Introducing the
ITU EMF Guide and Mobile App

The EMF Guide mobile app in 6 languages is available online at http://emfguide.itu.int
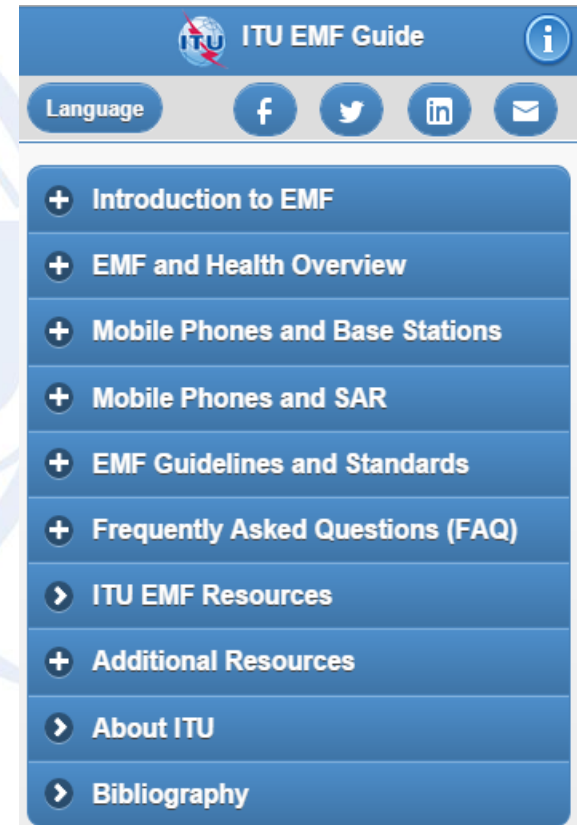
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Background

- Wireless communications is integral to modern society and we are always within arm's reach of mobile phones, tablets and other wireless devices.

- New base stations are being erected all the time, expanding our access to high-quality wireless communications.

- By 2020, nearly everything will be connected, with an estimated 50 billion connected devices, things and objects supporting almost every aspect of our daily lives.

- **So how safe are wireless devices and the networks that connect them?**

ITU & EMF

- ITU, as the United Nations specialized agency for information and communication technology (ICT), has established a task team of internationally renowned experts from government, industry and academia to study the responsible management of the Electromagnetic Fields (EMF) emitted by wireless communications infrastructure and devices

- To answer the often asked questions on EMF and our health, and to help explain how wireless technology works in our everyday lives, ITU has developed an 'EMF Guide mobile app' providing an up-to-date reference of the EMF information of the World Health Organization (WHO) and ITU.

What is the EMF Guide?

- App providing information and education resources on EMF suitable for all communities, stakeholders and governments.

- Ideal tool for city planners, officials and government advisors so they have up to date information

- Easy to access on web – **emfguide.itu.int**

- Works on mobile devices, tablets and PC's

- App store versions - iOS, Android and Blackberry

- 6 languages – AE, CN, EN, FR, ES, RU

- Intuitive illustrations and graphics - to help understanding

- Easy menu, informative topics and comprehensive Q&A

Accessing the EMF Guide

How many times have you been asked about mobile safety and can't recall the website with the answers?

Now it's easy with ITU's flexible way of accessing the app

go to **emfguide.itu.int** on your mobile device or PC

or

the app store iOS, Android, Blackberry

EMF Guide - Languages

- The EMF Guide has 6 languages

  - Arabic
  - Chinese
  - English
  - Spanish
  - French
  - Russian

○	العربية
○	中國
◉	English
○	Español
○	Français
○	Русский

- Your device will auto detect
  the language based on your settings

- You can also manually select the language

EMF Guide - Topics

- Home screen provides the list of topics

- Each topic expands & retracts through +/- accordion boxes

- Easy access to ITU Standards

- Contact ITU via the about tab
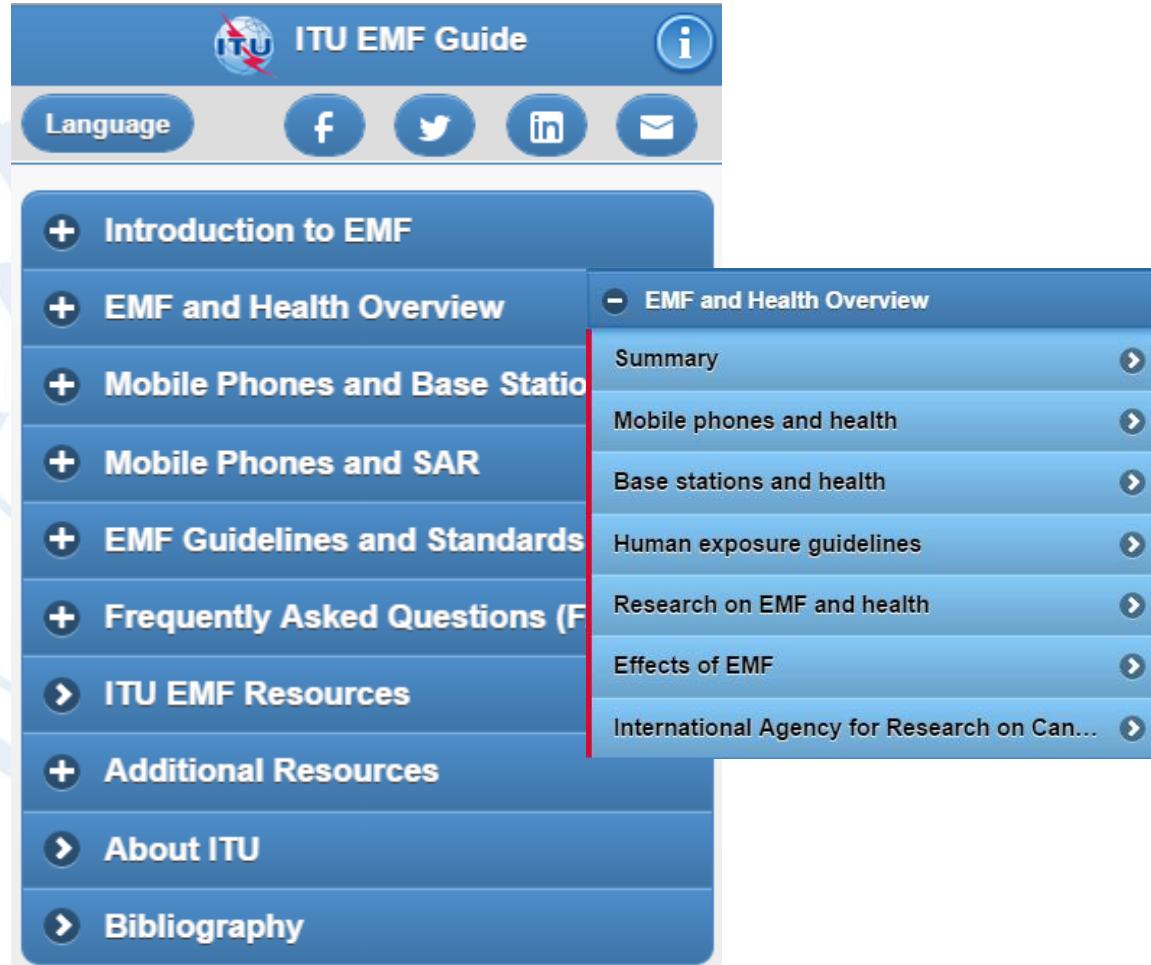
Informative Graphics

- The EMF Guide features a number of intuitive graphics to help readers improve their understanding of EMF and wireless safety.

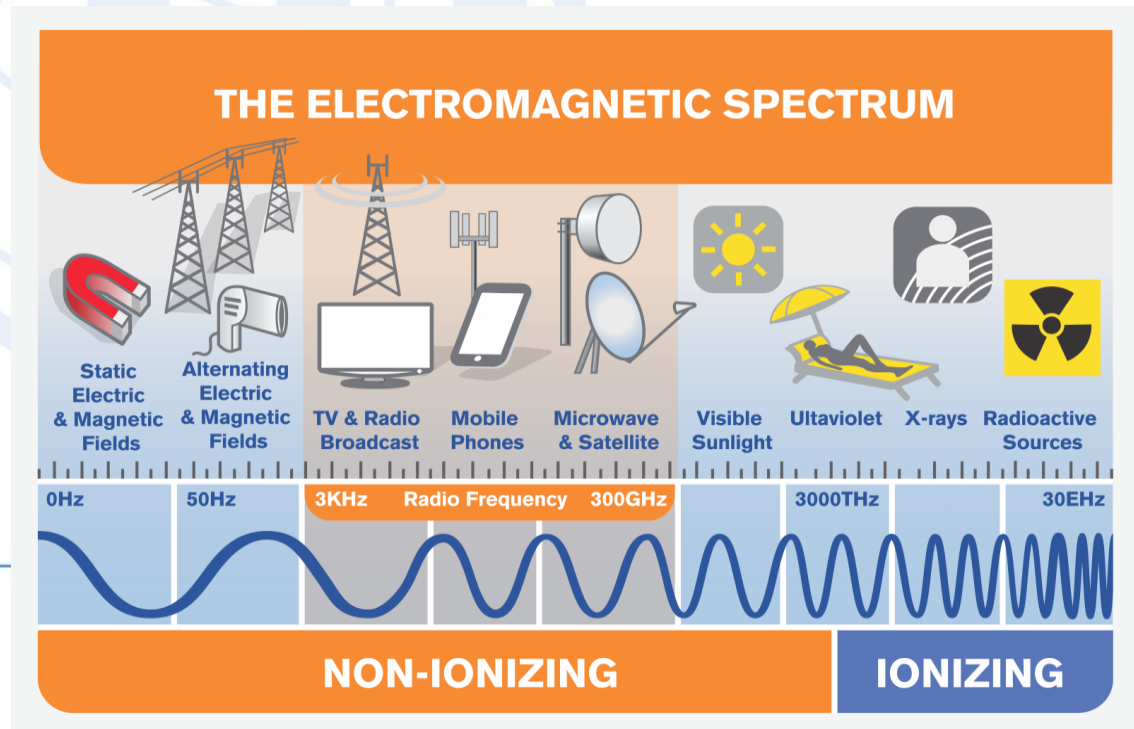- In designing the graphics, we wanted the pictures to 'tell the story' and to give users the ability to share these illustrations with interested students or friends and family.

This graphic illustrates the full electromagnetic spectrum and a few applications that you may be familiar with

THE ELECTROMAGNETIC SPECTRUM

| Static Electric & Magnetic Fields | Alternating Electric & Magnetic Fields | TV & Radio Broadcast | Mobile Phones | Microwave & Satellite | Visible Sunlight | Ultaviolet | X-rays | Radioactive Sources |

0Hz   50Hz   3KHz   Radio Frequency   300GHz   3000THz   30EHz

NON-IONIZING   IONIZING

Answering Common Questions

- Have a look at this simple but informative graphic illustrating how mobile phones work.

- These graphics make for great additions to presentations and we encourage you to use them, crediting ITU as the source.

A mobile network uses an extensive network of base stations close to users so that both the mobile and base station only transmit over a short distance

This means the lowest possible amount of power is used by both the base station and mobile
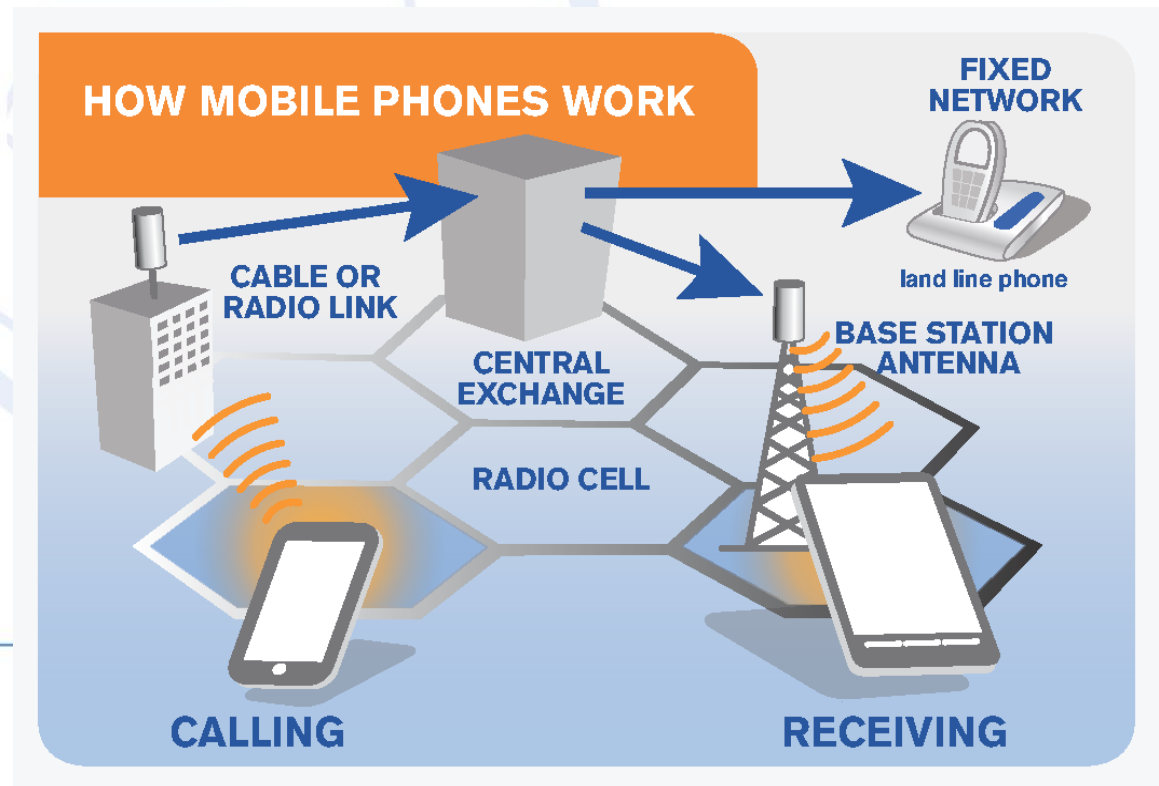
EMF Guide – Q&A

- The EMF Guide includes a comprehensive Q&A and answers common myths

Frequently Asked Questions (FAQ)

Mobile phones and EMF FAQ

Base stations and EMF FAQ

EMF standards FAQ

EMF myths FAQ

Base stations and EMF FAQ

⊞ What are the EMF levels around base stations?

⊞ Is it safe to live near a base station or locate base stations near schools or hospitals?

⊞ Do more base stations reduce EMF?

⊞ Is it safe to locate base stations on hospitals?

⊞ Are there restricted areas in front of base station antennas?

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2015

EMF Guidelines & Standards

- The EMF Guide provides easy access to EMF standards

EMF Guidelines and Standards

Human EMF exposure guidelines

Safety factors

ITU standards and guidelines

IEC standards

IEEE standards

ITU standards and Guidelines

⊞ **Overview of the ITU**

Recommendation ITU-T K.52 - "Guidance on complying with limits for human exposure to electromagnetic fields"
Find supporting ammendments and software **here**.

Recommendation ITU-T K.61 - "Guidance on measurement and numerical prediction of electromagnetic fields for compliance with human exposure limits for telecommunication installations"

Recommendation ITU-T K.70 "Mitigation techniques to limit human exposure to EMFs in the vicinity of radiocommunication stations"
Find supporting ammendments and software **here**.

EMF Estimator is a software application that implements the methodology described in ITU-T K.70 to calculate the cumulative radio frequency exposure levels in the vicinity of transmitting antennas.

Recommendation ITU-T K.83 "Monitoring of electromagnetic field levels"
Find supporting errata **here**.

Recommendation ITU-T K.90 "Evaluation techniques and working procedures for compliance with exposure limits of network operator personnel to power-frequency electromagnetic fields"
Find supporting software **here**.

Recommendation ITU-T K.91 "Guidance for

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Acknowledgments

- The app's development was led by <u>ITU-T Study Group 5</u>, ITU's standardization expert group for 'ICTs, the Environment and Climate Change'.

- The African Regional Group within Study Group 5 (<u>SG5 RG-AFR</u>) provided us with an initial set of questions on EMF commonly asked by citizens in the region.

- We then asked a broader selection of ITU members to expand this set of questions with other questions that they had received from colleagues, consumers, family and friends.

- The app was initially launched in 2014 as a mobile-only version and in 2015 in six languages and via the app stores.

Further Information

We hope you enjoy using the EMF Guide and welcome feedback via the
'Contact Us' section of the app.

Additional information on ITU-T activities on human exposure to electromagnetic fields (EMFs) can be found at:

http://www.itu.int/en/ITU-T/emf/Pages/default.aspx