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Written Statement To The House Of Representatives Committee On Small Business

Regarding The LightSquared Application And It's Impact On GPS Navigation

Dennis B. Boykin IV

Managing Principal & Founder, DB4 Consulting, LLC

Chairman Graves, Ranking Member Velazquez, members of the Committee, and old Army comrades, thank you for the opportunity to address this critical issue today - critical to me, a small business owner who depends on high-precision GPS to keep myself, my family, my passengers, and the people underneath my aircraft safe from harm.

I have many titles, including small business owner, licensed pilot, aircraft owner & operator who uses general aviation for business, and Chairman of the Leesburg Executive Airport Commission. My business, DB4 Consulting, LLC, is a veteran-owned small business in Leesburg focused on supporting small and mid-tier government contractors in program development and business processes. My background includes 24 years of military service, 12 years of commercial experience in this area, and specialized experience in small business operations. I am a frequent speaker and published author on small business contracting issues.

I have 3 concerns regarding this serious potential interference with high-precision GPS receivers: My family's safety, the costs associated with this proposal, and the impact on our general aviation infrastructure.

Over the 30+ years I've been flying, I've flown just about 40,000 miles in nearly 2,000 hours of flying experience, and I've figured out Rule # 1: "***Never scare yourself***". I'm not into aviation for the thrill - I'm in it for the utility. Sure, I enjoy the freedom of flight,

viewing the world from a new perspective, and the professional challenge of controlling the aircraft, but for me, getting in the cockpit really means mitigating every risk possible, to the greatest extent possible, in order to make the flight as safe as possible. That over-riding concern for safety might explain why I do things like exceed FAA training standards, set my own personal safety standards that are higher than required, and over-spend on maintenance. It also might explain why I've spent nearly $ 40,000 on GPS equipment and installations over the last 8 years in two airplanes.

For me, and more importantly my passengers, depending on GPS isn't something we take lightly - it's a matter of life and death. Now, I'm sure folks come up here all the time and use a lot of strong words like that - but in this case, it's not hyperbole, it's a subject with which I am more than a little familiar. I took an oath 38 years ago to *support and defend the Constitution of the United States against all enemies, foreign and domestic*, and after 3 tours of duty overseas and a fair amount of combat experience defending our nation, I know when something is a life or death issue, and when it isn't. I can assure you as certainly as I know the sun will rise tomorrow that the LightSquared proposal to mis-use allocated spectrum, and the interference associated with GPS that has been documented by many organizations, definitely falls into the category of something that can kill me. That makes it a big priority for me.

First, let me explain my volunteer work supporting the Town of Leesburg and our airport. I brief the Town Council every year on the health and well being of their airport, and every year I start the briefing with the phrase - "***Airports Are Not About Airplanes, They're About Commerce***". It's that interstate commerce benefit that drives the airport that brings over 200 jobs and $80 M a year in economic impact to Leesburg & Loudoun County. Our fleet of 275 based aircraft is nearly completely GPS equipped, and

requiring every one of those aircraft to add filters involves certified technicians, downtime, and out-of-pocket expense. Can we expect Mr. Sanjiv Ahuja to foot the bill for hundreds of thousands of general aviation aircraft across the nation?

Here's where the numbers really get scary – the FAA estimates $ 440 Million a year in negative economic impact to General Aviation if this network is deployed, and the potential loss of 800 lives per year. These numbers don't include an FAA estimate of $ 22 Billion in costs to the economy if Nextgen isn't deployed – a system I'll discuss in more detail later.

Clearly, as a steward of the public trust, and their funds, I'm more than a little concerned that this system will wreak economic havoc on our airport. I don't look forward to answering to the Town Council and the taxpayers of the Town when we lose tenants as they either give up their aircraft, or lose their aircraft, and their lives, in accidents caused by GPS outages. Explaining a budget awash in red ink, or worse, explaining why airplanes crash in backyards, is not a pleasant duty. I'd appreciate not being put in that position, thank you.

In my second role, managing a business, I'm glad to hear that LightSquared has proudly announced the development of a GPS filter to eliminate the spectrum interference issue that their ground-based system will cause in this part of the spectrum dedicated to satellite-based systems. Now, no one's seen this device but them, so we have to take their word for it that it exists, it works, and it's available. That's great – they've fixed the problem they're creating - but does it then become my problem?

First, let's be very, very clear – they're causing the problem – not GPS users or

manufacturers. LightSquared is very public in their claims that it's 'their spectrum', even to the point of now threatening legal action, yet they fail to mention that their conditional approval to use ground-based transmitters was only to 'fill in the gaps', as the FCC said, and in all cases the waiver was based on restrictions against interfering against other spectrum users. Claiming that 'GPS manufacturers should have known' is just plain throwing out a red herring here.

But enough about the industry – what about users, like myself, who's businesses are impacted by this argument ? LightSquared claims that Javad GNSS has produced a filter that will magically solve the problem. OK, not only has this filter not been approved by the FAA yet, here's a thought: Javad has absolutely no experience in aviation, so don't count on them having a viable product ready to fit my Garmin high-precision, WAAS-enabled receivers anytime soon.

And then once it does go thru the certification process, who pays for them? I can assure you that based on my nearly thirty years of aircraft ownership, I am far more qualified to render an opinion as to the expense and impact of this proposal than LightSquared is – and I can assure you that the costs of retrofit are going to be very, very high. We're not talking about putting a plug into a cable – we're talking about removing sophisticated electronic components from hundreds of thousands of aircraft, and taking those components apart, and then re-installing them. Start adding up those costs, and the numbers are staggering – certified technicians, downtime, and the inevitable damages caused by errors in the work. Thousands of small businesses and hundreds of thousands of pilots should not have to pay to support LightSquared's business model.

And speaking of business concerns, let's talk about environmental impacts. The FAA's

Nextgen system, which is completely dependent upon accurate and reliable GPS navigation, will save countless gallons of fuel and eliminate a significant amount of carbon emissions when implemented by moving aircraft through the skies in direct routes, rather than on the airway system that exists today. At the altitudes I fly, I'm already reaping the benefits of GPS navigation by 'going direct' – routinely receiving direct clearances (rather than flying airways) from the DC Metro area to points in South Carolina, Alabama and Florida. These reduced emissions, added up over multiple flights with hundreds of thousands of aircraft, are extremely important. The Lightsquared system puts those advantages at risk.

And finally, as a father and husband who flies for business, routinely flies his family on vacations, flies combat-wounded veterans to medical appointments, and flies animal rescue missions, I'm concerned for the safety of every flight.

I learned to fly over 30 years ago, when navigation was dependent on less-accurate VHF radios and AM beacons. I never really felt safe putting folks at risk in an airplane I was flying until we got to the point where GPS signals, enhanced by ground stations in the WAAS environment, created a precise flight environment that matched the accuracy of the weather information we now receive in the cockpit. Today, we enjoy a plethora of instrument approaches at my home airport in Leesburg, which was selected by the FAA to be one of the first five WAAS approaches in the nation. Any discussion of a potential interruption of these signals is a big deal when it impacts safety of flight. Remember, I said at the beginning that I never scare myself in a flight. Well, I've had a GPS outage once, and luckily it was in clear weather on a sunny day, and that was pretty scary. Now imagine yourself flying passengers on a night flight, in the clouds, on the GPS/WAAS approach to Runway 17 at Leesburg, and the screen goes blank due to a

harmonic attenuation from the LightSquared cell tower you just flew over. The ramifications are obvious, as is the conclusion that any reasonable person would reach: *There is absolutely no reason to create this risk to life and property, just for their profits*.

The applicant received a waiver to put ground-based transmitters in a spectrum originally designated for satellite-based systems, and that waiver was only to fill in the gaps. Now, they're attempting to re-purpose the spectrum, and do so at great risk to others. How that happened is not my concern - what is my concern is that every single person who gets in an airplane is being put at risk for someone else's business model, and that's just plain wrong.

In closing, I appreciate anything this Committee can do to mitigate the risks created by this situation, and I thank you for your service to our great nation.