

■ RSGB Spectrum Forum Meeting - 2016

October 2016



Item-9: WRC-19

■ ITU-R WRC-19

- Next World Radio Conference will be WRC-19
- Nominal Date: 28th Oct – 22nd Nov 2019
- Venue: tbc (Geneva?)
- Agenda Items for WRC-19 were agreed by WRC-15...
[AI-1.1 re 50 MHz in Region-1 is of particular interest](#)
- First ITU and CEPT meetings of new WRC study cycle held
- RSGB (as part of Ofcom UK delegation) attended CEPT PTD#1 in September-2016
 - which included items on 50-54 MHz, WPT, 5GHz Wi-Fi
- NB WRC-15 Final Acts (inc 5MHz) are not formally in force until end of 2016. The 2016 ITU Radio Regs are not yet released, but due soon

■ WRC-19 – Items of Interest include...

- **AI-1.1: to consider an allocation of the frequency band 50-54 MHz to the amateur service in Region 1**
- AI-1.7: spectrum needs for telemetry, tracking and command in the space operation service for non-GSO satellites with short duration missions
- AI-1.11: Railway radiocommunications between train and trackside
- AI-1.12: to consider possible global or regional harmonized frequency bands for Intelligent Transport Systems (ITS)
- AI-1.13: to consider identification of frequency bands for the future development of International Mobile Telecommunications (IMT),
- AI-1.15: to consider identification of frequency bands for landmobile and fixed services applications in the frequency range 275-450 GHz,
- AI-1.16: wireless access systems, including radio local area networks, in the frequency bands between 5150 MHz and 5925 MHz
- **AI 9.1.6: Wireless Power Transmissions (WPT)**

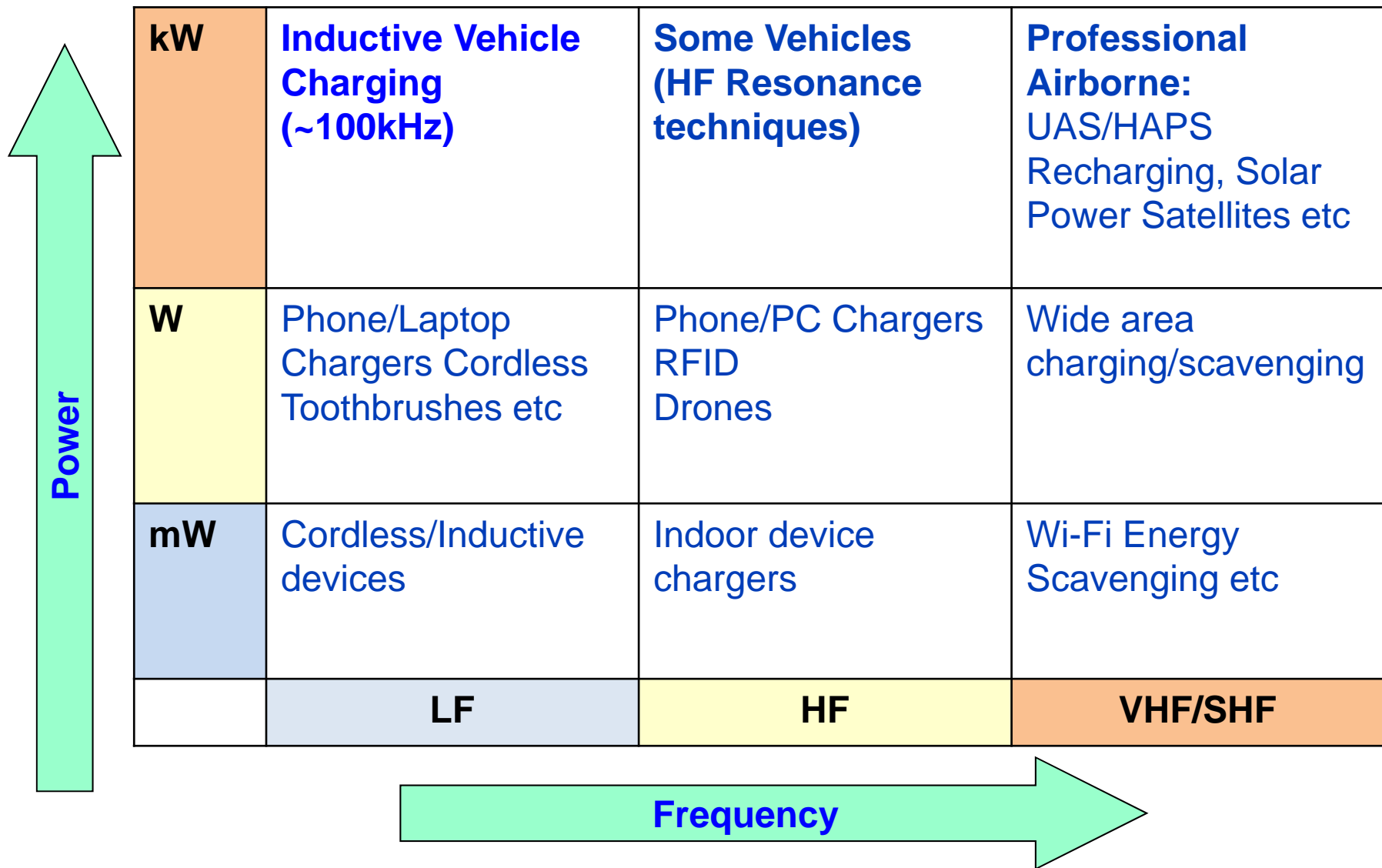
■ Wireless Power Transmission (WPT)

- **AI 9.1.6: Wireless Power Transmissions (WPT):**
 - a) to assess the impact of WPT for electric vehicles on radiocommunication services;
 - b) to study suitable harmonized frequency ranges which would minimize the impact on radiocommunication services from WPT for electrical vehicles
- These studies should take into account that the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO) and the Society of Automotive Engineers (SAE) are in the process of approving standards intended for global and regional harmonization of WPT technologies for electric vehicles.

■ Wireless Power - comments

- Wireless Power (wireless charging) has applications across frequency ranges and power scales – item scope is vague
- WPT is technically not a communications service (its closer to ISM)– but some uses have frequencies, spuri and high powers that may cause harmful interference
- Current UK Example: Milton Keynes buses – 120kW via 4x30kW induction 20kHz loops. Draft ETSI standard is for ~80-90 kHz, but other frequencies are possible inc HF
- Language and definitions need attention. For example:-
 - In CEPT automobile is a subset of ‘transport’ and height is an issue. In AI-9.1.6 ‘Electric Vehicles’ can be very ambiguous
 - Preliminary ITU concepts of beamed and non-beamed systems has no firm regulatory basis

WPT Context



■ WRC-19 – Future Mobile

- Next generation mobile comms (inc IoT and M2M) is broader than some individual agenda items and ranges from VHF - mmWave
- In addition previous changes such as 3.4GHz are destined to be a core band for 5G (as will 700 MHz TV-DSO2)
- Recent effort has included:-
- **AI-1.13: 5G** - Briefing paper by RSGB to Ofcom re 47 GHz
- **AI-1.15: THz** for Fixed/Mobile but our own work has been recognised by Ofcom in the new Terahertz NoV
- **AI-1.16: 5GHz Wi-Fi** - firm input to Ofcom consultation

■ AI-1.1: 50 - 54 MHz...

- Resolution 658 invites ITU-R...
- to study spectrum needs in Region 1 for the amateur service in the frequency band 50-54 MHz;
- taking into account the results of the above studies, to study sharing between the amateur service and the mobile, fixed, radiolocation and broadcasting services, in order to ensure protection of these services.
- NB: 47-68 MHz remains Broadcasting Primary in Region-1
- Broadcasting – VHF TV remains – esp in RCC states
- Radiolocation – Wind Profilers
- Many States inc UK has other users in 52-54

■ 50 MHz Work Overview

- Ongoing work on Draft CEPT Brief, ITU WP5 based on:-
 - 50.0-50.5: Weaksignal narrowband comms, beacons
 - 50.5-52.0: Current Voice Comms, Repeaters, Data
 - 52.0-54.0: Innovative Digital Applications
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- Requires considerable effort across all IARU Member Socs (inc Region-2/3) as well as PSC/SIG support (UKSMG etc)
 - 2017 sees ramp up of CEPT-CPG activity with PTD#2,3,4
 - Unfortunately PTD#4 has tight timing wrt the IARU-R1 Conference in September-2017

■ WRC-19 – 50 MHz Next Steps...

- Ongoing work on CEPT Draft Brief
 - Broadcast sharing (esp for RCC)
 - Wind profiler radars
 - Ongoing Ofcom liaison
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- Future: Develop CEPT ECP (European Common Position)
 - Monitor WRC-23 item 2.2:-
studies for a possible new allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz Res-656 (WRC-15);

■ WRC-19 – And also...

- RSGB/IARU is also alert and tracking other more threatening WRC Agenda items (not just WPT).
- IARU-AC: (See recent 2016 mtg minutes)
Do not expect as much success with future agenda items.
R1 have requested consideration of 1.8 MHz if opportunity arises (though this was rejected twice in 2015)
- This future ‘challenge’ is close to the expectations we had in the SF Nov-2015 meeting Item-9.3 on Spectrum Strategy

■ Follow WRC-19...

- Special Focus area on RSGB website at

[rsgb.org/wrc-19](https://www.rsgb.org/wrc-19)