

Morgan Lewis

Catherine Wang

Partner

+1.202.373.6037

catherine.wang@morganlewis.com

March 7, 2016

Via ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: Notice of Ex Parte Meeting
RM-11681; IB Docket No. 12-340; IB Docket No 11-109; IBFS File Nos. SES-
MOD-20151231-00981; SAT-MOD-20151231-00090; SAT-MOD-20151231-
00091; WC Docket No. 10-90; WT Docket No. 10-208; GN Docket No. 14-126;
ET Docket No. 15-184**

Dear Ms. Dortch

On March 3, 2016, Mark Lewellen, Manager of Spectrum Policy, Deere & Company, Mark Rentz, Senior System Engineer, Deere & Company, and the undersigned, as outside counsel to Deere & Company met with Philip Verveer, Senior Counsel, Edward Smith, Legal Advisor, and Jessica Almond, Legal Advisor to Chairman Tom Wheeler. In the meeting, we discussed the following:

1. The Settlement Agreement and Mutual Release, executed by Deere & Company and new LightSquared LLC (subsequently renamed Ligado Networks on December 8, 2015, reflecting Deere's interest in preventing interference to Global Positioning System ("GPS") signals critical to high-precision agriculture and many other applications. We discussed the commitment of Ligado to permanently abandon all terrestrial use of the 1545-1555 MHz band, and abide by specific handset and base station out-of-band emission and power level restrictions, among other provisions of that agreement. We also discussed Deere's commitment that it will not object to Ligado's network that meets such requirements.
2. The critical role that GPS plays in high-precision agriculture employed throughout the United States and elsewhere and, as a result, Deere's ongoing support for and

Morgan, Lewis & Bockius LLP

2020 K Street, NW
Washington, DC 20006-1806
United States

 +1.202.373.6000
 +1.202.739.3001

participation in Department of Transportation-sponsored testing and analysis examining how spectrum in bands adjacent to the Global Navigation Satellite System (“GNSS”) frequencies could be used without causing interference to GNSS. In that regard, we explained that degradation of any one of four essential internationally recognized attributes of GNSS -- accuracy, integrity, availability and continuity -- will greatly diminish the usefulness of GNSS to a large group of users relying on GPS in myriad applications.

(a) Each such application (including for example, survey, air and ground transportation, as well as agriculture) has a different set of requirements for accuracy, integrity, availability and continuity. What may seem like a small increase in the noise floor can affect any one (or more) of these parameters in unpredictable and dramatic ways. Accordingly, we discussed Deere’s support for a testing and analysis process based on a 1 dB harmful interference metric, a standard that has a long and well-established history in both international and domestic regulatory proceedings as the appropriate interference protection criteria for GPS receivers.

(b) Deere does not support other approaches that would require testing and analysis of many complicated use cases (including those not yet developed) in an attempt to accurately predict the interference impact to the four parameters relevant to each such application. Use of a defined change in the noise floor (1 dB) provides a readily identifiable and predictable metric that all interested parties can take into account now and in the future.

3. Deere’s ongoing interest in and commitment to the expanded deployment of broadband in rural areas. Most rural locations are areas of intense agricultural activity whose economic futures are tied to the ability of agricultural enterprises to take advantage of high precision farming techniques and agricultural telematics. Accordingly, in addition to interference-free GPS, broadband services are required to meet the needs of today’s agricultural operations. (Virtually all new agricultural equipment is manufactured with modems to support these essential services.) Deere therefore supports the Commission’s efforts toward USF reform to promote greater broadband coverage. Deere specifically proposes that the support programs be revised to promote coverage of agricultural “cropland and rangeland” and allow support for stand-alone broadband. In addition, wireless services, both mobile and fixed, are increasingly important in rural areas and Deere therefore supports continuing and even expanding the Mobility Fund among other wireless funding sources.
4. Deere urges the Commission to proceed expeditiously to grant its request for a limited waiver of specific Part 15 rules to enable an innovative application of TV white space technology to provide broadband connectivity in a machine-to-machine

Marlene H. Dortch, Secretary
March 7, 2016
Page 3

("M2M") application used on off-road agricultural equipment operating in rural areas. The proposed use will enable farmers to gather, analyze and respond to equipment and agronomic data in real time and thereby significantly improve efficiencies, production and sustainability. Prompt grant will serve the public interest by allowing Deere to bring innovative new services to agricultural operations using advanced white spaces device technology operating on underutilized spectrum without harm to incumbent spectrum users. The waiver has been pending since July 2015, is uncontested, and has already been structured to address any potential interference concerns of TV broadcasters, the primary service incumbents. Immediate action is needed to enable Deere to respond to the current business conditions that make this project possible. In the face of multiple financial and other business demands, the continuing delay makes it more and more challenging to preserve the internal and external resources and commitments that will be needed to fully implement the operations outlined in Deere's request.

If you have any questions regarding this *ex parte* notice, please do not hesitate to contact the undersigned.

Very truly yours,

/s/

Catherine Wang

Counsel for Deere & Company

cc:

Philip Verveer
Edward Smith
Jessica Almond