ITU-R in brief

Briefing

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Radiocommunications Bureau

Committed to connecting the world

ITU-T

Telecommunication standardization
- network and service aspects
(Bureau: TSB)

ITU-D

Promote and assist the extension of ICTs to all the world's inhabitants - narrowing the digital divide
(Bureau: BDT)

ITU-R

International regulation of radio-frequency spectrum and satellite orbits
(Bureau: BR)

193 Member States
319 Private Sector
169 Academia

Radiocommuncations Bureau (BR)

The BR Director, **Mr. Mario Maniewicz**,
is responsible for the management of the BR which
**organizes and co-ordinates the activities of the
Radiocommunication Sector (ITU-R)**.

Mario Maniewicz
Director, ITU Radiocommunication Bureau

Radiocommunication Services

WRCs update the Radio Regulations, the international treaty governing the use of the radio-frequency spectrum and satellite orbits

and

ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services

| Mobile | Satellite | Maritime | Emergency | Aviation | Broadcasting | Science |

Examples of Radiocommunication Services

IMT-2020 (5G)
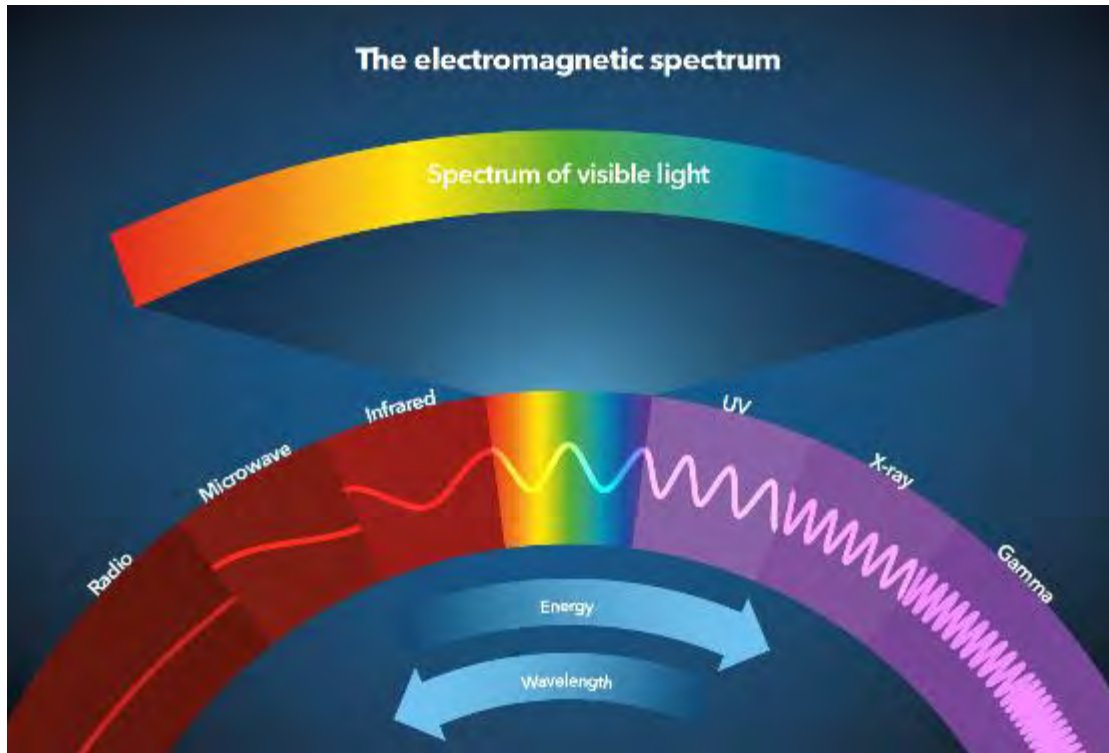
Non-GSO Satellite Systems
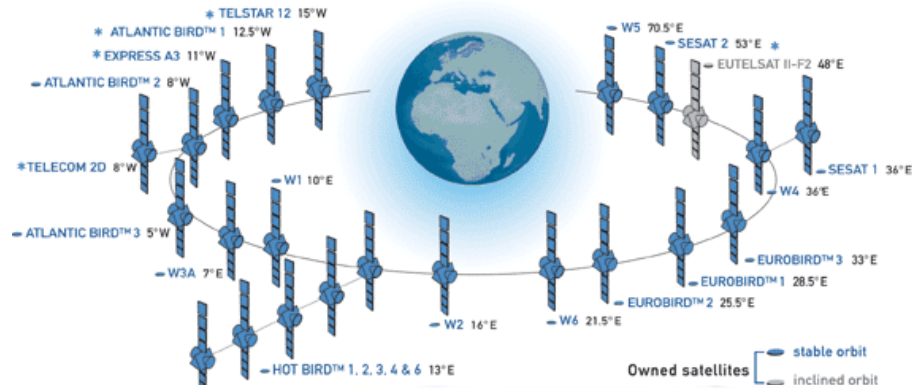
Broadcasting

Aeronautical & Maritime

Radio spectrum and satellite orbits
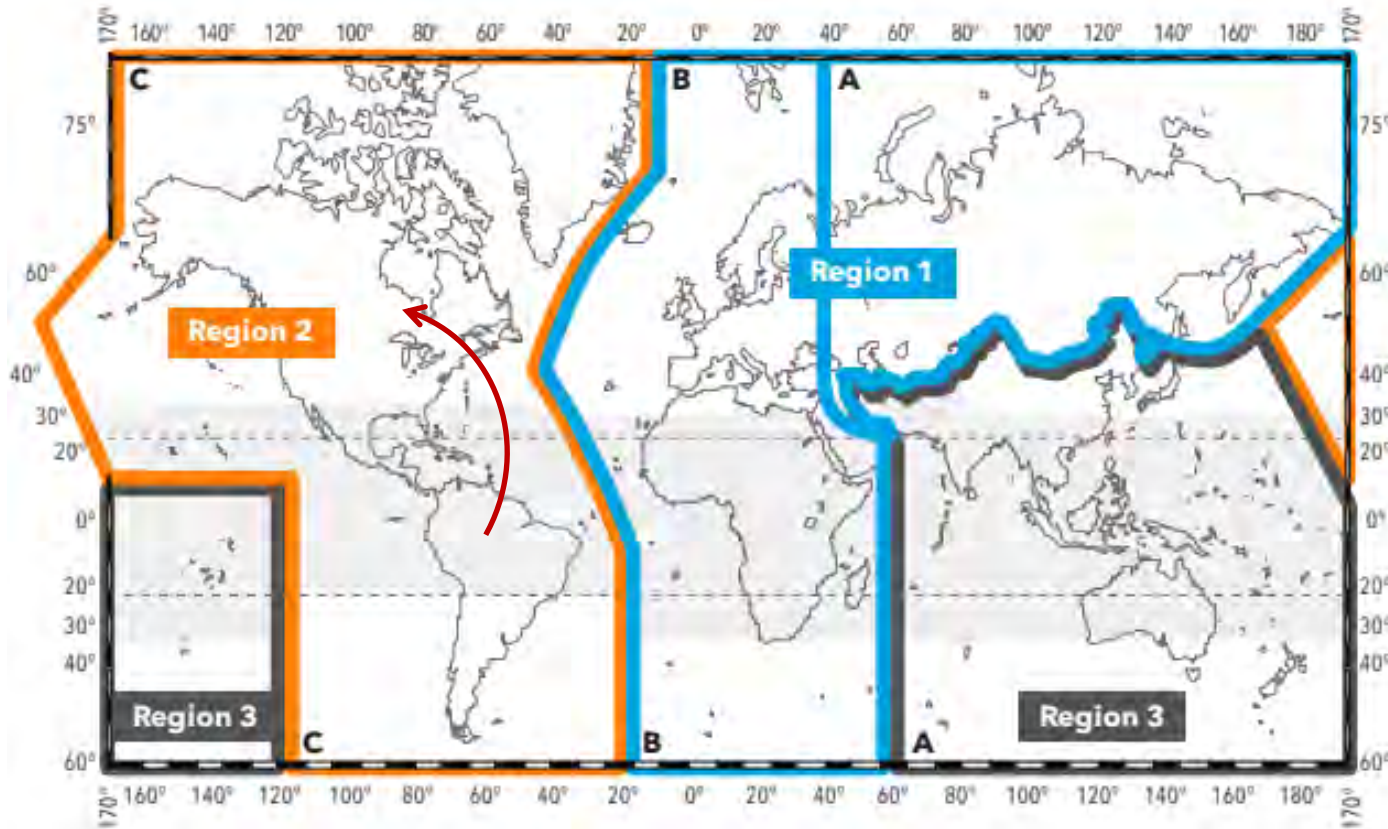

Limited natural resources

Why regulate?

- So that radio frequencies and any associated orbits are used rationally, efficiently and economically, and **countries** or groups of countries may **have equitable access** to orbits and frequencies

- So that radiocommunication **services** can operate efficiently and effectively **without harmful interference**

Why harmonize?

- Enables **international roaming**, allowing citizens to use the same device in different countries

- Creates **economies of scale**, thereby enabling **affordable devices and services**

- Facilitates **emergency communications**

International Regulations

The Radio Regulations is the international treaty on the use of radio spectrum and satellite orbits

- 1st "International Radio Telegraph Convention" was signed in 1906

- The treaty is updated every 4 years during a World Radiocommunication Conference (WRC)

- Next WRC will take place in 2023

https://www.itu.int/pub/R-REG-RR-2020

World Radiocommunication Conference (WRC-23)

RA-23 (UAE, 13-17 Nov. 2023)

WRC-23 (UAE, 20 Nov.-15 Dec. 2023)

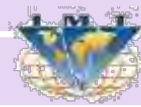https://www.itu.int/wrc-23/
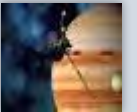https://dubaiwrc23.ae/home

WRC-23 Agenda

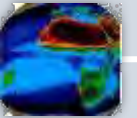## Fixed, mobile and broadcasting issues

1.1 **Protection of AMS & MMS stations in international airspace & waters in 4 800-4 990 MHz**

1.2 **3.3 ≤ MS & IMT ≤ 10.5 GHz**

1.3 **3 600-3 800 MHz MS in Region 1**

1.4 **0.694 ≤ HIBS ≤ 2.7 GHz**

1.5 **470 ≤ BS, MS ≤ 960 MHz**

Aeronautical and maritime issues

1.6 **Sub-orbital vehicles**

1.7 **New AMS(R)S VHF allocation**

1.8 **UAS CNPC links via FSS**

1.9 **Digital technologies for aviation safety-of-life applications (App. 27)**

1.10 **New AMS alloc. (around 15.5 & 22 GHz) for non-safety applications**

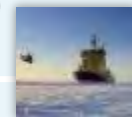*1.11* **GMDSS modernization & e-navigation**

Science issues

1.12 **Spaceborne radar sounders (2^{ndary}) EESS (active) @ 45 MHz**

1.13 **SRS @ 14.8-15.35 GHz**

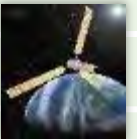*1.14* **Remote-sensing observation requirements - EESS (passive) @ 231.5-252 GHz**

Satellite issues

1.15 **A-ESIM & M-ESIM (GSO Ku-FSS)**

1.16 **ESIM (non-GSO Ka-FSS)**

1.17 **ISS / Sat.-to-Sat. links**

1.18 **NB MSS for IoT (L/S-bands)**

1.19 **Ka-FSS (s-E) (R2)**

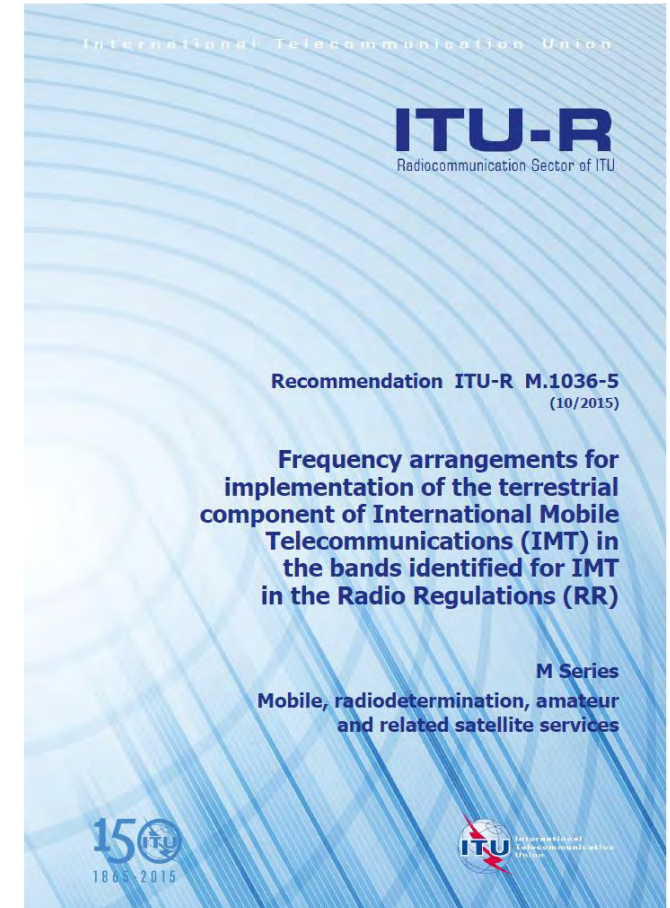*7* **Satellite regulatory issues**

Note: The WRC-23 agenda item numbers are indicated in italic (agenda items 2, 3, 4, 5, 6, 8, 9 (9.1, 9.2, 9.3) and 10 are not mentioned here).

Res. 811 (WRC-19)

International Standards

ITU-R Recommendations constitute a set of international technical standards

- Provide specifications, requirements, data guidance, or procedures for a specified application
- Developed in collaboration between public, private sector, academia and other regional and international organizations
- Approved by ITU Member States
- Their implementation is not mandatory, however they are commonly implemented worldwide

Free online access to all ITU-R Recommendations at:
https://www.itu.int/pub/R-REC

Summary

- Develop and update **international regulations on the use of spectrum and orbits**

- Develop and adopt **standards and best practices** on the use of orbit/spectrum

- **Apply** these regulations (frequency register and coordination)

- **Disseminate information** on these regulations, standards and best practices

Thank You