

**Township of Cranford**  
**Department of Engineering and Public Works**

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Received & Inspected

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FCC Mail Room

July 19, 2011

Mr. Julius Genachowski  
Chairman  
Federal Communications Commission  
445 12<sup>th</sup> 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.

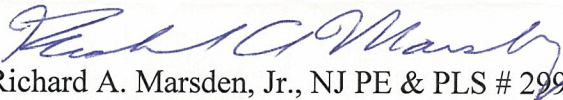
The Department of Defense, FAA, DHS, NASA, DOI, DOT, DOC, and the Professional Land Surveying and Engineering professions, have all expressed serious reservations in regards to this plan by LightSquared, LLC to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. (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