

**Before the
Federal Aviation Administration
Washington, DC 20590-001**

In the Matter of)
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)
Safe, Efficient Use and Preservation of) Docket No. FAA-2006-25002
the Navigable Airspace)
)

**COMMENTS OF
NEW AMERICA FOUNDATION
MEDIA ACCESS PROJECT
FREE PRESS
CUWIN
ACORN ACTIVE MEDIA FOUNDATION
THE ETHOS GROUP
FREENETWORKS.ORG
COALITION OF COMMUNITY NETWORKS
CTCNET**

The FAA’s action appears to be within its statutorily defined jurisdiction but the proposal in the NPRM, as former FCC Office of Engineering and Technology engineer Michael Marcus argues, “will not in practice be effective in meeting its goals and intentions and will impose great burdens on many spectrum users with no resulting public benefit.”¹ The rules, as proposed, depend on new filings to the FAA of construction or modification notices by a large fraction of the more than 5 million FCC licensees, including local and state governments, small businesses, and consumers. While the NPRM does not specifically mention unlicensed devices, the inclusion of the 5 GHz U-NII band, which includes military radars and other exclusively assigned spectrum as well as unlicensed devices, leads to a reasonable expectation that this is the FAA’s intent. NAF et al. believe that the FAA should clarify that low-power unlicensed devices operating under FCC Part 15 regulations pose such a low likelihood of interference with aeronautical devices that they are categorically exempt from the FAA’s proposed new requirements.

The NPRM only provides examples of harmful interference to FAA communications involving FM broadcast stations. Clearly, harmful interference to aeronautical devices is theoretically possible in any band where aeronautical communications take place. But the lack of citation of real world examples of such cases implies that their incidence is extremely rare.

¹ Comments of Marcus Spectrum Solutions in the Matter of Safe, Efficient Use and Preservation of the Navigable Airspace, FAA Docket No. 2006-025002, September 8, 2006.

This would be particularly true with Part 15 devices, of which there are more than 300 million operating at very low power levels and over very short distances (typically a maximum 300-to-500 feet) in homes and business across the country. Consider the use of unlicensed devices in airports and in airplanes. Unlicensed devices now routinely operate in airports and in airlines. Indeed, such uses are now so pervasive and important that there has recently been a fight between airlines and airports over who should have rights to operate access points for such devices (see FCC Docket No. 05-247). Laptops with unlicensed devices built in are also now widely used in airplanes. One unlicensed service on airplanes, Connexion by Boeing, has been offered for overseas flights on ten different airlines. Yet NAF et al. is not aware of any demonstrated harmful impacts such devices have had on aeronautical communications.

It is true that the use of both unlicensed and licensed wireless devices within airplanes is illegal because of the harmful interference they might cause. But it is also noteworthy that this ban is routinely ignored. There are probably few flights that take place on any given day in the United States where some passenger has not left on his or her mobile phone, WiFi enabled laptop, or Bluetooth enabled MP3 player. Yet, again, NAF et al. is not aware of any plane crash or other intolerable harm that has occurred because of such banned use.

Furthermore, all the unlicensed devices noted above are in the immediate vicinity of airports and airplanes. Since unlicensed devices operate at very low power and in normal configuration rarely communicate over distances greater than a few hundred feet, the risk of harmful interference from other unlicensed devices should be correspondingly lower. Therefore, even if restrictions are maintained *on board* flights – or even in an airport context – there appears to be no evidence that restrictions should apply to every U.S. home and business *away from* airports.

The FAA should also carefully consider what Michael Marcus has called “the tsunami of paperwork” that would result from passing such rules.² This burden would apply to both the FAA and consumers and might result in not only great public expense but also a high rate of non-compliance. For example, because WiFi home networks are operating in the unlicensed band at 2.4 GHz, most new cordless phone systems sold in retail outlets today operate in the 5 GHz unlicensed band; it is likely that there will be tens of millions of these devices operating within homes and offices, but posing no interference threat whatsoever to aeronautical devices.

In passing any regulation, the expected benefits and costs must be carefully weighed. For example, the FAA could completely ban carry-on consumer electronics devices as a way to prevent their in-flight, in-the-sky operation, but it has chosen not to do this, presumably because of the high enforcement cost and the high cost in terms of a degraded passenger flying experience. Instead, the FAA has apparently decided that the cost-benefit calculus warrants the design of plane communication systems that can withstand interference from low power wireless consumer electronics devices.

² Ibid.

Similarly, given the prohibitive cost of effective enforcement and the low risk of harmful interference, **NAF et al. suggests a categorical exclusion for low-power unlicensed devices.** The FCC uses a similar concept in 47 CFR 1.1306 for biosafety communications. In creating such an exclusion, the FAA should consider realistic placement of unlicensed devices considering where the public has access and the actual siting of aviation facilities. Perhaps the FAA already intended such an exclusion. If so, it should make this intention explicit.

Respectfully submitted,

By:
J.H. Snider
Research Director, Wireless Future Program
New America Foundation
1630 Connecticut Ave., NW
Washington, D.C. 20009

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