

I n t e r n a t i o n a l T e l e c o m m u n i c a t i o n U n i o n

# ITU-T

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

WORLD TELECOMMUNICATION STANDARDIZATION  
ASSEMBLY

Hammamet, 25 October – 3 November 2016

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## **Resolution 72 – Measurement and assessment concerns related to human exposure to electromagnetic fields**

## FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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## RESOLUTION 72 (Rev. Hammamet, 2016)

### **Measurement and assessment concerns related to human exposure to electromagnetic fields**

*(Johannesburg, 2008; Dubai, 2012; Hammamet, 2016)*

The World Telecommunication Standardization Assembly (Hammamet, 2016),

*considering*

- a)* the importance of telecommunications and information and communication technologies (ICT) for political, economic, social and cultural progress;
- b)* that, in the framework of telecommunications/ICTs to help bridge the digital divide between developed and developing countries<sup>1</sup>, a significant part of the infrastructure needed involves various wireless technologies and the installation of base stations in the appropriate measure to ensure quality of service;
- c)* that there is a need to inform the public of levels of electromagnetic fields (EMF) and safety limits as well as the potential effects of EMF exposure;
- d)* that an enormous amount of research has been carried out regarding wireless systems and health, and many independent expert committees have reviewed this research;
- e)* that the International Commission on Non-Ionizing Radiation Protection (ICNIRP), the International Electrotechnical Commission (IEC) and the Institute of Electrical and Electronics Engineers (IEEE) are three among a number of pre-eminent international bodies in establishing measurement methodologies for assessing human exposure to EMF, and they already cooperate with many standards bodies and industry forums;
- f)* that the World Health Organization (WHO) has issued fact sheets regarding EMF issues, including mobile terminals, base stations and wireless networks, referencing ICNIRP standards;
- g)* Resolution 176 (Rev. Busan, 2014) of the Plenipotentiary Conference, on human exposure to and measurement of EMF;
- h)* Resolution 62 (Rev. Dubai, 2014) of the World Telecommunication Development Conference, on measurement concerns related to human exposure to EMF,

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<sup>1</sup> These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

*recognizing*

- a) the work done within ITU Radiocommunication Sector (ITU-R) study groups on radiowave propagation, electromagnetic compatibility (EMC) and related aspects, including measurement methods;
- b) the work done within Study Group 5 of the ITU Telecommunication Standardization Sector (ITU-T) on techniques for taking radio-frequency (RF) measurements and assessment;
- c) that Study Group 5, in establishing methodologies for assessing human exposure to RF energy, cooperates with many participating standards organizations (PSOs);
- d) that the ITU EMF Guide, in its digital version, also available in a mobile-phone application, is updated as ITU and/or WHO receive information and/or results of research;
- e) that the Focus Group on smart sustainable cities, established within ITU-T Study Group 5, has published a technical report on EMF considerations in smart sustainable cities,

*recognizing further*

- a) that some publications about EMF effects on health create doubt among the population, increasing the perception of the risk they involve;
- b) that, in the absence of regulation and accurate, complete information, people become concerned about long-term exposure to EMF, due to their perception of risk, and are likely to oppose the deployment of radio installations in their neighbourhoods, demanding the enactment of restrictive municipal rules that affect the deployment of wireless networks;
- c) that Study Group 5, in particular, has elaborated Recommendations on the technical measurement of EMF that help to diminish risk perception within the population;
- d) that the development of these Recommendations has made it possible to significantly decrease the cost of measurement equipment and to leverage the results through social communication;
- e) that the cost of the advanced equipment used for assessing human exposure to RF energy is high, and that it may only be affordable in developed countries;
- f) that implementing such measurement and assessment is essential for many regulatory authorities, in particular in developing countries, in order to monitor the limits for human exposure to RF energy, and that they are called upon to ensure those limits are met in order to license different services;
- g) the importance of EMF emission assessment when implementing policies in some countries,

*noting*

- a) the similar activities carried out by other national, regional and international standards development organizations (SDOs);
- b) the urgent need for regulatory bodies in many developing countries to obtain information on EMF measurement and assessment methodologies in regard to human exposure to RF energy, in order to establish or reinforce national regulations to protect their citizens,

*resolves*

to invite ITU-T, in particular Study Group 5, to expand and continue its work and support in this domain, including, but not limited to:

- i) publishing and disseminating its technical reports, as well as developing ITU-T Recommendations to address these issues;

- ii) developing, promoting and disseminating information and training resources related to this topic through the organization of training programmes, workshops, forums and seminars for regulators, operators and any interested stakeholders from developing countries;
- iii) continuing to cooperate and collaborate with other organizations working on this topic and to leverage their work, in particular with a view to assisting the developing countries in the establishment of standards and in monitoring compliance with these standards, especially on telecommunication installations and terminals;
- iv) cooperating on these issues with ITU-R Study Groups 1 and 6, and with Study Group 2 of the ITU Telecommunication Development Sector (ITU-D) in the framework of ITU-D Question 7/2;
- v) strengthening coordination and cooperation with WHO in the EMF project so that any publications relating to human exposure to EMF are circulated to Member States as soon as they are issued,

*instructs the Director of the Telecommunication Standardization Bureau, in close collaboration with the Directors of the other two Bureaux*

within the available financial resources,

1 to support the development of reports identifying the needs of developing countries on the issue of assessing human exposure to EMF, and to submit the reports as soon as possible to ITU-T Study Group 5 for its consideration and action in accordance with its mandate;

2 to regularly update the ITU-T portal on EMF activities including, but not limited to, the ITU EMF Guide, links to websites, and flyers;

3 to hold workshops in developing countries with presentations and training on the use of equipment employed in assessing human exposure to RF energy;

4 to extend support for developing countries while they establish their regional centres equipped with test benches for continuous monitoring of EMF levels, especially in selected areas where the public has concerns, and transparently provide the data to the general public by using, among other things, the modalities listed in Resolutions 44 (Rev. Hammamet, 2016) and 76 (Rev. Hammamet, 2016) of this assembly, in the context of the development of the regional test centres, and of Resolution 177 (Rev. Busan, 2014) of the Plenipotentiary Conference;

5 to report to the next world telecommunication standardization assembly on measures taken to implement this resolution,

*invites Member States and Sector Members*

1 to contribute actively to the work of Study Group 5 by providing relevant and timely information, in order to assist developing countries in providing information and addressing measurement and assessment concerns related to human RF exposure and EMF;

2 to conduct periodic reviews to ensure that ITU-T Recommendations related to exposure to EMF are followed;

3 to cooperate and share expertise and resources between developed and developing countries in order to help government administrations, especially in developing countries, to reinforce or establish an appropriate regulatory framework for protecting people and the environment from non-ionizing radiation;

4 to encourage the use of ITU-T Recommendations to build national standards for measuring and assessing EMF levels and inform the public of compliance with those standards,

*further invites Member States*

to adopt suitable measures in order to ensure compliance with relevant international recommendations to protect health against the adverse effect of EMF.