Abstract

Free and Open Source Software ("FOSS") has generally focused on activism rather than rigorous research to adjudicate its mission. Nevertheless, options for empirical research exist and we hope in a brief discussion with this community to explain one opportunity where academic inquiry might help illuminate a specific issue that relates to the future of computer science education and the right to software repair.

For decades, FOSS developers — particularly at the operating system level — have worked to create an environment that inspires the next generation of software enthusiasts to — frankly put — "learn how their stuff works".

Almost every computer scientist born between 1970-1982 began their career in a golden age of home computing. From the VIC 20 to the Apple II to the Commodore 64 to the 8086 PC — this generation understood what it meant to have devices in their homes that allowed for software experimentation, modification, and education.

Today, we could have a new golden age. From the television, to the wireless router, to the very refrigerator — modern homes run more Linux-based devices than we could have dreamed of in the early 1990s.

Yet, despite Linux's *copyleft* license — the General Public License ("GPL") — nearly every vendor simply *refuses* to follow the requirements of these licenses . These requirements are not onerous, but they are antithetical to the motives of manufacturers. Ultimately, they wish to use software whose license should guarantee learning and a right to repair and modification in a manner that turns the computing devices in our children's home into land-filling junk that cannot be explored or modified.

To our knowledge, no academic inquiry has investigated the rather simple question: "What percentage of the industry that actually provides the complete and corresponding source code (CCS)" that copyleft licenses like the GPL require. These are right-to-repair licenses, and could revolutionarize industry requirements, yet no academic study has been done to determine — given the billions of Linux-based products on the market today — how many comply with these important copyleft licenses.

I ask for the opportunity for an extremely short talk to frame the problem. I believe this community — unlike so many other academic communities — would be open to considering this issue and providing interesting and useful feedback on how FOSS activists can collaborate with academic to consider this and related questions with academic rigor.

Biography

Bradley M. Kuhn is the Policy Fellow and Hacker-in-Residence at Software Freedom Conservancy (SFC). Kuhn began his work in the software freedom movement as a volunteer in 1992 — as an early adopter of Linux-based systems and contributor to various FOSS projects, including Perl. He worked during the 1990s as a system administrator and software developer for various companies, and taught AP Computer Science at Walnut Hills High School in Cincinnati. Kuhn's non-profit career began in 2000, when he was hired by the Free Software Foundation (FSF). As FSF's Executive Director from 2001–2005, Kuhn led FSF's GPL enforcement, launched its Associate Member program, and invented the Affero GPL. Kuhn began as SFC's primary volunteer from 2006–2010, and became its first staff person in 2011. Kuhn's work at SFC focuses on enforcement of the GPL agreements, FOSS licensing policy, and non-profit infrastructural solutions for FOSS. Kuhn holds a summa cum laude B.S. in Computer Science from Loyola University in Maryland, and an M.S. in Computer Science from the University of Cincinnati. Kuhn's Master's thesis discussed methods for dynamic interoperability of Free Software programming languages. Kuhn received the Open Source Award in 2012, and the Award for the Advancement of Free Software in 2021 — both in recognition for his lifelong policy work on copyleft licensing and its enforcement.