

**FEDERAL COMMUNICATIONS COMMISSION**

Washington, D.C. 20554

Zurich, April 25, 2019

**REQUEST FOR WAIVER: AUSPION INC.**

The IT'IS Foundation in Zurich, Switzerland, is a leading research organization in exposure assessment and dosimetry. It is also very active in contribution to the various exposure standards of IEC/IEEE/ISO. It was founded in 1999 as a non-profit research spin-off of ETH Zurich (Swiss Federal Institute of Technology, Zurich) and maintains very close ties with ETH. Within the last 10 years, IT'IS has established itself as an internationally renowned leading competence center in several areas including (i) EM sensor technologies; (ii) computational electromagnetics in complex environments; (iii) computational life sciences applied to complex anatomies; (iv) *in silico* tissue models; (v) virtual physiological human models; (vi) medical diagnostic/therapeutic applications, in particular MR; (vii) optimization of EM devices, incl. MR safe lead design; (viii) EM exposure systems for biomedical research; and (ix) exposure assessment, dosimetry, safety, and compliance evaluation. In addition to its basic research, the Foundation performs numerous research and service projects for national agencies/regulators from North America to the Far East as well as for the largest players in the telecom and medical device industries as well as for various international and national agencies/regulators from North America to the Far East. Extensive and advanced RF measurement and test resources are available on site. Further details about past and current research activities, achievements, and IT'IS partners are available at [www.itis.swiss](http://www.itis.swiss).

Based on the supporting information provided in the "Request for Waiver" submitted by Auspion Inc. to the Commission, it is IT'IS Foundations' opinion that this Waiver for a wireless power over distance (WiPod) system to charge applicable devices in the 24 GHz ISM band should be granted.

Auspion has demonstrated how the WiPod system can qualify for the Waiver. It has also demonstrated that the size of the power spot at the target location can be very well controlled and the system has various built-in mechanisms to determine if charging should be stopped or adjusted according to human presence within the charging vicinity. This will substantially reduce the potential for human exposure and Auspion still plans to perform all the necessary RF exposure compliance testing to demonstrate compliance.

As identified by Auspion, and it is also IT'IS' opinion, that the Commission should consider an appropriate rulemaking to clearly identify the requirements in Section 18.107(c) of Commission rules regarding the definition of "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." As wireless power transfer (WPT) technology continues to evolve, case-by-case staff interpretations through KDB inquiries regarding the applicability of "*local use*"

can introduce highly undesirable delays for industry to bring innovative products to market. In order to provide a level playing field for all interested parties in the WPT industry, it would be in the best interest for both the Commission and the WPT industry to have specific clarity on specific regulatory requirements. It is IT'IS' view that the technologies and procedures currently being developed for wireless communication devices operating above 6 GHz, can be adapted to enable rigorous exposure assessment in 3D of radiative WPT systems between 30 MHz and 110 GHz in various reflective environments. This will also enable consumers to have the best and safe technology available from the WPT industry, especially for wireless charging over distance applications. In addition, it will also enable RF exposure evaluation manufacturers to provide definitive test equipment and testing solutions for both the Commission and the WPT industry to evaluate RF exposure compliance according to clearly defined regulatory requirements and to work with standardization organizations such as the IEC and IEEE to develop international testing standards to benefit all interested parties.

Best regards,

IT'IS Foundation for Research on  
Information Technologies in Society

  
Niels Kuster