

To: Federal Communications Commission  
From: Eldo Varghese  
Date: July 30<sup>th</sup> 2015  
Re: ET Docket No. 15-170

I am writing as a private citizen, concerned about the unintended consequences of the proposed amendments to Commission's Rules regarding Authorization of RF Equipment (ET Docket No. 15-170). The probability of modification to SDR remains high with consumer electronics operating in the ISM bands (specifically, 2.4 ghz and 5ghz). While creating rules that attempt to prevent these modifications it is important to explicitly allow modifications of the consumer electronics, whether hardware or software, that do not modify the SDR component of the equipment.

These modifications are often beneficial to the consumer's safety and security. The low priced consumer electronics devices (wifi-routers, ap, wireless extenders etc.) are generally not supported by the manufacturer for greater than 3 years. Even with support, the ability of the manufacturer to patch security vulnerabilities in a timely manner varies from OEM to OEM. These security vulnerabilities expose personal, financial and medical data at home. If the home user is a remote employee like myself, the vulnerabilities also expose the employer's data. An end user usually is able to prevent the security vulnerabilities by modifying the operating system and replacing it with a third party firmware such as openwrt or dd-wrt.

Most software and hardware modifications usually do not create new ability to modify the SDR. While some of the wifi-chipsets that the OEMs utilize do have the ability to increase the tx power or operate in unlicensed channels, most consumers do not take advantage of SDR modifications. And restrict themselves to the operating system modifications, that do not configure the wireless chipsets for illegal operations.

A compromise that is acceptable to myself and to many in the community, would be to force the manufacturers to 'lock down' the wireless chipsets, while allowing the operating system modifications.