

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Auspion, Inc. Request for a Waiver of ISM)	ET Docket No. 19-83
“Local Use” Requirement in Parts 2 and 18)	
for a 24 GHz Wireless Power Transfer)	
Device over Distance)	

COMMENTS OF METAPOWER, LLC

MetaPower, LLC (“MetaPower”), a venture backed by The Invention Science Fund I, L.L.C., an Intellectual Ventures managed fund, hereby submits its Comments in response to the Public Notice in the above-captioned proceeding.¹ MetaPower supports Commission classification of wireless power transfer (“WPT”) at-a-distance (“AAD”) devices as Part 18 ISM devices. MetaPower submits, however, that the public interest would best be served if the Commission were to *clarify* that WPT AAD devices, including Auspion’s device, are appropriately classified as Part 18 ISM devices, rather than grant a waiver – because a waiver is not necessary. Regardless of whether the Commission provides clarification or grants a waiver of Part 18, it is important for the Commission to provide sufficiently broad guidance so that serial waivers are not required.

I. BACKGROUND

MetaPower is a Seattle-based startup developing WPT remote-charging solutions using cutting-edge beam-forming technology. MetaPower’s software-defined antennas generate

¹ *Office of Engineering and Technology Seeks Comments on Auspion USA, Inc. Request for Waiver of ISM “Local Use” Requirement in Parts 2 and 18 for a 24 GHz Wireless Power Transfer Device Over Distance*, ET Docket No. 19-83, DA 19-211, rel. March 26, 2019.

reconfigurable beams that focus power on the receiver and can follow the receiver in real-time if the receiver is in motion relative to the transmitter. The ability to deliver steerable, wireless power will revolutionize applications in which a device's performance or operation time are constrained by a limited on-board energy source, or where a wired connection impedes mobility. MetaPower's technology could have an immediate impact in many areas, including industrial IoT and industrial robotics.

II. AUSPION REQUEST FOR WAIVER

Auspion, Inc. ("Auspion") seeks a waiver of the Commission's Part 18 Industrial, Scientific and Medical ("ISM") rules to market a system for WPT AAD operating in the 24 GHz band.² Auspion asserts that its WPT AAD technology will transmit at 40 – 50 watts in most situations, and "that the average charging distance will be around three to five meters, though the charging of security cameras may necessitate a longer distance."³

Section 18.107(c) of the rules provides in relevant part as follows:

Industrial, scientific, and medical (ISM) equipment. Equipment or appliances designed to generate and use locally RF energy for industrial, scientific, medical, domestic or similar purposes, excluding applications in the field of telecommunication.⁴

Auspion notes that:

To date, the Commission has not officially examined when a technology that transfers power over distance constitutes "local" use or how these technologies could fit into the Commission's regulatory scheme. Interpretations by

² Request by Auspion, Inc. for Waiver of Section 18.107(c) of the Commission's Rules, filed January 3, 2019 ("Waiver Request"). Auspion refers to its technology as wireless power over distance ("WiPod"). MetaPower will refer to the technology as Wireless Power Transfer ("WPT") at-a-distance ("AAD").

³ Waiver Request at 5.

⁴ 47 C.F.R. § 18.706(c) (underlining added).

Commission staff view “local” in the context of power transfer to mean transmission at a set distance of up to three feet.⁵

Auspion concludes that “under this interpretation, [the Auspion technology] would not be considered ISM equipment” because it transmits power over a distance greater than three feet.”⁶

Operating under the assumption that its WPT AAD technology would not fit within the Section 18.706(c) definition of “generate and use locally RF energy,” Auspion seeks a waiver requesting that its technology be considered Part 18 ISM equipment.

III. DISCUSSION

MetaPower supports Commission classification of WPT AAD devices as Part 18 ISM devices. MetaPower submits, however, that the public interest would best be served if the Commission were to *clarify* that WPT AAD devices, including Auspion’s devices, “generate and use locally RF energy” and thus, are appropriately classified as Part 18 ISM devices. This will obviate the need for a waiver. Although the Commission has not defined “generate and use locally,” that language, on its face, appears to contemplate the classification of WPT AAD technology as Part 18 ISM devices for use cases within a reasonable proximity. MetaPower submits that the Commission should not require Auspion to obtain a waiver in order to be granted equipment authorization for its technology.

In December 2017, the Commission granted equipment authorization to Energous Corporation (“Energous”) for its consumer WPT AAD device.⁷ Energous submitted a Petition

⁵ Waiver Request at i and 8.

⁶ *Id.* at 8.

⁷ Grant of Equipment Authorization, December 26, 2017, FCC Identifier 2ADNG-MS300 (Part 18 Consumer Device, Wireless Charger, operating at 913 MHz) and Energous Press Release, “Energous Receives Industry-First FCC Certification for Over-the-Air, Power-at-a-Distance Wireless Charging, December 16, 2017 (“The Company’s WattUp Mid Field transmitter can deliver power via radio frequency (RF) energy to WattUp-enabled electronic devices at a distance of up to three feet”). *See also* Grant of

for Interpretation of 47 C.F.R. § 18.107(c) with its application for equipment authorization, explaining in detail why its consumer WPT AAD device should be considered a Part 18 ISM device.⁸ The grant of equipment authorization to Energous appears to be the basis for Auspion’s conclusion that devices that transmit power under one meter fit the definition of “generate and use locally,” and thus can be classified as Part 18 ISM devices.

In the alternative, MetaPower submits that the Commission should grant the Waiver Request, but in so doing, provide broad guidance to other developers of WPT AAD technologies. Regardless of whether the Commission provides clarification, or grants a waiver, of Part 18, it is important for the Commission to provide sufficiently broad guidance so that serial waivers are not required.⁹ In so doing, MetaPower recommends that the Commission distinguish between consumer WPT AAD devices and industrial WPT AAD devices. Auspion’s request relates to an industrial WPT AAD device, and the Commission’s disposition of the Auspion Waiver Request should provide broad guidance for other developers of industrial WPT AAD devices.

Future requests for equipment authorization of industrial WPT AAD devices pursuant to the Part 18 ISM rules should be handled through the well-established Knowledge Database (“KDB”) process supervised by the Commission’s Office of Engineering and Technology (“OET”). A requirement for each iteration of an industrial WPT AAD device to obtain a one-off

Equipment Authorization to Energous, May 2, 2017, FCC Identifier 2ADNG-NF130 (Part 18 Consumer Device, RF Wireless Charger and Receiver, operating at 5862.5 MHz).

⁸ See Energous Petition for Interpretation of 47 C.F.R. § 18.107(c), dated June 1, 2016 (“Energous Petition”). The Energous Petition was not placed on Public Notice. A copy of the Energous Petition can be found attached to Exhibit B to Energous’ application for Experimental Special Temporary Authority, Call Sign WN9XST, File No. 1890-EX-ST-2018.

⁹ For example, the Commission’s disposition of the Auspion Waiver Request should be broad enough to provide guidance to companies developing WPT AAD technologies for other ISM spectrum bands.

waiver would create unnecessary delay in the introduction of new products, and an undue burden on applicants and Commission staff.

MetaPower does not support a rulemaking proceeding to clarify the application of the Part 18 ISM rules to WPT AAD devices. At this point in time, a rulemaking proceeding is premature in light of the rapidly evolving WPT AAD technologies. Any rule adopted is likely to be out-dated before its effective date.

IV. CONCLUSION

For the reasons set forth above, MetaPower urges the Commission to *clarify* that WPT AAD devices, including Auspion's devices, are appropriately classified as Part 18 ISM devices, rather than grant a waiver, and to provide sufficiently broad guidance so that serial waivers are not required.

Respectfully submitted,

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