



## ITU WORKSHOP

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

**The Hague, The Netherlands  
10 April 2014**

[www.itu.int/go/rsg3-EuCAP14](http://www.itu.int/go/rsg3-EuCAP14)



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# ITU-R Study Group 3

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- **Terms of Reference of ITU-R SG3**
- **Working Groups**
- **Questions assigned to SG3**
- **Key Recommendations**
- **Handbooks**
- **Hot Topics**

- Study the Propagation of radio waves in ionized and non-ionized media.
- Study the characteristics of radio noise
- Produce Recommendations and Handbooks on Propagation issues for improving radiocommunication systems and specifically for addressing service performance and sharing aspects.
- Support other Study Groups and Joint Task Groups in the preparations for the World Radio Conference (WRC).

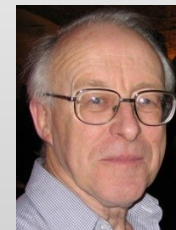
**WP 3J Propagation Fundamentals**



**WP 3K Point-to-area Propagation**



**WP 3L Ionospheric Propagation & Radio Noise**



**WP 3M Point-to-point and Earth-space propagation**



# Questions assigned to SG 3



Qu #	Title	Cat
203-4/3	Propagation prediction methods for terrestrial broadcasting, fixed (broadband access) and mobile services using frequencies above 30 MHz	S1
211-5/3	Propagation data and propagation models in the frequency range 300 MHz to 100 GHz for the design of short-range wireless radiocommunication systems and wireless local area networks (WLAN)	S1
228-1/3	Propagation data required for the planning of space radiocommunication systems and space science service systems operating above 275 GHz	C1
230-1/3	Prediction methods and models applicable to power line telecommunications systems	S1

**Plus 12 Questions of Cat S2  
and 7 Questions of Cat S3**



# Key Recommendations



- ITU-R P.526-12 **Propagation by diffraction** (incorporated by reference in the Radio Regulations)
- ITU-R P.837-xx **Characteristics of precipitation for propagation modelling**
- ITU-R P. 530-xx **Propagation data and prediction methods required for the design of terrestrial line-of-sight systems**
- ITU-R P. 618-xx **Propagation data and prediction methods required for the design of Earth-space telecommunication systems**
- ITU-R P.1812-x **A path-specific propagation prediction method for point-to-area terrestrial services in the VHF and UHF bands**
- ITU-R P.1144-xx **Guide to the application of the propagation methods of Radiocommunication Study Group 3**





- Handbook on Radiometeorology
- Curves for Radiowave Propagation over the Surface of the Earth
- Ionosphere and its Effects on Radiowave Propagation
- Ground Wave Propagation
- ITU-R propagation prediction methods for interference and sharing studies
- Radiowave propagation information for designing terrestrial point-to-point links
- Terrestrial land mobile radiowave propagation in the VHF/UHF bands
- Radiowave Propagation Information for Predictions for Earth-to-Space Path Communications

- Address issues raised by JTG 4-5-6-7 in preparation of WRC 2015.
  - Interference from WiFi access points into space-radars
- Address Climate Change and its effect radiometeorological statistics.
- Extend upper frequency limit of several prediction methods up to 105 GHz
- Improve multipath fading prediction methods for short, highly-reflective terrestrial paths, e.g., for radio links in streets





**THANK YOU!**