

Why the Government of Karnataka should adopt and promote Free (Swatantra) Software

Free software is a kind of software which anybody has the **freedom to use, modify and share**. It is also free or **gratis** (no cost). It is our submission that Governments should prefer free software over proprietary (private) software, which the user does not have the freedom to share or modify. This note provides some principles and empirical data in support of our submission.

“Swatantra” software

Though India is an important IT location, it has largely been a low-value IT producer. We have call centres, Business Process Outsourcing etc, however high-end software is largely produced in the US, Europe and other developed countries, not in India. One reason for this is that Indians have learnt to be end 'users' of software and not 'producers' on a large scale.

This state of affairs has important corollaries within our education system, where rote-learning dominates rather than deeper comprehension. Likewise, with private software, students can learn only to be mere mechanical users of software. This is because, private companies hide the code that goes into building the software. Users of private software are also always enslaved to the seller for any changes or support. With Free software, our students can learn not only how to use software, but also have the **freedom to create new applications and to maintain and modify software**. This is why free software is also called **Swatantra software**. Software is basically codified knowledge and Knowledge is accepted as “that which liberates”. Free software puts knowledge in our hands, while in the case of private software, this knowledge is hidden by the seller.

Kannada software

We may think that English is the 'natural' language of software. However software has no 'natural' language and the domination of English in software only indicates that there have been lesser efforts to extend software applications to other languages.

We want to put in maximum effort to protect, grow and further develop Kannada and our local languages. This is especially important in the area of Information Technology, so that the benefits are available to the entire community and not limited to English speaking citizens. Many countries are putting in lot of effort and resources into making software and software platforms as well as digital information resources in their own languages. For example, in Japan, France, Germany, China, Russia; Internet and other software applications as well as digital information have been developed in local languages.

This form of local language software and applications development can be best done by local software engineers working with free software. In contrast, when private software is used, changes can be done only by the seller, and this means fewer people can be involved in this effort. More importantly, this causes our language software to become dependant on the market and business priorities of the sellers. Hence Karnataka government needs to put effort into developing software and digital information in local language, and this can be done through the education system - in our network of schools, colleges and teacher education and support institutions. **The countries mentioned above and Kerala in India have succeeded in creating their local eco-system for local language software and digital information.**

Best use of limited resources – the economics of free software

In developing countries like India, there is really no reason to spend public money on private software when free software is available. For instance, if each of the 60,000 schools in Karnataka had 5 computers for each class, then we would spend - $60,000 * 5 * 25,000 = 750,00,00,000$ (Rupees 750 crores) on basic private software (a popular operating system and Office application). On the other hand, if the option of free software is selected, then this entire money could be used for other priorities such as basic

infrastructure, hardware, research into hardware innovations. If we take the entire Indian Public school system, the amount that we can avoid diverting to private software can amount to more than 25,000 to even **100,000 crores**.

“Swadeshi” software

Free software has a second economic benefit. Although we achieved political freedom 60 years ago, we are still suffering from economic colonisation. This is specially true in the IT Industry which is dominated by many foreign multinationals. When governments buy a software license, the license fees directly benefit multinationals based in foreign countries. However if free software is used, it can be further developed and customised by local software engineers, which means that money paid for such services remains in the local economy and also local IT capabilities are developed. This is a very critical consideration in the context of reducing imbalances in economic growth and livelihood opportunities.

“Samudaya” software

Free software can be created and modified by communities of students working together in a spirit of collaboration, while private software is produced by business organisations only. Most of the free software has been produced in this collaborative manner by people acting in a spirit of contribution and collaboration across the world. Hence free software can also be called **“Samudaya software”**. The symbol of the Ubuntu Linux system is of three human beings holding their hands together in a circle, symbolising such collaboration and cooperation.

National Curriculum Framework (NCF) emphasis on “constructivist approach to learning”

The NCF 2005, produced by NCERT emphasises that learning happens when the learner actively participates in the process of learning and not when the learner is a passive recipient of knowledge as a finished product. This is applicable to computer related learning as well. Software can be really learnt only when the learner actually is able to modify the code, write software, and develop applications. To reflect the spirit of the NCF, our schools should provide learners with the opportunity to create and modify software. **This is possible only through the use of free software and Not through private software.**

Secondly if our learners learn only private software, they will become dependant on it and also purchase private software for their own individual or household use – this is largely the situation in India, where most households use private software, which has been **copied in an unauthorised manner** in many cases **since they have not even heard of free software**. Private software vendors offer their private software at extremely low prices to schools, because they want to make students dependant on their software and not explore alternatives. The Minister of Culture for Brazil called Microsoft a 'drug pusher' for this reason, offering the initial samples at little or no cost and then benefitting from having made the user dependant on their product.

Public software

Since Governments function on the same principles of free software - transparency/openness, putting public and community interest over private interest, public software should be actively promoted within the public (Government) system and specially the education system. Private software functions on principles of competition, non-transparency / closedness and 'for-profit' and these are aligned to the business world than to the Government or non-profit sector. Hence while private software definitely has an important role in the business world, the public sector should prefer free (public) software.

Secondly, government cannot purchase software whose source code is not provided to it. This has security implications. The vendor can insert code that can monitor the activities of the Government staff using the software and this can be a security threat to the Government. For this reason, the defence department of the US and many countries will not purchase private software and insist on open source. This threat is not an

empty one – recent newspaper reports said World Bank debarred Satyam Computers from contracting with them, since Satyam installed spy software in the projects they did for the World Bank.

Software quality

Multinational vendors often suggest that private software is of 'good quality' and has 'support' and training facilities, whereas free software is of poor quality, is unreliable and has no training or support facilities. However this **generalisation is unfounded** and simply based on the fact that most people have not used or been exposed to available alternatives. The majority of software purchased in India (and elsewhere) is the operating system of the computer coupled with an office automation package. In this respect, free software is as good, if not than better private software. The Governments of many countries have taken specific policy decision to go for Open Office and GNU/Linux. In India, Kerala and Tamil Nadu have taken clear policy decision to opt for free softwares like Open Office and GNU/Linux. Annexure

The table below gives some of these options:

Free software alternatives available

Application area	Microsoft	Free software*
Operating system	Microsoft Windows	Ubuntu GNU-Linux
Word Processor	Microsoft Office - Word	Open Office - Writer
Spread Sheet	Microsoft Office – Excel	Open Office - Calc
Presentation	Microsoft Office – Powerpoint	Open Office - Impress
Email client	Microsoft Outlook	Mozilla Thunderbird
Internet Browser	Microsoft Internet Explorer	Mozilla Firefox
Database	Microsoft Access or Oracle	Open Office – database or MySQL

*** Several free software options are available and an appropriate one can be chosen based on local needs**

What we request from the Government of Karnataka

The IT policy of the Government of Karnataka specifically recommends that free software should be the preferred option for Governments, but this recommendation needs to be comprehensively implemented. Similarly, the Education Department of the Government of Karnataka has taken the decision to implement the 'Computers at School' programme (Mahiti Sindhu) on Free software platform.

This choice must be applied while purchasing computers for all Government departments. Most hardware vendors promote private software since they have business benefits from this and **do not even offer a choice to the buyer to opt for free software. Government offices must specifically ask for and insist on Free software when procuring computers.** This is also required from a 'least cost' (L0) principle of procurement, since free software will save a significant part of the total purchase costs. In fact, the price of private software (operating system and Office) can amount to about 30-40% of total cost of computers purchased, and this can be saved with Free software options.

When Government takes a policy decision to use and promote Swatantra software, it will give a huge boost to local software development, Kannada software applications and learning software in our schools. Secondly the 'dependance' mindset on private software can easily be broken through Government policy and program that promotes and popularises free software. Government should actively promote **samudaya** software efforts and encourage use of **swatantra** software within the public systems.

What support can the Free Software Movement offer to the Karnataka Government?

In Kerala and in other states, Governments have worked with civil society organisations associated with the Free software movement to create local networks of software developers, trainers and support staff. The Free software movement is quite strong in Karnataka and there are many organisations who can work to support the efforts of Government in promoting the use and creation of Free software, Kannada software. A few examples - Free Software Users Group, Linux Users Groups, Centre for Internet and Society, IT for Change, Sampada etc. The free software community also has links with similar communities in other parts of the world and the global community of volunteers working on developing and maintaining free software is quite strong.

Last year, organisations that are working to promote FOSS came together to establish a 'Coalition of the FOSS Community in India' whose goal is to collaborate with governments and other organisations to promote the adoption of FOSS, specially in the public sector. Several of the member of this coalition are based in Bangalore, including the Centre for Internet and Society, Swatantra Malayalam Computing, Deeproot Linux, IT for Change etc. Faculty from IIM-B, Bangalore University as well as other academic institutions are also members of this coalition. This coalition is willing to provide any technical support or guidance that the government may require in this regard.

However as mentioned earlier, the Government has a very crucial role to play in supporting the selfless work of such volunteer communities in building a world where software and knowledge is free. This has to be at both policy and program levels. In terms of policy, Government must require the use of free software as a default and procuring private software must be allowed after a considered conclusion that free software alternatives are not available. In terms of program, Government departments must insist on free software for their own use. This can easily start with the personal computers and laptops procured by the Government, since robust free software alternatives are available. In terms of larger applications, the Government of Karnataka e-Governance policy clearly states that for any application developed for the government, the source code must be given to the Government, and Government should have all rights over the source code, including the right to modify and enhance it, if required.

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