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COMPARATIVE STUDY OF SOCIABLE OPEN SOURCE TECHNOLOGY

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ABSTRACT
In this computer era, everything works on latest computer technology. Most of the time we work in proprietary commercial environment where we have to pay for its usage. Even we cannot do any kind of changes in the code. The source code for proprietary commercial software is usually a closely guarded secret. They are guarded closely within a corporation and are protected legally by patents and copyrights. To overcome this drawback, facility open source technology is introduced.
From the last decade, the open source technology is increased. Numerous amounts of valuable products have produced by Open Source Software communities. The best ever facility provides by Open Source is to open the source code publicly available for the sake of the community. They also publish their software with an open source license means that other developers can see how it works and add to it.
This paper focuses on the comparative study of open source technologies, their issues and benefits. Examples of open source products include Open Office, the internet browser Mozilla Firefox, Wikipedia, the Linux operating system and its derivative Android, an operating system for mobile devices. *Scilab, Octave*are some of the free and open source software for numerical computation providing a powerful computing environment for engineering and scientific applications.

KEY WORDS: OSAT,OSS,ATA, AV.

INTRODUCTION
Open source software is developed free of charge through a community driven development process, and as such, it is also provided to public at no cost, but under certain usage and distribution conditions. Many of the traditional software companies have tried to take advantage of the free software, not just by using the software, but also by creating quite sophisticated business models and strategies around the open source software.
Open source appropriate technology (OSAT) refers to technologies that provide for sustainable development while being designed in the same fashion as free and open source software. The open software movement has produced a community of hackers and computer programmers whose shared goal is to work together to develop better computer software. Licensing is another advantage of open-source software. You don't have to worry about how many copies of LibreOffice you've installed at home or the office. There's no cost no matter how many times you download or install it. Another advantage of open-source code — if you're a programmer — is that you can do what you like with it. You can study Open Office or LibreOffice and customize it to your needs, improve it, or use the code to create something completely new and release your changes to the public. Unless you're a programmer or have one on staff, this may not be a feature you need, but for some users it's a valuable selling point.

Table1. Following table shows the name and purpose of some of the OSS that are discussed in this paper.

	Purpose
Open Office	Word processing,spreadsheet
SQL_Ledger	Accounting software
Clam AV	Antivirus
FortiClient	Antivirus
LDP	Database
PostgresSQL	Database
MySQL	Database
Evolution	Email Client
SendMail	Email servers
Qmail	Email servers
Apache	System & Desktop
Fedora	System & Desktop
Ubuntu	System & Desktop
Ruby	Programming language
Javascript	Programming language
Java	Programming language
Erlang	Programming language
PHP	Programming language

REVIEW OF THE TECHNOLOGY:
OS Word processing : OpenOffice.org (OOo), commonly known as OpenOffice, is a open-source office suite. It was an open-sourced version of the earlier StarOffice, which Sun Microsystems acquired in 1999, for internal use.The suite includes a robust array of office applications including a word processor, spreadsheet editor and database program. If you already have documents in Microsoft Office's proprietary file formats, including Word's DOC and DOCX formats, Open Office can open them without any intermediary conversion needed. Microsoft Office, OpenOffice, and LibreOffice are reasonably secure as long as you follow standard security procedures.
OS Accounting :SQL-Ledger is an open source accounting software. Accounting data is stored in a SQL database server, for the display any text or GUI browser can be used. This software is built with freely available software;hence it has no fear of locked in. Pearl language is used to write the software. One useful specialty is that it supports the all the foreign languages and no special programs required to make the changes or add a new

language. It's installation is easy and takes very less time to install.

Open source Antivirus:

1. Clam AntiVirus (ClamAV) is a free,cross platform antivirus engine that detect many types of malicious software, including viruses. One of its main uses is on mail servers as a server-side email virus scanner.ClamAV includes a number of utilities such as a command-line scanner, automatic database updater and a scalable multi-threaded daemon, running on an anti-virus engine from a shared library.TheClamAV virus database is updated at least every four hours

2. FortiClient: It is an effective and efficient top Free Antivirus is well known for web filtering, a firewall, network optimization and parental controls. FortiClient with its on-access theme and resident protection enables users & guests to work efficiently anywhere, without compromising on their security.

OS Databases:

Now we will see some open source databases,such as LDP,PostgresSQL and MYSQL

1. LDP: it stands for Lightweight Directory Access Protocol.Its main motto is to enable anyone to locate organizations, individuals, and other resources such as files and devices in a network, whether on the internet or intranet.

2. PostgresSQL: It's a powerful open-source database introduced in 1996. It's an object-relational database that is often named "Postgres", which means "PostgreSQL". It has variety of features like -

- It provides more profitable business models with wide-scale deployment.
- It has compliance free environment for license.
- It is flexible for the trial releases and concept research and never demands for the additional licensing costs.

3. MySQL: It is the world's most popular open source database. With its proven performance, reliability, and ease-of-use, MySQL has become the leading database choice for web-based applications, used by high profile web properties including Facebook, Twitter, YouTube.

It provides the features such as SQL compatibility,Client/Server Architecture,Platform independence,ODBC and many more.

E-mail Clients:

Evolution allows you to access your personal information like your calendars, mail, address books and tasks in one place.

By default Evolution opens the mail view. This is where you can view all your mail. You can change to other views of the application by going to the bottom of the left pane in the window and selecting the desired view.

When Evolution starts, it remembers the last view that you used. However you can also explicitly start Evolution in a specific view. For the calendar view, use the command evolution --component=calendar in the Terminal application. It also provides other options like "mail", "contacts", "tasks", and "memos".

E-mail Servers:

1. **Sendmail:**Sendmail was first created before the Internet officially existed. It has been extraordinarily successful, having grown from 1981, when it wasn't at all obvious that the Internet was going to be more than an academic experiment with only a few hundred hosts.It helps in virtualization,consolidation and cloud migration.
2. **Qmail**is one of the finest mail server programs. It is incredibly easy to use and is the most flexible product as compared to others.

It has following features-

- Secure
- Flexible Qmail can be used for a large variety of purposes & niches and can be adapted easily
- Reliable
- Speedy
- No licensing
- Simple

OS servers & desktops:

1. Apache: Apache HTTP Server also called as Apache is generally recognized as the world's most popularweb server. It's fast and secure and runs over half of all web servers around the globe.It is distributed by the *Apache Software Foundation*.The Apache web server provides a full range of features, including CGI, SSL, and virtual domains.

2. Fedora linuxdesktop: Linux is increasingly popular for desktops.If user switching from Windows to Linux then Fedora is the best option. It has the speciality that it performs common tasks from command line.

3. Ubuntu: With a built-in firewall and virus protection software, Ubuntu is one of the most secure operating systems around. And the long-term support releases give you five years of security patches and updates.Ubuntu is fully translated into over 50 languages and includes essential assistive technologies.Ubuntu offers thousands of apps available for download. Most are available for free and can be installed with just a few clicks,such as-

Telegram,Chromium,Thunderbird,Dropbox,DropBox and many more.

OS

Languages:C,C++,Ruby,PHP,Python,Java,Javascript,Erlang,Perl,Groovy are some of the examples of open source languages. We are highlighting some of them.

1. **Ruby:**It is a beautiful, artful language. It is also handy and practical language.Ruby's pure object-oriented approach is most commonly demonstrated by a bit of code which applies an action to a number.Users can freely alter its parts.Ruby uses very limited punctuation and usually prefers English keywords, some punctuation is used to decorate Ruby. Ruby needs no variable declarations. It uses simple naming conventions to denote the scope of variables.
2. **Javascript:**JavaScript is an object-based scripting language.

- Giving the user more control over the browser.
- It Handling dates and time.

- It Detecting the user's browser and OS,
- It is light weighted.
- JavaScript is a scripting language and it is not java.
- JavaScript is interpreter based scripting language.

3. **PHP:**It is faster than other scripting language.It has following features as-
Simple,Faster,Interpreted,CaseSensitive,Simplicity,Efficiency,
Platform independent,Security,Flexibility.

4. **Python:**Python is easy to very easy to use and high level language. Thus it is programmer-friendly language.There are a lot of features provided by python programming language.It is more expressive language.Python is an interpreted language. User can run equally on different platforms such as Windows, Linux, Unix, Macintosh etc. Thus, Python is a portable language.It also supports features of object oriented language.Python has a large and broad library.The best facility provided by it is that Graphical user interfaces can be developed using Python.Last but not the least feature of Python is that it can be easily integrated with languages like C, C++, JAVA etc.

5. **Java:**Java is used in internet programming, mobile devices, games, e-business solutions etc.Following are the features of Java-

- Simple
- Object-Oriented
- Portable
- Platform independent
- Secured
- Robust
- Architecture neutral
- Dynamic
- Interpreted
- High Performance
- Multithreaded
- Distributed

6. **Erlang:**This is a programming language used to build scalable soft real-time systems with requirements on high availability. Most of its uses are in telecoms, banking, e-commerce, computer telephony and instant messaging. Erlang's runtime system has a built-in support for concurrency, distribution and fault tolerance.One of the best features of Erlang, that user can update your code without bring the server or the serves down.Erlang can keep up to two copies of code loaded at once. Each version of your application is packaged separately, and stored in a version-tagged folder.It relies on extremely lightweight threads useful in concurrent programming.

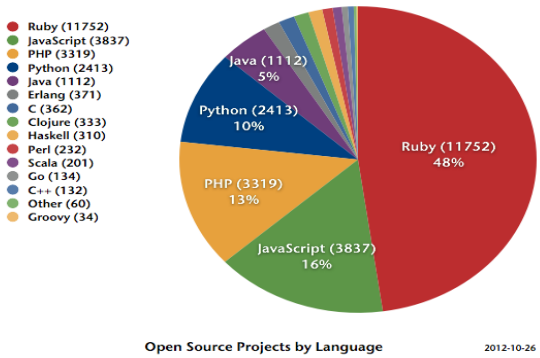

Fig 1: Pie Chart showing comparitive usage of OS programming languages

CONCLUSION

While cost is a driving factor, OSS has several additional benefits as--
It provides high-quality results when the source code is passed around, tested and fixed.It gives a valuable learning opportunity for programmers. Many consider open-source software more secure than proprietary software because bugs are identified and fixed quickly. Hence on the conclusion, we conclude that we have to take the advantage of All Time Available(ATA) OSS.

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