The Popularity of Free Open Source Software As A Software Development Method

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Abstract- *The most blooming and successful software among them are: Linux Operating System, Mozilla, Apache web server and Openoffice.org [1]. The FOSS is being viewed by many as its being good in terms of their usage, reliability, performance and market share.*

The major focus of open source software developer is on functionality and the features which are useful, easy to use by the users. The major advantages of FOSS and its importance is the usability of open source applications which are embedded in most Linux OS and how it can be measured by assessing user performance such as, satisfaction, effectiveness and acceptability. Linux is a freely available Operating System in different flavours and with different languages. The Linux feature set is similar to the feature set of Microsoft Windows.

***Keywords*-** Open Source, usability, Usability assessment, FOSS

I. INTRODUCTION

The basic definition of FOSS is, where the user is free to use the program, primarily developed by volunteers, anyone can modify and customize and source code is available to users[1].

Different software companies have prosperously developed open source software/projects. But in authenticity some users prefer commercial applications which are GUI predicated, as some Open source software's doesn't come with much of GUI predicated and so they have poorer usability. Open source software's are not appreciated much and rather upbraided because they are utilizer centric which can be subsidiary to a few particular users group, but it can transmute if the developer's team can understand the usability of the users and for what overall applications do they utilize for then it can consummate their desiderata.

In this research work we have presented a little background information of open source software and its utilization in our routine computer driven life. The author additionally analyses the open source application in terms of usability. Usability simply defined as, interaction of utilizer with a system. How that system can be utilized?

Open Source software has tremendously gained the momentum by engendering prosperous software such as Linux Operating System, Apache Web Server and the Openoffice.org; these are liberatingly available for every utilizer. In the tardy 50's, 60's and 70's it was much driven by commercial software's which utilizer had to go with it and the liberation to make his own representation in the software was missing.

II. OVERVIEW

We have utilized different techniques to carry this survey. Discussions, forums and conferences are the criteria's abaft the output. The research was not only web base but carried on some authentic experience at our organization. The survey was predicated on questions about the Linux and Windows Operating System. It is predicated on its uses as well as different approaches towards open source software compared to commercial software.

Many people are utilizing open source and they are proficiently adept at it. One can make changes as it is open to all and can make the software/program as he or she desires. We have approached few tests, one was Usability test in order to conduct this test, and we felt that it is indispensable to do some research about the users. We have checked how many users have downloaded the open source application in the past years.

It gives a conception about how many utilized the open source applications compared to the commercial applications. Secondly the feedback option on the particular websites for the visitors who have downloaded are asked to fill up the feedback form to have more authenticated information about the users who have downloaded the

software. Predicated on this author got some conception about the utilization's and popularity of open source applications.

A. User friendly application

Comparison check was made to visually perceive whether the open source software is utilizer cordial or not. Predicated on the feedback's it has been found that most of the open source and very much utilizer amicable. Stats and facts show that the Indian Regime is additionally much keen to en-hearten utilizing the Open Source Software.

B. Stats and facts

With reference to some of the articles, author is willing to publish few stats.

- The supreme court of India has directed all the courts across the nation to switch over to Ubuntu 10.04[2]. The apex court also gave a customized Ubuntu Linux DVD to all the courts for installation.

- Across the country over 17,000 courts were using Linux since 4 years. The e-committee of the Supreme Court of India has issued a circular for 'Guidelines for Roll-out and Installation of Ubuntu Linux for Indian Judiciary' for the purpose. The content in the Circular speaks about the replication and installation of Ubuntu Linux Operating system given by the judicial officers in the prescribed form.

- Kerala state has always been in the forefront with regard to FOSS adoption. In Kerala starting from school students to Government offices, everyone uses Linux. Today electricity board of Kerala is saving a whopping 1.6 million USD with FOSS [3] (Free Open Source Software) adoption.

- Another Indian state government Assam has included FOSS in its State IT policy and made FOSS as an integral part of its state IT policy [4]. The policy has been amended as it mandates Open source standards and ODF in particular. This has allowed the Open source supporters to go ahead with Open standard for office documents unlike the proprietary .doc, OOXML and other data formats.

- According to Government policy it said that all generic hardware purchased should be compatible and support Open Source Software. An anti-virus software sale in 2012 touches ~ Rs.4, 000 Cr. This huge amount could be avoided if FOSS products are adopted.

- The Life Corporation of India, with an IT infrastructure of 3,500 servers and 30,000 desktops saved about Rs. 42 Cr by adopting FOSS[1].

- Other states such as Delhi, Kerala and other North-East are using extensive ODF file formats (excluding maintenance and support) [5].

- The IIM-B study has highlighted the debate of FOSS vs. Commercial Software's. In the last month 64 educational institutes across Maharashtra, including the Tata Institute of Social Sciences (TISS) and the Homi Bhabha Centre for Science Education, protested against the state government's MoU with Microsoft India, wherein the software major will set up three IT academies and train government school teachers on ICTs.

C. Some of the benefits realized by the organisations studied are as follows

The analysis of the case data shows that much of the desktop operating systems can be replaced with FOSS operating systems. We assume a base price of Rs.3600 per unit for Windows operating system based on two criteria's: one, this price is on the lower side as the range of prices of the system varies from Rs.2000 to Rs.13750; second, this was a specific price used by a respondent for replacing many desktops.

With a base price of Rs.3600 of the operating system, we compute the savings that can be achieved for three scenarios: one in which 30% of the desktops are replaced with FOSS; the second in which 50% of the desktops are replaced with FOSS; and the third in which 70% of the desktops are replaced with FOSS. These Scenarios are viable and will vary for each organization and context. The cost savings with these three scenarios is depicted in the chart below.

The figure suggests saving from replacing windows operating system priced at Rs.3600 with FOSS. _ Illustration 1: Savings from replacing Windows operating system priced at Rs.3600 with FOSS. The analysis in the above graph may be interpreted as follows: In 2010, the savings obtained from having 30% of the desktop operating systems replaced with a FOSS alternative will be Rs. 5,910 million.
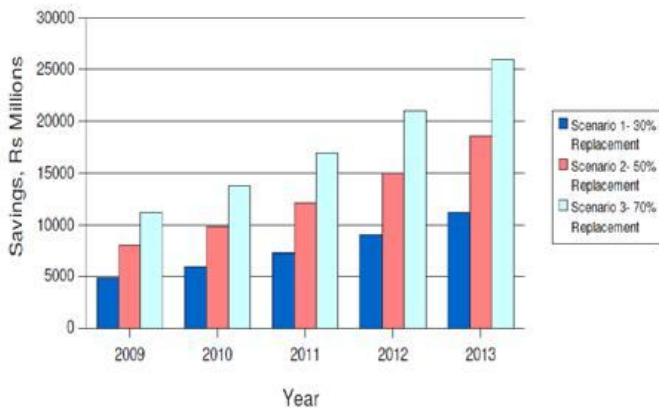
Illustration 1: Savings from replacing Windows operating system priced at Rs 3600 with FOSS Figure Courtesy : Economic impact of FOSS in India[1]

If a moiety of the desktops (50%) is fitted with a FOSS operating system, the savings will be Rs. 9,847 million; if 70% of the desktops have a FOSS operating system then the savings will be Rs. 13,800 million. Corresponding figures for the years 2011, 2012, and 2013 may be read off the bar graphs (for instance, at a supersession level of 70% in 2013, the savings will be to the tune of over Rs. 25 billion!). These calculations are predicated on the projected magnification of PC. Elongating the same logic to office productivity implements we can compute the savings. Open Office is a free office suite that has virtually the same functionality as that of Microsoft Office. For this analysis we consider Microsoft office products at three price points – as the range emanates from Rs 3025 to Rs 26,8004, depending on the type of product and licence – which are Rs 3025 (the Home edition), Rs 16,500 (the Professional edition) and Rs 26800 (the Ultimate edition). The savings for the three price ranges are depicted in the charts below.
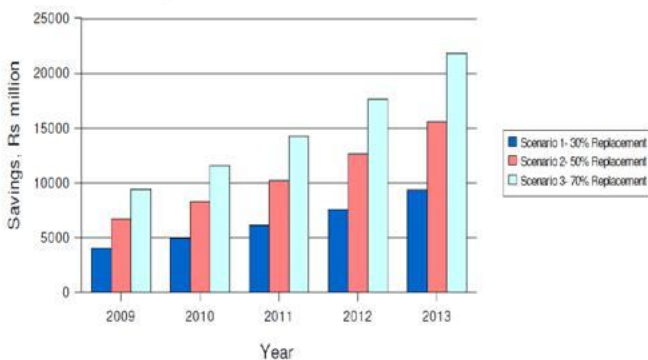

Figure Source: - Economic Impact of FOSS in India [1]

III. OPEN SOURCE CODE SOFTWARE USED BY 79 PER CENT OF ENTERPRISES

Open source code software is utilized very generally in enterprises with at least ten employees. At least some open source software is utilized by 79 per cent of enterprises [6]. These data were accumulated with an inquiry by Statistics Finland in spring 2011 and they apply to enterprises with at least ten employees [6]. Utilization of open source software in spring 2011, with at least ten employees. A Cyberspace browser is the most prevalent open source code software utilized in enterprises (67%). An open source code browser is utilized marginally less often in immensely colossal enterprises with at least 100 employees (56%) than in more diminutive size categories (66–69%)[6]. Examined by economic activity, its use is limpidly most prevalent in information and communication (85%). Open source code office software is utilized by 43 per cent of enterprises. It is utilized by 49 per cent of enterprises in the most diminutive size category and by 23 per cent of those in the most astronomically immense size category.
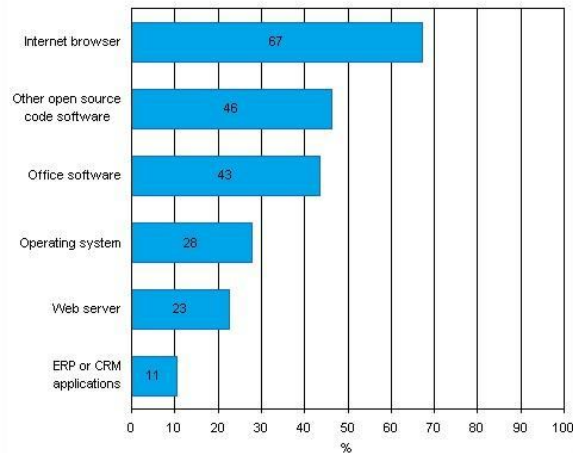
Source: Use of Information Technology in Enterprises 2011, Statistics Finland

Figure source: [6]

Open source code office software is used by 43 per cent of enterprises. It is used by 49 per cent of enterprises in the smallest size category and by 23 per cent of those in the largest size category [6].

An open source code operating system is withal quite general and it is utilized by 28 per cent of enterprises. It is utilized more commonly in immensely colossal enterprises with at least 100 employees (41%) than in enterprises of more diminutive size categories, where its prevalence varies from 26 to 30 per cent. Examined by economic activity, its use is pellucid most prevalent in information and communication (58%).
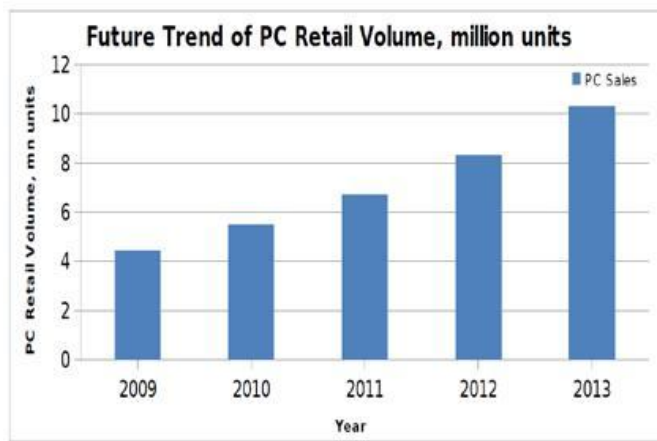
Illustration 2: PC Sales in Future

The forecast for PC sales in the next few years is depicted in the graph (Illustration 2) above. The chart above shows that the retails sales of PCs are forecast to be about 5.5 million units in 2010 and about 10.31 million units in 2013. (Source FOSS Impact IIMB report 2009)[2].

IV. COMMON MISUNDERSTANDINGS OF "F REE SOFTWARE" AND "OPEN SOURCE"

The term "free software" is prone to misinterpretation: an unintended denouement, "software you can get for zero prices," fits the term just as well as the intended denouement, "software which gives the utilizer certain freedoms."

We address this quandary by publishing the definition of gratuitous software, and by saying "Think of 'free verbalization,' not 'free potation.'" This is not an impeccable solution. An unequivocal and rectify term would be preponderant, if it didn't present other quandaries. Haplessly, all the alternatives in English have quandaries of their own.

We've visually examined many that people have suggested, but none is so pellucid "right" that switching to it would be a good conception. (For instance, in some contexts the French and Spanish word "libre" works well, but people in India do not agenize it at all.[7]). Every proposed supersession for "free software" has some kind of semantic problem—and this includes "open source software"[8].

The official definition of "open source software" (which is Published by the Open Source Initiative and is too long to Include here)[9] was derived indirectly from our criteria for gratuitous software. It is not identically tantamount; it is a little looser in some venerations. Nonetheless, their definition accedes with our definition in

most cases. However, the conspicuous meaning for the expression "open source software"—and the one most people seems to cerebrate it means—is "You can optically canvass the source code."

That criterion is much more impotent than the gratuitous software definition, much more impotent withal than the official definition of open source. It includes many programs that are neither free nor open source. Since the conspicuous meaning for "open source" is not the construal that its advocates intend, the result is that most people misunderstand the term[11].

According to writer Neal Stephenson, "Linux is 'open source' software designation, simply, that anyone can get replicas of its source code files"[11]. I don't cerebrate he deliberately sought to repudiate or dispute the official definition. I cerebrate he simply applied the conventions of the English language to come up with a construal for the term.

The state of Kansas published a kindred definition: "Make utilization of open-source software (OSS). OSS is software for which the source code is liberatingly and publicly available, though the concrete licensing accidences vary as to what one is sanctioned to do with that code."

The New York Times has run an article that stretches the denouement of the term to refer to utilizer beta testing—letting a few users endeavour an early version and give confidential feedback—which proprietary software developers have practiced for decades [12]. Open source adherents endeavour to deal with this by pointing to their official definition, but that corrective approach is less efficacious for them than it is for us.

The term "free software" has two natural construal's, one of which is the intended designation, so a person who has grasped the conception of "free verbalization, not free beer" will not get it erroneous again. But the term "open source" has Only one natural designation, which is different from the denotement its adherents intend. So there is no succinct way to expound and justify its official definition. That makes for worse discombobulating.

Another misunderstanding of "open source" is the conception that it signifies "not utilizing the GNU GPL." This inclines to accompany another misunderstanding that "free software" betokens "GPL-covered software" [13]. These are both misconstrue, since the GNU GPL qualifies as an open source license and most of the open source licenses qualify as gratuitous software licenses.

The only thing these activities have in prevalence is that they somehow invite people to participate. They stretch the term so far that it only denotes "participatory".

V. IN SHORT ECONOMIC IMPACT OF FOSS

The economic impact of FOSS is quantified by computing the cost savings that will be possible if proprietary software is superseded by gratuitous software. The computations are done for software on PCs and servers.

Computations of cost savings resulting from replacing proprietary and commercial software with FOSS is done by first forecasting PC sales in the retail market, and then estimating the savings by considering three scenarios. The first is one in which it is assumed that 30% of the PCs will be replaced with FOSS software. The other two scenarios consider 50% and 70% replacement respectively.

VI. CONCLUSION

Author wants to conclude that there is lot of scope in future for FOSS and Open Source OS. Approach of Indian Government is very good to implement open source. It is very good economically.

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