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FCC Adopts New Rules for Field Disturbance Sensor Devices Operating in 60 GHz Band

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The Federal Communications Commission (FCC) released a Report and Order that updates its rules for the 60 gigahertz (GHz) band, which spans 57 to 71 GHz. The new rules permit the use of unlicensed field disturbance sensors (FDS) in the 60 GHz band to support a wide array of new applications. Field disturbance sensors are devices that establish a radio frequency field in their vicinity and detect changes in that field resulting from the movement of people or objects within range. These sensors can help detect children left in dangerously hot cars, enhance the ability of unmanned aircraft (UA) to sense and avoid people and obstacles, and enable touchless control of devices, among many other uses.

The new rules:

1. Clarify the relationship between radars and FDS applications by classifying radars as a "subcategory" of FDS.
2. Permit various power levels for specific uses and sub-bands.
3. Permit FDS operation on board UA flying less than 400 feet above ground level.

Specifically, the FCC will permit the following for FDS devices:

1. Up to 20 decibels per milliwatt (dBm) peak effective isotropic radiated power (EIRP) for indoor operation, and up to 30 dBm peak EIRP for outdoor operation, including all vehicular applications, within the 57.0 – 59.4 GHz band.
2. Up to 3 dBm peak EIRP for all operations within the 57.0 to 61.56 GHz band.
3. Up to 20 dBm peak EIRP for all operations within the 57.0 to 61.56 GHz band, subject to a 50% duty cycle.
4. Up to 14 dBm peak EIRP for all operations within the 57 to 64 GHz band, subject to a 22.7% duty cycle.
5. Up to 20 dBm peak EIRP for fixed outdoor operations or vehicular applications (except in-cabin vehicular use cases) within the 57 to 64 GHz band, subject to a 50% duty cycle.

The new rules will be effective 30 days after the order is published in the Federal Register. Six months after the rules go into effect, all current 60 GHz waivers will be terminated, and devices approved under the waivers will need to comply with the new rules before they can be marketed and sold in the US. Although the FCC is terminating 60 GHz waivers, devices that were certified to be marketed and operate under the waiver can continue to be used, so long as they do not cause harmful interference.

If you would like additional information on the new rules, please contact one of the Cooley lawyers listed below.

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