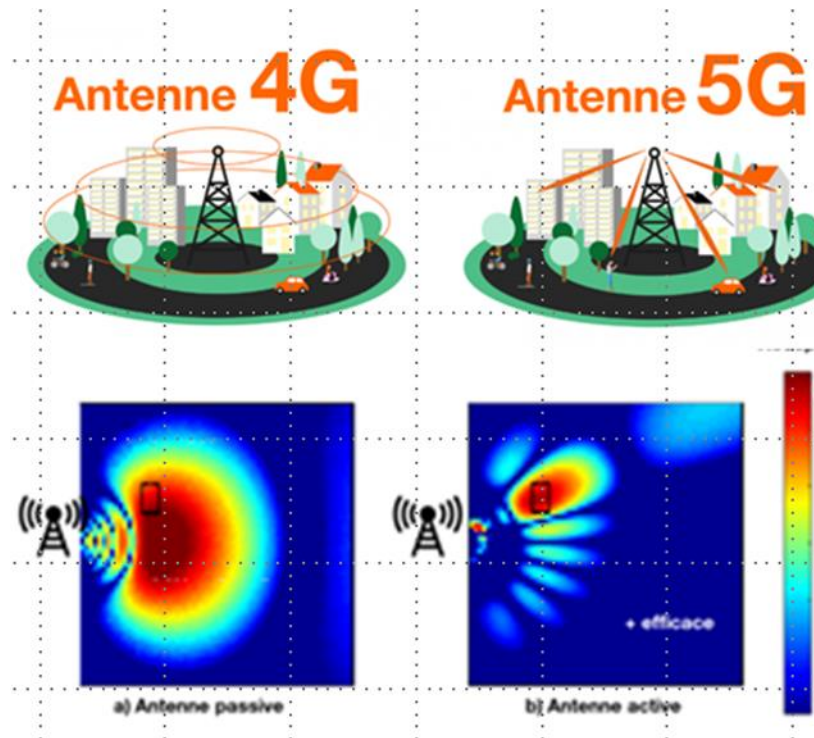
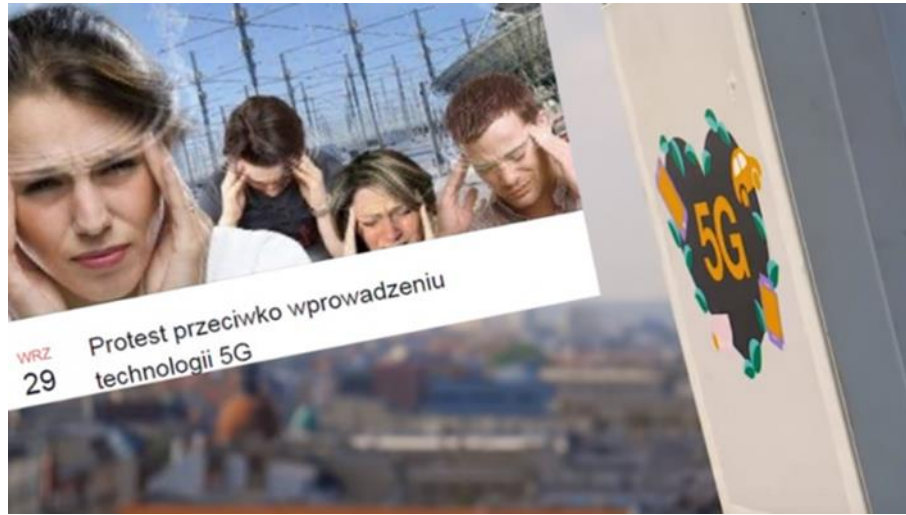


# ITU-T activities on Human exposure to electromagnetic fields (EMFs)



Dr. Fryderyk Lewicki  
Chairman of Working Party 1  
of ITU-T Study Group 5  
Orange Polska, Poland

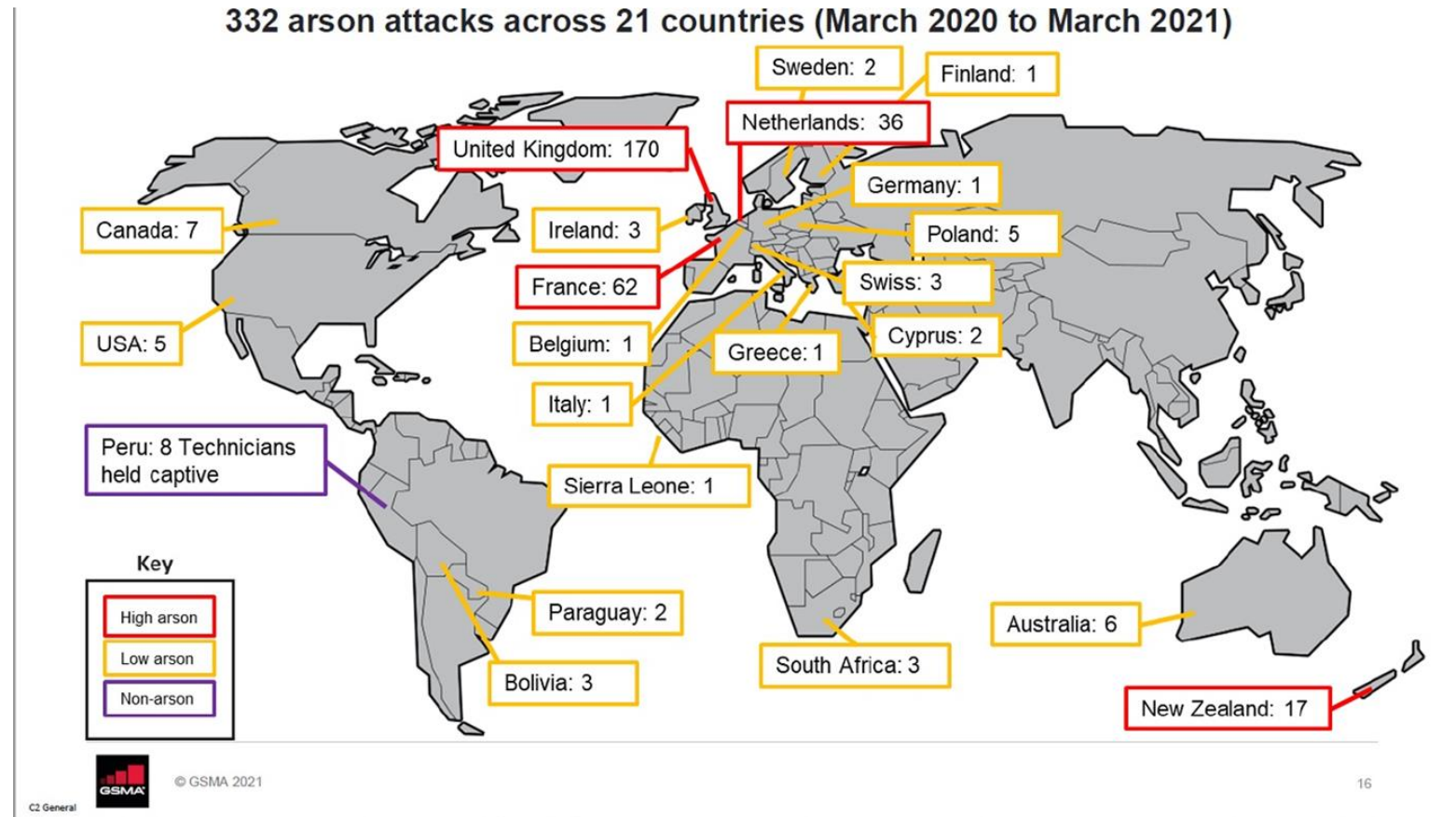
# Problems with 5G rollout – fake news



Viruses cannot travel on radio waves/mobile networks. COVID-19 is spreading in many countries that do not have 5G mobile networks. COVID-19 is spread through respiratory droplets when an infected person coughs, sneezes or speaks. People can also be infected by touching a contaminated surface and then their eyes, mouth or nose.

**FACT: 5G mobile networks DO NOT spread COVID-19**

World Health Organization #Coronavirus #COVID19 8 April 2020



Source: The 10th GSMA EMF Forum 2021, Sarah Wylie, Vodafone

# ITU-T Q3/5 Human Exposure to EMF from Digital Technologies – ITU Resolutions

- ITU PP Resolution 176 - "Measurement and assessment concerns related to human exposure to electromagnetic fields"
- WTSA Resolution 72 - "Measurement concerns related to human exposure to electromagnetic fields"
- WTDC Resolution 62 - "Assessment and measurement of human exposure to electromagnetic fields"





# ITU-T Q3/5 Human Exposure to EMF

## Cooperation with International Organizations

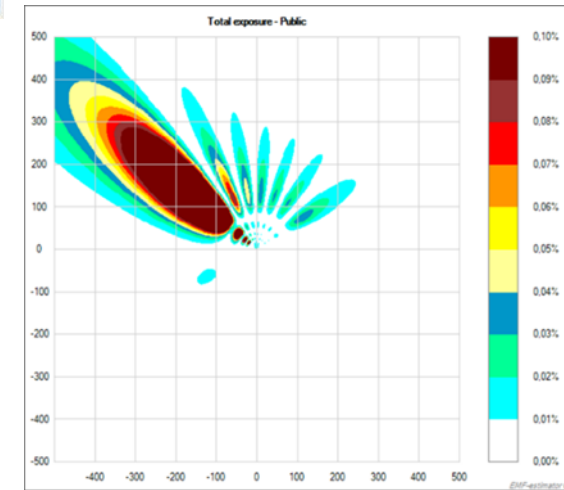
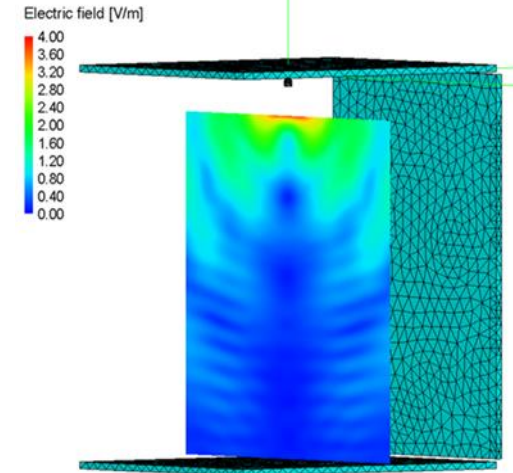
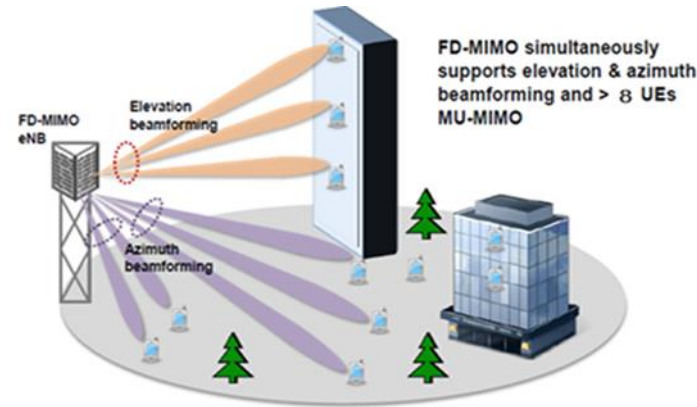
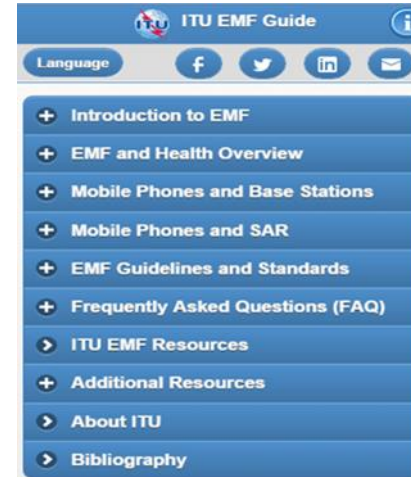
- World Health Organization
- International Commission on Non-Ionizing Radiation Protection
- International Electrotechnical Commission
- Institute of Electrical and Electronics Engineers
- GSM Association
- European Conference of Postal and Telecommunications Administrations
- European Telecommunications Standards Institute



# ITU-T Q3/5 – Current deliverables

- 11 Recommendations: (ITU-T K.52, K.61, K.70, K.90, **K.91**, K.83, K.100, K.113, K121, K.122, K.145)
- 9 Supplements: (ITU-T K.Suppl. 1, 4, 9, 13, 14, 16, 19, 20 and 29) and 1 Technical Report
- 2 mobile applications
- 5 Software packages

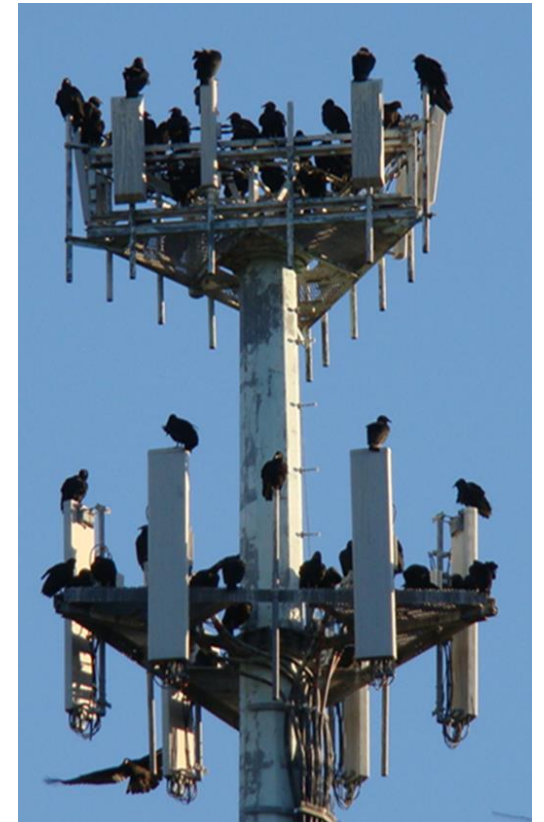
<https://www.itu.int/en/ITU-T/studygroups/2017-2020/05/Pages/default.aspx>



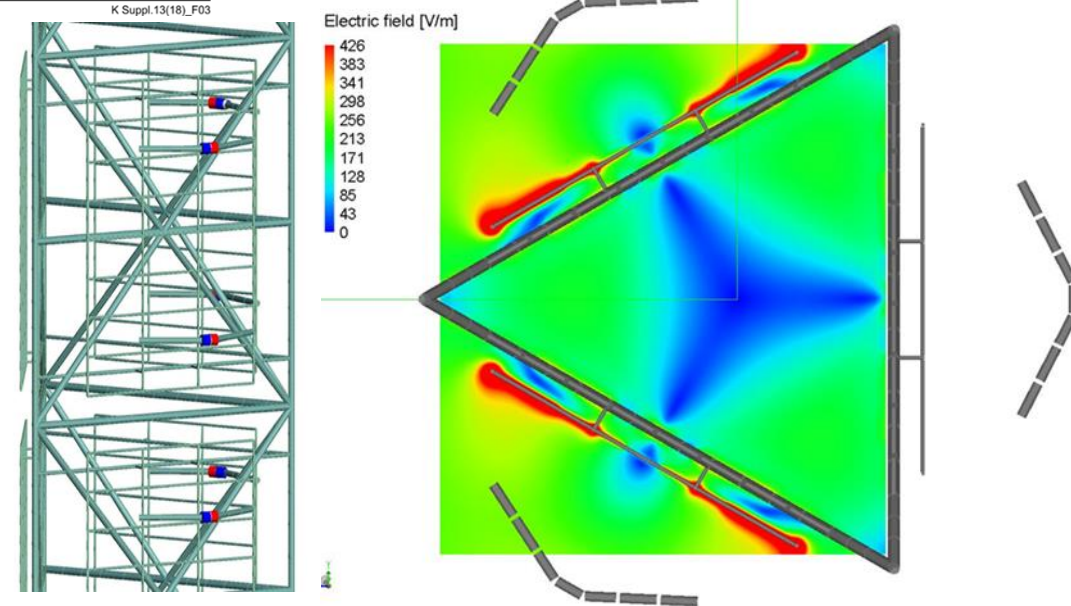
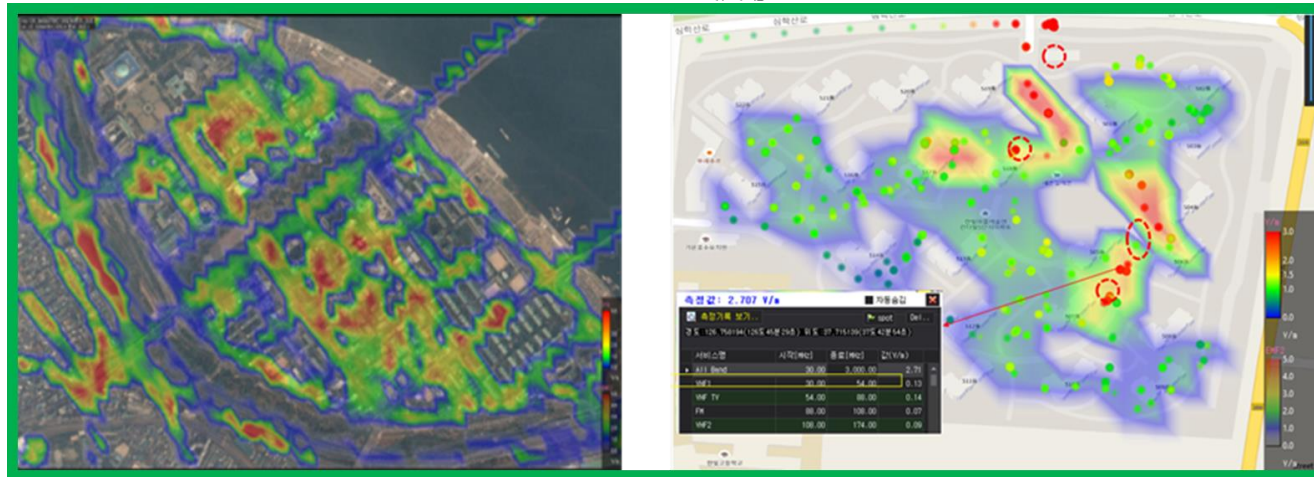
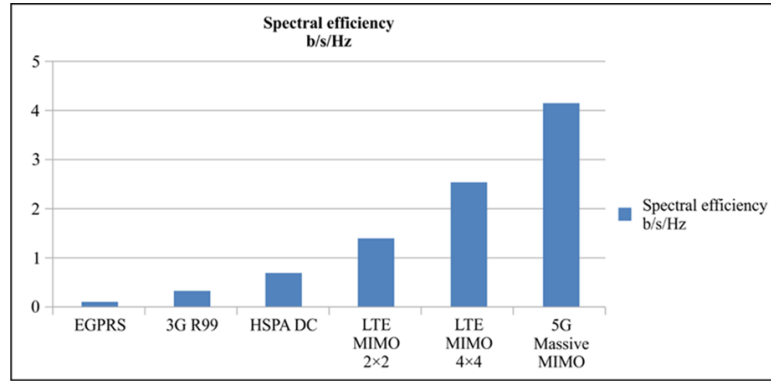
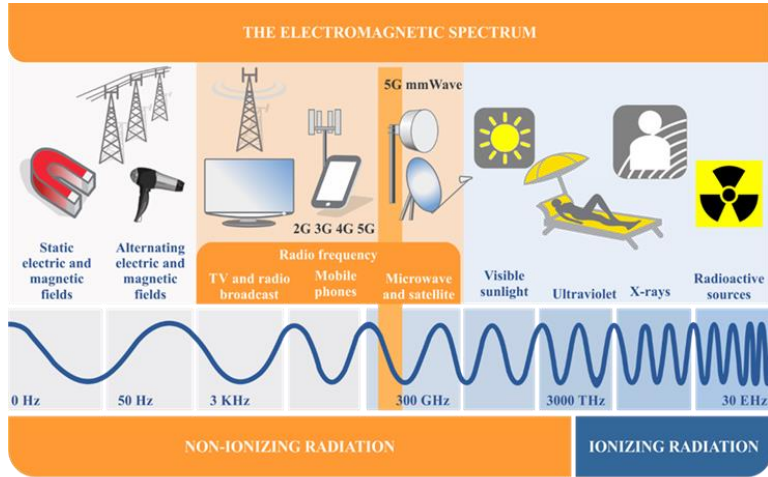
## Recommendation ITU-T K.91

# Guidance for assessment, evaluation and monitoring of human exposure to radio frequency electromagnetic fields

- There are plenty of standards concerning human exposure assessment
- Most of the standards are very general or product oriented
- In real environment there are many sources of radiation operating simultaneously
- Recommendation ITU-T K.91 gives guidance on the all issues concerning RF EMF including references to other ITU documents and international standards

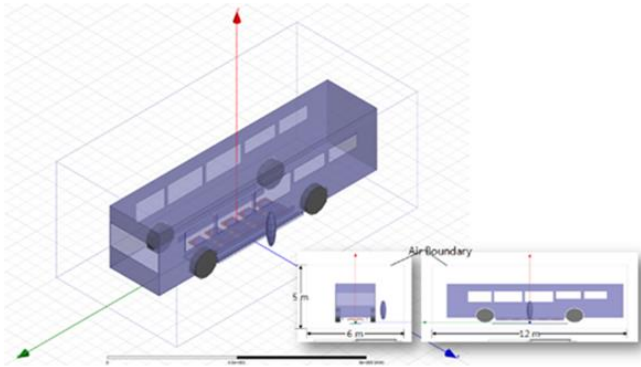


# Examples from other ITU-T Recommendations

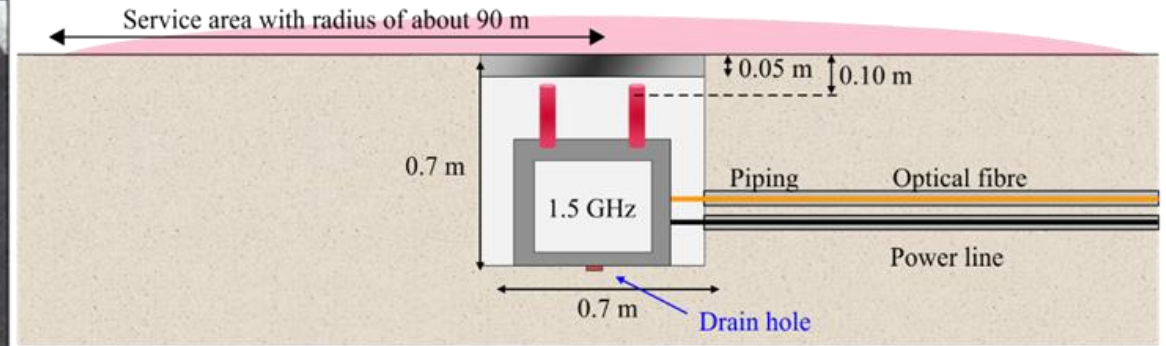




# Q3/5 Informative documents: ITU-T Supplements & Reports

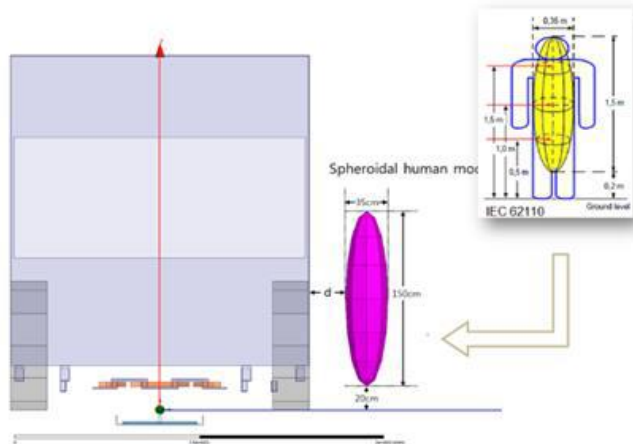


a) Photo



b) Structure and service area

K Suppl.20(20)\_F01



	1G	2G	3G	4G	5G
	1980	1990	2003	2009	2020
SERVICES					
DEVICES					

K Suppl.1(20)\_F05

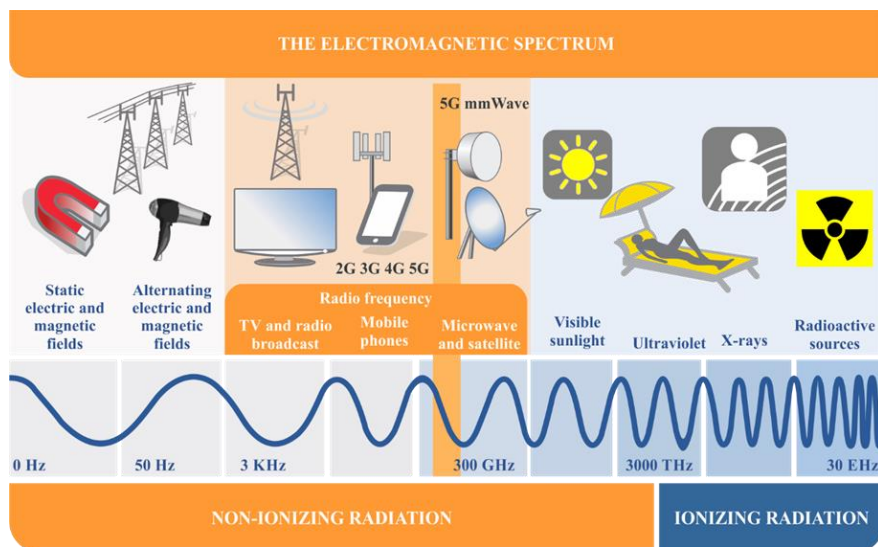
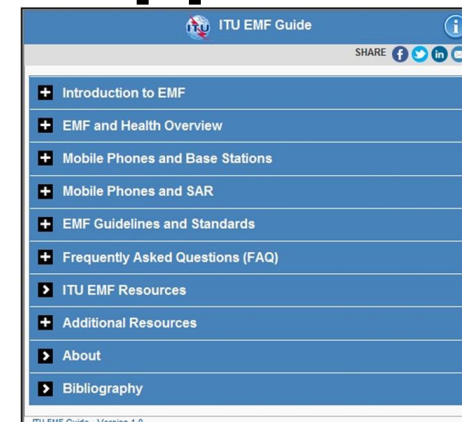


K Suppl.19(19)\_F01

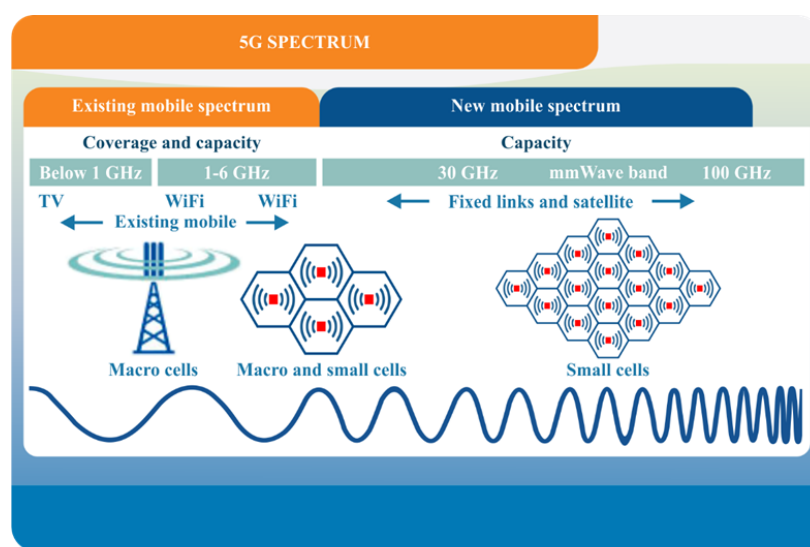


# Q3/5 Informative documents: EMF-Guide: mobile App

- Promotes RF EMF information and education resources, available in 6 languages
- Provides the most useful information in helping to clarify uncertainties concerning EMF



K Suppl.1(20)\_F01

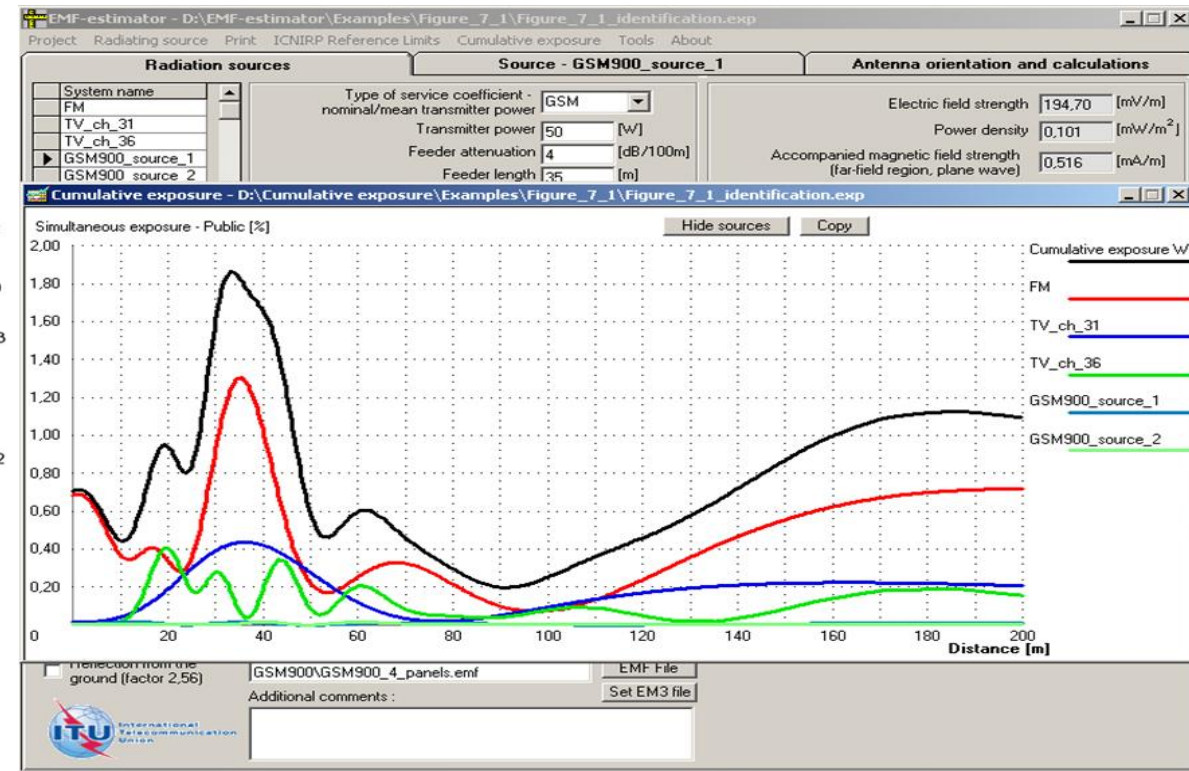
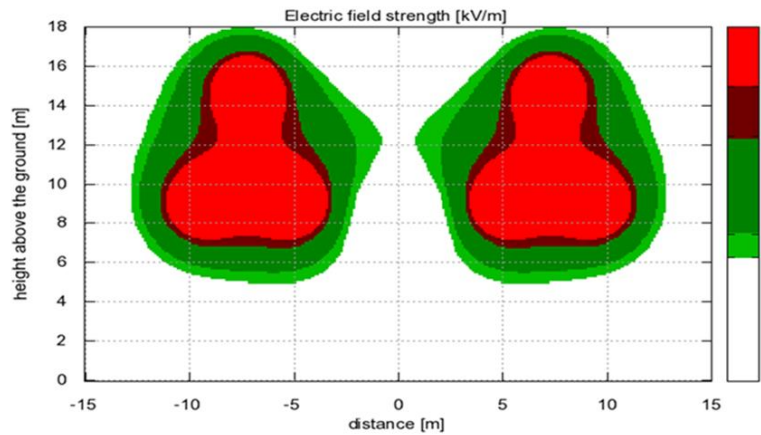


K Suppl.1(20)\_F10

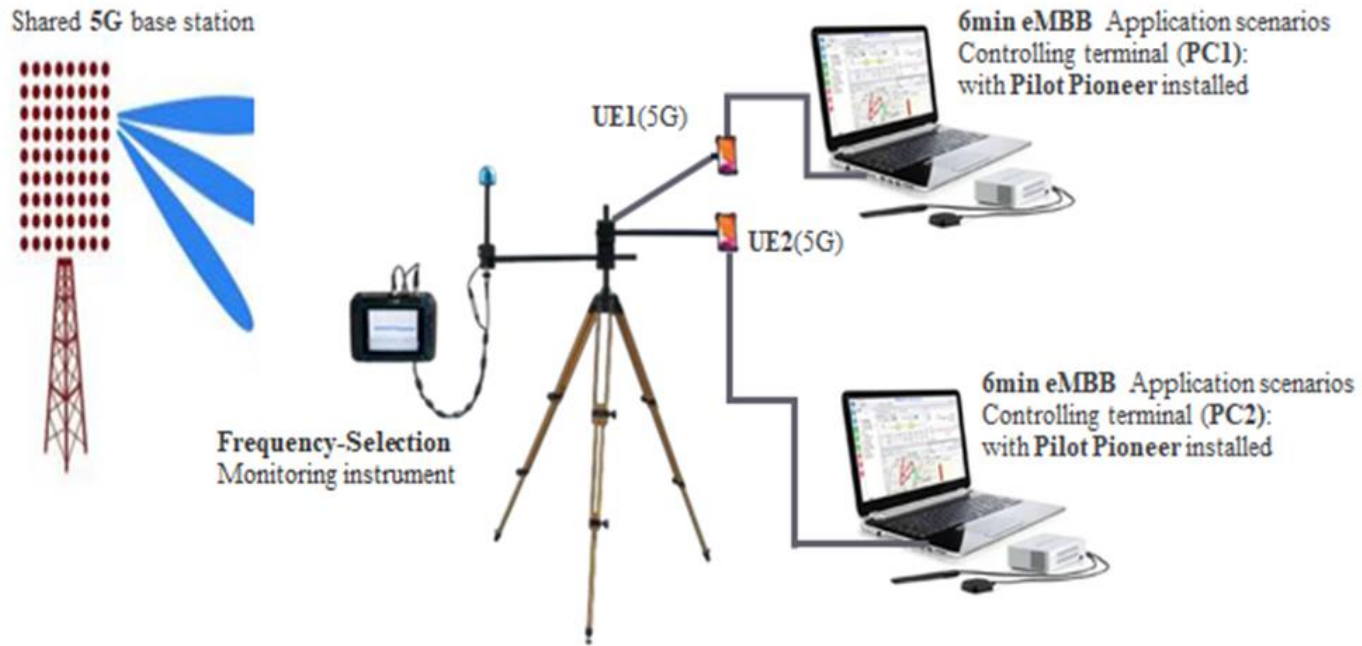


K Suppl.1(20)\_F11

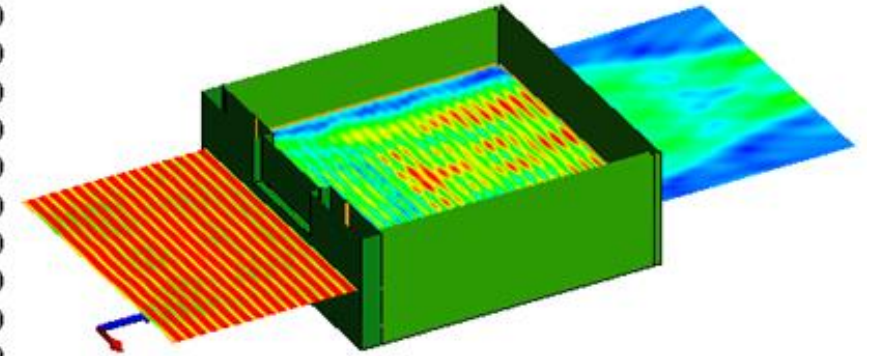
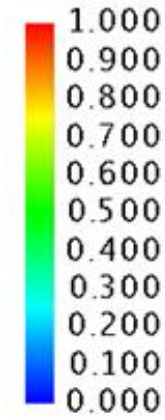
# ITU-T Q3/5 – software tools (EMF-estimator, EMFACDC, ...)



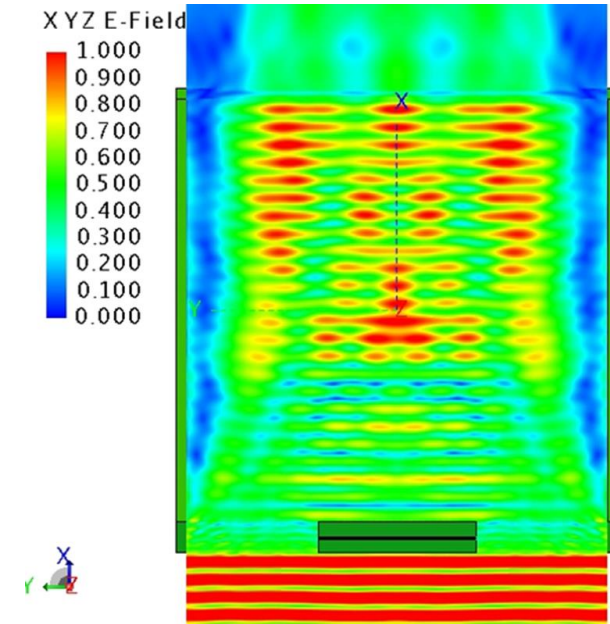
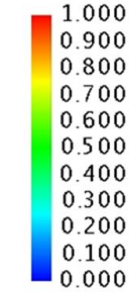
# ITU-T Q3/5 ongoing work



XYZ E-Field [V/m]



XYZ E-Field





# Thank you!

Questions? Interested in learning more?  
Let us know!



**Email**

[tsbsg5@itu.int](mailto:tsbsg5@itu.int)



**Website**

[SG5: Environment, EMF & circular economy](#)