center (CDTC) to promote open standards-based solutions through training and support
	Ministry of Science and Technology	R&D	Oct 2003	Proposed	The Ministry has started the first Free Software Workshop, which recommends the use of OSS in the Federal Government
<b>Brazil and South Korea</b>	Interagency	R&D	Nov 2004	Approved	Brazil's National Institute of Technology of the Information (ITI) and the Korean IT Industry Promotion Agency (KIPA) signed an agreement to exchange OSS experiences
<b>China</b>	Beijing Science and Technology Commission	Advisory	Aug 2002	Approved	"Beijing Science and Technology Commission has endorsed Linux as China's most important chance to improve its software industry... the commission would urge Chinese government bodies to consider using Linux with new computer systems, and also encourage private and university software designers to develop Linux and other open source software programs."
	Ministry of Information Industry	Advisory	Sep 2002	Approved	"China's Ministry of Information Industry has established an Open Source Alliance to support Linux systems."
	Ministry of Information Industry	Advisory	Mar 2001	Proposed	"Ministry of Information Industry (MII) and the Chinese Academy of Sciences (CAS) would work together to encourage the development of the nation's software industry..."

<b>Government</b>	<b>Branch / Agency</b>	<b>Action</b>	<b>Date</b>	<b>Status</b>	<b>Details</b>
					According to Ministry officials, the government would fund further development of Red Flag Linux...”
	Ministry of Information Industry	R&D	Aug 2004	Approved	MII established the Open Source Software Promotion Alliance to encourage the development of China’s OSS industry. It is composed of enterprises, non-profit organizations, representatives from NGOs, and individuals under the guidance of the Chinese government
<i>China, South Korea and Japan</i>	Multinational	R&D	Sep 2003	Approved	This is an ongoing collaboration to develop and promote OSS to replace proprietary operating systems. Japan has earmarked \$8.6 million for the project. At a meeting on April 3, 2004, officials agreed to seek ways of reducing costs of software with Linux. The most recent meeting was in late July 2004 and aimed to promote development and use of OSS
<i>Colombia</i>	Legislative	Mandatory	Aug 2002	Proposed	Bill proposed mandating that all State institutions and State majority-owned enterprises exclusively use OSS in their information systems
<i>Cuba</i>	Executive	Preference	Feb 2007	Proposed	The Cuban government is to migrate thousands of its computers to the operating system Linux. Communications Minister Ramiro Valdes advocated the use of open source, but there is no deadline for the migration
<i>EU</i>	DG XII, Info Society	Advisory	2003-2004	Approved	2003-2004 Workplan encourages the use of OS where appropriate for the specific program of “Integrating and strengthening the European Research Area.”

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	Directorate Info Security	Advisory	Jun 2002	Approved	eEurope 2005 Action Plan recommends open source for a EU “interoperability framework.”
	Research Institutions	R&D	Dec 2004 / May 2005	Approved	EU provided 2.2 million euros to study OSS in December 2004 and an additional 660,000 euros in May 2005.
	EU Commission	R&D	Sep 2002	Approved	Under the Information Society Technologies program, the EU Commission launched the “Three Roses Initiative” to provide funding for the use of open source software in e-government services and e-business solutions in EU Member States
	EU Parliament	Advisory	Sep 2001	Approved	“Adopted a resolution proposed by the committee on the Echelon Interception System. The resolution urged the Commission and Member States to promote European encryption software and support projects aimed at developing open source encryption software.”
	Ineroperable Delivery of European eGovernment Services Programme	Advisory	Jan 2004	Approved	The Open Source Observatory aims to provide “support for initiatives that encourage uptake of OSS and spread good practice in its use.”
	EU Commission IDA	R&D	Nov 2003	Approved	The IDA Open Source Migration Guidelines – “provide practical and detailed recommendations on how to migrate to Open Source Software (OSS)-based office applications, calendaring, e-mail and other standard applications.”
	Information Society DG	R&D	May 2003	Approved	There are roughly 20 projects supporting and developing OSS. They contribute to the development

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					of essential components of a free software infrastructure, and associated development tools or applications. See source for a list of projects from the 5th Framework Programme
	<i>* Lot more initiatives</i>				
<b>Finland</b>	Legislative	Advisory	Jun 2002	Failed	A group of Finnish MPs signed a non-binding Bill “requiring national and local agencies to migrate their IT systems to the Linux operating system.” The bill has expired and was not renewed in 2003
	Joint Venture	R&D	Sep 2003	Approved	The Applied Linux Institute run by the Dept. of Communications and the Institution of Adult Education of Vantaa at the University of Helsinki, and the Dept. of Schooling and Education of the City of Vantaa, (all public institutions), is conducting research and development on OS applications
<b>France</b>	Ministerial	Preference	2003	Approved	Ministries of Defense, Culture, and Economy use FOSS operating systems
	Ministry of Culture and Communication	Preference	2003	Proposed	Ministry called for full migration to FOSS by 2005. Also two parliamentary bills submitted (1999 and 2000) supporting FOSS, died
	Ministry of Defense	R&D	Sep 2004	Approved	Ministry has formed a consortium to develop a highly secure Linux-based operating system
	Executive	R&D	Aug 2003	Approved	The government has launched an open-source content management system to standardize government websites
	Commissariat General du Plan	R&D	Oct 2002	Approved	“A working group composed of experts from companies and administrative agencies issued

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					a report analyzing the French software industry and examining how the government can best support the industry. The report recommended that public agencies promote the development of free software platforms and open standards.”
	Ministerial	R&D	Nov 2001	Approved	Agency for the Development of the Electronic Administration (ADEA), formerly the Agency for Technologies of Information and Communication in Administration (ATICA), is “in charge of selecting open standards to be enforced all over public administrations in order to guarantee full interoperability.”
	Agency for the Development of the Electronic Administration	R&D	Feb 2004	Proposed	Agency for the Development of the Electronic Administration (ADEA) announced plans to migrate 5-15% of its desktop software to OSS by 2007 as part of a 3-month “feasibility study” of switching to Linux on 17,000 machines in Paris’ public administration
	Legislative	Advisory	Jun 2004	Proposed	The French Government wants to cut its software bill at least in half, said Civil Service Minister Renaud Dutreil. In order to reach this ambitious objective, the Government is planning to run open source software (OSS) in part of its 900,000 desktop computers over the next three years
<b>France and China</b>	Interagency	R&D	Oct 2004	Approved	French Atomic Energy Commission and Chinese Ministry of Science and Technology will collaborate to develop Linux-based software
<b>Ghana</b>	Legislative	Advisory	Apr 2007	Proposed	“The government of Ghana is serious about free and

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					open source software. Ghanaian communications minister Mike Oquaye said that the government had already 'tasked the Ghana-India Kofi Annan Centre of Excellence in ICT to spearhead the national consultation process on open source policy and to provide an initial draft document for our consideration'."
<i>Indonesia</i>	Education Ministry	Preference	Mar 2003	Approved	U.S. company donated \$57 million worth of its open source office suite to the Education Ministry
	Ministry of Research and Technology	Preference	Oct 2006	Proposed	The Indonesian Government's mission of going open source is nearly accomplished. The Government has already launched IGOS Nusantara 2006 Release 3 for the country's users. IGOS (Indonesia, go open source!) is a national effort to strengthen the national information technology system as well as to exploit the global information technology development through utilization and exploitation of Open Source Software (OSS)
<i>Iran</i>	High Informatics Council	R&D	Sep 2004	Approved	Government is developing OSS alternatives in preparation for a migration for national security reasons and to increase its chances of entry into the WTO through better enforcement of IP laws
<i>Israel</i>	Ministry of Finance	Advisory	Jan 2004	Proposed	"The ministry plans to distribute thousands of Open Office programs on CD-ROM at public computer centers and eventually community centers across the country," and is "about to propose that government ministries use the free Linux open operating system as well." "Government agencies will continue to use proprietary products they already have but won't

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					upgrade them, and the government is promoting the development and use of open-source alternatives.”
	Department of Commerce	Preference	Dec 2003	Approved	With its Microsoft contract running out, the Department announced plans to switch most desktops to Open Source Software. Other agencies are showing an interest as well
	Ministry of Industry, Trade and Labour	R&D	Apr 2005	Approved	Ministry paired with IBM to encourage the use and development of OSS. As part of the plan, the Ministry offers grants of up to \$100,000 for Israeli start-ups
<b>Japan</b>	Ministry of Economy, Trade and Industry	R&D	Feb 2003	Approved	METI planned on spending 1 billion yen in FY04 on OSS Development and Deployment. Procurement policy is “open to any new technology and company.” METI is also promoting OSS collaboration with other Asian countries
	Ministry of Internal Affairs and Communications (METI)	Preference	Oct 2005	Proposed	The Ministry of Internal Affairs and Communications announced its plans to shift keygovernment systems to Linux in order to decrease its dependency on Microsoft products
	Somusho METI LDP	Preference	Nov 2002	Proposed	“An e-Japan committee organized by the ruling Liberal Democratic Party (LDP) promoted the accelerated development and deployment of open source software operating systems within the national government... Somusho (the government agency responsible for public management and telecommunications) would initiate a study on open source deployment. The Japanese Ministry of Economy, Trade, and Industry (METI) also planned

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					to deploy an open source platform in one of its institutes.”
	METI	Preference	Nov 2004	Proposed	Approved OS desktop software as eligible for future bids. The Ministry is evaluating its options but has not committed to actual deployment
<b>Pakistan</b>	IT Ministry	R&D	Apr 2004	Approved	The Ministry has “decided to launch an Rs 37 million project to train 4,000 government officials from different ministries and departments” on the use of open source
	Ministry of Science and Technology	R&D	2003	Approved	The government established a Task Force for Linux to set up “future directions” for Pakistani IT
<b>Slovenia</b>	Ministry of Information Society	Advisory	Oct 2003	Approved	OSS and proprietary options are given equal consideration in procurements, though the government plans to “contribute to propagating information and knowledge...of the use of software and solutions based on open source.”
<b>South Africa</b>	Government Information Officers' Council	Preference	Jun 2003	Approved	The Government Information Officers' Council (GITOC) has concluded that: “As OSS offers significant indirect advantages, opting for OSS will be preferable where the direct advantages and disadvantages of OSS and PS are equally strong...open standards will be a prerequisite for all software development, thus contributing to the ease with which OSS can be implemented and adapted; Government will encourage partnerships ... to foster the utilisation of OSS.” Approved by Cabinet in June 2003
	Department of Science	R&D	Dec 2003	Approved	Department of Science and Technology is funding the

<b>Government</b>	<b>Branch / Agency</b>	<b>Action</b>	<b>Date</b>	<b>Status</b>	<b>Details</b>
	and Technology				Open Source Center to promote government and educational uses of OSS
	Government IT Officers' Council	R&D	Aug 2006	Approved	Council investigating use of FOSS in 2003 made recommendations promoting FOSS applications when proprietary ones offered no advantage. In 2005, the revised policy stated that the “South African Government will implement FOSS unless proprietary software is demonstrated to be significantly superior...Whenever FOSS is not implemented, then reasons must be provided in order to justify the implementation of proprietary software.”
<i><b>Sri Lanka</b></i>	ICT Agency	Advisory	Jan 2004	Proposed	ICT Agency Chair stated, “While the Government realizes that Open Source is not suitable for all situations, it supports and encourages its use where it provides a benefit. Sri Lankan companies too may benefit by adopting open source development methodologies when they make business sense.”
<i><b>Tanzania</b></i>	Executive	Advisory	Feb 2003	Approved	A National ICT Policy document recommends the use of OSS
<i><b>UK</b></i>	OGC / e-Government Unit	Advisory	Oct 2004	Approved	The updated version of Government policy on the use of Open Source Software within the UK government specifies software choices should be made on a money-for-value basis, giving no preference to OSS. The National Technical Authority for Information Assurance (CESG) will examine issues regarding OSS for use in government systems
	OGC	R&D	Sep 2003	Approved	November 2002 Case Study and September 2003 “Proof of Concept” Final Report state that OSS is a

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					“viable and credible alternative” to proprietary software and recommend the public sector consider benefits of development and migration
	OGC / e-Government Unit	R&D	Oct 2003 / Oct 2004	Approved	Nine government agencies tested OSS to “measure the effectiveness and cost-benefits of IT systems based on OSS products.” OGC concluded testing found that “open source is a viable and credible alternative to proprietary software” for many applications, but there are still limitations hindering its use. It recommends a gradual introduction of OSS as applications improve
	E-Envoy Office / Department of Industry and Trade	R&D	Feb 2003	Approved	“The e-Envoy Office and the Department of Industry and Trade (DTI) adopted interim conclusions on government-funded R&D software outputs... [that] state that if no exploitation route is specified for government-funded R&D software outputs, the default position of the government should be ‘to adopt an open source software license which complies with the OSI definition (which includes the GPL and Berkeley style licenses) or a UK-specific analogue of it’ [and] ‘all government-funded software should be accompanied by appropriate documentation which will assist the exploitation via the open source software license’.”
	Office of the Deputy Prime Minister	R&D	Jun 2005	Approved	The government will sponsor research at the National Computing Centre in OS applications in the public sector
<b>U.S.</b>	DoD	Advisory	Jun 2003	Approved	Established rules for open source use at DoD.

Government	Branch / Agency	Action	Date	Status	Details
	OMB	Advisory	Jul 2004	Approved	Agencies' procurements must consider cost of ownership and maintenance, as well as risks, security, and privacy of data. Policies are "technology and vendor neutral."
<i>Venezuela</i>	Executive	Advisory	Aug 2002	Approved	The government policy articulates "open source whenever possible, proprietary software only when necessary."
	Executive	Mandatory	Dec 2004	Approved	The decree requires all public administration systems to shift to OSS, and in the cases where OSS cannot be used, the agency in need must take requests to adopt other solutions to the Ministry of Science and Technology. The decree also talks about R&D, cooperation, and education in OSS
	Executive	R&D	Nov 2003	Approved	The Venezuelan Academy of Open Source Software opens in Mérida

*For a more comprehensive view of national and state level initiatives on policy, refer to the [study](#) conducted by the Center for Strategic and International Studies, USA*

# A Draft policy for India

## Adopted Approach

Some policies come with an explanation of FOSS and its advantages; then go on to specific policies and their justifications while others go as far as chalking out long term strategies for its implementation. Many keep it restricted to policy alone (with separate ones for Open Standards and FOSS sometimes). India would probably be most suited to adopt a policy that prefers FOSS rather than mandates it. However, the importance of Open Standards in the case of any country cannot be overlooked. The following draft policy shows a strong inclination for Open Standards while taking a preferred stance towards Free/Open Source Software.

## Legend



-

Alternative wording



-

Additional wording not found in other policies



-

Requiring debate

- I. Effective from <date>, all electronic documents including text, spreadsheets, and presentations of the sovereign State of India shall be created, exchanged, maintained, and preserved in the Open Document Format(an open, XML-based file format). The format must meet the following criteria :
- (1) interoperable among diverse internal and external platforms and applications;
  - (2) fully published and available royalty-free;
  - (3) fully and independantly implemented by multiple vendors; and
  - (4) controlled by an open industry organization with a well-defined inclusive process for evolution of the standard. By that date, the State of India shall be able to accept all documents received in open document format for office applications and shall not migrate to a file format currently used by only one organization.
  - (5) The concerned Ministry shall develop guidelines for state agencies to follow in determining whether existing electronic documents must be converted to an open, Extensible Markup Language based file format. In developing guidelines under this subsection, the concerned agency shall consider :
    - (i)The cost of converting electronic documents;
    - (ii)The need for public access to the documents; and
    - (iii)The expected storage life of the documents. [\[1\]](#)[\[2\]](#)

The mandatory format for interchange and generated electronic information between the different structural parts of the State of India will be one of the following standard information storage formats:

Open Document Format for Office Applications (OASIS Open Document Format, based on standard ISO/IEC DIS 26300), for working documents and administrative procedures.  
Interchange Document Format PDF(A (Portable Document Format ISO 19005-1:2005), for

information which needs to be immutable for visualization.

The established office productivity tools for all public employees of the State of India will be office implementations that support the standards mentioned in the first point as the mandatory and native storage formats, and which will be inventoried as a work of CDAC/NIC ?? . Its introduction in the workplaces of public employees of the Indian Government will be immediate.[\[3\]](#)

- II. The Government will implement FOSS unless proprietary software is demonstrated to be significantly superior. Whenever the advantages of FOSS and proprietary software are comparable FOSS will be implemented when choosing a software solution for a new project. Whenever FOSS is not implemented, then reasons must be provided in order to justify the implementation of proprietary software.[\[4\]](#)
  
- III. The Government will promote R&D in FOSS. The focus areas will be e-Governance, and development of appropriate technologies. The various institutions will network with national & international organizations and industry for knowledge sharing and collaboration in the above field. Collaboration with other developing countries will be given priority.[\[5\]](#)
  
- IV. The Government shall support the training of civil servants to use open software and it shall promote the development of materials used to educate civil servants in the area of open software and open standards.[\[6\]](#)

- V. The Government shall promote integrating the knowledge related to the software solutions based on FOSS into educational programmes. In the process, contents on the open and proprietary software shall be presented equally in order to prepare the younger generations for independent decision-making on the choice and legitimacy of the chosen software for individual information and business purposes.[\[6\]](#)
- VI. The Government shall create awareness about FOSS through the print and electronic media.
- VII. All Government procurements in hardware will mandatorily require the vendors to supply drivers that support the operating system of choice.
- VIII. Foreign players wishing to take up the FOSS model of business shall have to identify an SME partner on a 50:50 basis or must subcontract out to SMEs a certain percentage of the contract.
- IX. The government will provide tax incentives to SMEs by means of a ten year tax holiday.
- X. The Government will also consider facilitating credit/Financial assistance to startup FOSS companies.

# References

- [1] Minnesota Open Standards bill, <http://www.revisor.leg.state.mn.us/bin/bldbill.php?bill=H0176.0.html&session=ls85>
  
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