

ITUWRS
ONLINE2020

29TH WORLD RADIOCOMMUNICATION SEMINAR
30 November - 11 December 2020

Planning Procedure for HF Broadcasting - RR 12

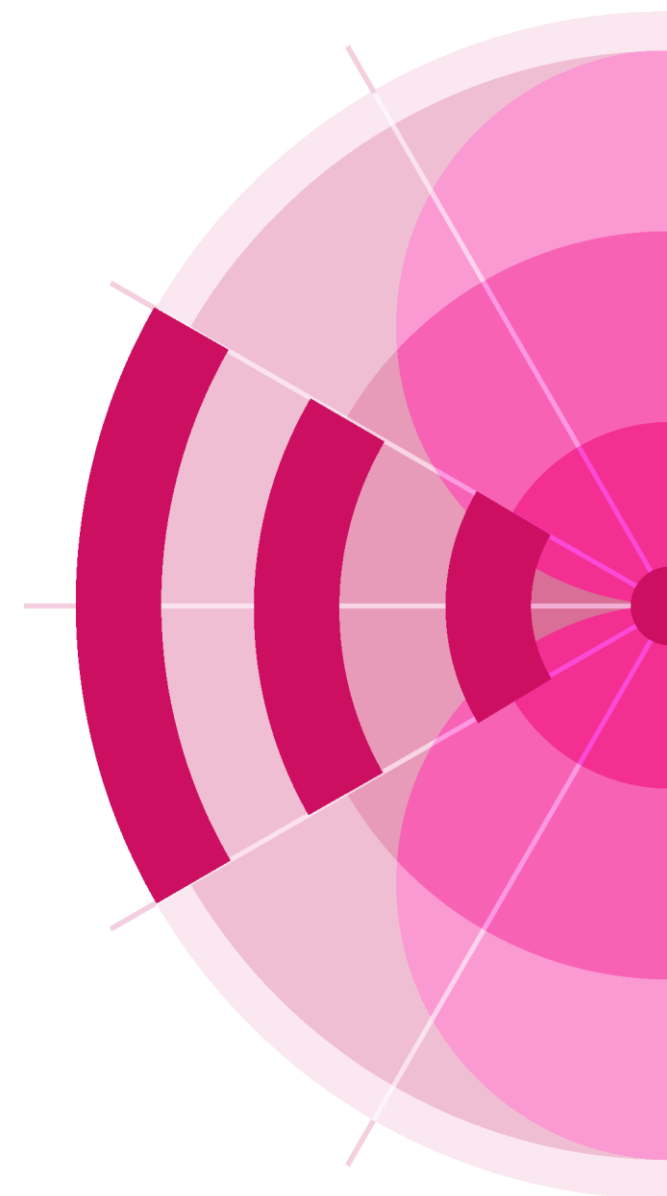
Nedialko Miltchev

Broadcasting Services Division

ITU-R

www.itu.int/go/wrs-20

#ITUWRS



Summary

- Planning procedure for HF Broadcasting – RR12.
- Introduction to HFBC notification.
- HFBC Schedule.
- Coordination and Regional Coordination Groups.

Planning Procedure

ECUAL Access



Main Principles:

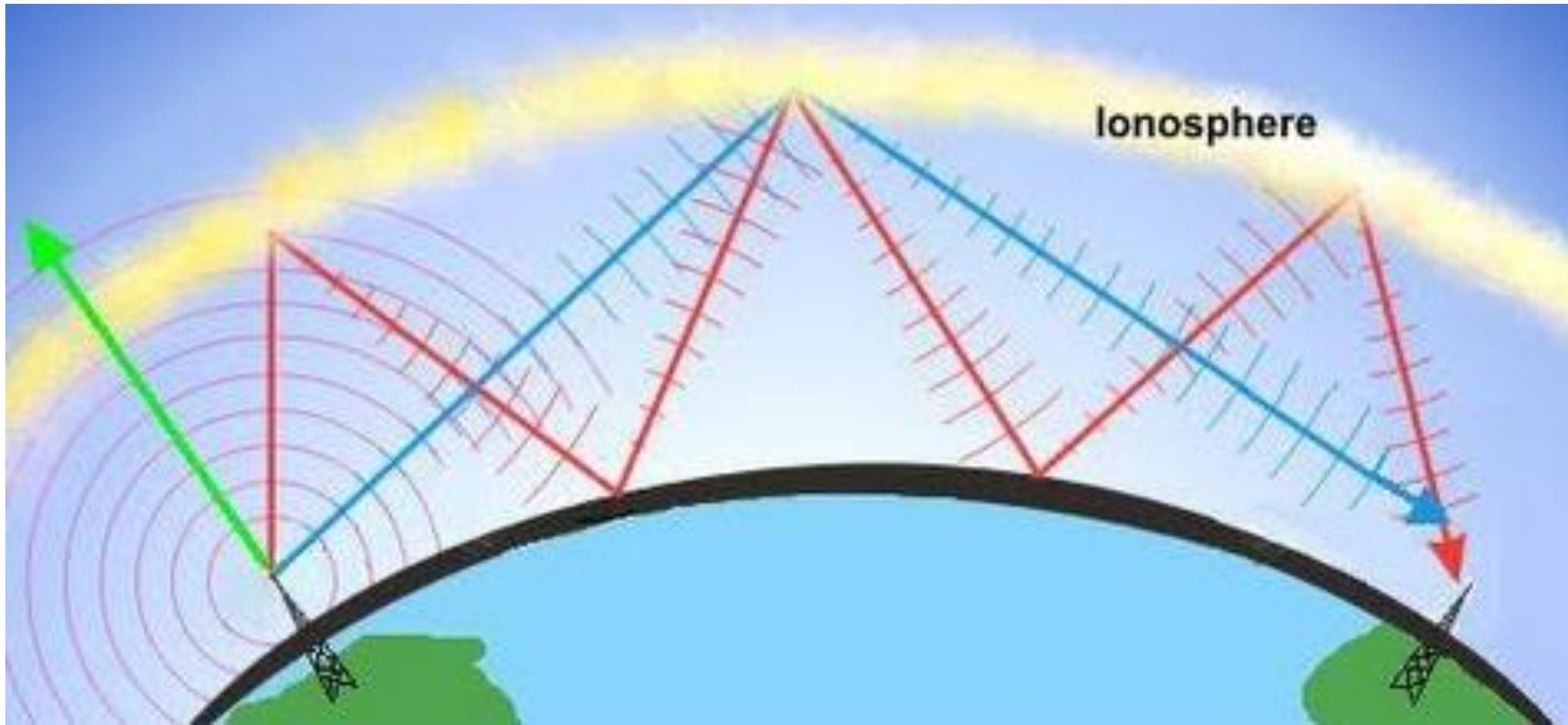
- Equal access to HF bands.
- Equitable treatment of national and international requirements.
- Efficient use of the spectrum.
- Minimize incompatibility.

Frequency bands

- Block allocation - HF bands between 5 900 kHz and 26 100 kHz
- Current allocation situation:

Band:	Frequency range [kHz]
6	5 900 – 6 200
7	7 200 – 7 300 *
7	7 300 – 7450
9	9 400 – 9 900
11	11 600 – 12 100
13	13 570 – 13 870
15	15 100 – 15 800
17	17 480 – 17 900
18	18 900 – 19 020
21	21 450 – 21 850
25	25 670 – 26 100

Particularities



Particularities

Two seasonal periods:

- Summer-Season A, Schedule A
- Winter-Season B, Schedule B



Schedule A:

- From last Sunday of March until Last Sunday of October

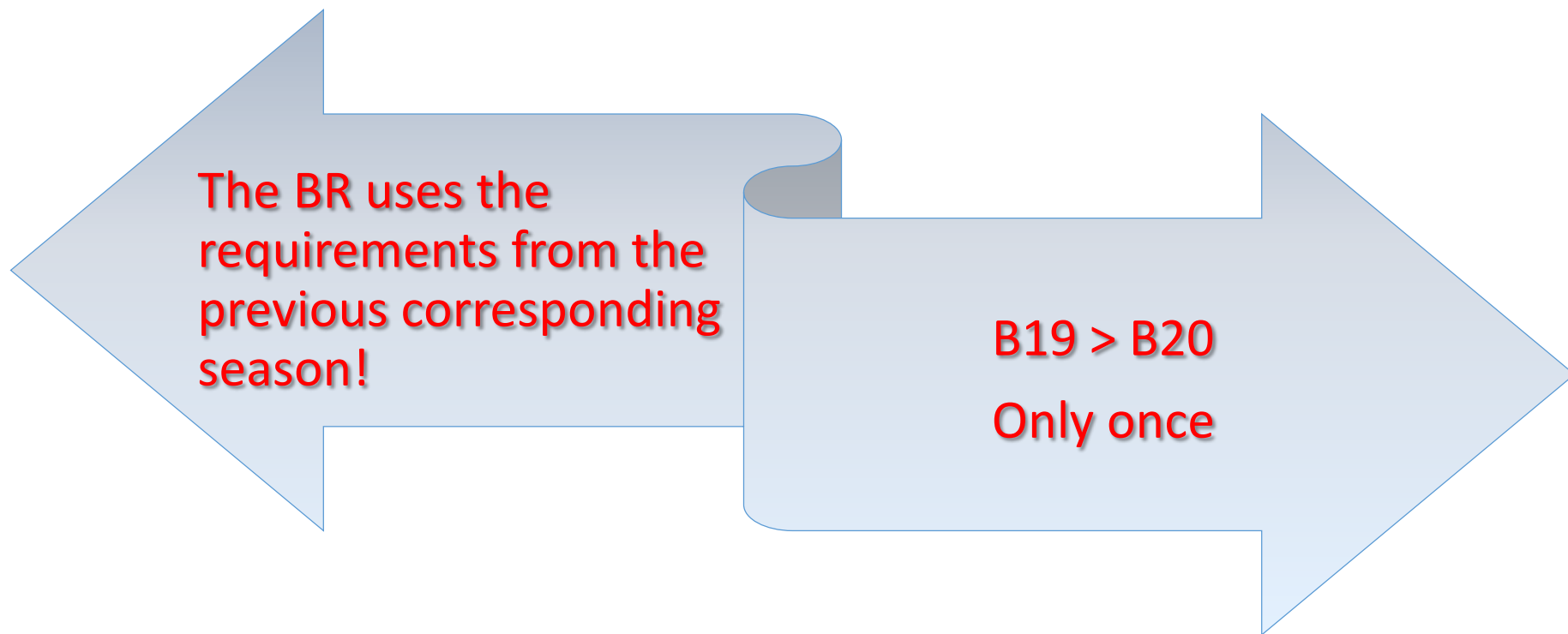
Schedule B:

- From last Sunday of October until last Sunday of March

Season B20 - current season

Schedule title	Date of edition	Date limit for submissions
B20 Tentative 1 (B20T1)	End of August 2020	16 August 2020
B20 Tentative 2 (B20T2)	End of September 2020	20 September 2020
B20 Schedule 1 (B20S1)	End of October 2020	18 October 2020
B20 Schedule 2 (B20S2)	End of December 2020	13 December 2020
B20 Final (B20F)	End of April 2021	21 April 2021

No requirements are submitted?



Next season the requirements will be suppressed from the schedule

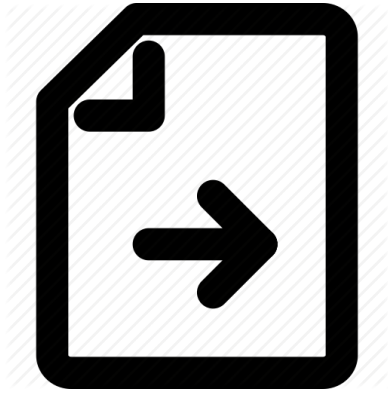
Notification - Who can notify?



- Administrations
- Authorized organizations

Administrations could authorize HF broadcasters, managers or other organizations to submit schedules

What to notify?



- Whole schedule, no "modifications"
- Common file format
- [File format for submission of HFBC requirements](#)
- [Example of a requirement file](#)

Via WISFAT

(Web Interface for Submission of Frequency Assignments/allotments for Terrestrial services)

<http://www.itu.int/ITU-R/go/wisfat>

Coordination



- Bilateral and multilateral
- Regional Coordination Groups
- Coordination on a common technical base

HFBC Regional Coordination Groups

ABU-HFC - Asia-Pacific Broadcasting Union - High Frequency Conference



www.abu.org.my

ASBU - Arab States Broadcasting Union



www.asbu.net

HFCC - High Frequency Coordination Conference



www.hfcc.org

HFBC Publication

The CD-ROM publication was discontinued and replaced by free of charge Online publication.

- 11 publications per year:
 - Two Tentative Schedules (T1,T2)
 - Two or three Schedules (S1,S2,S3)
 - Final Schedule (F)



<https://www.itu.int/en/ITU-R/terrestrial/broadcast/HFBC/Pages/Schedule.aspx>

HFBC Schedule contains:

- Monthly updated seasonal schedules.
- Propagation and compatibility analysis.
- Latest versions of the HFBC Reference tables.

On the ITU web site:

Combined schedules as notified in a text format:

<https://www.itu.int/en/ITU-R/terrestrial/broadcast/HFBC/Pages/Schedule.aspx>

HFBC Reference tables:

- Established to identify a requirement.
- Maintained by the BR.
- Common use with HF Regional coordination groups.
- Set of 15 Reference tables (HFBC database):
 - Administrations, Frequency ranges, Broadcasters, Frequency management organizations, Transmitting sites, Antenna types, Languages, Solar activity (SSN), Target area (CIRAF zones), etc.
- Used for the creation of the requirement files.

HFBC Reference tables:

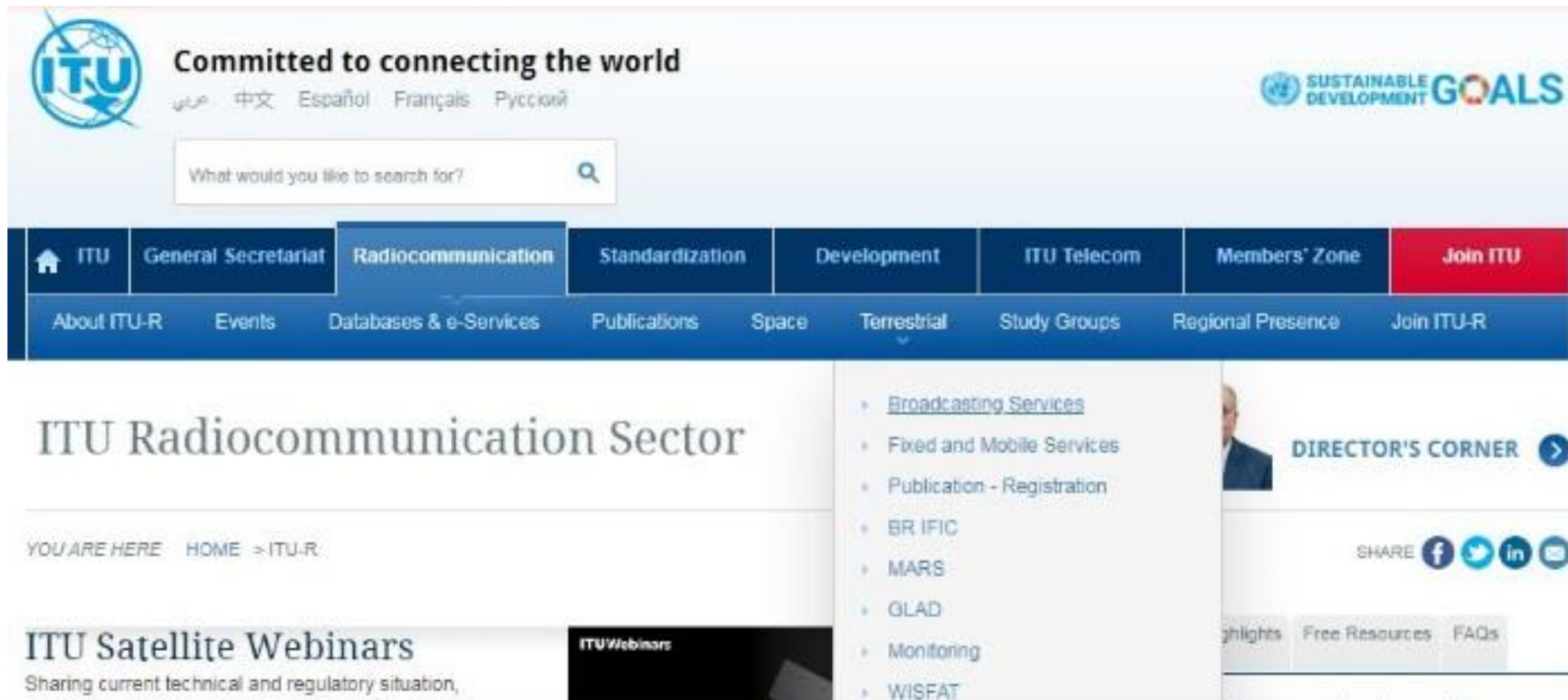
Reference tables

HF Reference tables used for the preparation of requirement files. All files are in ASCII text format.

admin.txt	Administrations
antenna.txt	Transmitting antennas
authoris.txt	Authorized organizations
broadcas.txt	Broadcasters
ciraf.txt	Test points and corresponding CIRAF zones
fmorg.txt	Frequency management organizations
language.txt	Languages based on ISO-3
rngfreq.txt	Frequency bands
season.txt	Seasons
site.txt	Transmitting sites
sunspot.txt	Sunspot numbers

HFBC on the web:

- <https://www.itu.int/en/ITU-R/terrestrial/broadcast/HFBC/Pages/default.aspx>



The screenshot displays the ITU website interface. At the top left is the ITU logo with the tagline "Committed to connecting the world" and language options: العربية, 中文, Español, Français, Русский. To the right is the "SUSTAINABLE DEVELOPMENT GOALS" logo. A search bar asks "What would you like to search for?". The main navigation bar includes: Home, ITU, General Secretariat, Radiocommunication (highlighted), Standardization, Development, ITU Telecom, Members' Zone, and Join ITU. A secondary navigation bar lists: About ITU-R, Events, Databases & e-Services, Publications, Space, Terrestrial, Study Groups, Regional Presence, and Join ITU-R. The main content area features the heading "ITU Radiocommunication Sector" and a breadcrumb trail "YOU ARE HERE HOME > ITU-R". A sidebar on the right lists various services: Broadcasting Services, Fixed and Mobile Services, Publication - Registration, BR IFIC, MARS, GLAD, Monitoring, and WISFAT. Below the sidebar is a "DIRECTOR'S CORNER" section with social media share buttons (Facebook, Twitter, LinkedIn, Email) and links for Highlights, Free Resources, and FAQs. At the bottom left, there is a section for "ITU Satellite Webinars" with the text "Sharing current technical and regulatory situation," and an "ITU Webinars" button.

HFBC on the web:

- HFBC Schedule
- Planning procedure.
- HFBC Reference tables.
- Notification: File format for the requirements, example.
- HFBC Circular letters
- Regional coordination groups
- ITU HFBC software

ITU HFBC software

- Consistent with Article 12 of the Radio Regulations and Res.535(Rev.WRC-03)
- HFBCREQ - Data capture software.
- HFBCVAL - HF Data validation software
- ITUHFBC - HF Calculation software.
- HFBCANT - HF Antenna calculation software

HFBCREQ Data capture software

ITU RR12 submission - new - HFBCREQ

File Display Tools Preferences Help Français Español

Season

Source

No of requirements

All requirements
Click below to select requirement

Enter/Change data as required.

Freq/Band	Start time	Stop time	Start Date	Stop Date	Days Operation
<input type="text"/>	<input type="text" value="00"/> <input type="text" value="00"/>	<input type="text" value="24"/> <input type="text" value="00"/>	<input type="text" value="10/25/2020"/>	<input type="text" value="3/28/2021"/>	<input type="text" value="1234567"/>

Site Site name Target Circls

Ant Code Antenna designation Pwr kW Slow Max Azm Mod Design Freq


Adm Ntf Btc FMD Language Remarks

Save changes Add as a NEW requirement Delete requirement

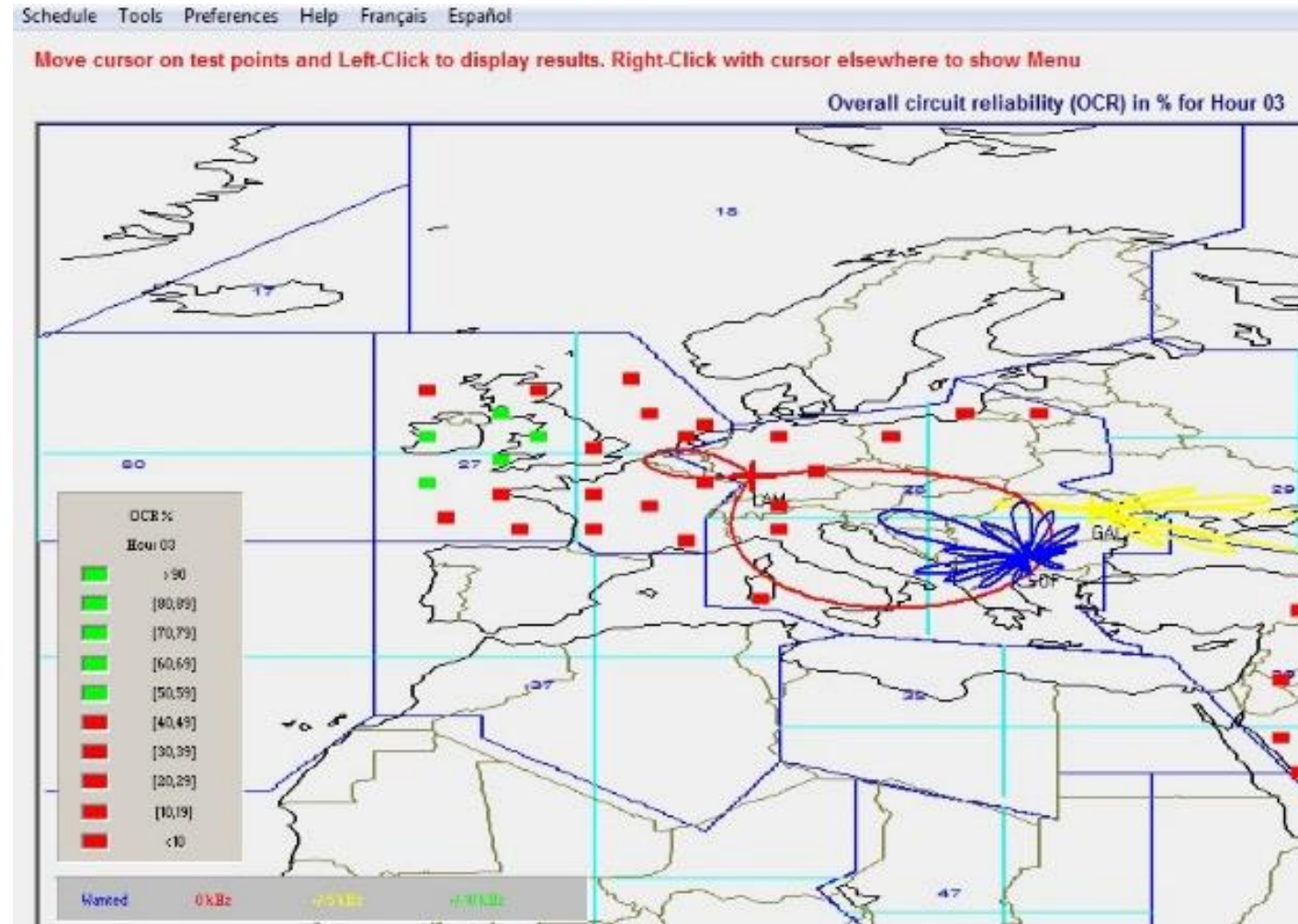
Authorized Notifying Organisation

- ABC, Radio Australia
- AFG, Afghanistan
- AFS, South Africa
- AGL, Angola
- ALB, Albania
- ALG, Algeria
- AND, Andorra
- ARG, Argentina

OK Cancel



ITUHFBC HF Calculation software



HFBCANT Antenna calculation software

HFBC Antennas

Please enter Antenna Code or select from list below
If required, make changes to parameters and click Refresh

Antenna Type

- AHR (100-299)
- CHR (300-499)
- EHR (500-699)
- CH (700-750)
- CT (750-799)
- LPH (800-849)
- LPV (850-874)
- RH (875-924)
- HQ (925-949)
- HX (950-974)
- VM (975-990)

Old Codes (1-75)

Tools

Refresh
Print

Exit

Ground dielectric constant (3 - 80)

Ground conductivity (.00003 - 5.0 S/m)

Operating frequency (2 - 30 MHz)

Number of elements in the same row (9 max)

Number of elements in the same stack (9 max)

Design frequency (2 - 30 MHz)

Height above ground (0.10 - 9.99 Lamda)

Slew angle (0 - 30 deg)

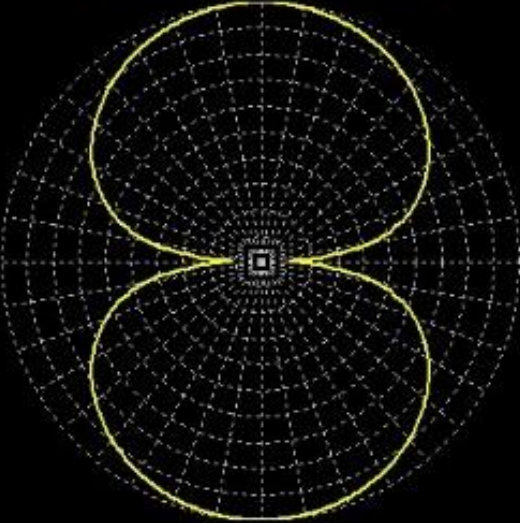
Azimuth at Gain max (degrees)

Elevation at Gain max (degrees)

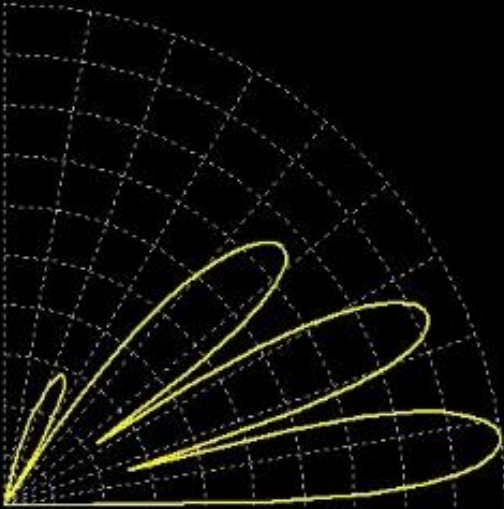
Directivity Gain (dBi)

Floor/Step value (dB)

Horizontal pattern at 8° elevation



Vertical pattern at 0° azimuth



Thank you!

ITU – Radiocommunication Bureau

Questions to brmail@itu.int or brbcd@itu.int

