

Bennett Schoonerman

Professor Doubleday

Intro to Interactive Media

13 October 2016

Open Source for Web Development

Today we live in a world where computers have become a part of our everyday lives. Our homes, cars, and phones are all becoming increasingly powerful computing devices. At the core of these systems is software; Simple and complex algorithms alike solving our everyday problems and making our lives easier. Open source software is when the original source code is made freely available and can be redistributed or modified depending on its license. Closed source, as one might expect, is the exact opposite. Closed source software is not shared with anyone to view or make changes. Open source prior to the 1980s mostly involved sharing software between universities for academic purposes. In 1983 the GNU project was the first mass collaboration project started by Richard Stallman (Pingdom).

Open source has made a tremendous impact on web development over the years. Software such as Bootstrap, Adobe Brackets, Ember.js and Angular.js are just a few examples of what the open source community has created. Adobe Brackets is a powerful text editor which allows developers to live preview their code and make changes on the fly. Personally it's my favorite text editor for that reason. I use Bootstrap on almost all of my sites because it makes sure that my website will look nice on any screen with just a few simple html classes. According

to What is Bootstrap, the fourth version is in beta right now. By using powerful repository tools such as GitHub, Bootstrap has been able to advance to the state it's in today.

The open source community consists of companies and individuals who collaboratively work on software projects. As a result developers have drastically reduced developing time with multiple minds working together to develop, build, debug, and test software. Another advantage of open source development is users are able to find features they like, or don't like. Since open source allows everyone access to the code. Users are able to modify the existing code to give the program additional features or resolve bugs.

The people behind open source are for the most part computer coding enthusiasts. There are several projects for personal applications and the community. As an open source developer, there are several ways to make money. The first method is selling support or services. Especially when clients want to implement software, but lack the knowledge, time, or energy to compile it themselves. Server side software applications are typically paired with a maintenance package. One example is paid installation and setup with on call assistance (ProfitBricksUSA). In very complex software applications good documentation is very time consuming to produce. Some models promote the software for free and the “documentation is available for purchase”(Understanding How Open Source Software Developers Make Money). Lastly the most popular model for making money with open source development is plug-ins. Plug-ins are software that gives added features or services to an existing application.

Wordpress is perhaps one of the biggest examples of this open source model. The open source rooted content management system has drastically changed the face of web development. In 2003 Wordpress began as a single bit of open source code to help with typography for

everyday users. Today it is the largest self-hosted blogging tool in the world, used on millions of sites, and seen by tens of millions of people every day (About-Wordpress). Wordpress can make use of several plugins to enrich the experience. Programs such as Divi give wordpress a graphical user interface. A popular combination with Divi is a theme from suppliers such as Elegant Themes. This gives anyone the power to build a beautiful fully responsive website with little to no coding knowledge. This has helped Wordpress to become the most popular content management system available.

Open source software, such as Adobe's brackets text editor, Google's Angular.js, Twitter's Bootstrap, Wordpress, and Android OS, can all be found on the web. Many of these open source software projects are free from a parent company. The intention is that developers will build apps or other software for the parent program. In some cases the parent company will see a percentage of the sales from the app or plug-ins that stem from the original program. In the end, everyone benefits from open source software. Companies have more developers to refine the code, and an added stream of revenue from apps and plugins. Open-source software has been increasingly accepted as an economically viable solution for companies in general. In fact, "even large software companies, such as IBM and Google, have started to "open" the code of their products to increase their visibility and adoption, as well as to foster their improvement with the lowest possible cost" (Moreno).

The open source initiative is a global non-profit, The Open Source Initiative (OSI) protects and promotes open source software, development and communities, championing software freedom in society through education, collaboration, and

infrastructure, stewarding the open source definition, and preventing abuse of the ideals and ethics inherent to the open source movement.(Pingdom)

Developers choose to join the OSI for many reasons. “Individual members are invited to participate directly in the growth of open source software by creating or joining OSI-sponsored working groups or incubator projects in various areas of open source advocacy and adoption”(Deek and McHugh). These working groups and projects serve as resources for the entire open source community. Members contribute to open source software like, Debian, Drupal, Eclipse, FreeBSD, Joomla, KDE, LibreOffice, Linux, Plone, Python, TYPO3, WordPress, and many more. Several developers have used open source in their projects, by joining the open source initiative they see it as a way to give back to the open source community.

After creating or contributing to the OSI there are over 50 different licenses that the OSI has certified for open source. The three most popular licences are free-for-all, keep-open, and share-alike license. The free for all licence only requires the licensees to give credit to the original authors. Derivative works can be made proprietary. These licenses are sometimes referred to as “academic licenses”(Engelfriet). Free-for-all licenses don’t require authors to share code, which means a competitor can “take” the code and build a improved version of it. A keep-open licence means that software has to be made available as open source as well. Larger works incorporating such software can be kept proprietary. Lastly, under the share-alike licence “if the software is modified or extended, the result as a whole has to be made available as open source” (Engelfriet). The term copyleft is more commonly used to characterize this kind of license.

Some popular places to obtain open source material include GitHub, BitBucket, Project Locker, Cloudforge, and Sourceforge. There are four major reasons that open source software has become so popular on the web. Control, education, security, and stability. People love open source because it lets them look under the hood at what the code is actually doing and gives them complete control. It also allows them to only enable the features that they want. Some people like open source because it shows how other developers solve problems. It gives them a chance to pick through the code and find things that could be useful to them. Many people prefer the security of open source software. The user can see exactly what the program is doing and confirm only the necessary tasks are being performed. Lastly stability, many users prefer open source software to proprietary software for important, long-term projects. Because programmers publicly distribute the source code, users relying on that software for critical tasks can be sure their tools won't disappear or fall into disrepair if their original creators stop working on them.

The future of open source looks very promising. As the number of websites and applications continues to grow. The need for libraries and other open source code will continue to grow too. Encouraging the growing number of (OSI) members to continue building bigger, better projects. Taking web development farther than it has ever gone before.

Works Cited

Deek, Fadi P, and James A McHugh. "Chapter 7 The Economics of Open Source." *Open Source Technology and Policy*, Cambridge University Press, New York, NY, 2008.

Pingdom. "The 9 Most Important Events in Open Source History - Pingdom Royal." *Pingdom Royal*, 26 May 2015,

ProfitBricksUSA. "45 Of the Top Source Code Repository Hosts | ProfitBricks Blog." *ProfitBricks Blog RSS*, 2 Jan. 2015,

"Understanding How Open Source Software Developers Make Money." *MakeUseOf*, .

"WordPress.org." *About — WordPress*,

Engelfriet, Arnoud. "Choosing an Open Source License." *IEEE Software*, vol. 27, no. 1, 2010.,pp. 48-49

"What is Bootstrap?" *Progressive Digital Media Technology News*, London, 2016.

Moreno, Valter d. A., Junior, and Josir C. Gomes. "BENEFITS AND SUCCESS FACTORS OF OPEN-SOURCE WEB SERVICES DEVELOPMENT PLATFORMS FOR SMALL SOFTWARE HOUSES." *Journal of Information Systems and Technology Management : JISTEM*, vol. 9, no. 3, 2012., pp. 585-605,