# new faces

of FreeBSD

BY DRU LAVIGNE

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 the three committers who joined the Project in September 2016. Sevan Janiyan and Ruey-Cherng Yu became doc committers, and Joseph Mingrone became a ports committer.

Tell us a bit about yourself, your background, and your interests.
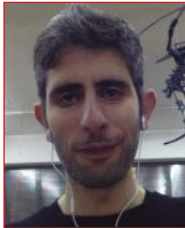
Sevan: I'm a 30-something system administrator currently based in London, England. I began working with computers in my early teens, mostly learning through self-study over the years. I have a technical blog called GeekLAN (https://www.geeklan.co.uk) where I write about some of the things I work on.

I actively try to avoid hoarding computers, but somehow my collection of small computers continues to grow. I enjoy playing with different operating systems and listening to electronic music. I would like to learn more about functional and object-oriented programming languages, specifically Lisp and Smalltalk.
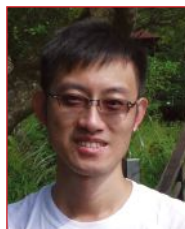
Ruey-Cherng: I am a dentist in Taiwan. I didn't major in computer science but I'm very interested in computer science. My father bought an 80286 PC when I was 10 years old. I remembered the OS was DOS 3.3, and I played a lot of DOS games with it. As the hardware requirements went higher and higher, my father upgraded my computer from 80386, 80486DX2-66, Pentium, and so on. After a while, I decided to understand how these games work. In my first year of high school, I attended a C programming language and data structure course in the Department of Computer Science and Information Engineering, National Taiwan University. The compiler I used at that time was Borland C++ 2.0. After finishing the course, I learned that debugging is difficult work so I instead entered medical school.

During my college life, I started to know more about the Unix-like operating systems via Redhat Linux 5.2. I also used Mandrake Linux and Debian. My interests are computer science, cycling, economics, and accompanying my two daughters.

Joseph: I am a PhD candidate in the Math/Stats department at Dalhousie University in Halifax, Nova Scotia, Canada, where I work on models of molecular evolution. Aside from doing research, I spend time managing our research group's computing cluster. Before graduate school, I worked as a software developer on a variety of projects using a variety of languages.

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

Sevan: Long, long ago, I managed to get hold of a Sun3/60 workstation (this was a workstation produced by Sun Microsystems in the 1980s which used a Motorola 68000 CPU) and was looking for an operating system to run on it. I became aware of the BSDs through this effort but really didn't know what was what. I certainly visited the websites of the three major BSD variants some time around 1997.

The first time I actually tried FreeBSD I remember clear as day. I saw the 5.0 release announcement on the news site Slashdot the night it landed. Same situation again: I'd obtained another aging piece of hardware, this time a DEC AlphaStation 250. Linux

hadn't worked out so well on this system, and I saw the Alpha CPU was a supported architecture, so I gave FreeBSD a try and wasn't disappointed. The first thing was that my system was way faster than the previous operating Linux distributions I'd tried and secondly, thanks to the Handbook, I was able to achieve a great deal with the system without prior knowledge. This was very empowering and I was hooked.

Ruey-Cherng: When I used Redhat 5.2, I found the dependency problems to be so annoying. This improved after I switched to Debian. When dealing with the dependencies of RPM files and searching for solutions on the Internet, I found one of the features of FreeBSD: the ports system. The convenience of ports interested me. But at that time, the hardware compatibility was not so good, so I just tried FreeBSD for a short period. In May 2014, FreeBSD attracted me again. I installed FreeBSD 9.0 on my Fujitsu T2010 and FreeBSD worked well with some tweaks.

Joseph: I first learned about FreeBSD around 1998. Two roommates and I were moving into an apartment and we hoped to share an Internet connection. This was before cheap consumer routers were common, and I recall the ISP either charging extra for, or forbidding multiple computers on, the same connection. At that point, I had little Unix experience, so I made a deal with an older, wiser computer science student. He chipped in with technical advice and I took extra turns driving for our summer-job carpool. We found a discarded desktop, threw in a second network card, and installed some Linux distribution. I don't recall the details, but I remember it did not work well. This older, wiser student was friends with a FreeBSD alumnus, Marc Fournier, and Marc recommended FreeBSD. After installing FreeBSD, that old desktop ran wonderfully all year. So, FreeBSD was introduced to me and what initially interested me was the stability. Today, there are many reasons why I still run it on servers, desktops, and laptops, but I will highlight one. I appreciate the control FreeBSD gives me. With the relatively minimal base system and powerful ports system, I can customize the installation, unlike any other operating system that I am aware of. Naturally, I am excited about the upcoming packaged base.

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How did you end up becoming a committer?

Sevan: I believe I reached the sufficient level of patch submissions to move up to the next level where I get to commit my own proposed changes after being reviewed and given the all clear by my mentor, Benedict Reuschling.

It all began while I was reviewing the source history and documentation for the utilities shipped in the base systems of the current BSDs. I came to the realization that there was an inconsistency regarding the origin of the utilities and which version of operating system they first appeared in. The modern BSDs are in a fortunate position where the lineage can be traced all the way back to 1BSD. The FreeBSD Project hosts a copy of the CSRG repo which can be checked out or browsed with a web browser at https://svnweb.freebsd.org/csrg/. If preferred, the repository along with the actual binaries are available as a CD set from Kirk McKusick for purchase at http://www.mckusick.com/csrg/index.html. With a copy of the CSRG repo and various other resources online to cover other unices, I set out to review the history section of man pages which included it and to add the section to those which were missing it. The result is that the tools in `/bin and /sbin` are now documented. The `/usr/bin` and `/usr/sbin` tools are next.

Ruey-Cherng: When gathering the information I needed to install FreeBSD 9.0, I found a lack of traditional Chinese documentation. The information I did find was outdated, mostly for FreeBSD 5.X. The latest update of the FreeBSD Handbook in zh_TW was in 2008. There was no official FreeBSD website link to the zh_TW version because its content was too outdated. So I decided to update the translation of the FreeBSD Handbook.

I sent an email to the freebsd-doc mailing list to introduce myself and seek help and recommendations. My co-mentor lwhsu@ contacted me and helped me to convert old BIG-5 encoding to UTF-8. Then, I began the translation. delphij@ helped me to solve the mojibake problem in PDF rendering. I set up a FreeBSD server on my Raspberry Pi 2B so that I can ssh to my server from the dental clinic and do some translation work when I have free time. The FreeBSD arm package repository was not set up at that time and I encountered some problems when installing the programs I often use. I met my mentor kevlo@ in the FreeBSD Taiwan User Group on Facebook. He answered lots of my stupid questions kindly and patiently. He solved my problems and encouraged me to continue my translation.

The progress of my work was very slow as I struggled with the xml tags. Fortunately, the

evening when I tested and practiced the po translation, I encountered some problems in po translation to UTF-8. My co-mentor wblock@ kindly helped me solve them. The conversion of the old translation method to the po translation is a labor-intensive work. You have to copy and paste all the strings one by one to a po file. It needs to involve more people in the project. To attract more new blood, I gave a talk about the traditional Chinese translation of the FreeBSD documentation at a local BSDDay in Taipei in July (https://lists.freebsd.org/pipermail/freebsd-translators/2016-August/000141.html). For people who could not attend, I also wrote an article to introduce the traditional Chinese translation of FreeBSD documentation. A contributor, cwlin, contacted me via the subversion log. He converted the handbook in zh_TW to po translation which was a very big work! After, kevlo@ proposed me to be a committer to facilitate my translation work. Now with the help of kevlo@ and ryusuke@, I have revived the FreeBSD website in zh_TW.

Joseph: Like most committers, I just started submitting patches. I met FreeBSD people by lurking on IRC and the mailing lists and attending BSDCan. The hacker lounge at BSDCan was a nice way to make connections with Free-, Open-, and even a few DragonFlyBSD community members. Those connections sparked my motivation to contribute more.

I have worked on a variety of ports from games/voxelands to security/wpa_supplicant, but one area where I hope to make more commits could be described as "scientific software." A few examples are biology/diamond, biology/njplot, biology/paml, cad/gmsh, and math/R.

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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?

Sevan: I'm very happy to be a member of the Project. The on-boarding process is very easy and fellow team members are very helpful with tips and suggestions. The workflow goes from Bugzilla, which is our bug tracker where requests and patches land, to Phabricator, which is the review system. I really like the review system as it's reassuring to have someone go over your changes. Sometimes things are overlooked and

it's good to catch them before they land in the source tree. This process also helps with the team becoming familiar with each other's approach and it provides different perspectives to a problem.

Every year the BSD community gathers in Ottawa, Canada, at a conference called BSDCan. Each evening, there is a documentation sprint. At the doc sprints, folks from the documentation team give talks about various aspects of working on documentation and help people get started with working on the documentation. Unfortunately, BSDCan is once a year so for our day-to-day interaction we meet and hang out on IRC and the mailing lists. There is a wiki article for the IRC networks we are present in: https://wiki.freebsd.org/IRC/Channels#EFnet. #bsddocs on EFnet is where the documentation team can be found as well as on the freebsd-doc@ mailing list.

To someone interested in becoming a FreeBSD committer, I would suggest joining the IRC channel and mailing list relevant to the area of interest. This will get you in touch with other developers who can provide guidance and a helping hand if stuck. If you're unsure of a project to begin working on, a review of the system is always a safe start. This has the benefit of familiarizing you with the current state which can help clarify what new improvements could be made, reducing the likelihood of potential oversights.

Ruey-Cherng: You could install FreeBSD and do your daily work with it. As you find some bugs in the system, ports or documentation, send a bug report with your patch. I installed FreeBSD plus the Xfce desktop environment on my Macbook Pro 2011 to do routine jobs such as surfing the web, word processing, and instant messaging on FreeBSD every day.

The first time I browsed the FreeBSD forums, I thought it a little deserted. I went to browse the mailing lists archive and subscribed to some mailing lists. I found most FreeBSD developers like the old school discussion method of mailing lists. Subscribe to the mailing lists of the fields you are interested in. Soon you will understand why they like mailing lists instead of the web forum as it is very convenient to browse and reply with your favorite email client. Now that you know where the developers gather, introduce yourself and participate in the discussion.

Related bug reports will also be sent to the mailing lists and you will see your bug reports and patches in the mailing lists. The developers will recognize your contributions and provide suggestions.

Look for a local FreeBSD user group and join it. This is a good way to receive new information and solutions for the problems you encounter. You may also meet some developers in the local user group.

Read the FreeBSD Handbook and the other articles and books in the FreeBSD documentation project to learn more about FreeBSD. If you find bugs or outdated information in the documenta-tion, fix the bugs and contribute your updates.

Surf the FreeBSD website in your language and find what you can do to update the con-tent of that website to sync it with the English version.

If you have hardware that FreeBSD doesn't support yet, don't be disappointed. You may have an opportunity to be involved in testing the driver! Seek the driver solution in the related mailing lists, look to see if there is a latest and unreleased driver and help the developers test it.

All your efforts will be appreciated. If you see others discussing issues "loudly," don't be afraid. It is just a smaller society like the real world.

Joseph: My experience has been quite positive. I have fantastic mentors (swills and AMDmi3) who help to steer me in the right direction when I veer off course. Some other, more senior ports developers (especially mat) have offered lots of helpful hints as well. To anyone thinking about contributing to the ports tree, I would say, with over 25,000 ports, we need you! The Porter's Handbook and tools like poudriere and portlint make chipping in accessible, even for people with less experience. ●

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DRU LAVIGNE is a doc committer for the FreeBSD Project and Chair of the BSD Certification Group.

Thank you!

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