Open Source Software Movement and its relevance to Marathi on computers

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Introduction

As we all know computers are indispensable today. Further a computer without appropriate software to run on it is as good as junk. We routinely use word processing, email, presentation, spreadsheet, web browser, database software. As with most other modern technology, computers being a western innovation, English is the default language of use in the software we use on a day to day basis.

- In this paper I will introduce a revolution in computer software called Free / Open Source Software (FOSS) movement.

- I will present an overview of how and why open source software movement started.

- I will briefly present how it is possible and indeed beneficial in terms of savings, usability and security to use open source software to do most of our day to day computing tasks.

- I will present the current status of Open Source software availability in Marathi.

- Most importantly I will introduce how using the open source software WE The Group Of People Present Here Today, can make a large amount of computer software available in Marathi quite rapidly.

The aim of this conference is to study and promote the use of Marathi on computers thus taking computer to every Maharashtrian irrespective of his English abilities.

The life force of any computer is the software running on the hardware.

To use the computer in everyday life we need at least the following software

a) Operating system e.g. Windows, Linux, Unix, Mac OS

b) Office suite with word processor, spread sheet, presentation, database

c) Internet browser

d) Email software

e) Utilities like Personal Information Manager, Calculator, Spell Checker, Dictionary

In addition depending on user we may need several other software like image editing, software for playing music movies etc. Professionals have additional requirements of specialized software to do their job.

The cost of the above basic software itself today is more than the computer's hardware cost.

This prohibitive cost makes it impossible for average man to own a computer and use it legally.

At this point it is very interesting to note that much of all the software development started in universities in western world. The academia needed software to work with the computers, do research, collaborate with colleagues. They started making the basic building blocks of software development like the programming languages, the protocols with which programs & computers communicate with each other. They freely shared software, code & ideas among each other which allowed others to build on what was already developed and take the general effort forward. Indeed much of the computer

including the internet as we know today was born this way.

At some point companies started producing software and selling it for profit. Much of it initially was based on programming languages, protocols, software developed by the academia. As it was in their commercial interests and to overcome competition, these companies stopped sharing code. They introduced hitherto unheard of policies for selling software called software licensing. This ingenious piece of legacy reduced the buyer of software to just a licensed user from owner of purchased property.

This prompted outrage among the universities and laboratories which had done much of the groundwork so far. Thus was born a formalized movement of free / open source software.

The free / open source software movement is based on a simple term, freedom. Freedom to run the program as you wish for any purpose, freedom to study and change the source code as you wish, freedom to make and redistribute copies, and freedom to publish modified versions.

If you bought something say a car would you not have the freedom to run it as you choose? Freedom to look at its internals like engine? Freedom to enhance it with a music system? Freedom to lend it to a friend? Resell it after you no longer need it? It is this same basic freedom denied by the commercial software makers prompted the birth of free / open source software movement.

People like Richard Stallman, Linus Trovalds made sterling contributions to the movement . Thousands of like minded people joined the movement and it soon became a new revolution in the field of computing.

Free / Open source software has several inherent advantages over commercially produced software.

a) Users contributing ideas & code to FOSS are motivated by peer recognition and their own need for the same software than by commercial interests. Software code is accepted only if meets the approval of project members. This makes for much better quality of code.

b) The source code of the software is open & free for all to see, use and modify. This ensures that thousands of developers see the code thus quickly finding & eliminating any vulnerabilities, weaknesses and security threats.

c) Thousands of contributions mean much more rapid development of software.

d) A very large talent pool is available which is impossible for any individual software company to match.

Thus FOSS is more stable, secure & free to boot.

Some of the leading examples of FOSS are…

a) Gnu collection of compilers and other software

b) Apache web server

c) Linux, BSD operating systems with KDE, Gnome desktop managers

d) Mozilla / Firefox browser

e) Open Office office suite

f) Mysql, Postgres Relational & other DataBase Management Systems (RDBMS)

g) Programming languages like Perl, PHP etc.

There are as many as 1,09,863 projects on sourceforge.net website, a foundry for software development projects. Covering all aspects of computing from super computing to software for mobile phones & PDA's.

These efforts allow us to use FOSS for our everyday needs comfortably as many projects have achieved a very high degree of maturity. For example the Apache web server

is THE most widely used web server on the internet, the Linux operating system is the most prevalent server operating system on the internet and is making rapid inroads into the market share of all other operating systems, the Open Office suite has all that the best commercially available office suites features plus offers the advantages of saving files in any of the competing formats for example that of Microsoft Word or Excel.

To take computing to masses in our country, it is imperative to meet two requirements..

a)   As seen the cost of essential software is prohibitive. FOSS offers a simple, secure free alternative.

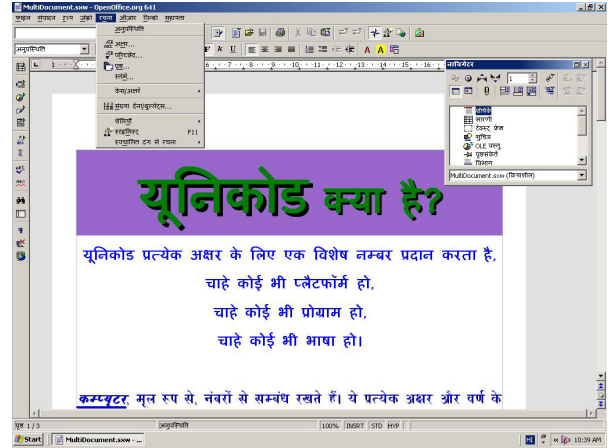b) Make software available in our own language.

FOSS has the unique advantage of access to source code. This makes it possible to adapt it and make it available in our language. In fact as FOSS is made by thousands of developers from countries around the globe, it is already available in hundreds of languages. Also most FOSS projects have made it very easy for even non programmers to adapt their software to different languages by making special tools.

Some examples...

a)   The Open office project is already available in Hindi among 100s more.

b)   The Linux operating system along with Gnome & KDE desktop managers with hundreds of day to day useful tools like, PIM (Personal Information Manager), Calculator, Games, Email client is also available in Hindi along with hundreds of other languages.

These umbrella projects make it possible for us to use our computers in multiple languages. an Example..

Most of these projects are sadly lacking in Marathi support. This is only due to lack of volunteers to do the job of translation.

As we have seen it is very much possible to have a very complete computer user experience with FOSS.

Also it is possible to adapt FOSS to our own language. Indeed most of the FOSS projects have made it possible for even non programmers to contribute towards adaptation in their own language. This is made possible by making all the strings comprising part of the GUI like the File menu option for example available as a separate replaceable bundle. Thus by translating & replacing all the strings in this bundle in our own language it is possible to adapt the software & use it in Marathi.

What we must do...

a)   Adapt projects which are useful / relevant to us;

b)   Use the software & give feedback, suggestions thus acting as software tester and giving back something to the community which gave us free software.

c)   Form groups among ourselves with language experts & software experts to forthwith start Marathi translation efforts of FOSS most useful & relevant to us.

I am making a pledge here to make my expertise available to any such project.

Lets join hands to start making Marathi available on every computer that needs it.

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