

ITUEvents

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Overview of terrestrial services

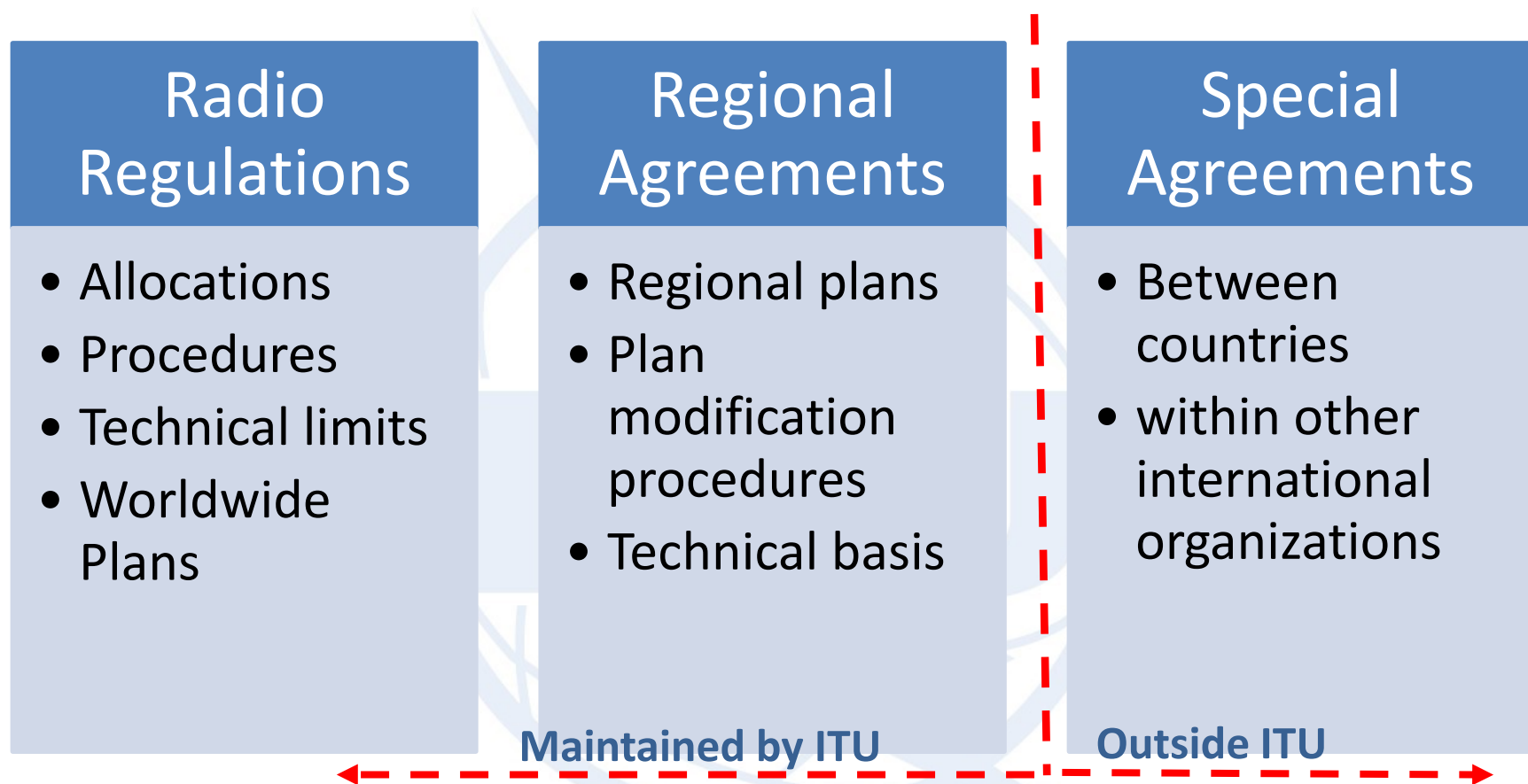
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Terrestrial services

Terrestrial : stations on the ground, at sea, in the air up to ≈ 50 km

- **Fixed service:** fixed wireless access, backbone lines, backhauling
- **Land Mobile:** mobile broadband - ubiquitous connectivity, PMR
- **Aeronautical mobile:** comms with aircraft, at airports, WAICs
- **Maritime mobile:** communications with ship, shore, e-navigation
- **Broadcasting :** TV and sound program delivery to population
- **Radionavigation :** location and navigation
- **Radiolocation:** object detection, transport safety, e.g. intelligent transport systems (ITS), air/maritime traffic control
- **Other:** Amateur, Meteorological aids, standard frequency and time signal

Main regulatory instruments



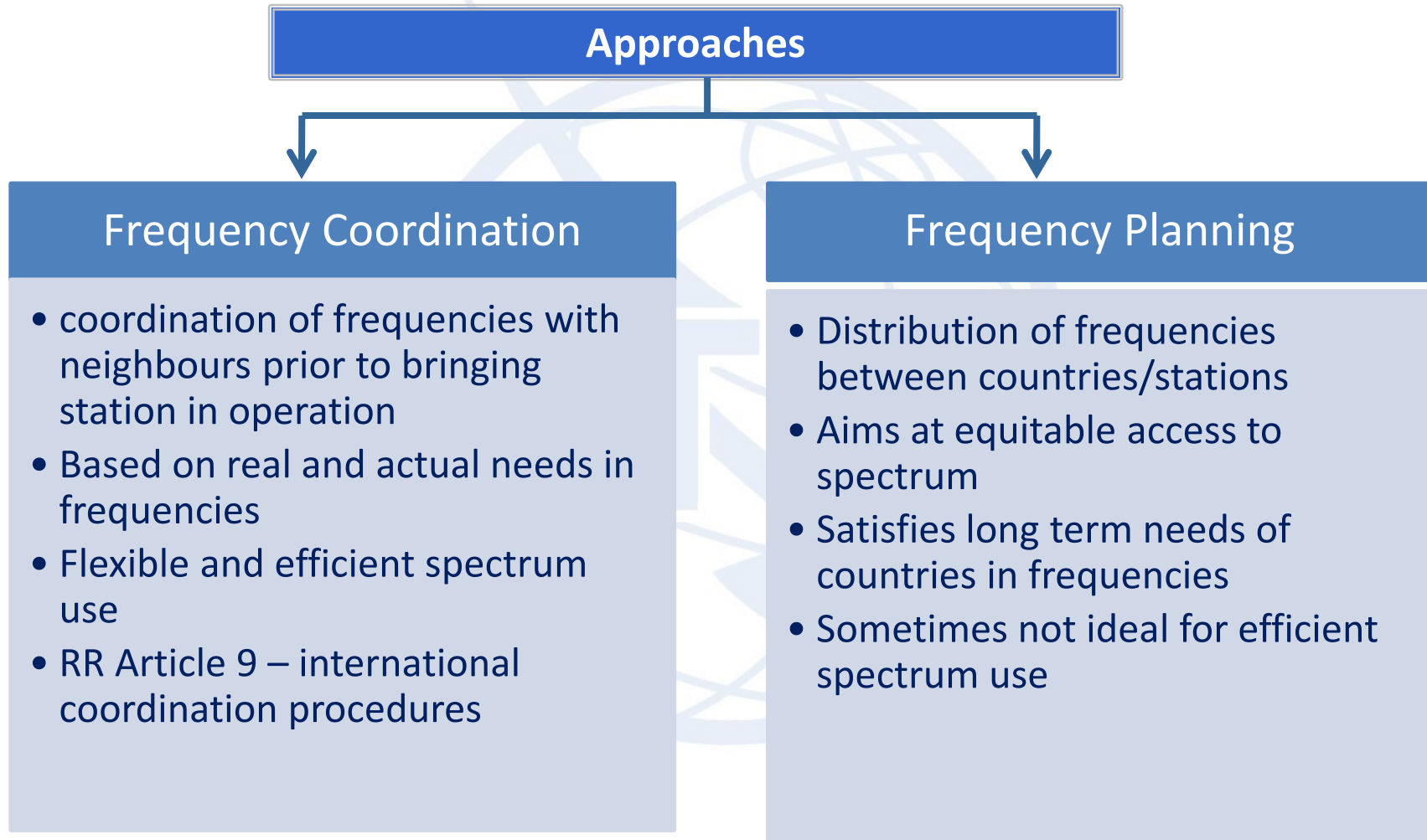
■ Other ITU instruments:

- **Rules of Procedure** that explain some RR provisions
- **ITU-R Recommendations**: technical standards containing system characteristics, channeling arrangements, mitigation techniques, etc.

Radio Regulations

- Main instrument of international regulatory framework
- Based on 2 main concepts:
 - (1) **Blocks of frequency allocations** to compatible services
 - ✓ Compatible operation of stations
 - ✓ Stable planning environment for administrations and industry
 - (2) **Regulatory procedures:**
 - Coordination -> *operation at acceptable interference level*
 - Notification and recording stations in the MIFR -> *obtaining international rights to operate i.e. international recognition*
 - Resolving interference, radiomonitoring, distress, urgency communications, etc.
 - RR also contains technical limits on stations, worldwide frequency plans, resolutions regulating use of radio services

Approaches to sharing spectrum



Frequency plans for terrestrial services

- Types of frequency plans:
 - Assignment and Allotment ; Worldwide and Regional plans
- Existing frequency plans for terrestrial services:
 - Worldwide HF allotment plans for maritime mobile and aeronautical mobile services in RR Appendixes 25, 26, 27
 - Regional/sub-regional (concluded under the auspices of ITU)
 - VHF/UHF sound and TV broadcasting : GE84, ST61, GE89, GE06
 - LF/MF sound broadcasting: GE75, RJ81, RJ88
 - LF/MF maritime and aeronautical: GE85M, GE85N
 - Seasonal planning HFBC: ART 12 of the RR
 - Other plans concluded outside ITU: ICAO, IALA

Master International Frequency Register

- Master International Frequency Register (MIFR): database on the actual usage of frequencies by stations all over the world.
- Covers all terrestrial services, except amateur, with current records from 9.8 kHz up to 224 GHz
- Currently contains about 2 670 000 terrestrial assignments. More than 100 000 assignments processed yearly
- Published every 2 weeks in the BR International Frequency Information Circular (BRIFIC) on DVD and online
- Practical value of the MIFR:
 - Obtaining the right of international recognition
 - Identification of sources of interference
 - Basis for coordination activities
 - Information on the parameters and deployment of stations
 - Reference data for decisions on new allocations at WRCs



Other terrestrial activities

- Publishing List of Coast Stations (List IV), List of Ship Stations (List V) and maintenance of the related [Maritime Access and Retrieval Database \(MARS\)](#) – RR Article 20
- Allocation of Means of Identification for stations (call sign series, Maritime Identification Digits, etc.) and publication in [Global Administrative Database \(GLAD\)](#) – RR Article 19
- Organization of [radiomonitoring programmes](#) in HF band and in 406-406.1 MHz; publishing summaries of monitoring results. Publication of the List of International Monitoring Stations (List VIII) – RR Article 16
- Maintenance of the [database of emergency and disaster relief communications](#) (Resolution 647(Rev.WRC-15))
- Maintenance of the [database of oceanographic radars](#) (Resolution 612(Rev.WRC-12))

Assistance to administrations

- **Assistance** to administrations:
 - In the application of the procedures of the RR and Regional Agreements, training in the related software
 - In resolving cases of harmful interference
 - In resolving cases of contravention or non-observance of the Radio Regulations
 - In transition to digital TV and allocation of Digital Dividend
 - In multilateral coordination meeting, e.g. on spillover
 - Providing best practices of spectrum usage

Databases, software and online tools

