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|  | **ASIA-PACIFIC TELECOMMUNITY** | |
| **2nd Meeting of SATRC Working Group on Spectrum in SAP-IV** | **Document**  **WGSPEC-02/INP-05** |
| 11-12 March 2014, Tehran, Iran | **11 March 2014** |

Telecommunication Regulatory Authority of Islamic Republic of Iran

**NEW WORK ITEM PROPOSAL ON NON-IONIZING RADIATION SAFETY IN MOBILE TELEPHONE BANDS IN SATRC COUNTRIES**

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| **Work Item** | **Non-Ionizing Radiation Safety in mobile telephone bands** |
| **Sub working Item-** |  |
| **Document Type** | SATRC Report |
| **Group/Chair** | Spectrum |
| **Editor(s)** | Homayounnasab |
| **Scope** | * Mobile phone use all around the world has risen dramatically over the last 20 years * People increasingly rely on mobile phones as their sole or primary means of telephone communication * The question of whether long-term exposure to RF energy emitted from mobile phones can cause other types of adverse health effects, such as cancer, has been the subject of research and debate * The lack of appropriate dissemination of precise information has created and increased an obscure fear of radio waves among the public. * Increase the people complain reports and their worry * This report addresses why SATRC countries should concern about this subject |
| **Purpose** | **To propose**   * the common standards which is accepted from SATRC countries. * the methods of standard measurement * the necessary policies and regulations for decreasing the public complains and worry * for establishment non-ionizing radiation protection center in Iran to evaluate the measurement of radiations and certify the radiations of BTS in SATRC countries. * the methods of decreasing the number of BTS sites * the necessary policies in environment compatibility (Beautification and Masquerade of BTS) * an application for Ios and Android system through which people can check the status of RF map of capital cities in SATRC countries. |
| **Related Document** | The following ITU-T Recommendations and other references contain provisions:  [1] ITU-T Recommendation K.52 (2000), Guidance on complying with limits for human  exposure to electromagnetic fields.  [2] ITU-T Recommendation K.61 (2003), Guidance to measurement and numerical prediction of electromagnetic fields for compliance with human exposure limits for telecommunication installations.  [3] Federal Communications Commission, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, Fifteenth Report (June 27, 2011).  [4] GAO-14-63:Published: Dec5,2013.Publicly Released: Jan6,2014 |
| **Related Organization** | GAO,FCC, ITU,SATRC |
| **Timelines** | Phase1: 3months - Phase2: 9months- Phase3: 4months |

**Background paper on Non-Ionizing Radiation Safety in mobile telephone bands:**

# Scope

Mobile phone use all around the world has risen dramatically over the last 20 years, and people increasingly rely on mobile phones as their sole or primary means of telephone communication. Like other devices that transmit radio signals, mobile phones and BTS antennas emit radio-frequency (RF) energy. At high power levels, RF energy can heat biological tissue and cause damage. Though mobile phones operate at power levels well below the level at which this thermal effect occurs, the question of whether long-term exposure to RF energy emitted from mobile phones can cause other types of adverse health effects, such as cancer, has been the subject of research and debate, furthermore; the lack of appropriate dissemination of precise information has created and increased an obscure fear of radio waves among the public.

However, based on voluminous findings from studies, exposure guidelines has been developed with a safety margin enough to protect human health from adverse effects of radio waves.

, but these results do not decrease the people complain reports and their worry. This report addresses why SATRC countries should concern about this subject, what is known about the health effects of RF energy from mobile phones, what are current research activities, how SATRC administrations set the RF energy exposure limits and guidelines for mobile phones and BTS antennas, how accountability agencies inform the public about health issues related to mobile phones and BTS radiation and what the future plans of SATRC countries are in non- ionizing radiation protection.

For answering the mentioned questions we can investigate scientific researches, survey some developed countries as best practices; study the measurement results in SATRC countries, moreover; we are able to review the concerning regulations and guidance in SATRC countries; also study the proposed methods of decreasing people complains in SATRC countries, Moreover; new suggested approaches for eliminating the numerous BTS sites for SATRC counties, propose new methods of beautification and masquerade of BTS sites for SATRC countries, study interactions among other parts of government in concerning matter in SATRC countries.

1. **References**

*The following ITU-T Recommendations and other references contain provisions:*

*[1] ITU-T Recommendation K.52 (2000), Guidance on complying with limits for humanexposure to electromagnetic fields.*

*[2] ITU-T Recommendation K.61 (2003), Guidance to measurement and numerical prediction of electromagnetic fields for compliance with human exposure limits for telecommunication installations.*

*[3] Federal Communications Commission, Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, Fifteenth Report (June 27, 2011).*

*[4] GAO-14-63:Published: Dec5,2013.Publicly Released: Jan6,2014*

1. **Details**

**I will investigate and report the following topics:**

3-1- The importance of radiation safety and the hazards (Phase1):

* The hazards which may be caused by unlimited radiation exposure
* The problems of inadequate concerning to radiation exposure

3-2- 3 developed countries investigation on non-ionizing radiation safety and environment compatibility as best practices

* Ways of measurement
* Equipment of measurement
* Standards guidelines
* The results of mentioned countries concerning the non-ionizing radiation protection
* Methods of beautification and masquerade of BTS sites
* The methods of eliminating the numerous BTS sites
* Future plan

3-3- To determine the status of non-ionizing radiation safety and environment compatibility in SATRC countries (Phase2):

* Ways of measurement
  + Performed proceedings in order to organizing the non-ionizing radiation protection in SATRC countries.
* Regulations and standards guidelines
* Methods of beautification and masquerade of BTS sites
* The methods of eliminating the numerous BTS sites
* The results investigation the non-ionizing radiation protection and evaluation
* Defining a project to map the RFmap of capital cities for the SATRC country's .
  + Future plans in non-ionizing radiation protection

**Tools of answering the above mentioned subjects:**

* Preparation of a questionnaire to collect the SATRC countries proceedings in radiation safety
* Give a report concerning the questionnaire result
* Preparation of a questionnaire to collect the SATRC countries proceedings in dissemination of safety radiation information and results to the public
* Give a report concerning the questionnaire result
* Preparation of a questionnaire to gather the future plan of radiation safety by circulating among SARTC countries.
* Give a report concerning the questionnaire result
* Preparation of a questionnaire to collect the SATRC countries proceedings in environment compatibility
* Give a report concerning the questionnaire result

4- **Goals (phase3):**

**To propose**

* the common standards which is accepted from SATRC countries.
* the methods of standard measurement
* the necessary policies and regulations for decreasing the public complains and worry
* for establishment non-ionizing radiation protection center in Iran to evaluate the measurement of radiations and certify the radiations of BTS in SATRC countries.
* the methods of decreasing the number of BTS sites
* the necessary policies in environment compatibility (Beautification and Masquerade of BTS)
* an application for Ios and Android system through which people can check the status of RF map of capital cities in SATRC countries.