

March 14, 2016

Ms. Marlene H. Dortch, Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street, NW
Washington, DC 20554

Re: IB Docket No. 13-213, Terrestrial Use of The 2473-2495 MHz Band for Low-Power Mobile Broadband Networks (“Globalstar”)

ET Docket No. 13-49 (“5.9GHz”)

Dear Ms. Dortch:

On March 9, 2016, I met with Edward Smith, Advisor to Chairman Wheeler, with regard to the above captioned proceedings.

Globalstar

PK stated that, should the Commission approve Globalstar’s application of a TLPS service, it should emphasize the importance of this decision with regard to the public interest framework previously discussed by Public Knowledge in its filing dated November 19, 2015.¹ Specifically:

a) Testing

The Commission must make clear that it is the FCC that controls the testing process, and the FCC that ultimately determines what level of testing is sufficient. It is not a question of either an applicant or an opponent saying the Commission should or should not be satisfied. Of course, the Commission should encourage applicants and opponents alike to engage in joint and open testing designed to test reasonable theories of interference and impact. But the objective of such testing is to provide adequate information to the *Commission* so that the Office of Engineering and Technology can perform its function and determine ensure the most productive use of the public spectrum.

Because testing can never eliminate all danger of interference that could be deemed harmful or destructive (depending on the nature of the service and the appropriate standard), it is equally important for the Commission to have means to stop deployment and address interference concerns if they emerge. Accordingly, the nature of interference testing depends a great deal on the reliability and effectiveness of the proposed interference mitigation mechanisms. The

¹ Availabe at <http://apps.fcc.gov/ecfs/document/view?id=60001339856>

Commission has authority to set such mitigation rules pursuant to Section 303(b), Section 324, and Section 333.

b) Importance of recognizing the increasingly crowded nature of spectrum use.

The Commission has recognized on numerous occasions that demand for spectrum access and intensity of spectrum use are increasing exponentially. Additionally, the Commission has recognized, and should affirm, that both exclusive licensed and unlicensed spectrum access provide valuable service to the public. Accordingly, in this increasingly crowded spectrum environment, all users of spectrum must cooperate with one another. Instead of a contentious atmosphere in which parties seek to have rights adjudicated by the Commission, the Commission should foster an environment that facilitates and encourages mutual accommodation.

In the end, however, if all else fails, the Commission must have clear processes by which it will adjudicate spectrum interference claims. The Commission should clarify the standards under which it will do so and the mechanisms by which it will resolve disputes when all parties are operating within the scope of their service rules. This applies with equal force to licensed v. licensed conflicts as well as licensed v. unlicensed.

TLPS provides examples of both sets of conflicts. Some of these conflicts are straightforward. For example, WCAI's comments with regard to potential future use of the EBR5 white spaces is the sort of speculative spectrum squatting that the Commission should disregard entirely. No one has claim to a potential use of unallocated spectrum sometime in the distant future. By contrast, concerns relating to existing licensed services and unlicensed services require consideration and a clear set of rules for resolution.

c) The Commission should recognize that TLPS intrudes into the spectrum allocated for public use, and that this imposes a greater burden to benefit and protect the public spectrum.

As discussed at considerable length in previous filings by PK and others, TLPS seeks unique treatment in the 2.4 GHz underlay by operating at higher power levels on the edge of the band than would otherwise be permitted. In exchange for this unique privilege, TLPS must accept unique obligations to avoid destructive interference within the 2.4 GHz band. The recent filings with regard to potential impact on Bluetooth operations show that managing integration of TLPS into the crowded 2.4 GHz unlicensed space will require all users to work together to maximize spectrum efficiency and minimize disruption to the greatest extent possible.

Additionally, the Commission should make clear that its decision to grant TLPS an exclusive right to operate at higher power within the 2.4 GHz band is not merely a function of avoiding destructive interference, but of conveying a positive benefit of relieving congestion within the band (as demonstrated by Globalstar's filings). Future applicants seeking to leverage the unlicensed space for exclusive spectrum rights must be prepared to show that any grant of exclusive right confers benefits to the broader public use of the public spectrum access via unlicensed.

5.9 GHz

Public Knowledge urged that the Commission should move expeditiously on the promised public notice to refresh the record. In particular, PK urged the following questions be included in any public notice.

1. Non-commercial condition.

The auto industry licensees insist that sharing is impossible in the band (or is only possible using the Cisco proposal of total avoidance) because of concerns for life and safety. Life and safety allocations are always made on a *non-commercial* basis. This is necessary for two reasons. First, allocation to public safety on a non-commercial basis is necessary to preserve the centrality of the public safety mission. Second, permitting commercial operation on spectrum allocated without auction expressly for life and safety purposes constitutes a windfall to the licensees. This is particularly true here, where the licensees are for profit automobile companies rather than traditional life and safety entities.

The Commission should therefore seek comment on whether to impose a non-commercial condition on that portion of the band reserved for life and safety operations. If the Commission adopts the Cisco approach of avoidance, or rejected any sharing, the entire 75 MHz would be subject to a non-commercial condition. By contrast, if the Commission were to adopt the Qualcomm proposal, only the portion of the band designated for life and safety functions would be subject to a non-commercial condition.

2. To what extent do existing anti-collision systems provide adequate back up in the event of transient interference from sharing?

Increasingly, automobiles come with anti-collision systems relying on unlicensed Ultra-Wide Band systems (UWB) and other unlicensed or licensed technologies. Unlike DSRC in the 5.9 GHz band, these systems are already deployed effectively using existing allocations of spectrum. Indeed, the auto industry extensively advertises their effectiveness.²

Given these systems already exist and are deploying well ahead of the schedule for 5.9 GHz DSRC, to what extent does the exclusive allocation to DSRC add value? Do the existing systems for collision avoidance provide sufficient mitigation against potential transitory interference from unlicensed operation on a shared basis in UNII-4 so as to warrant sharing? Specifically, what level of interference in UNII-4 to protected DSRC systems should be considered “harmful” in light of the fact that UWB systems will provide primary anti-collision protection in automobiles for the foreseeable future? Does the fact that UWB systems work regardless of whether other cars are using DSRC further limit the value of DSRC exclusivity?

3. Privacy and other public interest concerns.

As the Commission has repeatedly emphasized, consumers have the right to expect privacy in the use of wireless systems. This is particularly true with regard to geolocation

² See, e.g., this advertisement for the Volkswagen Passat. https://www.youtube.com/watch?v=E6_gMWDJWxs

information, which can be extremely sensitive. Because unlicensed spectrum is open to all, it has no “service rules” beyond power limits, out of band emissions, and other rules related to interference avoidance.

Licensed spectrum, however, generally carries with it significant public interest obligations. In particular, as the Commission discussed extensively in the NG911 Order, public safety services have obligations to protect both privacy and cybersecurity. Because DSRC is not classified as a Title II service, DSRC does not automatically fall under the obligations of Section 222. Nevertheless, because of the ability of automobile manufacturers to collect information – including geolocation – via DSRC, the Commission should consider what privacy rules and cybersecurity rules are necessary to protect the public.

In accordance with Section 1.1206(b) of the Commission’s rules, an electronic copy of this letter is being filed in the above-referenced docket. Please contact me with any questions regarding this filing.

Sincerely,

/s/ Harold Feld
Senior Vice President
Public Knowledge

CC: Edward Smith