IB Docket 11-109

Township of Cranford

Department of Engineering and Public Works

Richard A. Marsden Jr., PE,PP,PLS,CME
Township Engineer/Director of Public Works
8 Springfield Avenue, Cranford, New Jersey 07016
(908) 709-7218 Fax (908) 276-4872

July 19, 2011

EX PARTE OR LATE FILED

Mr. Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

RE: Concern of LightSquared New Network Disrupting Surveyors GPS Signals

Dear Chairman Genachowski:

As a licensed Professional Land Surveyor in New Jersey, I must express serious concerns regarding the Federal Communications Commission (FCC) granting LightSquared, LLC conditional approval to build a nationwide 4G-LTE wireless broadband network (FCC File No. SAT-MOD-20101118-00239). Early testing by GPS technology leaders, Garmin and Trimble Navigation, demonstrated that LightSquared's technology would likely interfere with Global Positioning System (GPS) receivers, degrading their performance in the best case scenario and completely jamming GPS receivers in the worst case scenario.

The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared, LLC to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. (Perform a web search for "LightSquared" and you will find confirmation of these concerns.) This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.

High-precision GPS equipment used by Land Surveyors and other geomatics professionals costing thousands of dollars per receiver would be more adversely affected than the consumer GPS devices given their inherent design. Literally, tens of thousands of high-precision GPS receivers are used in the United States. GPS technology has transformed the way we build and manage our infrastructure, adding a tremendous level of efficiency to the design, construction, and maintenance of roads, bridges, commercial properties, residential subdivisions, parks, farms, golf courses, etc.

GPS has become an essential tool for design professionals and many municipal police, fire and engineering departments. It is imperative that these GPS signals are not jeopardized by broadband technology.

This situation has the potential of becoming a tremendous public safety issue and an economical disaster not only for New Jersey, but also for the United States as a whole. The members of the New Jersey Society of Professional Land Surveyors urge you to reject the LightSquared application until such time that all tests conclusively demonstrate there is no risk of interference.

Very truly yours,

Richard A. Marsden, Jr., NJ PE & PLS # 29941
Township Engineer

cc: Mayor Daniel J. Aschenbach
David W. Robinson, Township Commissioner
Marlena A. Schmid, Township Administrator
Rona Goldberg, Associate Director NJSPLS

IB Docket 11-109

OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N. E. 21st Street
Oklahoma City, OK 73105-3204

SURVEY DIVISION

Phone: 405) 521-2621
Fax: (405) 522-0364
Email: lreser@odot.org

July 18, 2011

Mr. Julius Genachowski, Chairman
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: LightSquared and High Precision Global Positioning System (GPS)

Dear Mr. Genachowski,

The FCC has initiated a National Broadband Plan to establish 4G coverage nationwide. The company, LightSquared, has developed a plan to create this network. This plan causes interference with high precision GNSS receivers. The frequency range selected is right next to the frequency range occupied by GPS L1 signal. When you factor in that LightSquared is broadcasting 1500 watts per antenna vs. GPS's 31 satellites, 11,000 miles in space, broadcasting 30 watts, there is considerable interference into the L1 spectrum. Even though LightSquared occupies a different spectrum than GPS L1, the signal generated is powerful enough to degrade GPS performance and/or jam high precision receivers. In tests that were conducted in May 2011 to see the effects of LightSquared's signal on different GPS receivers, all brands were negatively affected. High precision receivers were the worst affected. If this initiative is allowed to proceed, at this time, it will cause our high precision GPS receivers to be non-operational and worthless.

GPS is utilized in 80% of our field data collection. To lose this vital component of our operations would be detrimental to the design schedule of all Oklahoma Department of Transportation (ODOT) projects. Add to this the construction industries wide-spread use of Automated Machine Guidance (AMG) systems, which also utilize high precision GPS receivers on their construction equipment, current construction and maintenance operations will be delayed and severely hampered. The effects of this on ODOT could run into the hundreds of millions of dollars. Equipment costs alone could reach $10 million.

ODOT is not the only one affected. All Surveyors and GIS data collection that use high precision GPS will be negatively affected by this. Local, State and Federal entities all will feel the negative effects. High precision GPS, in its current form, is vital to infrastructure construction and maintenance. This technology should not be allowed to be degraded by any other technology, by any degree. It is my opinion that LightSquared should find a frequency range far enough away from all GPS signals to eliminate the problem.

Sincerely,

Larry D. Reser, PLS
Chief of Surveys

"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."

AN EQUAL OPPORTUNITY EMPLOYER

IB Docket 11-109

DBK CONSULTING, L.L.C.
LAND SURVEYING AND CIVIL ENGINEERING

Christian M. Kastrud, N.J.P.E., C.M.E.
Steven D. Parent, N.J.P.L.S.

Mr. Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Dear Chairman Genachowski:

As a licensed Professional Land Surveyor in New Jersey, I must express serious concerns regarding the Federal Communications Commission (FCC) granting LightSquared, LLC conditional approval to build a nationwide 4G-LTE wireless broadband network (FCC File No. SAT-MOD-20101118-00239). Early testing by GPS technology leaders, Garmin and Trimble Navigation, demonstrated that LightSquared's technology would likely interfere with Global Positioning System (GPS) receivers, degrading their performance in the best case scenario and completely jamming GPS receivers in the worst case scenario.

The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared, LLC to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.

High-precision GPS equipment used by Land Surveyors and other geomatics professionals costing thousands of dollars per receiver would be more adversely affected than the consumer GPS devices given their inherent design. Literally, tens of thousands of high-precision GPS receivers are used in the United States. GPS technology has transformed the way we build and manage our infrastructure, adding a tremendous level of efficiency to the design, construction, and maintenance of roads, bridges, commercial properties, residential subdivisions, parks, farms, golf courses, etc. GPS has become an essential tool for design professionals and it is imperative that these GPS signals are not jeopardized by broadband technology.

This situation has the potential of becoming a tremendous public safety issue and an economical disaster not only for New Jersey, but also for the United States as a whole.

147 Union Avenue, Suite IC, Middlesex, New Jersey 08846
Phone 732.764.0100 Fax 732.764.0990

The members of the New Jersey Society of Professional Land Surveyors urge you to reject the LightSquared application until such time that all tests conclusively demonstrate there is no risk of interference.

Sincerely,

7.19.11

(Date)

Steven D. Parent, P.L.S.
New Jersey License No. 24GS03626900
DPK Consulting, L.L.C.
147 Union Avenue, Suite 1C
Middlesex, New Jersey, 08846
(732) 764 - 0100

DH Steffens Company
ENGINEERS
SURVEYORS
PLANNERS
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TB Docket
11-109

EX PARTE OR LATE FILED

Mr. Julius Genachowski, Chairman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Dear Chairman Genachowski:

As a licensed Professional Land Surveyor in Maryland, I must express serious concerns regarding the Federal Communications Commission (FCC) granting LightSquared, LLC conditional approval to build a nationwide 4G-LTE wireless broadband network (FCC File No. SAT-MOD-20101118-00239). Early testing by GPS technology leaders, Garmin and Trimble Navigation, demonstrated that LightSquared's technology would likely interfere with Global Positioning System (GPS) receivers, degrading their performance in the best case scenario and completely jamming GPS receivers in the worst case scenario.

The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared, LLC to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.

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This situation has the potential of becoming a tremendous public safety issue and an economical disaster not only for Maryland, but also for the United States as a whole. The members of the Maryland Society of Surveyors urge you to reject the LightSquared application until such time that all tests conclusively demonstrate there is no risk of interference.

Sincerely,
D.H. STEFFENS COMPANY

July 19, 2011
Date

By: Herbert N. Redmond, Jr.
Herbert N. Redmond, Jr.
Professional Land Surveyor
Maryland License No. 10665
License Expiration Date Nov. 27th, 2011

STATE OF MARYLAND
HERBERT N. REDMOND, JR.
No. 10665
REGISTERED
PROFESSIONAL LAND SURVEYOR

317 Charles Street • P.O. Box 1709
La Plata, MD 20646
(301) 934-2921 • (301) 870-3253
(301) 884-8551 • Fax: (301) 884-3295

22335 Exploration Drive • Suite 1020
Lexington Park, MD 20653
(301) 862-2226 • (800) 331-1568
Fax: (301) 862-2350

Internet: www.dhsteffens.com
Email: dhsteffensco@dhsteffens.com

IB Docket 11-109

Charles P. Johnson & Associates, Inc.

Civil and Environmental Engineers • Planners • Landscape Architects • Surveyors

1751 Elton Rd., Suite 300 • Silver Spring, MD 20903 • 301-434-7000 • Fax: 301-434-9394 • www.cpja.com

Mr. Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

July 20, 2011

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

Dear Chairman Genachowski:

As a licensed professional Property Line Surveyor in Maryland, I must express serious concerns regarding the Federal Communications Commission (FCC) granting **LightSquared, LLC** conditional approval to build a **nationwide 4G-LTE wireless broadband network (FCC File No. SAT-MOD-20101118-00239).** Early testing by GPS technology leaders, Garmin and Trimble Navigation, demonstrated that LightSquared's technology would likely **interfere with** Global Positioning System (GPS) receivers, **degrading** their **performance** in the best case scenario and **completely jamming GPS receivers** in the worst case scenario.

The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared, LLC to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.

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This situation has the potential of becoming a tremendous public safety issue and an economical disaster not only for Maryland, but also for the United States as a whole. **The members of the Maryland Society of Surveyors urge you to reject the LightSquared application until such time that all tests conclusively demonstrate there is no risk of interference.**

Sincerely,

Daniel F. DeBolt
Reg. Property Line Surveyor

IB Docket 11-109

FISHER, COLLINS & CARTER, INC.

CIVIL ENGINEERING CONSULTANTS and LAND SURVEYORS

Terrell A. Fisher, P.E., L.S.
Earl D. Collins, P.E.
Charles J. Crovo, Sr., P.E., L.S.

Paul W. Kriebel, P.E.
Mark L. Robel, P.L.S.
Aldo M. Vitucci, P.E.

JULY 20, 2011

Mr. Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

EX PARTE OR LATE FILED

Dear Chairman Genachowski:

As a licensed Professional Land Surveyor in Maryland, I must express serious concerns regarding the Federal Communications Commission (FCC) granting LightSquared, LLC conditional approval to build a nationwide 4G-LTE wireless broadband network (FCC File No. SAT-MOD-20101118-00239). Early testing by GPS technology leaders, Garmin and Trimble Navigation, demonstrated that LightSquared's technology would likely interfere with Global Positioning System (GPS) receivers, degrading their performance in the best case scenario and completely jamming GPS receivers in the worst case scenario.

The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared, LLC to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.

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This situation has the potential of becoming a tremendous public safety issue and an economical disaster not only for Maryland, but also for the United States as a whole. The members of the Maryland Society of Surveyors urge you to reject the LightSquared application until such time that all tests conclusively demonstrate there is no risk of interference.

Sincerely,

STATE OF MARYLAND
CHARLES J. CROVO, SR.
No. 10763
REGISTERED
PROFESSIONAL LAND SURVEYOR

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IB Docket 11-109

Mr. Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Dear Chairman Genachowski:

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Sincerely,

Russell E. Reese, LS 11014
Vice President

100 Park Avenue, Rockville, MD 20850 • T (301) 762-9001 • F (301) 294-6418 • www.maddoxinc.com

MADDOX | Engineers & Surveyors

IB Docket 11-109

Brevard Surveying and Mapping, LLC
337 Heywood Avenue
Orange, NJ 07050
Phone 973-865-2624
Fax 973-675-1365

EX PARTE OR LATE FILED

Received & Inspected

JUL 25 2011

FCC Mail Room

July 19, 2011

Mr. Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Dear Chairman Genachowski:

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Sincerely,

Belton Brevard, IV
Professional Land Surveyor

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JUL 25 2011

FCC Mail Room

Mr. Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

EX PARTE OR LATE FILED

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Sincerely,

Matthew G. Bloedorn, L.S.
Maryland Professional Land Surveyor #21337

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