The Growth and Evolution of Open Source

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ACT- I

Scene 1 (B) (FREEDOM VIDEO)

It was on 15th August, 1947 that people of India celebrated independence which marked freedom of speech , expression and actions...but not a large number knew that there was even a stiffer fight to face in the future..the fight to release software from its shackles.. The fight for freedom of code.

Scene 2 (B) (MAJDOOR)

No matter how far we go into the advancement of technology over various domains we can never ignore the fundamental parameter for development of software, the society. India, which holds a very important place in the field of information technology, still fails to cater the needs of the major stakeholders of the country.

Scene 3

For the optimum development of any nation, there needs to be a very strong relation between technology and society. The society is developing technically and the technology in turn is helping the society to reach a higher stage of development. The technical developments are always incomplete unless they percolate to the last strata of society. Similarly, the society is the major driving factor for the technology to develop.

Scene 4 (B) (MICROSOFT PICS)

It was until late 1980s that the world was dominated by "priced" software that mainly originated from Microsoft, Apple and IBM. These companies enjoyed monopoly over the entire software market which hampered the development and improvement of software. It was then, that the open source software movement was born…. And before we go on lets know what open source software is …

Scene 5:

Suppose you buy a copy of Microsoft office. In that case you might find yourself in one of the two subclasses of users. One, who knows what the software is about and is satisfied using it. Second, one who wants to modify the various features made available by the software. In case you lie in the second group of users, you keep wondering upon how you can get your work done, however small it may be. This is because of the simple fact that Microsoft would never allow you to actually possess the code that you have purchased. This is what proprietary software is all about.

This restricts the development and growth of the software as a developer can never contribute to it and only a set of nominated people have the right to make any sort of changes.

Open source is entirely a different cup of tea.. you not only own the software but also the code; and that too free of cost.. The Free / Open Source Software movement stands for full freedom for the production, distribution, modification and use of software as per the needs and wishes of the user.

Scene 6:

Suppose I need a library management system for my organization. All I need to do in open sourcing is to search the web for existing open sourcing solutions and I get an excellent software "KOHA", change the look feel and navigability to suit my organization and the complete library management system is ready. Now in case I need to add other modules, like forum, blogs, etc. I can easily download them from the web and integrate them with my existing software. I do not have to write the code again for what has already been written by somebody else in any part of the world. Development under open source involves cooperation and co-development which saves a lot of valuable time.

Scene 7(B) (CD CASE)

IN our country, whatever the software might be, its always available for free. This is due to an extremely extensive market of software piracy that works in the markets, over the internet and every other form that you can possibly imagine. But, did u ever think.. open source software can never be pirated.. rather you can demand it as a part of your rights.

Scene 8:

Thousands of people across the country work with pirated Microsoft Windows. Regulations in regard to piracy are getting more and more strict . Imagine a situation when piracy is completely eradicated. Would you prefer buying two licenses of Microsoft windows for two of your personal computers or would you go in for open source solutions? Then is the time that people would realize the benefit that open source brings to you as an end customer.

Scene 9:

Some of the finest software in the world are open source. If you are a regular user of the system, you'd be rather surprised to realize the fact that not a single day must have passed without you using open sourcing solutions. Majority of web servers, database servers, websites and applications, all are built on the open sourcing model. Though this is a common fact today, but there was a particular period of time when all this was initiated.

ACT – II

Scene – 1: (B) (REV OS RED HAT)

The first major contribution towards open source came with the development of an Open source Operating System currently called Linux. But there was something required to interface between the operating system and hardware. This is what we know as kernel…

Scene – 2

Essentially the operating system has two major components: application programs and a program that keeps running all the time, the kernel. Essentially the kernel is the last level of abstraction. As a basic component of an operating system, a kernel provides the lowest-level abstraction layer for the resources (especially memory, processors and I/O devices) that application software must control to perform its function. It typically makes these facilities available to application processes through inter-process communication mechanisms and system calls.

Scene – 3 (B) (HACKING VIDEO)

It all started in the MIT labs when some class of people were prohibited to use certain resources of a computer system. It was then that a group of hackers decided to hack user passwords to access those resources. After hacking the passwords they mailed the users their passwords and mocked them saying that they could simple use Enter as their passwords.

The major watermark in the history of Open Sourcing was the introduction of the GNU Project.

Eventually all this led to the growth and development of what we know as linux.

Scene – 4

GNU is a computer operating system composed entirely of free software. Its name is a recursive acronym for GNU's Not Unix; it was chosen because its design is Unix-like, but differs from Unix by being free software and containing no Unix code. Development of GNU was initiated by Richard Stallman and was the original focus of the Free Software Foundation (FSF).

Scene – 5 (B)

While an open source operating system GNU was being developed by Richard Stallman, simultaneously a kernel was being developed by Linus trovalds. Eventually they both realized that it was best to work together. This led to development of what we know today as GNU/LINUX or simply linux. As more and more software were being developed, the developers felt that there was a need of protection of software against possible licensing issues. This marked the birth of GPL.

Scene -6

If we put the software under the public domain, somebody else would be able to make changes in the software and turn that into a proprietary software which meant that the users would be running their software but they wouldn't have the right to cooperate and share. To prevent that, we use copy left. In this case, the authors of the code give you permission to modify the code and bring about changes in the software and finally redistribute it, provided all the terms are met.

ACT – III

Scene 1: (B)(APACHE)

In order for Linux to grow and evolve it needed something which would make it a must have technology. This threshold was crossed with the development of Apache web server which made complex websites possible. According to surveys the graph of adoption of Linux and Apache are identical. Presently Apache dominates the market of web servers and is the choice product of leading websites. This is simply because Apache is reliable, scalable, robust and its combination with Linux is indispensible. Lets have a quick glance at some of the open source products that have revolutionalized the software world.

Scene 2:

Initially, the GNU Linux was popular in the market and as the concept of open sourcing made its way, a large number of companies came up with different distributions of Linux which we commonly refer to as 'distros'. At the present date, numerous Linux distros are existent in which major ones are Red Hat, Mandriva, Open Suse, Ubuntu, Debian, Slackware etc.

Scene 3: (B)

In order to propagate in the society, the open source needed the business model to be explained to the public. It was then that Eric Raymond came up with a magnificent work on the paper titled "The Cathedral and the Bazaar" which was an anthropological analysis of what made the open source world work. It reflected two styles of software development, the closed type which was referred to as the cathedral style and that the open source type which had its analogy with the bazaar.

Scene 4:

When we talk of web servers, we need something to surf on. This is fulfilled by a web browser. The "Cathedral and the bazaar" had a deep impact on Netscape Navigator which was almost an extinct company in the field of web browsers simply because of the monopoly of Microsoft internet Explorer. It was then that people decided to open into the open source domain with the project Mozilla. This resulted in the development of the best browser known – Mozilla Firefox.

Scene 5:

Since the open source movement was born we saw exponential development in the field of software development. A large number of well known projects are open source that include PHP, MySql, Perl, Python, Eclipse, Derby, Java, Wikipedia etc. The power of open source can be easily understood by the growth ad development of an online encyclopedia – Wikipedia. It was an idea initiated by Jimmy Wales in a time where there was only proprietary encyclopedia with huge amount of content. Thousands of people contributed towards this online encyclopedia and within no time, an online encyclopedia was ready. Even today thousands of people contribute towards Wikipedia in various languages.

ACT IV

Scene 1: (B) (ADVANCEMENT)

No matter how many developments take place, technology has no meaning unless and until it is not reachable by the common man of society. Even though very positive developments have been seen over the previous years, it's important to realize the impact into the life of a common man.

Scene 2:

Open Source has played a major role in bringing the technology closer to the society as a whole. Since the software under open source is free, they propagate deeper into the society, thereby benefitting the society as a whole. Open Source has played a major role in IT Localization and language support to enable technology to be used by all kinds of people. The $100 laptop, hole in the wall project and such projects are only possible by the use of open source software. Open source has already played a major role in catering the needs of school children in various backward areas of the world. Looking at the current development of open source and the development of society, we can clearly see that these both will drive each other into a more technically advanced future. We can be rest assured that in the future, superior technology would be available in all sections of the society.

ACT V

Scene 1:

Students are the growing buds of any nation. The extreme potential and energy that these people have can accomplish almost anything within their sphere of imagination. In order to enable open source to drive the future, the right step is to infuse the concept of open source in minds and hearts of these students.

Atal Bihari Vajpayee - Indian Institute of Information Technology & Management, Gwalior, a Deemed University, is an apex IT and Management Institute, established by the ministry of HRD, Government of India took a pioneering step in the field of growth and development of free open source software by the establishment of students forum for free open source software. The objectives of the forum are

1. Development of the society through modern open sourcing tools
2. Provide open sourcing solutions to the current needs
3. Provide an platform for the intellectual and technical development of students
4. Spread the awareness and developments of open-source, reaching far and wide.
 The forum conducts various activities at all domains to meet these objectives. The forum is intended to be an inspiration for all the institutes throughout the country towards the development of open source. The basic essence of open source would be realized if and only if various institutes join hand in hand to contribute towards this noble cause.