



**pennsylvania**

DEPARTMENT OF TRANSPORTATION

www.dot.state.pa.us

July 21, 2011

Received

AUG 03 2011

FCC Mail Room

Commissioner's Secretary  
Office of the Secretary  
Federal Communications Commission  
445 12<sup>th</sup> St.  
Room TW-A325  
Washington, DC 20554

To Whom It May Concern:

This letter is to provide comments from the Pennsylvania Department of Transportation (PennDOT) regarding the Lightsquared Technical Working Group report, IB Docket Number 11-109.

PennDOT has taken the position that any technology that risks GPS interference should be deemed unacceptable. After reviewing various reports and having conversations with our wireless carriers, the Department feels that there is enough risk with the proposed LightSquared system that current GPS performance will be affected. Consequently, PennDOT is recommending that LightSquared not be allowed to proceed forward with their proposed 4G LTE system until there is definitive, 3<sup>rd</sup> party validation that the system will have no impact to the current GPS infrastructure. PennDOT, like many other agencies and private sector companies, relies heavily on GPS technology. If GPS functionality is compromised, the following aspects of PennDOT's operations will be affected:

**Traveler Information** – Currently, PennDOT is in the initial stages of creating a 511PA mobile application to provide on-the-go information to the traveling public. The backbone of the application is the GPS chip found in smartphones. Without GPS functionality, this application will not be able to recognize the user's location and provide the appropriate information. Additionally, GPS is a key component of the Department's Intelligent Transportation System (ITS) strategic direction. It is PennDOT's ultimate goal to get traveler information into portable and in-car navigation systems so travelers can be made aware of incidents before they reach them and can take the appropriate actions.

**Maintenance** – Currently, GPS is utilized in PennDOT's maintenance fleet Automatic Vehicle Location (AVL) system. Without the GPS functionality, PennDOT will not be able track their equipment/resources as efficiently, resulting in an inevitable loss of productivity. The AVL system is essential during winter operations and emergency management situations.

**Construction** – GPS technology is currently used by PennDOT surveyors. Additionally, numerous state contractors employ GPS when performing field work on state construction contracts.

Any questions regarding this matter should be directed to Douglas Tomlinson P.E., Chief, ITS Division, at 717-787-3657 or via email at [dtomlinson@state.pa.us](mailto:dtomlinson@state.pa.us).

Sincerely,

for Daryl R. St. Clair, P.E., Acting Director  
Bureau of Highway Safety and Traffic Engineering

Enclosure

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12<sup>th</sup> Street, SW, Washington DC 20554.

*Accessibility Information.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY).

The comments and reply comments filed in response to this Public Notice will be available via ECFS at: <http://fjallfoss.fcc.gov/ecfs2/>; you may search by docket number (IB Docket No. 11-109). Comments and reply comments are also available for public inspection and copying during business hours in the FCC Reference Information Center, Portals II, 445 12<sup>th</sup> Street S.W., Room CY-A257, Washington, D.C. 20554. Copies may also be purchased from Best Copy and Printing, Inc., telephone (800) 378-3160, facsimile (202) 488-5563, e-mail [FCC@BCPIWEB.com](mailto:FCC@BCPIWEB.com).

*Ex Parte Rules.* This proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.<sup>8</sup> Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must: (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made; and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with section 1.1206(b) of the Commission’s rules. In proceedings governed by section 1.49(f) of the rules or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

By the Chief, International Bureau

– FCC –

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<sup>8</sup> See 47 C.F.R. §§ 1.1200 *et seq.*

Received & Inspected  
AUG 03 2011  
FCC Mail Room

Captain Joe Dropp  
76 Helms Alee Lane  
Berkeley Springs, WV 25411-6825

July 27, 2011

Federal Communications Commission  
445 12th St., SW  
Room TWA325  
Washington, DC 20554

Re: Comments regarding FCC IB Docket No. 11-109, Interference with GPS Signals

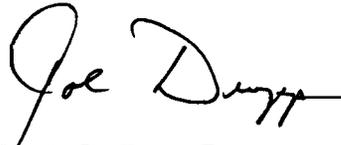
Dear Federal Communications Commission:

As you consider the conditional approval for LightSquared, I write to ask you to preserve the integrity of the nation's GPS system.

Last year, the federal government shut down the Loran navigation system, making recreational mariners solely reliant on GPS for all electronic navigation needs. Like so many other GPS users around the country, GPS is now integrated into our daily outings, and we look to the FCC to protect the integrity of the GPS signal.

My experience in the last ten years at sea and on the road is that few sailors and fewer drivers are using Charts/Maps and are relying on Navigation devices that are supported by GPS. Any thought of degrading this system is a major step backward. Especially for sailors who lost LORAN C last year.

Sincerely,



Captain Joe Dropp, Ret.

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LISTED



# PUBLIC NOTICE

Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

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**DA 11-1133**  
**June 30, 2011**

## **COMMENT DEADLINES ESTABLISHED REGARDING THE LIGHTSQUARED TECHNICAL WORKING GROUP REPORT**

**IB Docket No. 11-109**

**Comment Date: July 30, 2011**  
**Reply Comment Date: August 15, 2011**

On June 30, 2011, LightSquared Subsidiary LLC (LightSquared) submitted a final report of the technical working group co-chaired by LightSquared and the United States Global Positioning System (GPS) Industry Council (USGIC)<sup>1</sup> and organized in response to a condition in FCC Order and Authorization, DA 11-133 (released January 26, 2011).<sup>2</sup> The condition required that LightSquared help organize and participate in a technical working group “that brings LightSquared and the GPS community together” to address potential interference issues recently raised by members of the GPS community.<sup>3</sup> The Order “envision[ed] a working group in which cooperative and candid discussions can ensue, and where information, including proprietary information, can be shared among the participants with appropriate measures in place to protect the confidentiality of that information.”<sup>4</sup> The condition required submission of a final report that includes the working group’s analyses of the potential for overload interference to GPS devices from LightSquared’s terrestrial network of base stations, technical and operational steps to avoid any such interference, and specific recommendations going forward to mitigate potential interference to GPS devices. Among other things,<sup>5</sup> the Order also made clear that, “as a condition of granting this waiver, the [working group] process . . . addressing the interference concerns regarding GPS must be completed to the Commission’s satisfaction before

<sup>1</sup> The report is available through the FCC’s Electronic Comment Filing System (ECFS) in IB Docket No. 11-109.

<sup>2</sup> 26 FCC Rcd 566, 588, ¶ 48 (Int’l Bur. 2011).

<sup>3</sup> 26 FCC Rcd at 586, ¶ 41.

<sup>4</sup> Id.

<sup>5</sup> The Order also, for example, required LightSquared to ensure substantial market availability of mobile satellite service by requiring LightSquared to dedicate at least 6 MHz of L-band spectrum, nationwide, exclusively to satellite service. 26 FCC Rcd at 583-584, ¶ 36.

LightSquared commences offering commercial service pursuant to this waiver on its L-band MSS frequencies.”<sup>6</sup>

The technical working group effort identified significant technical issues related to potential LightSquared operations in the upper portion of the L-Band, which is most proximate to the band used by GPS. Over more than three months, the technical working group tested more than 130 representative devices in seven different receiver categories, in a number of different test environments. The tests demonstrated potentially significant interference between LightSquared operations in the upper portion of the band and various GPS receivers. The tests also identified some interference issues in the lower 10 MHz portion of the band. The overall conclusion of the testing is that transmissions in the upper 10 MHz channel — the channel nearest to the 1559-1610 MHz GPS band — will adversely affect the performance of a significant number of legacy GPS receivers.

In addition to the technical working group report, LightSquared has submitted its recommendations to address the problems identified by the working group.<sup>7</sup> In particular, LightSquared indicates its willingness to: (1) operate at lower power than permitted by its existing FCC authorization; (2) agree to a “standstill” in the terrestrial use of its Upper 10 MHz frequencies immediately adjacent to the GPS band; and (3) commence terrestrial commercial operations only on the lower 10 MHz portion of its spectrum and to coordinate and share the cost of underwriting a workable solution for the small number of legacy precision measurement devices that may be at risk. We specifically invite comment on these recommendations, including any alternative proposals to enable these two important services — GPS devices and L-band mobile broadband — to co-exist. We also welcome comments on the technical working group report generally. Comments should be filed no later than July 30, 2011, and reply comments by August 15, 2011.

*Comments and Reply Comments.* Comments and reply comments may be filed using: (1) the Commission’s Electronic Comment Filing System (ECFS); or (2) by filing paper copies. All filings should reference the docket number of this proceeding, IB Docket No. 11-109.

- **Electronic Filers:** Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>. Filers should follow the instructions provided on the website for submitting comments. In completing the transmittal screen, ECFS filers should include their full name, U.S. Postal Service mailing address, and IB Docket No. 11-109.
- **Paper Filers:** Parties that choose to file by paper must file an original and one copy of each filing. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.
  - All hand-delivered or messenger-delivered paper filings for the Commission’s Secretary must be delivered to FCC Headquarters at 445 12<sup>th</sup> St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes or boxes must be disposed of *before* entering the building.

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<sup>6</sup> 26 FCC Rcd at 586-587, ¶ 43.

<sup>7</sup> LightSquared’s recommendation is also available through the FCC’s Electronic Comment Filing System in IB Docket No. 11-109.

July 21, 2011

**Velma Ybarra**  
510 Ware Blvd.  
San Antonio, Texas 78221

**Ms. Marlene H. Dortch, Secretary**  
Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

Received & Inspected

Re: Comment Deadlines Established Regarding the LightSquared  
Technical Working Group Report, IB Docket No. 11-109

AUG -3 2011

FCC Mail Room

**Ms. Dortch:**

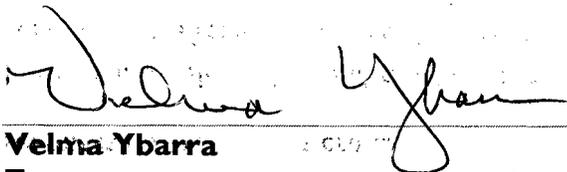
Thank you for your leadership on the Federal Communication Commission. Please continue the commission's efforts to increase the availability of spectrum for high-speed broadband internet access. Specifically, I ask you to support LightSquared and their efforts to launch a nationwide 4G-LTE broadband wireless network. This network is a crucial to establishing a National Broadband Plan and increasing the amount of spectrum assigned to broadband wireless.

Their network will be a satellite-terrestrial system that will increase access and availability to wireless broadband here in San Antonio and millions of Americans across the country that live in underserved areas like the one I represent in South San Antonio. LightSquared has supplied satellite communications access to public safety and security professionals for many years where the need for reliable and seamless connections is critical.

I also believe since they will not be a retailer they will help companies like Cricket offer state of the art service with affordable access. The increased market competition will spur innovation, lower prices, and create opportunities for more and better access in underserved communities like the I serve; Harlandale Independent School District.

In closing, it is imperative that the FCC address how to expanded wireless broadband capacity. This plan is a sound and logical way to do this without spending US tax dollars. I hope that you stay the course and approve the new network.

Respectfully,



**Velma Ybarra**  
Trustee  
Harlandale Independent School District

cc:  
US SENATOR JOHN CORNYN

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LIST A BOOE

**Dean Urdahl**  
State Representative

District 18B  
Meeker and Wright Counties



# Minnesota House of Representatives

COMMITTEES: CHAIR, LEGACY FUNDING DIVISION  
GOVERNMENT OPERATIONS AND ELECTIONS  
STATE GOVERNMENT FINANCE

Received & Inspected

AUG - 3 2011

FCC Mail Room

Ms. Marlene Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, D.C. 20554

Re: Comment Deadlines Established Regarding the LightSquared Technical Working Group Report, IB Docket No. 11-109

Dear Ms. Dortch:

I am writing to ask the Commission's help to bring reliable broadband Internet and cell phone coverage to rural communities.

My legislative district in southern Minnesota is comprised of parts of Meeker, Wright and Kandiyohi Counties. Litchfield, the largest city in my district, has just 6,000 residents. There is no reliable cell phone coverage in my district. There is also no consistent access to wireless broadband Internet. The lack of consistent wireless broadband prevents companies that rely on Internet service to move to my district and create the jobs that we need.

LightSquared's integrated satellite-terrestrial network will greatly increase access to wireless broadband for the 26 million Americans who lack it, particularly in rural areas like the district I represent. The company is a long-standing satellite communications provider to the public safety and homeland security community, and the new network's ability to reach remote areas and provide seamless secure connectivity will be of great benefit to first responders, healthcare workers and emergency response personnel.

As a wholesale provider, LightSquared will allow smaller wireless providers to offer world-class service and also enable many new competitors to enter the wireless market. Competition brings innovation, greater customer choice and lower prices.

We need more capacity in our wireless telecommunications networks. LightSquared's proposed 4G-LTE network will provide a significant expansion of the nation's wireless broadband spectrum. This network would be a privately funded initiative using spectrum long assigned to LightSquared and its predecessors. I encourage the Commission to move without delay to support this and other proposals that will provide opportunity to rural communities.

Sincerely,

A handwritten signature in black ink that reads "Dean Urdahl".

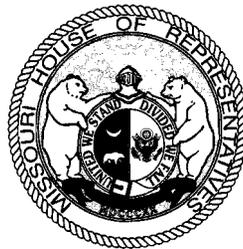
Dean Urdahl

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11-109

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State Capitol, Room 204  
201 West Capitol Avenue  
Jefferson City, MO 65101-6806  
• Tele: (573) 751-1309  
Fax: (573) 751-2007  
E-Mail:  
mike.talboy@house.mo.gov



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Tax Policy

**DISTRICT PHONE**  
(816)-536-0082

**MISSOURI HOUSE OF REPRESENTATIVES**  
**MIKE TALBOY**  
**Democrat Minority Leader**  
State Representative  
District 37

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**AUG - 3 2011**

**FCC Mail Room**

July 29, 2011

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street NW  
Washington, DC 20554

Re: Comment Deadlines Established Regarding the LightSquared Technical Working Group Report,  
IB Docket No. 11-109

Dear Ms. Dortch,

I strongly urge the Federal Communications Commission (FCC) to continue working with both the GPS community and LightSquared to design a solution where both GPS and 4G-LTE services can co-exist. This path forward is necessary to ensure both the safety and prosperity of America's future. Asking Americans to choose is not an answer.

By offering 4G-LTE access via wholesale, LightSquared is essentially democratizing wireless broadband in the United States. This is especially important in economically disadvantaged parts of the country, including my urban district in the heart of Kansas City.

In addition, LightSquared's investment in American infrastructure will help generate 15,000 jobs in each year of its network build out and inject at least \$14 billion into the economy. In the long-term, LightSquared's service will provide \$12 billion in value to the economy and \$120 billion in benefits to consumers. Clearly, not deploying LightSquared's 4G-LTE network would cause significant economic harm which our country can ill afford at this time.

Congress and President Obama were smart to provide \$7.2 billion in broadband stimulus grants to expand access and ultimately "increase jobs, spur investments in technology and infrastructure, and provide long-term economic benefits," in communities across America. The LightSquared network would provide many of these same benefits - except that it would not cost taxpayers a single penny.

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The FCC should continue to facilitate the process and ensure the stakeholders commit to problem-solving so that all Americans can benefit from both LightSquared's unique service and GPS devices.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Talbo", with a long horizontal flourish extending to the right.

Mike Talbo  
Missouri House of Representatives  
District 37

11-109



# LAND SURVEYORS' ASSOCIATION OF WASHINGTON

30442 - 227<sup>th</sup> Pl. S.E., Black Diamond, WA 98010 Email: [info@lsaw.org](mailto:info@lsaw.org) Phone: 360-886-5557

Affiliated with  
AMERICAN CONGRESS ON SURVEYING AND MAPPING - NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS  
WESTERN FEDERATION OF PROFESSIONAL SURVEYORS

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AUG - 3 2011

FCC Mail Room

July 25, 2011

Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

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

Dear Sir or Madam,

The Land Surveyors' Association of Washington (LSAW) is deeply concerned that the LightSquared proposal, as submitted, will significantly interfere with the high precision GPS receivers that the surveying profession relies on every day.

If LightSquared is allowed to move forward with their plan, it would cause a great amount of damage to the precision of our GPS equipment which amounts to millions of dollars invested throughout the state of Washington. This is an expense that we cannot overcome.

Most of the Surveying firms within Washington State have seen job cutbacks resulting in a reduced number of people per firm. Precision GPS equipment is allowing us to economically proceed forward with smaller crews and still get the same amount of work completed. Without the accuracy of GPS, we would be devastated.

LSAW members work with many road contractors who use machine controlled GPS and if the precision is degraded for this equipment it could result in mistakes equaling millions of dollars in materials and labor.

We understand the need and importance for more capacity and wider coverage for wireless broadband. Having this would be a great benefit for us as surveyors. Unfortunately, we cannot allow it to come at the expense of the high precision GPS equipment we currently use. I urge you to ensure that we, the precision users of GPS, are not damaged in any way. Therefore, we respectfully request the following:

1. The FCC must make clear, and the NTIA must ensure, that LightSquared's license modification is contingent on the outcome of the mandated study unequivocally demonstrating that there is no interference to GPS. The study must be comprehensive, objective, and based on correct assumptions about existing GPS uses rather than theoretical possibilities. Given the substantial pre-existing investment in GPS systems and infrastructure, and the critical nature of GPS applications, the results of studies must conclusively demonstrate that there is no risk of interference. If there is conflicting evidence, doubts must be resolved against the LightSquared terrestrial system. The views of LightSquared, as an interested party, are entitled to no special weight in this process.
2. The FCC should make clear that LightSquared and its investors are proceeding at their own risk in advance of the FCC's assessment of the working group's analysis. While this is the FCC's established policy, the Commission's International Bureau failed to make this explicit in its order.

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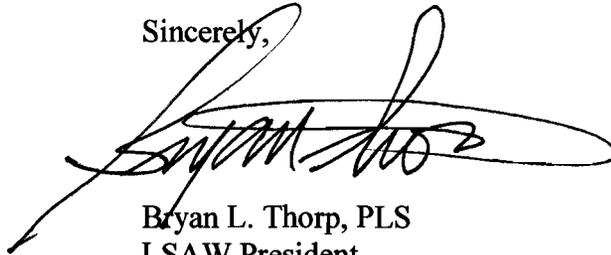
July 25, 2011

Page -2-

- 3.
4. Resolution of interference has to be the obligation of LightSquared, not the extensive GPS user community of millions of citizens. LightSquared must bear the costs of preventing interference emanating from their devices, and if there is no way to prevent interference, it should not be permitted to operate. GPS users or providers should not have to bear any of the consequences of LightSquared's actions.
5. This is a matter of critical national interest. There must be a reasonable opportunity for public comment of at least 45 days on the report produced by the working group and further FCC actions on the LightSquared modification order should take place with the approval of a majority of the commissioners, not at the bureau level.

Thank you for your time and consideration for our concerns and requested items.

Sincerely,

A handwritten signature in black ink, appearing to read "Bryan L. Thorp", with a large, sweeping flourish extending to the right.

Bryan L. Thorp, PLS  
LSAW President



Received & Inspected

AUG - 3 2011

FCC Mail Room

Corey Woods  
Councilmember

July 28, 2011

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

Re: Comment Deadlines Established Regarding the LightSquared Technical Working Group Report, IB Docket No. 11-109

Dear Ms. Dortch:

The American people would greatly benefit from the expansion of wireless technology. Unfortunately, as too often happens, self-interest is getting in the way. To explain, a company called LightSquared is planning to invest \$14 billion in a nationwide 4G-LTE wireless broadband network, which would greatly enhance competition in the broadband wireless industry. However, the commercial GPS industry is trying to stop LightSquared from building this network because some GPS receivers experience interference. They experience such interference because they operate inside LightSquared's spectrum. Rather than allow these devices to simply fail because they are essentially trespassing on LightSquared's licensed spectrum, LightSquared has been working with the Federal Communications Commission to identify and mitigate these interference issues. Yet, instead of assisting with this process, the GPS industry has simply declared defeat and insists that no solution can be found.

America could greatly benefit from LightSquared's broadband investment, so I ask that you encourage the commercial GPS industry stop designing receivers that pick up signals in LightSquared's spectrum and begin working with the FCC and LightSquared to find a technical solution for the existing devices. Without their cooperation, America will continue to lack broadband capacity and competition in the wireless industry.

Sincerely,

Corey Woods  
Councilmember

No. of Copie  
12345678

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