



# Wireless Power Transfer Updates

Alfonso G. Tarditi

Laboratory Division  
Office of Engineering and Technology  
Federal Communications Commission



# Overview

- 1. Consolidation of previous guidance for portable WPT**
- 2. Guidance for some Part 18 Portable Devices**
- 3. Concluding Remarks**



# Consolidation of Previous Guidance for WPT Portable Devices

- Old guidance of Oct. 2020 TCB Workshop (and documents cited therein): for *WPT portable* devices (as defined in § 2.1093) with power < 15 W and frequency >100 kHz, **H-field limits** in 47 CFR §1.1310 may be used to obtain device grant (the limit for 300 kHz applies all the way to 100 kHz)
- The **updated guidance** in this presentation provides a more precisely defined, and uniform applicability to a class of Part 18 portable devices
- This updated guidance **supersedes** all previous applicable guidance



# Guidance for some Part 18 Portable Devices (I)

- This guidance applies only to **Part 18 devices** (including WPT) authorized via **certification** (not via Supplier's Declaration of Conformity, SDoC)
- Applicability restricted to *portable devices* (per § 2.1093) that also meet the following conditions:
  - Certification under Part 18 rules
  - Total conducted power  $\leq 15$  W
  - Frequency between 100 kHz and 4 MHz
  - Loop/coil design for emitting structure (dominant H-field near-field emission)



## Guidance for some Part 18 Portable Devices (II)

- Portable devices meeting the aforementioned criteria may be granted a certification if:
  - the **H-field strength** surrounding the device is below the applicable limit in 47 CFR §1.1310 (with the limit for 300 kHz being applied all the way to 100 kHz)
  - H-field data are taken along all **three axes** the device, from 0 cm to 20 cm, in 2 cm maximum increment measured from the edge of the device, with one axis coincident with the axis of the main coil
- In alternative, for all other cases of Part 18 portable devices below 4 MHz, SAR **numerical simulations** compliance data may be submitted, and approval may be granted on a case-by-case basis, following KDB Inquiry for NUMSIM PAG Item



# Concluding Remarks

- Work is presently in progress at the FCC to address **several industry-relevant issues** related to wireless power transfer, both from applicability and test measurement perspectives.