

I have used openwrt, dd-wrt, tomato wherever possible and for over a decade.

By leveraging all the work that has gone into the development of Linux (and its utilities) in general and the Linux kernel in particular these alternatives provide me with a more reliable, more secure, and more feature rich operating system than what the vendor of the hardware provides.

Of course, this is hardly surprising: the cost to redeveloping just the Linux kernel (as of v.2.6 in 2011) was estimated to exceed US\$3bn.

The proposed regulation will require at least parts of the software to be locked down and to not be modifiable by the user. In addition to the reservations that other comments before this one have presented, I have the following:

- People who maliciously intend to interfere with other RF signals will very likely still be able to do so. Time and time again we have seen manufacturer lock-down mechanisms circumvented. This famously includes jailbreaking Apple iOS devices, modding Microsoft's Xbox, and other prestigious targets.
- Manufacturers will be more likely to lock down all software of the device as opposed to identifying individual modules that affect the modes of operation of the RF device and locking only those.
- In cases of security vulnerabilities in the locked-down software (likely all the devices software), fixes will be much more difficult for users to perform if they will be able to perform the fixes themselves at all without resorting to some authorized "fix provider". Expected delays in security fixes will likely exacerbate the impact and spread of malware.

It is therefore that

- I wish the FCC would endorse free/open-source software and collaborate with the communities behind dd-wrt, openwrt, tomato, and the like. I would be very surprised if these communities were unwilling to collaborate and comply. Given that a lock-down is unlikely to be effective and considering the adverse effect on security as a whole of the installed base of such SDR devices this seems to be the best option.

Sincerely,

Marko Schütz-Schmuck