

# this month

In FreeBSD

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This is the time of year when open-source mentoring organizations review proposals from students looking to participate in **Google's Summer of Code**. This month, we take a look at the FreeBSD Project's participation in the program.



Since 2005, Google has offered their annual Summer of Code (<http://www.google-melange.com/gsoc/homepage/google/gsoc2015>), a program that provides student developers from across the globe a three-month stipend to write code for a mentoring, open-source software project. This program provides several benefits to both the student and the mentoring organization. In addition to being paid, students learn how to write a proposal of work and to achieve timed milestones for that work. Their project is mentored by an experienced developer who can assist in code review, time organization, and learning that project's tools, communication channels, and coding standards. The mentoring organization has the opportunity to nurture new ideas and integrate new features into their codeset with the possibility of training new developers for the project.

The FreeBSD Project has the distinction of being a mentoring organization for every Google Summer of Code since the program's inception in

2005. This means that 2015 marks the 11th year of participation for the FreeBSD Project. As of this writing, student proposals are still being reviewed so we do not yet know the names of the 2015 student participants.

We can, however, take a look at the last 10 years of participation. Each Summer of Code student, mentor, project, and a summary of that project's results can be found at <https://www.freebsd.org/projects/summerofcode.html>. In addition to an overview of the process, that page contains a hyperlink for each year of participation.

Over the 10-year period, the FreeBSD Project has mentored a total of 136 students. Google Summer of Code allows students who are interested and still eligible for the program to reapply. For FreeBSD, the breakdown of student participation is presented below:

#### 136 students (total)

111 students .....	participated for 1 year
18 students .....	participated for 2 years
3 students .....	participated for 3 years
3 students .....	participated for 4 years
1 student.....	participated for 6 years

This level of participation, an average of over 13 students per year, reflects the importance to the FreeBSD Project of cultivating new ideas and attracting new developers as each student requires a time commitment of three months from a mentor. It is also encouraging that 25 students were both eligible and chose to reapply for subsequent years.

Google Summer of Code has received some bad press about students who do not complete their projects, do not have their code integrated into the project's codebase, or who never participate again with the project once their Summer of Code finishes. While not every Summer of Code student works out, the FreeBSD Project has had good success in cultivating relationships, integrating student code, and gaining new developers.

The FreeBSD Project uses a "commit bit" process to denote contributors who have the ability to commit directly to a FreeBSD source repository. Commit bits are granted to active contributors, and new committers have their commits reviewed by several mentors before they are committed. Commit bits are also retired should the committer no longer have time to contribute, typically after a year of inactivity. The FreeBSD Project defines three types of commit bits, indicating to which source repository the

contributor has commit access: src, ports, and doc.

Out of the 136 Google Summer of Code participants, 20, or nearly 15%, were granted commit bits. Some were granted multiple commit bits, which reflects on their continued level of participation within the Project. Out of the 20 committers over that 10 year period, 17 are still active committers. The breakdown is as follows:

**20 committers (total)**  
16 committers with 1 commit bit  
3 committers with 2 commit bits  
1 committer with 3 commit bits

The granted commit bits were for the source repositories below:

17 src committers, with 3 retired (out of a total of 314 src committers)  
6 ports committers (out of a total of 192 ports committers)  
2 doc committers (out of a total of 41 doc committers)

In addition to commit bits, some participants also became active in other areas. Several former Summer of Code students became mentors for later Summer of Code students. One participant became a member of the FreeBSD Doc Engineering Team and another is secretary for the FreeBSD Core Team.

While it is too late to apply for the 2015 Google Summer of Code, interested students should follow the Google Open Source blog (<http://google-opensource.blogspot.com/>) to keep up-to-date on the 2016 proposal period, which should take place next March. The

FreeBSD Project provides several idea lists to help students narrow down their project ideas:

- <https://wiki.freebsd.org/IdeasPage>
- <https://wiki.freebsd.org/SummerOfCodeIdeas>
- <https://wiki.freebsd.org/JuniorJobs>

Note that these ideas are not limited to Google Summer of Code students, which is good news for those of us who do not meet the age or student requirements of that program, but who are also interested in contribution ideas. Each idea provides a technical contact who is willing to act as a mentor for that idea. •

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