new faces

of FreeBSD

BY DRU LAVIGNE

Johannes Dieterich

Mahdi Mokhtari

This column aims to shine a spotlight on contributors who recently received their commit bit and to introduce them to the FreeBSD community. This month, the spotlight is on **Johannes Dieterich**, who became a ports committer in January, and **Mahdi Mokhtari**, who became a ports committer in February.

Tell us a bit about yourself, your background, and your interests.

Johannes: I am a trained computational chemist. Our field develops simulation codes for high-performance computing (HPC) installations to study chemical processes. The relevant physics of these processes dictates what level of theory is appropriate—anything from Newtonian mechanics to various ranks of quantum mechanical approaches. One of my personal research topics is the development of global optimization techniques for chemical optimization problems.

Currently, I am a researcher at Princeton University. Method development remains my passion, and efficient implementations my obsession. When I am not coding or writing things, you will find me in a muscle car and/or exploring the American outdoors.

Mahdi: I'm Mahdi Mokhtari, aka MMokhi among my friends. I started programming with computers in a robotics course in high school where I learned C, and about half a year after that I started C++ in parallel. Then I was attracted to GNU/Linux, and right after that, I had an interest in developing with FreeBSD.

How did you first learn about FreeBSD and what about FreeBSD interested you?

Johannes: I worked as a system administrator (SuSE and Debian) in college to make money. I was somewhat disappointed with these sys-tems, wondered if there was anything different and more suitable for my personal computers and came across FreeBSD. I ended up ordering a FreeBSD 6.1 CD from a retailer, a copy of Greg Lehey's *The Complete FreeBSD* and Dru Lavigne's *BSD Hacks*, which are two excellent works. After a learning curve involving a lot of recompilation of ports and broken X11, FreeBSD became my workhorse. FreeBSD was and is transparent to work with, very developer friendly, and came with a huge ports collection. The Handbook is an excellent resource for a beginner, and I found the community to be very friendly and professional to interact with.

Mahdi: Unlike many people, and because I'm probably the youngest person in the room (even younger than Beastie), I am not an old-fashioned Unix person who experienced the 1990s. I heard about BSD from a colleague while I was working as a part-time R&D developer. That was in the context of a comparison of FreeBSD with Linux, and I became more curious about it. I started searching and asking more people, and I found the helpful community of FreeBSD—at first on IRC.

I started asking many, many questions, from simple usage hints to functionalities of specific macros of mbufs on the kernel pf module. People on IRC answered me, and I felt I needed to replace my laptop operating system.

How did you end up becoming a committer?

Johannes: Coming from HPC, one of the most important topics for a few years had been GPU acceleration. FreeBSD still is lagging severely behind the competition in this regard. This problem extends beyond just FreeBSD as an HPC system—highly improbable—to using it as an HPC developer platform, or even just to enable mainstream accelerated applications. I got involved with some of the efforts trying to improve this situation, especially for AMD GPUs, thinking it would be a quick thing to fix some ports. Of course, it ended up being much more work and is still ongoing. However, I have had the privilege of getting to know and work with a bunch of brilliant people and have learned a lot. This got me a commit bit and the motivation to push forward even more. My goal is to do my share in ensuring FreeBSD remains the best option as a (HPC) developer system just as much as it was in 2006 when I installed 6.1-RELEASE.

Mahdi: I'll begin with how I started as a contributor. After I was tied to this operating system and the community around it, I wanted to be part of it. As well as using it, I wanted to develop it! So I asked other committers how to do that. At that time, it seemed like a cliché, but now I totally understand the answer I got: "work on what you like and what needs working on, and after some time you'll see people contacting you to join."

After that, I was playing with concepts I learned, trying to port Linux applications to FreeBSD, customizing the kernel, and writing modules for it. One day, I was working on porting MySQL 5.7 for FreeBSD. I knew enough C/C++/CMake/MySQL to read and edit code as needed, and I was working on this port just out of curiosity. I also saw demands for this port on the ports mailing list, so I opened a PR (https://bugs.freebsd.org/bugzilla/show_bug.cgi?id=204607). With the help of brnrd@, I successfully finished my first port and accepted maintainership of it. This was my starting point.

After this, I learned more and focused on what I loved, and tried to help the Project on things I was a so-called expert in, or on things I liked to learn about! Yes, it is a great thing that this

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utopia exists!

About two years later, I was still enjoying the cycle of helping --> learning --> helping. I was contacted by feld@, who asked me if I would like to learn other things and commit my changes directly. I enthusiastically answered "Yay."

How has your experience been since joining the FreeBSD Project? Do you have any advice for readers who may be interested in also becoming a FreeBSD committer?

Johannes: My experience has been very good indeed. I found developers behave professionally behind closed doors, in private, and in person. All the positive reactions I was greeted with were overwhelming.

Readers should take my advice, as a very junior member, with a grain of salt: I would say pick a field in FreeBSD that you feel strongly about, think suboptimal, and improve it. There is a lot to be done and precious little time. Do not be shy to ask for help.

Mahdi: My experience since the first question I asked has been great. People are ready to help you on PRs most of the time. Remember, they have jobs, which sometimes means a little waiting is needed.

If you like to learn, FreeBSD is one of the best places. For readers who are interested, continue working on what you love and it will benefit you and others. It just takes some time, patience, and interest. Be sure people appreciate your work, and one day you'll be punished with that commit bit.

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