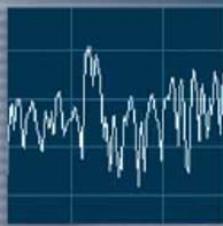


# **ITU Radiocommunication Sector (ITU-R) Studies on Electromagnetic field measurements to assess human exposure**

**Philippe Aubineau  
Counsellor, ITU-R Study Groups,  
Radiocommunication Bureau, ITU**





## Handbook

### SPECTRUM MONITORING



# ITU's worldwide recognized reference on Spectrum Monitoring and related issues

- Chapter 5.6 on **Non-ionizing radiation measurements**
  - Explains **NIR limits & exposure quotient**
  - **Instruments for NIR measurements**
    - Broadband isotropic probes and meters
    - Tri-axis antennas and field strength meters
    - Transportable station
    - standard field strength measurement equipment
  - **Measurement procedures** for different radio services (incl. mobile, broadcasting, etc.)
  - **Reporting methods**

Source: ITU-R Handbook on Spectrum Monitoring  
[www.itu.int/pub/R-HDB-23](http://www.itu.int/pub/R-HDB-23)



# On-going ITU-R Studies on EMF measurements to assess human exposure

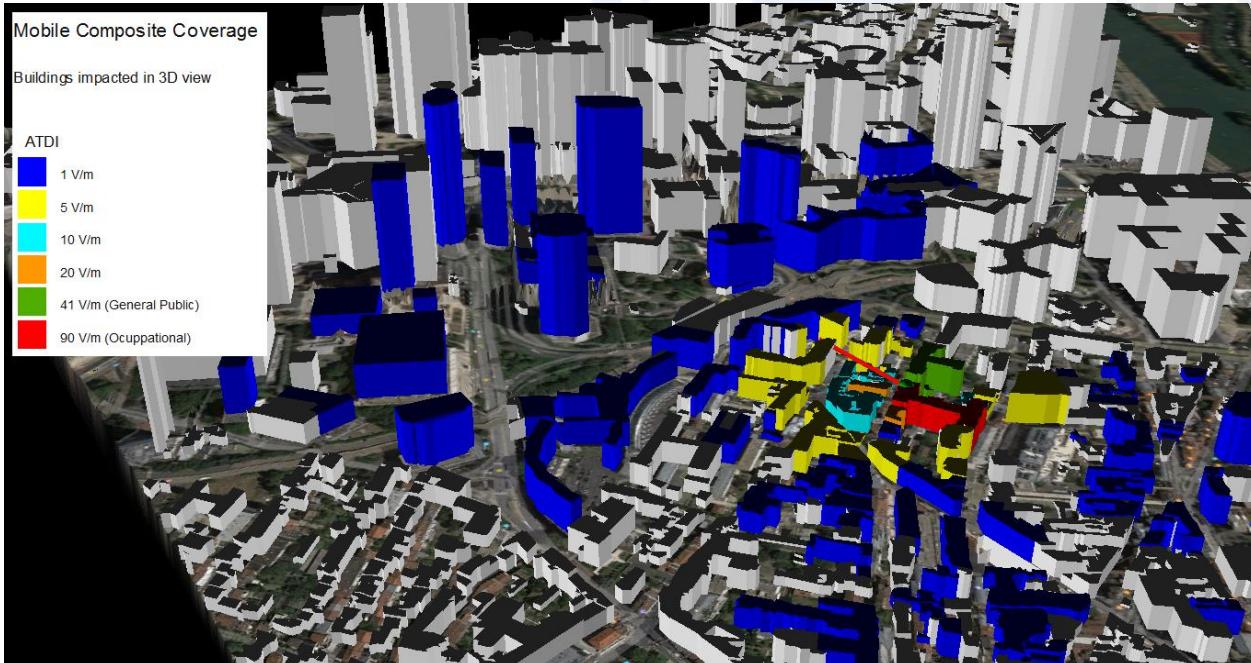
- Work initiated by the ITU Experts Group on Spectrum Monitoring (i.e. ITU-R WP 1C) in response to Question ITU-R 239/1 (2016):
  1. What are the **measurements techniques** to assess the human exposure from wireless installations of all types?
  2. How can **measurement results** be presented?
- Studies should be completed by 2018!

Source: Question ITU-R 239-1 - [www.itu.int/pub/R-QUE-SG01.239](http://www.itu.int/pub/R-QUE-SG01.239)



# Example of preliminary draft new ITU-R information on measurements referring to all radiocommunications wireless stations, except portable wireless devices

Three dimensions cellular exposure-contours, showing buildings impacted



Isotropic antennas for the frequency range 9 kHz to 6 GHz



# Correspondence activities

- ITU-R WP 1C Correspondence Group to develop the draft new Report ITU-R SM.[EMF-MON] on electromagnetic field measurements to assess human exposure

Chairman: Haim Mazar (Madjar)  
(Email: [h.mazar@atdi.com](mailto:h.mazar@atdi.com))

SharePoint Site



Mailing list

[rwp1c-cg-emf-mon@itu.int](mailto:rwp1c-cg-emf-mon@itu.int)

E-mail Archives

[rwp1c-cg-emf-mon](mailto:rwp1c-cg-emf-mon)

- Next ITU-R WP 1C meeting on [5- 12 June 2018]  
(see at: <http://www.itu.int/en/events/Pages/Calendar-Events.aspx?sector=ITU-R>)

## Thank you!

ITU-R Study Groups: [www.itu.int/ITU-R/go/rsg](http://www.itu.int/ITU-R/go/rsg); Email: [brsgd@itu.int](mailto:brsgd@itu.int)

ITU-R Study Group 1 – Spectrum management: [www.itu.int/ITU-R/go/rsg1](http://www.itu.int/ITU-R/go/rsg1)

ITU-R Working Party 1C – Spectrum monitoring: [www.itu.int/ITU-R/go/rwp1c](http://www.itu.int/ITU-R/go/rwp1c)  
Email: [rsg1@itu.int](mailto:rsg1@itu.int)

Email: [philippe.aubineau@itu.int](mailto:philippe.aubineau@itu.int)

