

"Policy on ICTs" for a public institution

June 2011

Table of Contents

Definitions.....	1
Background.....	1
Philosophical imperatives for public institutions.....	3
Universal access	4
Participation.....	4
ICT Policy.....	6
Public Software resources available.....	6
Operational aspects.....	7
Annexure A. Advantages of using public software	7
Annexure B. Draft process for PS adoption.....	8
Annexure C. Resources	11

Definitions

1. Public institution

Public institutions are institutions working for public interest. This includes governments as well as academic institutions, civil society (NGO/CBO), community media institutions.

2. Public Software

Public software can be defined as basic software, which being essential for the participation of all in the digital society needs to be seen as a right, just as public education or public health. Such a right can also be derived from right to education or right to information, both of which need the use of basic software applications. Public software, being publicly owned is freely shareable and locally customizable (is free and open source software).

Background

3. We are moving from an industrial society to an information or knowledge society, with the production and consumption of information becoming an increasingly important activity, not only from economic but even more so from social and cultural perspectives. This knowledge society is increasingly a digital society. It is the digital format of resources that has caused such an explosion of information since creation, storage and dissemination of information has become much easier and cheaper than before.
4. However, the term 'digital divide' suggests that different groups, have differential capacities and power to participate in this process of knowledge creation and sharing. Within organisations in society, public institutions need to fully adopt ICTs (Information and Communication Technologies) in their work processes in ways that can make their work more effective, including in the sharing of their work and experiences and in the accessing of experiences and perspectives from elsewhere.
5. Our limited use of ICTs also limits possibilities for the poor and marginalised to access and appropriate ICTs for their own empowerment. Since it is an important societal responsibility to

ensure that all, especially people from marginalised groups are able to participate fully in the knowledge society being built, if NGOs and CBOs use the power of ICTs more fully has an important role, as they work with marginalised groups in society.

6. While public institutions work leads to continuous creation of knowledge, based on their experiences and insights, such knowledge often remains with the specific individuals or institutions. Share individual knowledge across the institution and institutional knowledge across the domain would be immensely helpful to the efforts of all developmental actors, since such sharing would help them to strengthen their own efforts, benefiting from the positive as well as negative experiences of their peers. New ICTs can help such development and dissemination of individual and institutional memories in many ways:
 1. ICTs help in the easier recording of experiences and insights – not only through digital tools such as text processors but also audio/video creating/editing digital resources (digital resource construction).
 2. ICTs help in the easier sharing of digital resources created above, through email lists, blogs etc (digital resource sharing)
 3. ICTs help easy access to the free digital knowledge resources accessible through the Internet
7. Through the use of such ICT tools, the collaborative creation as well as dissemination of knowledge could become a routine organisational activity rather than a difficult exercise undertaken occasionally. This document discusses the nature and application of ICTs in our organisation and the principles that would underlie this.

Philosophical imperatives for public institutions

8. Software is a basic building block of our increasingly digital world and its nature has important implications for public interest. If basic software needs to be seen as an entitlement of all, then its production and consumption needs to be modeled on public good principles. Its procurement thus has important implications far beyond that of procuring office equipment etc and cannot be treated as a 'technology issue' to be taken care of only by the technology experts.
9. Software developed for public service has a unique context and objectives deriving from those of public service; with its imperative of providing public goods and ensuring equity and social justice. It is well known that private and commercial actions have very different context, motives and considerations than public actions. For instance, the largest possible reach and diffusion as well as transparency of actions are basic to public service, which are not necessarily values espoused by private and commercial players.
10. The principle of equity/social justice requires that the public institutions should specially focus on the needs of the poor and marginalized. Since any 'license fee' restriction can be a severe impediment to the possibilities of the poor and marginalized to use software, equity consideration requires that the public institutions use freely shareable software, that is accessible to all, especially the communities they work with.

Universal access

11. Software that is proprietary (privately owned) where the right to share and modify is not publicly available are a serious obstacle to universal access to ICTs. Software used should also be one that is freely shareable, so that it can be freely acquired by members of community as well. Specially basic software that runs the personal computers used by all (desktop software), comprising of operating system, applications that process text documents, spreadsheets, images, audio/visuals etc.
12. Proprietary software also often uses document formats that are proprietary. To open or edit these documents in proprietary formats, the user is compelled to procure a copy of the same proprietary software, at a cost of the license fees. To make ICTs universally accessible, it is essential that the public institutions only uses documents in free and open formats, so that no citizen is compelled to purchase software that can open or edit these formats.

Participation

13. Proprietary applications allow only for their application to be used. Software released under a license such as the GPL, allows it be modified by users as well as freely shared with others. This increased extent of participation means that Public software can be customized with changes designed, developed and tested with wider community participation. This helps in greater ownership over the software application and the processes surrounding its development and use. This can give a encourage groups of volunteers who can participate in development, testing, audit etc. In ICT programs in public schools, teachers and students can customize the software and tools for their local needs. **As a public institution our members will participate in the production/ customisation and use of software, not as mere 'consumers' but as 'responsible citizens'**. This means even 'non technical' persons can participate in contributing to the design of applications, their testing / social audit etc.

Collaborative working and publishing

14. As a public institution, collaborative working, peer learning and sharing is an important principle. In our use of ICTs, we should network our computers to share files etc. Collaborative editing of documents, publishing of organisational information resources, in text, audio, image and video formats will also be an important process. The use of simple content management systems for designing and developing websites will also help in sharing information of and from our organisation. Use of simple public software tools to edit audio/video/images and for websites means that these publishing activities become a part of regular organisational work, and not special activities that are done once in a while with the help of expensive external expertise only (which then remains static for months or years)

Organisational ICT Policy

15. *As a public institution we will adopt public software in our work. We will use private software only in exceptional cases where we do not have equivalent public software available. Such cases would be categorised as exceptions and clearly explained during the procurement.*
16. *As a public institution, we will use publicly owned digital formats and avoid proprietary digital formats. Any exceptions would be clearly explained during the procurement prior use.*
17. *We will work to demystify ICTs and to recognise it as a critical organisational and societal resource that all of us need to understand, and take an active role in its design.*
18. *We will work to use a large number of public software applications in our work, moving from a 'minimalist proprietary' environment to a 'maximalist public software' environment. This would include using image, audio, video editors to create and share knowledge in multiple ways. Local language software tools can also be used easily to for communication.*
19. *We will participate in the creation, enhancement, customisation, implementation of public software tools in society.*

Public Software resources available

20. PS applications have functionality equivalent to proprietary applications. We will use the public software as per details

Application area	Proprietary /private	Public Software ¹
------------------	----------------------	------------------------------

¹ These are examples, there are other public software options available for each of the categories

Operating system	Microsoft Windows	Ubuntu GNU-Linux
Word Processor, Spread Sheet /Presentation	Microsoft Office – Word, Excel, Powerpoint	Open Office – Writer, Calc, Impress
Email client	Microsoft Outlook	Thunderbird
Internet Browser	Microsoft Internet Explorer	Firefox
Database	Access or Oracle	MySQL
Desktop Publishing	Page Maker, Corel Draw	Scribus
Graphics / Image editing	Adobe Photoshop	GIMP
Vector Graphics	Corel Draw	Inkscape
Website design and maintenance	Sharepoint	Drupal
Audio editing	Adobe final cut pro	Audacity
Video editing	Adobe final cut pro	KDEN Live

Annexure A. Advantages of using public software

1. GNU/Linux operating system is much less vulnerable to viruses/worms compared to Microsoft Windows. This will lead to reduced system downtime and load on support and also expenditure on anti virus software. <http://www.linux.com/news/software/applications/8261-note-to-new-linux-users-no-antivirus-needed> explains how GNU/Linux is more secure from viruses
2. PS reduces costs of computing, since the software is freely shareable without needing to pay any license fees. Community members with who the organisation works with, students can also take the same software for their home computers. PS is an important factor in democratizing the access/use of computers in a developing country context.
3. Students, computer programmers in the institution can make required customizations etc as may be needed, and be part of the larger PS community in India to collaborate in this regard.
4. Institute need not be forced to upgrade its software whenever the vendor stops supporting an older version. PS source code being open, ensures that it gets support and maintenance from PS communities and PS enterprises without being 'locked-in' into one vendor. This also reduces unnecessary upgrades and expenditure.
5. A platform like Ubuntu GNU/Linux comes bundled with hundreds of free software tools, helping organisation increase its depth and breadth of using ICTs

Annexure B. Draft process for PS adoption

1. Share communication within the organisation about the virtues of public software and why as a public institution you should adopt public software. This can include a letter from the Organization head and also putting up posters on public software
2. Have a meeting/session if required to discuss this and explain the same in detail and address the concerns and expectations of colleagues
3. Discuss the 'Organisation ICT Policy' (your version of this note) and explain its features. Discuss if any local changes are needed to this.
4. Make a plan for migrating computers – this will need to consider the following
 1. number of offices/branches
 2. number of people/staff
 3. number of computers being used
 4. kinds of software applications being used
5. The following categories can be prepared to help in the adoption (with a customised approach for each category)

1. Category A - using MS Windows, MS Office (only English typing) and Internet Explorer
2. Category B - using MS Windows, MS Office (English and local language (Kannada / Hindi / Telugu / Tamil / Urdu etc) typing) and Internet Explorer
3. Category C- using special packages – Corel Draw, Page Maker, Tally Accounting or other special packages on Windows

6. Custom approaches

Category A

1. All computers which are only using MS Windows, MS Office (only English) and Internet Explorer could be immediately migrated to Ubuntu GNU/Linux (with Open Office and Firefox Web Browser). Initially 20 – 80% of all such computers can be migrated to Ubuntu. Over a 3-6 month time frame, all such computers could be migrated to Ubuntu.
2. On all computers still on Windows, Open Office and Firefox Web Browser should be immediately installed and their use encouraged in place of MS Office and Internet Explorer
3. Office of the organisation leader should migrate to Ubuntu and required software .
4. Thunderbird installation would include migrating of old emails (pst files) from MS Outlook to Thunderbird. All using gmail, yahoo mail, organisational mail should move to Thunderbird email client, mail client allows much more effective working.
5. Any other software currently running on Windows which are in nature of web based applications would not be affected by the migration, since the web browser would work in same manner on Ubuntu as well.

Category B

6. In case of computers using Hindi / Kannada (local language) word processing, 1-2 computers would be converted and piloted for a few weeks/months using public software tools like SCIM and on satisfactory resolution of issues if any, other such computers should be migrated

Category C, D and E

7. A phased switch to Ubuntu should be planned. In these cases, Open Office, Firefox would be installed on all other computers (on Windows operating system) in the institution. These applications are identical in Windows and in Ubuntu operating systems. Staff would be encouraged to use these applications and over a period of time, would migrate from Windows to Ubuntu, continuing to use the Open Office, Firefox and Thunderbird applications (on Ubuntu). Open Office can read and process MS Office documents.
8. In case of applications like Corel Draw or Page Maker, the users should start familiarising themselves with the public software equivalents like Scribus or Inkscape. Say after a 3- 6 month period, all their computers would be migrated to Ubuntu once they become comfortable
9. In case of special applications, which have versions available on GNU/Linux, vendor could be asked to provide the same , in place of the version on Windows systems.
10. New applications developed in-house should be web based applications, so that having Firefox on client is sufficient. Applications should not depend on only proprietary web browser
11. All new computers and notebooks bought will be pre-loaded with Ubuntu. Hardware vendors will be asked to supply computers with Ubuntu pre-loaded
12. An 'in-house' technical team which can be trained (in a day) to install Ubuntu and related software applications will provide support and troubleshoot. This team can be in touch with the local FOSS volunteers and with Public Software Centre.

Annexure C. Resources

The www.Public-Software.in site has useful information on Public Software. This includes the rationale for public software on political, socio-cultural, economic and pedagogical grounds, apart from the philosophical. There are also links with websites that are sources of software, 'how to' install and use applications as well as FAQs. The site has resources in multiple languages. There are several other sites too with resources and support.

Like all change processes, this will also need communication with all faculty and staff so that people are prepared adequately and once they understand the underlying principles, usually their support increases. A basic 'note' on why public software is available on this site, and can be shared. The

philosophy of adopting public software is important to understand so that this does not become a mere economic logic based process. Appreciation of the philosophy will help us tide over any teething issues since this is the 'right thing' to do.