


memorandum

DATE: April 27, 2011

TO: Curtrisha Banks

FROM: Karl Kensinger 
Associate Chief, Satellite Division

SUBJECT: File No. SAT-MOD-20101118-00239

Please scan this memo and the attachments and post the document to the File No. SAT-MOD-20101118-00239.

The attachments are various emails that include comments concerning this file:

1. Email from Stan Fields to Mindel DeLaTorre dated 2/8/11.
2. Email from David Standish to Mindel DeLaTorre dated 2/8/11.
3. Email from Douglas Brunner to Mindel DeLaTorre dated 2/8/11.
4. Email From Judson Porter to Mindel DeLaTorre dated 2/9/11.
5. Email from Randy Snarr to Mindel DeLaTorre dated 2/9/11 (forwarding email thread initiated 2/7/11).
6. Email from Giffen Marr to Mindel DeLaTorre dated 2/9/11.
7. Email from Patrick McKelvey to Mindel DeLaTorre dated 2/10/11.
8. Email from William Dicus to Mindel DeLaTorre dated 2/10/11.
9. Email from Mike Wade to Mindel DeLaTorre dated 4/6/11.

From: Stan Fields <sdfields@austin.rr.com>
To: Mindel DeLaTorre
Sent: Tue Feb 08 13:13:34 2011
Subject: FCC approves GPS-jamming broadband transmitters

Ms. DeLaTorre,

Both the commercial and general aviation fleets have largely converted from the old NAV electronics to GPS for navigation and control. Advancements in avionics and auto pilots rely on reliable GPS broadcasts to function. With GPS pilots are able to land at non controlled air fields with the degree of precision afforded by ILS equipped airports. This technology provides for an unprecedented level of safety that is threatened by interference from high-powered, land-based broadband transmitters the FCC approved to operate in the band adjacent to GPS frequencies. Tests show that GPS receivers like my Garmin 430W began to be jammed at 13.8 miles from each transmitter site, and that navigation was effectively shut down at 5.6 miles from each site. This is disastrous to the operation of my aircraft.

Please reconsider the frequency assignment of these high power land based transmitters to prevent interference with GPS broadcasts, vital to aviation.

Respectfully,
Stan Fields
Austin, Texas Aviator

From: David Standish <carbonflier@gmail.com>
To: Mindel DeLaTorre
Sent: Tue Feb 08 14:20:07 2011
Subject: GPS and Lightsquared

The GPS system has cost this country a very large amount of money and has made travel much more convenient and safe. Very expensive equipment has been installed in almost all aircraft both commercial and private revolutionizing the safety of air travel. Any new communication system which interferes with the existing GPS system should not be approved due to very serious cost and safety issues.

Does the same agency that will not allow me to use my Kindle on an airliner really want to approve a system which renders GPS signal unusable for miles around these proposed transmitters.

Does the FCC or Lightsquared plan to compensate me and thousands of fellow aircraft owners for loss of use of very valuable avionics.

Who will be responsible when someone is injured or killed due to loss of GPS information in flight.

David Standish

From: Douglas Brunner <legacyflyer@gmail.com>
To: Mindel DeLaTorre
Sent: Tue Feb 08 22:58:52 2011
Subject: Re: FCC File No. SAT-MOD-20101118-00239

Dear Ms. DeLaTorre,

Re: FCC File No. SAT-MOD-20101118-00239

I was disturbed to read that the FCC is considering allocating radio spectrum to Lightsquared that can/will interfere with GPS signals.

This is of major concern to pilots who nowadays primarily use GPS navigation when flying. In fact the whole "NextGen" air traffic control system is based on the use of GPS along with transponders that relay position information (derived from GPS) to other aircraft and ground stations. Interference from Lightsquared radio transmission could cripple efforts to improve and advance air traffic routing and control in the future and could represent a significant safety issue to the flying public

Also, I suspect there will be a lot of unhappy automobile owners as well if Lightsquared interferes with their GPS navigation systems.

I urge you to require that all potential interference issues be dealt with before spectrum is allocated to Lightsquared.

Please respond to: douglasbrunner@earthlink.net or legacyflyer@gmail.com

Thank you

From: Judson Porter <jdporter@elp.rr.com>
To: Mindel DeLaTorre
Sent: Wed Feb 09 10:20:41 2011
Subject: GPS issues

Both of my airplanes depend on GPS for landing in IFR conditions. each of my Garmin 430 W GPS radios cost \$7000.00 plus another \$800 for the installation. According to all reports this Frequency interference issue endanger my life and those of my passengers.

this needs to be fixed or are you guys NUTS?

> *FCC Approves GPS-jamming transmitters *
> *Federal Communications Commission gives the green light to
> 40,000 broadband transmitters that would cripple GPS navigation.*
>
> *26 January 2011 The Federal Communications Commission (FCC)
> has approved a company called LightSquared Communications to
> install up to 40,000 high-powered, land-based broadband
> transmitters that broadcast in the band directly adjacent to
> the GPS frequencies. It has been found that these transmitters
> would have a disastrous effect upon aviation GPS receivers such
> as the popular Garmin GNS 430W. In testing, the receivers began
> to be jammed at 13.8 miles from each transmitter site, and
> navigation was effectively shut down at 5.6 miles from each
> site. Automotive units such as the Nuvi did a little better.*
>
> The approval was moved rapidly through the approval process,
> and the approval was made despite industry representatives'
> pleas to evaluate the transmitters further.

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seek the most accurate truth available

From: randy snarr <randylsnarr@yahoo.com>
To: Mindel DeLaTorre
Sent: Wed Feb 09 10:42:10 2011
Subject: FCC approves GPS-jamming broadband transmitters

I want to voice my very strong opposition to the approval of LightSquared Communications installation of up to 40,000 transmitters in the frequencies adjacent to current GPS frequency.

I operate a small aviation related business in the rocky mountain west and trust my life and my passengers to accurate and reliable GPS navigation.

This is absolutely outrageous what is happening in this country. I am beyond sick and tired of my government ruling the people.

This has to stop. I vote and have am ready to pick up the torch of revolt and remove you and your cronies from your perch if this stands. I want a thorough study of this issue done before you ram another impediment to my liberty down my throat.

Are you personally involved with this company?

How much did they contribute to your political campaign?

Do you or anyone on your staff have any personal relationships with people at this firm?

This whole thing smells bad to me.

If one airplane crashes as a result of your decision to do this you will have blood all over your hands and there will be hell to pay for it !!!

Note to government.

GET THE HELL OUT OF OUR LIVES!!!

Randy Snarr
South Jordan, Utah

"Flight by machines heavier than air is unpractical and insignificant, if not utterly impossible"

-Simon Newcomb, 1902

--- On Mon, 2/7/11, Dan Schaefer <dfs155@roadrunner.com> wrote:

From: Dan Schaefer <dfs155@roadrunner.com>
Subject: [LML] Fw: Fwd: FCC approves GPS-jamming broadband transmitters
To: lml@lancaironline.net
Date: Monday, February 7, 2011, 8:18 PM

----- Original Message -----

From: [Ray Modert](#)
To: [undisclosed recipients:](#)
Sent: Monday, February 07, 2011 9:33 AM
Subject: Fw: Fwd: FCC approves GPS-jamming broadband transmitters

Subj: FCC approves GPS-jamming broadband transmitters

I find this to be mind boggling. Is the Administration intentionally undermining the GPS system? It would appear so.

FCC Approves GPS-jamming transmitters

Federal Communications Commission gives the green light to 40,000 broadband transmitters that would cripple GPS navigation.

26 January 2011 – The Federal Communications Commission (FCC) has approved a company called LightSquared Communications to install up to 40,000 high-powered, land-based broadband transmitters that broadcast in the band directly adjacent to the GPS frequencies. It has been found that these transmitters would have a disastrous effect upon aviation GPS receivers such as the popular Garmin GNS 430W. In testing, the receivers began to be jammed at 13.8 miles from each transmitter site, and **navigation was effectively shut down at 5.6 miles from each site**. Automotive units such as the Nuvi did a little better.

The approval was moved rapidly through the approval process, and the approval was made despite industry representatives' pleas to evaluate the transmitters further.

[[Read the Full Article >>](#)]

More information, including contact numbers for the lawmakers who are involved in the approval process can be found here: [GPS Community Urged to Contact Congress](#).

The FCC's Chief of the International Bureau, Mindel De La Torre, was not swayed by the protests of the GPS manufacturers; perhaps she would be influenced by a whole bunch of respectful, concerned citizens who wrote to her at Mindel.DeLaTorre@fcc.gov, or called her office at 202-418-0437.

I am using the Free version of [SPAMfighter](#).
SPAMfighter has removed 881 of my spam emails to date.

Do you have a [slow PC](#)? Try free scan!

From: Giffen Marr <gamarr@charter.net>

To: Mindel DeLaTorre

Sent: Wed Feb 09 12:36:43 2011

Subject: GPS Concerns

Dear Ms De La Torre

I am writing you concerning the approval of a LightSquared electronic transmitter that may have deleterious effect on GPS signal reception.

I personally have several GPS receivers that I use, both in my automobile and airplane. The ones in my airplane are used for primary navigation. Any degradation of the GPS signal could result in an accident with all of it's associated consequences.

Please ensure that this technology is compatible with other users of the electromagnetic spectrum and does not impose any undue hazard to other users.

Thank You
Giffen Marr

From: Patrick McKelvey [mailto:pmckelvey@gmail.com]

Sent: Thu 2/10/2011 4:31 PM

To: Mindel DeLaTorre

Subject: GPS Jamming Issue

Ms. De La Torre,

I'm writing to address the issues brought forward in the following link regarding Lightsquared and your approval for their installation of over 40,000 high powered transmitters.

Without going into the beeps and squeaks of how and why this will happen, let me explain what this holds in the future purely from an aviation perspective.

For the last decade the aviation industry has more or less been reborn in their capabilities which are all based on the highly accurate capabilities of WAAS enabled GPS. Quickly fading are the days of expensive ground based RF transmitters which aircraft used to leap frog across the country from one to another. Also fading are expensive local systems used for instrument approaches. WAAS enabled GPS provides all of the these things, and more much more accurately. Precision approach capability has been brought to airports that never had it or could afford it. The technology simply advanced to the point where that ability quite literally appeared out of thin air. Commercial aviation is leaning heavily this direction more and more each day, it provides much more accuracy, the ability to go point to point (as opposed to wandering along airways, covering more ground and thus burning more fuel) and flying reliable precision approaches into once "fair weather only" airports.

The implementation of these transmitters will not only set back aviation years, but is a serious threat to the safety of aviation across the spectrum. Imagine for a moment a commercial aircraft flying a GPS approach into Aspen Colorado. The airport lies in a valley with steep mountains on either side, the approach starts miles out and stair steps down over mountain peaks to ultimately provide guidance to a safe final approach where a landing can be made. Now let's imagine that as this aircraft is on the final portion of the approach, surrounded by mountains on either side, and over flying downtown Aspen (which the approach does) and loses all GPS reception because this thing has been built. You now have a commercial aircraft, full of passengers, in a valley surrounded by mountains, flying blind with no way to navigate. Do you want to be on

it? Because as near as I can tell you've approved this.

I'm not being sensational about this either, this situation can AND WILL play out at some point in the future if this moves forward. It will be known that interference was not only a possibility but shown to be a truth. Your name will be on the paper trail that all leads back to your approval. Lightsquared will probably wind up being sued into extinction.

Never mind all of what I have said above, I'm curious if the Department of Defense has even become privy to this. I'm almost certain they will shut this down as it will devastate all domestic UAV capabilities, which not only the military but DoHS, TSA, and the Border Patrol have all adopted.

This program is moving too fast, and the serious safety concerns it carries are being brushed off. As a pilot for close to 20 years I can only hope that it's not my name written in blood when all is said and done.

Respectfully,
Patrick McKelvey

http://www.gpsworld.com/gnss-system/news/data-shows-disastrous-gps-jamming-fcc-approved-broadcaster-11029?utm_source=GPS&utm_medium=email&utm_campaign=Navigate_01_31_2011&utm_content=data-shows-disastrous-gps-jamming-fcc-approved-broadcaster-11029

From: William Dicus <dicusd37@aol.com>
To: Mindel DeLaTorre
Sent: Thu Feb 10 19:13:30 2011
Subject: LightSquared transmitters

The risk of serious degradation of GPS accuracy by these transmitters should dictate that their use be prohibited. Loss of positional awareness in flight under instrument conditions is potentially lethal for pilots and passengers and quite probably for those on the ground as well. I don't think you want any airplane and especially a loaded airliner to crash because of such evidence. Please take action to stop this approval for the LightSquared transmitters.

From: Mike Wade [mailto:mwadepls@earthlink.net]
Sent: Wednesday, April 06, 2011 2:56 PM
To: Mindel DeLaTorre
Cc: Jim McLeFresh
Subject: Possible Problems For GPS Users

Mr. De La Torre,

I'm writing to urge you to slow the rush to grant LightSquared authorization to use a portion of the Radio Navigation Satellite Service (RNSS) bands so close to that currently used by civilian GPS users. The Professional Land Surveyor (PLS) community, local government, the agricultural and construction industry and many others too numerous to recount, have all developed applications and reliance on a strong, uninterrupted signal.

The "exploding" personal communications industry must not destroy this valuable asset that has been developed by a multitude of users during the past 20 years. Halt the rush and complete a thorough investigation.

Thank you,

Vernon Wade,
Retired WA PLS