

## BR's assistance in cross-border coordination

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# Regulatory framework BR's assistance for harmful interference BR's assistance for frequency coordination

#### **Overview**

#### **Main regulatory instruments**

#### Radio Regulations

- Allocations
- Procedures
- Technical limits
- Worldwide Plans

Regional Agreements

- Regional plans
- Plan modification procedures
- Technical basis

Special Agreements

 Between countries

**Outside ITU** 

 within other international organizations

**Maintained by ITU** 

- Other ITU instruments:
  - Rules of Procedure
  - ITU-R Recommendations

#### **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

#### **BR's assistance**



- In the application of the procedures of the RR and Regional Agreements, training in the related software
- In resolving harmful interference and infringement
- In transition to digital TV and Digital Dividend
- In multilateral coordination meeting, e.g. on spillover
- Providing best practices of spectrum usage

#### Assistance in a case of harmful interference

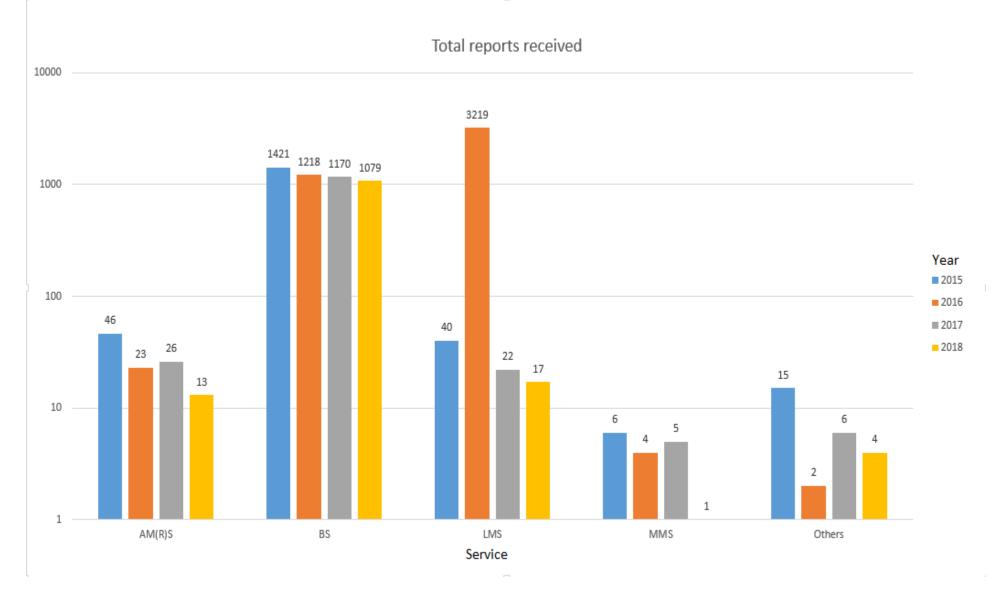
- Cooperation between administrations
- Direct contact between monitoring stations or operators
- If necessary, inform the BR
- If bilateral action failed, request BR assistance
- The BR may request the cooperation of stations on the International Monitoring List
- If the interference persists, the BR prepares a report to the RRB



#### Harmful interference statistics

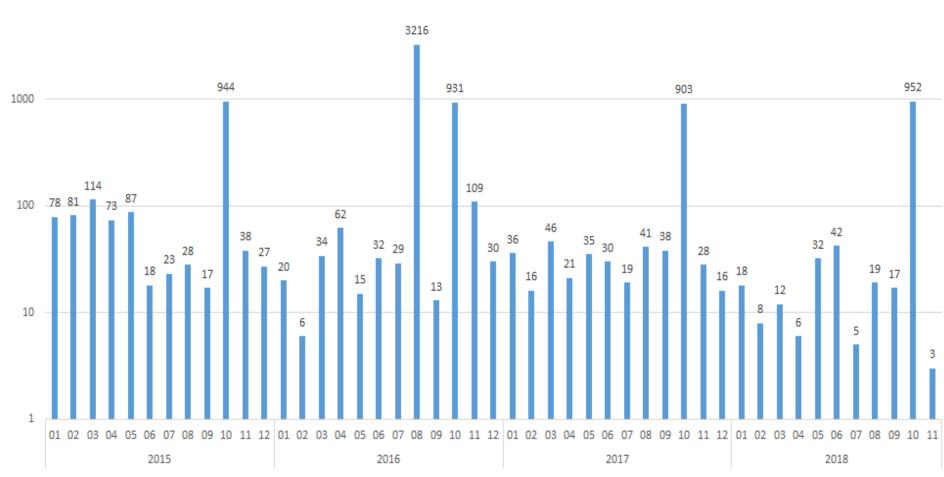
- > 1000 Appendix 10 Reports in 2018
- 1079 broadcasting
- 17 land mobile
- 13 aeronautical mobile
- 2 fixed
- 2 amateur
- 1 maritime mobile





AM(R)S: Aeronautical mobile (route) service - BS: Broadcasting service - LMS: Land mobile service - MMS: Maritime mobile service





#### **Harmful interference**



Any assignment that could cause harmful interference shall be notified

- Spectrum monitoring
- Coordinate with your neighbours
- Procedure for resolving interference in coordination agreements

## Assistance for DSO in Sub-Saharan Africa



Digital migration and spectrum Policy summits
 ✓ December 2011: Nairobi
 ✓ September 2012: Accra
 Decisions

✓ Adoption of the MPEG4 and DVB-T

✓ Adoption of the dual HDTV/SD for the set-top boxes

## **Objectives of the frequency coordination activities**

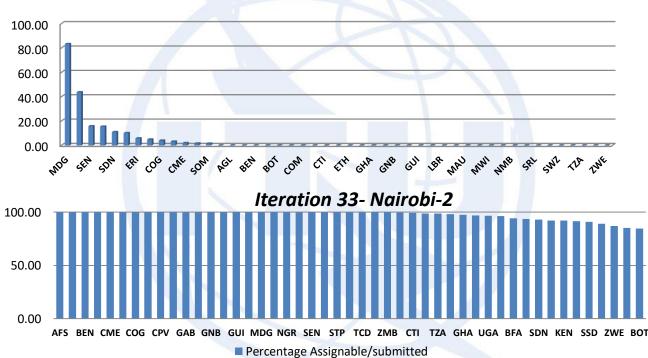




- To assist the countries in coordinating the modifications of the GE06D Plan in the band 470-694 MHz
  - To enable the administrations to successfully to put in operation the broadcasting and mobile services in the UHF band without harmful interference

#### **Results: 1st and last iterations**





Iteration 1, percentage of assigned channels

## **BR** actions





Provided the necessary software and tools

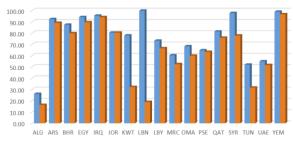
Workshops and training on the GE06 tools and frequency planning

Assistance in sub-regional coordination meetings

#### Assistance to ASMG and CAC

2014-2015: Frequency Coordination Meetings for Arab Spectrum Management Group (ASMG)





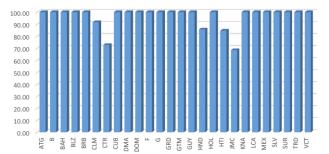
Iteration 27- Percentage of assignabe channels

■ ignore all ■ Ignore interferers 3-4dB

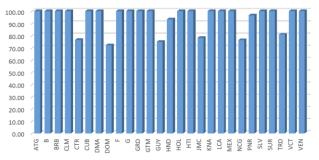
2017-2018: Frequency Coordination for Central America and Caribbean (CAC)



Final VHF iteration - Percentage of assignable channels (4dB margin), ignoring self-interference and interference to the wanted requirement



Final UHF iteration - Percentage of assignable channels (4dB margin), ignoring self-interference and interference to the wanted requirement





## Thank you!