

ITU WORKSHOP

Overview of activities of ITU-R Study Group 3 on radiowave propagation

10 April 2014 – 15:00 – 18:20

Room Oceania, Worldforum, The Hague, The Netherlands

Within the 8th European Conference of Antennas and Propagation (EuCAP 2014)
www.eucap2014.org

The ITU-R Study Groups develop the technical bases for decisions taken at World Radiocommunication Conferences and develop global standards (Recommendations), Reports and Handbooks on radiocommunication matters. ITU-R Study Group 3 (SG3) deals with propagation of radio waves in ionized and non-ionized media and the characteristics of radio noise, for the purpose of improving radiocommunication systems. It is structured in four working parties:

- Working Party 3J (WP 3J) - Propagation fundamentals
- Working Party 3K (WP 3K) - Point-to-area propagation
- Working Party 3L (WP 3L) - Ionospheric propagation and radio noise
- Working Party 3M (WP 3M) - Point-to-point and Earth-space propagation

The objectives of the workshop are the following:

- Introduce ITU-R, SG3, its structure and its working methods.
- Provide an overview of the most important ITU-R SG3 recommendations.
- Discuss the current workplan, the key areas of future study, the need for new contributions.
- Practical guidance on how to contribute to the work of SG3.

The workshop is open and free of charge to all EuCAP 2014 participants.

Presentations will be available from the workshop website hosted under ITU-R in:

<http://www.itu.int/en/ITU-R/study-groups/workshops/RSG3-EuCAP14/Pages/Program.aspx>

Organisers:

- B. Arbesser Rastburg (ITU-R Study Group 3 Chairman)
- D. Botha (ITU-R SG3 Counsellor)

Programme:

15:00 – 15:30 - ITU-R – Study Group 3 – Radiowave Propagation

Bertram Arbesser-Rastburg (SpaceTec Partners, Belgium - ITU-R Study Group 3 Chairman)

David Botha (ITU-R S G3 Counsellor)

- Introduction to ITU-R
- Overview of Study Group 3
- SG3 Key Aspects and Working Methods

15:30 – 15:55 - WP3J – Propagation Fundamentals

Marlene Pontes (WiNGS Telecom, Brazil - ITU-R SG3 Vice-chairman, WP3J Chairman)

Overview of topics of current interest:

- Propagation by diffraction (Recommendation ITU-R P.526)
- Characteristics of precipitation for propagation modelling (Recommendation ITU-R P.837)
- The modelling of joint temporal fading statistics (Preliminary draft new ITU-R Recommendation)
- Handbook on Radiometeorology

Critical points and future needs

15:55 – 16:20 - WP 3K - Point-to-area propagation

Paul McKenna (NTIA, US – WP 3K Chairman)

Overview of topics of current interest:

- Propagation curves for aeronautical mobile and radionavigation services using the VHF, UHF and SHF bands (Recommendation ITU-R P.528)
- Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3 000 MHz (Recommendation ITU-R P.1411)
- Method for point-to-area predictions for terrestrial services in the frequency range 30 MHz to 3 000 MHz (Recommendation ITU-R P.1546)
- A path-specific propagation prediction method for point-to-area terrestrial services in the VHF and UHF bands (Recommendation ITU-R P.1812)

Critical points and future needs

16:20 – 16:40 – Break

16:40 – 17:05 - WP3L – Ionospheric propagation and radio noise

Les Barclay (Consultant, UK - ITU-R WP3L Chairman)

Overview of topics of current interest:

- Ionospheric mapping and modeling (Recommendation ITU-R P.1239)
- Ionospheric propagation data and prediction methods required for the design of satellite services and systems (Recommendation ITU-R P.531)
- Method for the prediction of the performance of HF circuits (Recommendation ITU-R P.533)
- Ground wave propagation (New ITU-R Handbook)
- Radio Noise (Recommendation ITU-R P.372)

Critical points and future needs

17:05 – 17:30 - WP 3M - Point-to-point and Earth-space propagation

Carol Wilson (CSIRO, Australia – ITU-R SG3 Vice-chair, WP3M Chairman)

Overview of topics of current interest:

- Propagation data and prediction methods required for the design of terrestrial line-of-sight systems (Recommendation ITU-R P.530)
- Propagation data and prediction methods required for the design of Earth-space telecommunication systems (Recommendation ITU-R P.618)
- Prediction procedure for the evaluation of interference between stations on the surface of the Earth at frequencies above about 0.1 GHz (Recommendation ITU-R P.452)
- A general purpose wide-range terrestrial propagation model in the frequency range 30 MHz to 50 GHz (Recommendation ITU-R P.2001)

Critical points and future needs

17:30 – 17:50 - SG3 Software, databanks and testing procedures

Antonio Martellucci (ESA, The Netherlands), Carlo Riva (Politecnico di Milano, Italy)

Software in ITU-R recommendations

Overview of software, databanks and testing procedures

17:50 – 18:20 - Panel Discussion

Moderator: Thomas Kürner (TU Braunschweig, EuRAAP WG Propagation Chairman)