

April 24, 2012

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

**Re: Phone conversation between NovAtel Inc. and Office of Engineering and Technology (OET) regarding GPS Receiver Survey published in GPS World January 2012.**

Dear Ms. Dortch,

On April 24, 2012, at the request of Michael Ha, a teleconference was held between OET members Michael Ha, Ron Repasi, Walter Johnston, Robert Weller, Mark Settle as well as NovAtel Inc. employees Jason Hamilton and myself concerning details of the Annual Receiver Survey, sponsored this year by NovAtel and published in January (2012) by GPS World. A link to an on-line version of this publication can be found here:

[http://licensing.fcc.gov/myibfs/download.do?attachment\\_key=914888](http://licensing.fcc.gov/myibfs/download.do?attachment_key=914888)

There was a general discussion regarding GPS technical specifications including the number of channels, satellite tracking, accuracy, power consumption, etc. Other questions revolved around the use of the GPS modernized signals in the customer installed base of GPS receivers today. Specifically there was a question regarding the adoption use of the new L2C signal and the impact to our customers when the L2P/Y code is shut down. We told them that even though all of our current product sold today is capable of tracking the new signals, the bulk of our customers are not currently using it do to the fact that there are not enough satellites generating these signals to be useful. I told them that the useful threshold number of satellites would be more than 18. We told them that when the L2P/Y signal is shut down, estimated to be near the year 2020, there will be a significant number of customers, using older non-compatible equipment that will be forced to upgrade. I estimated that 25% of the current install base of survey grade equipment would fall into this category. This would include all legacy equipment manufactured and sold (and still in use) before the modernized signals were finalized and adopted into receiver designs by the manufacturers. Whereas the remaining 75% of the current customers either already have product that will switch automatically to the new signals, can be manually switched, is software upgradeable or will have replace their current non-compatible product before the cutoff date in the due course of business. We estimated that the turnover (replacement) rate of fielded high performance GPS equipment varies with customer base. For survey product the turnover rate is 3 - 5 years, for reference stations, 7 - 10 years, for avionics it is the expected life of the aircraft 10 - 20 years.

We were also asked if we had productized our prototype GNSS antenna that was successfully tested at ALU labs late 2011 in reference to LightSquared emissions. We told them that we have not and that activity was put on hold pending final decision on the matter by FCC.

Sincerely,

---

Patrick C. Fenton, P.Eng.  
Vice President and Chief Technology Officer  
NovAtel Inc.  
1120 68 Avenue N.E.  
Calgary, AB Canada, T2E 8S5