

Radiation Safety of Mobile Phone Radio Base Stations

Telecommunications Users and
Consumers Advisory Committee (TUCAC)

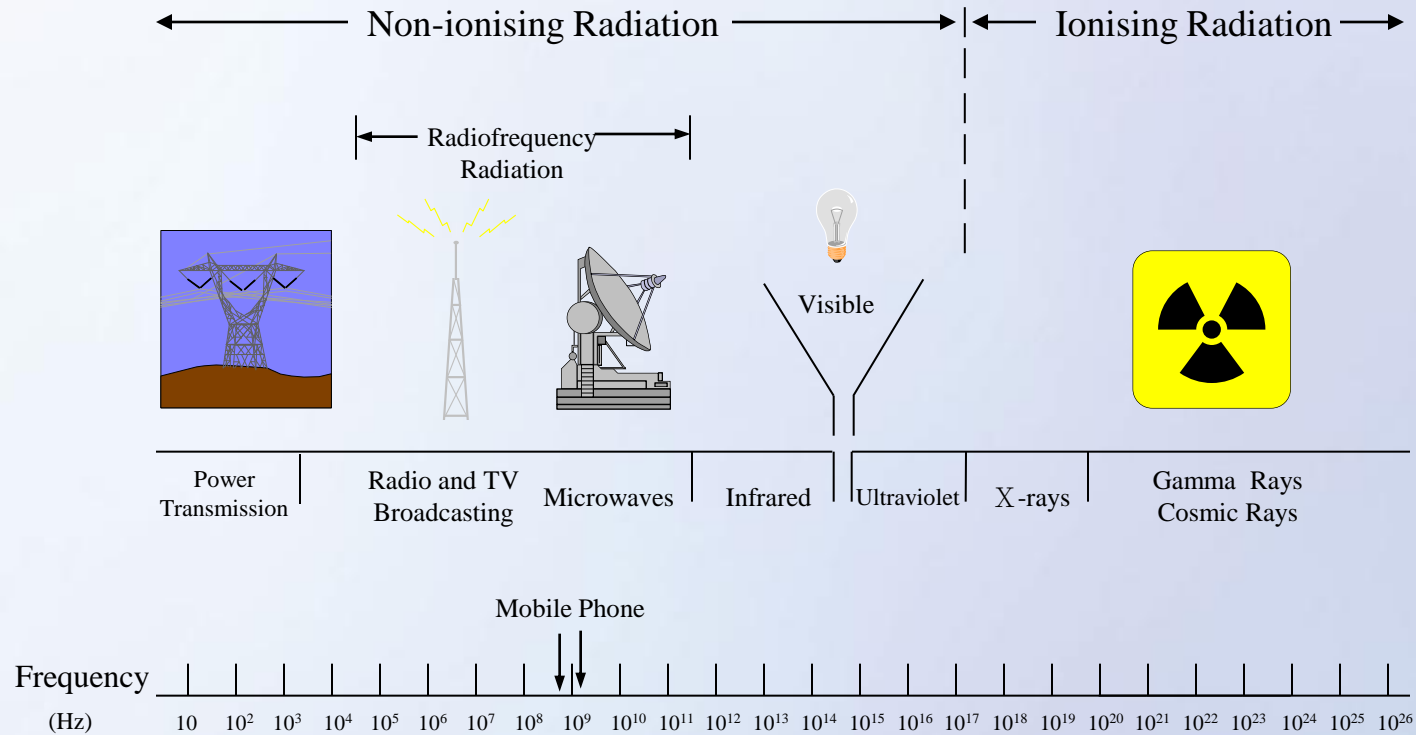
25 July 2013

Mobile Phone Radio Base Stations

- To provide an uninterrupted service, mobile network operators need to install mobile phone radio base stations (RBS) on a territory-wide basis
- Over 31,000 RBS are installed
- There is increasing public awareness of radiation safety



Classification of Electromagnetic (EM) Radiation



EM Radiation of RBS

- RBS emits EM radiation in form of radiofrequency (“RF”) signals to convey information.
- RF signals
 - relatively low frequencies
 - ~ 3 kHz to 300 GHz
 - non-ionising radiation (“NIR”)
 - low energy level, which is insufficient to cause ionization of atoms or molecules

Radiation Safety Standard

- In consultation with the Department of Health, limits as recommended by the International Commission on Non-ionising Radiation Protection (“ICNIRP”) are adopted as the radiation safety standard.
- According to the World Health Organization, there is no convincing scientific evidence to suggest that NIR levels below the ICNIRP limits will cause adverse health effects
- ICNIRP (or similar) limits are widely used
 - including the USA, Canada, Germany, France, Korea, Australia and New Zealand etc.

ICNIRP Limits

- ICNIRP
 - set limits for exposure to NIR
 - applicable to frequency bands of RBS:

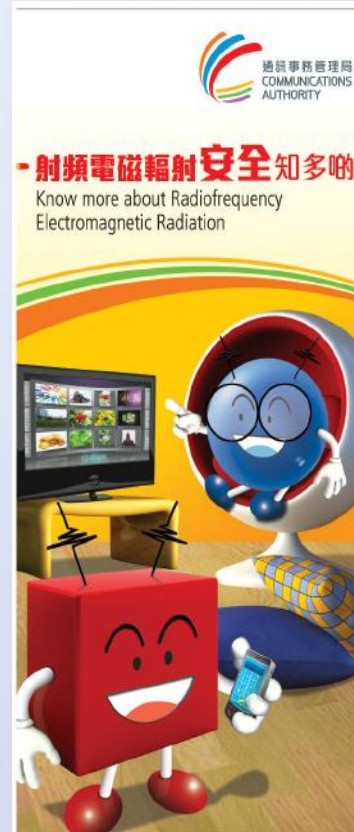
Frequency Band	800/900 MHz	1800 MHz	Beyond 2000 MHz
Time-varying fields	41.3 V/m	58.3 V/m	61.0 V/m

Regulation concerning Radiation Safety of RBS

- According to telecom licence condition, operators are required to obtain approval from the Communications Authority (CA) before putting their RBS into operation.
- Operators shall observe the “Code of Practice for the Protection of Workers and Members of Public Against Non-Ionising Radiation Hazards from Radio Transmitting Equipment” issued by OFCA
 - to ensure that the overall radiation levels in public areas do not exceed ICNIRP limits
- Operators are required to submit the reports of NIR measurement within one month from the commencement of RBS operation. OFCA will conduct a sample check on RBS by on-site measurement of radiation level.

Responses to Public Concern over RBS Radiation

- issue leaflet “Know more about Radiofrequency Electromagnetic Radiation”
- provide a web page on “RF Radiation Safety” on OFCA’s website
- promote a better understanding of RF radiation safety on the newspaper
- set up a hotline to respond to public enquires
- attend district council meetings to brief members on radiation safety of RBS



Thank you