

Report of ITU-R WP1A meeting held 26 May to 2 June 2021

IARU again represented the amateur service at this meeting, held virtually, with some 350 delegates registered for the sequence of WP1 meetings. WP1A Working Group WG1A2 was of most relevance to IARU, covering WPT.

Documents under consideration in that group were:

SM.2303: [Preliminary Draft Revision] Wireless power transmission using technologies other than radio frequency beam

SM.2449: [Working Document towards a Preliminary Draft Revision] Technical characteristics and impact analyses of non-beam inductive wireless power transmission for mobile and portable devices on radio communication services

SM.2451: [Working Document towards a Preliminary Draft Revision] Assessment of impact of wireless power transmission for electric vehicle charging on radiocommunication services

Working document towards Recommendation or Report on WPT emissions

SM.2392 [Preliminary] draft revision Applications of wireless power transmission via radio frequency beam

[Preliminary] draft new Recommendation - Guidance on frequency ranges for operation of wireless power transmission via radio frequency beam systems for mobile/portable devices and sensor networks

[Preliminary] draft new Report - Impact studies and human hazard issues for wireless power transmission via radio frequency beam

- together with associated work plans.

The work for ITU was mainly focused on papers SM 2303, 2449 and 2451. IARU input focused on proposing amendments to additional material submitted by other delegations and proposing a new Annex which documented measurements of amateur signal levels commonly present and comparing these to test data from the USA on non-beam WPT emission levels and to suggested limits.

Most of the discussions on the detail were resolved with a degree of compromise, and the latest draft will be attached to the Chairman's Report for the meeting

Outstanding technical issues remaining include:

- whether E-field antennas are as susceptible to WPT-EV emissions as H-field antennas
- what the true noise levels are in residential areas, with WPT developers arguing that WPT emissions will not be above the (now elevated) noise level.

In terms of the E-field sensitivity to WPT emissions, the proposed work plan submitted by IARU to the European Commission, for WPT-EV tests in the Joint Research Centre, included proper both E- and H-field measurements.

IARU member society DARC has made good progress with the roll-out of its ENAMS automated noise measurement system and IARU is now able to draw heavily on that data

The other point of discussion at the meeting related to the WPT-Emissions document which has been under discussion for some time. Here there is no agreement on whether this should be a Report or a Recommendation and the work has been carried forward to the next meeting in November 2021.

Discussion on “beam” WPT covered a range of issues, including amendments to the proposed frequencies (none are below 800 MHz). Sadly, many proposed frequencies fall in spectrum which the amateur service shares with other services. However, given the nature of the technology and the directivity of amateur antennas in these frequency ranges, the prospect of coexistence seems quite good.

Some concerns were expressed about the rate of progress on some Reports and Recommendations, with the point being made that industry is bringing products to market already. This was followed by a proposal from the floor to continue drafting groups between now and the next meeting (November). There were objections to this proposal and so the next discussions will be at the November 2021 meeting.