

Dynamic Spectrum Alliance Limited

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September 21, 2015

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

Re: *Deere and Company Request for Limited Waiver*, ET Docket No. 15-184

Dear Ms. Dortch:

The Dynamic Spectrum Alliance¹ (DSA) supports Deere and Company's (Deere) request for a limited waiver of the Commission's rules for fixed unlicensed devices in the television bands. Deere has shown that granting its request will allow Deere and its partners to deploy innovative machine-to-machine technologies in an agricultural setting.

On July 13, 2015, Deere filed a request for a waiver of several sections of the Commission's Part 15 rules as they apply to fixed white space devices.² In particular, Deere seeks permission to deploy automatically geolocated fixed devices on slow-moving off-road agricultural equipment, thereby enabling communications between specific machines or between machines and a farmhouse.³

A grant of the requested waiver would serve the public interest.⁴ The propagation characteristics of the television broadcast bands make them uniquely suited for innovative machine-to-machine technologies. Here, Deere proposes to use unlicensed devices for a variety of agricultural purposes, including monitoring equipment and sensors, and transmitting agronomic metrics such as chemical and moisture levels.⁵ Use of this technology, Deere says, will improve the efficiency of agricultural operations and potentially increase crop yields.⁶ These benefits, without additional risk of harmful interference, meet the Commission's public interest test for granting a waiver.

Deere, moreover, has addressed concerns about harmful interference from the proposed operations in two ways. First, although Deere's radios do not include an *incorporated* geolocation capability, their equipment will use an automated navigation system to ensure location accuracy, meeting the +/- 50 meter requirement currently set forth in the FCC's rules.⁷ The devices thus will accurately

¹ A list of the Dynamic Spectrum Alliance's members is located at <http://www.dynamicspectrumalliance.org/members.html>.

² See Petition for Waiver of Deere and Company, ET Docket No. 15-184 (July 13, 2015) (Petition).

³ Petition at 1-2.

⁴ See 47 C.F.R. § 1.925(b)(3) (setting forth the standard for granting waivers).

⁵ Petition at 4.

⁶ *Id.*

⁷ Petition at 2, 3; 47 C.F.R. § 15.713(f)(3). According to Deere, the StarFire navigation equipment that will be used is able to provide far more precise location information than what is required under the rules.

report geolocation data, will re-register with the database when they move more than 50 meters, will not transmit if they move more than 50 meters and are unable obtain an updated channel list, and will otherwise comply with the FCC's technical rules for fixed devices.

Second, Deere proposes to operate these devices exclusively on off-road farm equipment.⁸ Deere states that these vehicles, "which cannot be registered and are not intended for normal operation on the highway due to their weight, size and/or configuration," are used primarily for "tillage, planting, spraying, harvesting, or transportation of agricultural products or farm property by or for agricultural producers."⁹ As a consequence, Deere will likely deploy these vehicles in rural areas where there are fewer broadcasters and widely dispersed television receivers, lessening the likelihood of interference with incumbent signals. And of course, it is unlikely that anyone will watch broadcast television in the middle of the farm fields where agricultural off-road equipment typically operates.

For the reasons set forth above, the DSA supports Deere's request for waiver, which the Commission should grant without delay.

Respectfully submitted,



H. Nwana
Executive Director, Dynamic Spectrum Alliance

See Petition at 5 (noting that StarFire system can provide location information within one foot of uncertainty).

⁸ Petition at 1.

⁹ *Id.* at 1 n.1.