



World Radiocommunication Seminar 2016



Regulatory framework for terrestrial services

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Terrestrial services

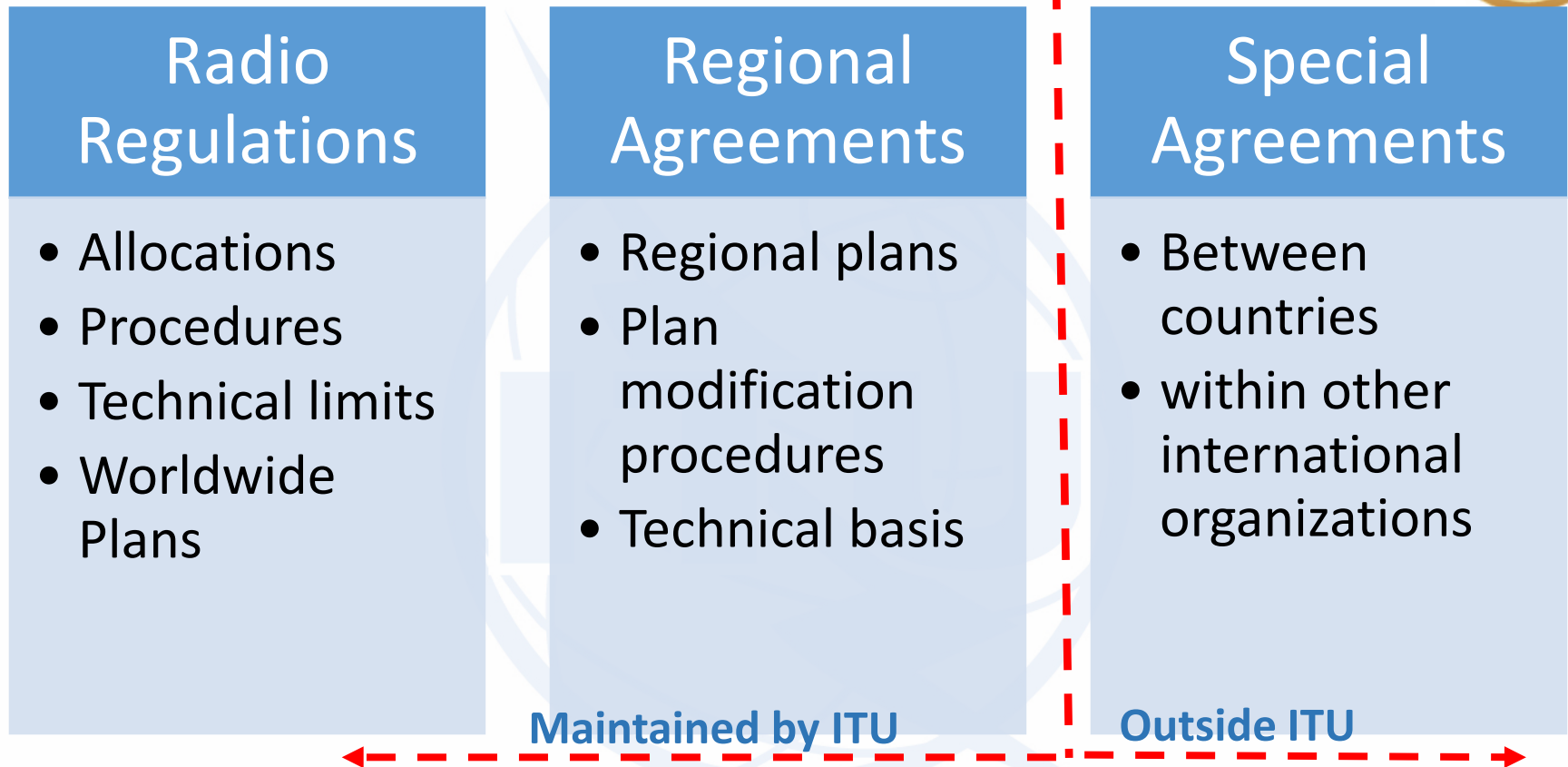


Terrestrial : stations on the ground, at sea, in the air up to ≈ 50 km

- **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
- **Others:** Amateur, Meteorological aids, standard frequency and time signal



Main regulatory instruments



Other instruments:

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



Radio Regulations



- Main instrument of international regulatory environment
- Based on 2 main concepts:
 - (1) **Blocks of frequency allocations** to services having similar characteristics. Now: 9 KHz – 3 000 GHz. Future - > optical?
 - ✓ Facilitates compatible operation of stations.
 - ✓ Creates 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, supported by radiomonitoring, etc.

Approaches to sharing spectrum

Approaches

Frequency Coordination

- coordination of frequencies with neighbours prior to bringing station in operation
- Based on real and actual needs in frequencies
- Flexible and efficient spectrum use
- RR Article 9 – international coordination procedures

Frequency Planning

- Distribution of frequencies between countries/stations
- Aims at equitable access to spectrum
- Satisfies long term needs of countries in frequencies
- Sometimes not ideal for efficient spectrum use



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, RJ8
 - LF/MF maritime and aeronautical: GE85M, GE85N
 - Seasonal planning HFBC: AR 12
 - 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 10.1 kHz to 143 GHz
- Currently contains around 2 556 000 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 Mobile Access and Retrieval Database](#) (MARS)
- Allocation of Means of Identification for stations (call sign series, Maritime Identification Digits, etc.) and publication in [Global Administrative Database](#) (GLAD)
- 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)
- 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 alleged 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

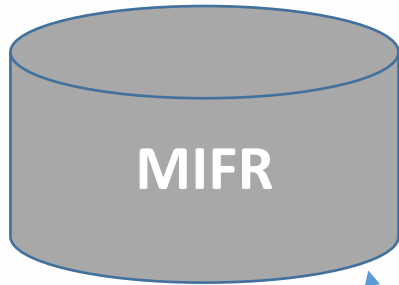


Databases, software and online tools

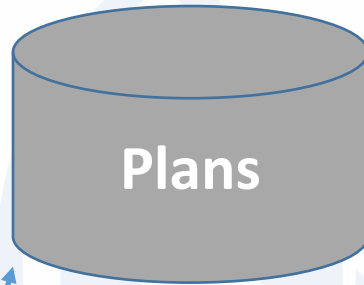


Frequency assignment/allotment databases
(parameters to assess compatibility, international rights)

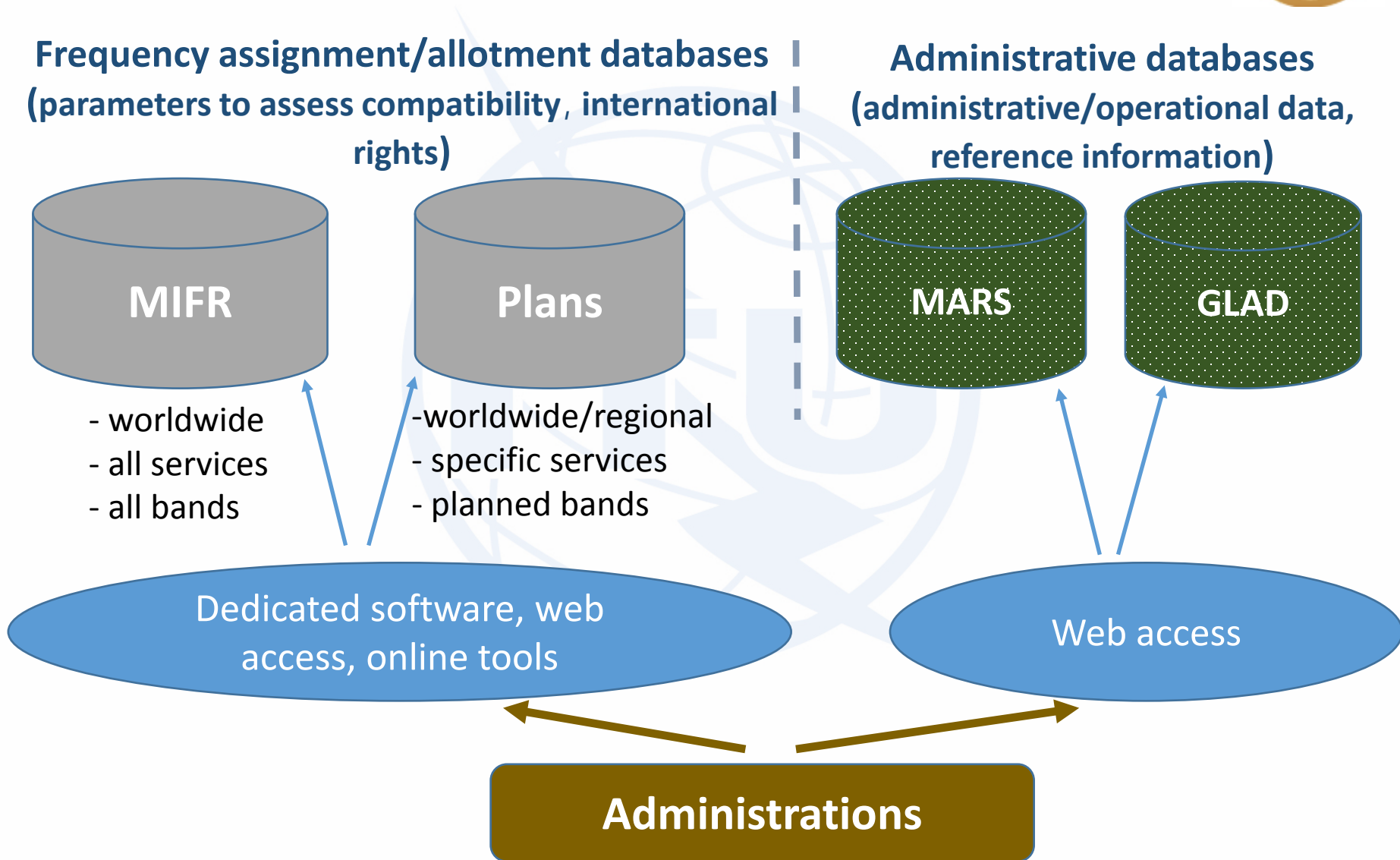
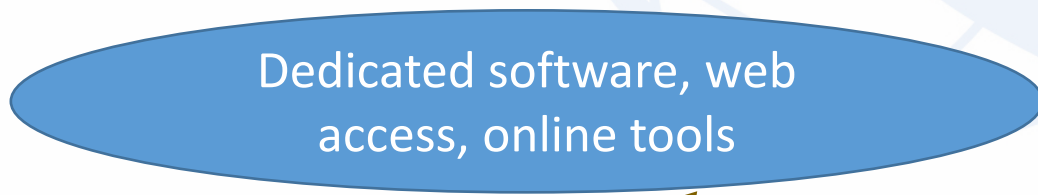
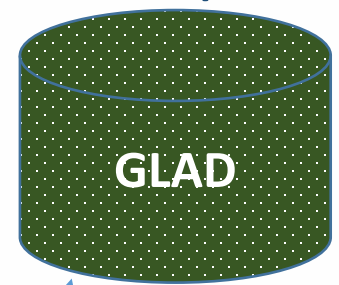
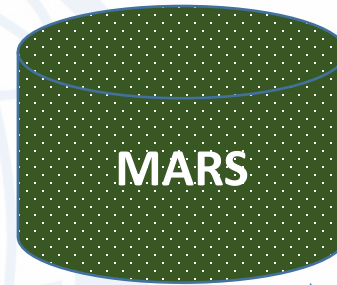
Administrative databases
(administrative/operational data, reference information)



- worldwide
- all services
- all bands



- worldwide/regional
- specific services
- planned bands





***Thank you for
your attention!***