







Workshop ITU HFBC software

Nedialko Miltchev
ITU-R/Broadcasting Services Division

Introduction to the ITU HFBC software package

- General principles:
 - Consistent with Article 12 and Resolution 535 of WRC-97.
 - Developed in consultation with administrations, broadcasters, and coordination groups.
 - Takes into account the availability of suitable computer hardware by administrations to run the software.

Key features of the software modules

-  **HFBC REQ** - Data Capture software
-  **ITU HFBC** - Calculation software
-  **HFBC VAL** - Data validation software
-  **HFBC ANT** - Antenna calculation software

HFBC REQ

Data capture software

- Capture HF requirements.
- Create and modify requirement files.

HFBC REQ

ITU RR12 submission - M:\BRTSD\BCD\HFBC\B10\B10S1ReadyForPublication\B10T2-15918-CZE.txt - HFBCREQ

File Display Tools Preferences Help Français Español

Season: **B10**

Source: **CZE**

No of requirements: **26**

Enter/Change data as required.

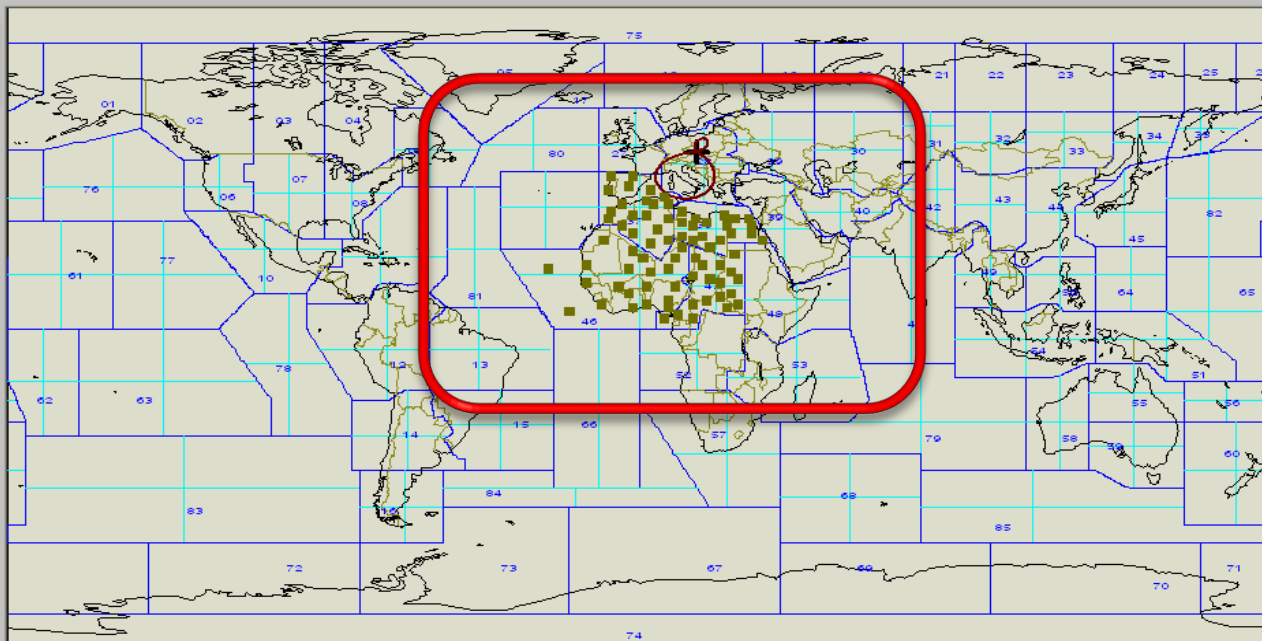
Freq/Band	Start time	Stop time	Start Date	Stop Date	Days Operation	Alt Freq 1	
7355	22 30	23 00	10/31/2010	3/27/2011	1234567		
Site	Site name	Target Cirafs	Alt Freq 2				
LIT	Litomysl, CZE	37,38,46,47					
Ant Code	Antenna designation	Pwr kW	Slew	Max Azm	Mod	Design Freq	Alt Freq 3
146	AHR(S)2/2/0.5	100	0	199	D		
Adm	Ntf	Brc	FMD	Language	Remarks	Data type	
CZE	CZE	RPR	TCH	Eng			

All requirements

Click below to select requirement

- 5930 0700-0800 LIT (1)
- 5930 1600-1630 LIT (2)
- 5930 1700-1730 LIT (3)
- 5930 1730-1800 LIT (4)
- 5930 1800-1830 LIT (5)
- 5930 1900-2000 LIT (6)
- 5930 2000-2100 LIT (7)
- 5930 2100-2130 LIT (8)
- 5930 2130-2230 LIT (9)
- 5930 2300-2400 LIT (10)
- 5980 0500-0530 LIT (11)
- 5995 1830-1900 LIT (12)
- 6055 1230-1300 LIT (13)
- 6055 1300-1400 LIT (14)
- 7280 1630-1700 LIT (15)
- 7345 0300-0330 LIT (16)
- 7345 0330-0430 LIT (17)
- 7345 0800-0830 LIT (18)
- 7345 1100-1130 LIT (19)
- 7355 2230-2300 LIT (20)**
- 7410 0100-0300 LIT (21)
- 7420 1530-1600 LIT (22)
- 9855 0430-0500 LIT (24)
- 9880 1130-1230 LIT (25)
- 21745 1000-1100 LIT (26)

Save changes Add as a NEW requirement Delete requirement Clear all fields



ITU HFBC

Calculation software

- The main HF module, linked with the data capture module.
- Propagation prediction: calculates propagation data; results in tabular form or on maps.
- Compatibility analysis: calculates interference from other requirements; identifies interference sources; results are shown on maps.

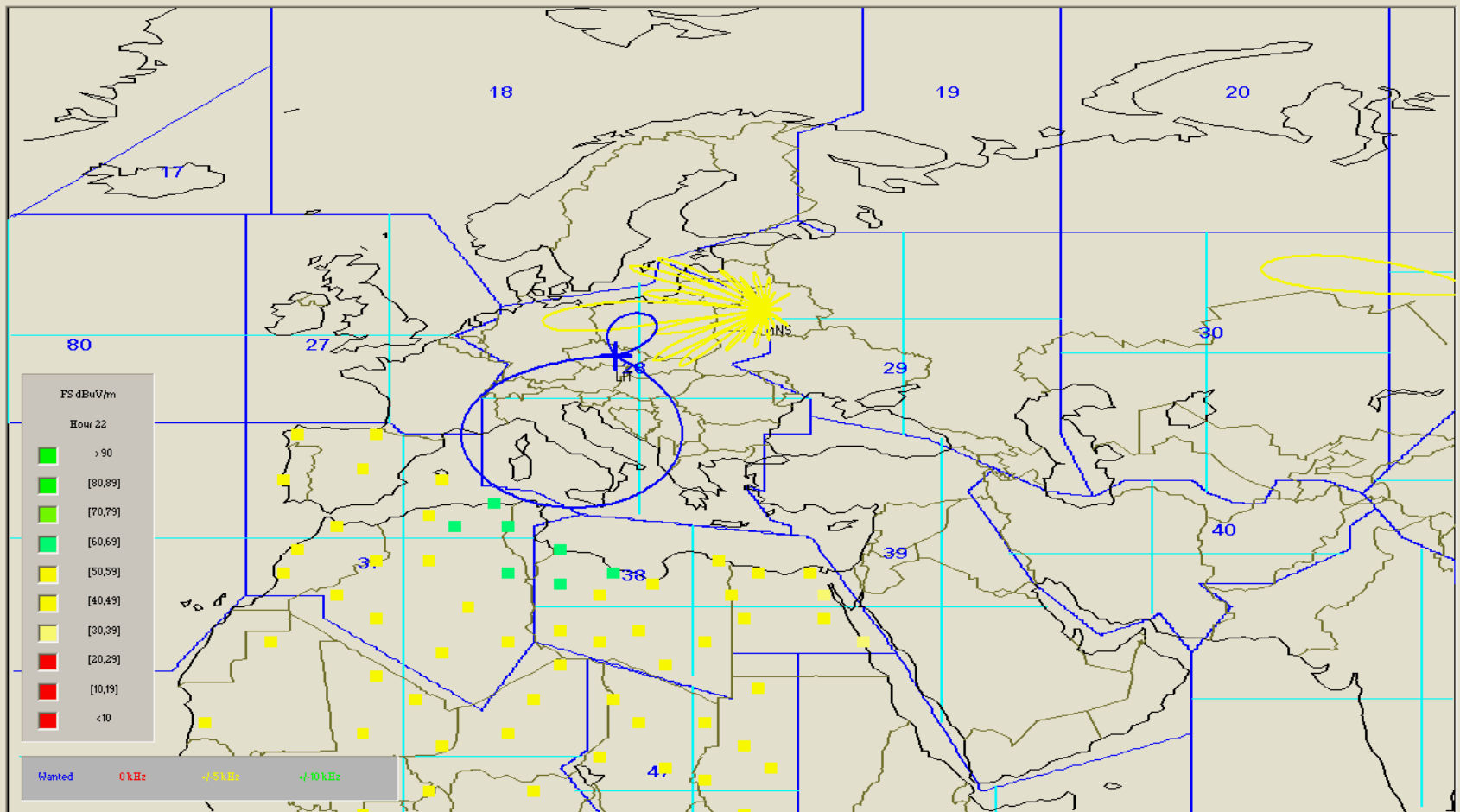
ITU HFBC

GO TO COMPATIBILITY ANALYSIS MODE - B10S1 on ITU HFBC CD-ROM - ITU HFBC 5.2

Schedule Tools Preferences Help Français Español

Move cursor on test points and Left-Click to display results. Right-Click with cursor elsewhere to show Menu

Field strength in dBuV/m for Hour 22



Wanted: (4378) 7355 D 2230-2300 CZE TCH LIT 37.38 46.47
Unwanted: (68) 7355 D 2200-0400 USA FCC RND 3-5.9-11.17.27
Unwanted: (1179) 7360 D 2155-2400 CHN RTC BJI 42SE,435W
Unwanted: (2838) 7360 D 1200-2400 BLR SDT MNS 27.28
Unwanted: (3437) 7350 D 2200-2300 RUS GFC NVS 43.44

HFBC VAL

Data validation software

- Designed to assist administrations to validate quickly their HFBC requirement files:
 - For Article 12 HF bands.
 - For Regional coordination groups bands.
- Remove requirements with frequencies out of the Article 12 bands.

HFBC VAL

HFBC VAL 2.0 - M:\BRTSD\BCD\HFBC\B10\B10S1ReadyForPublication\B10T2-15918-CZE.txt

File Edit Validate Tools Help Français Español

4 error(s); Total number of requirements = 26

; B10 CZE 30-AUG-2010 TCH

FREQ	STRT	STOP	CIRAF	ZONES	LOC	POWR	AZIMUTH	SLW	ANT	DAYS	FDATE	TDATE	MOD	AFRQ	LANGUAGE	ADM	BRC	FMO	REQ#	OLD	ALT1	ALT2	ALT3	NOTES	
5930	0700	0800	07	07	LIT	100	260	0	101	1234567	311010	270311	D		FraDeu	CZE	RPR	TCH	8086						
3333	1600	1630	27,28		LIT	100	260	0	101	1234567	311010	270311	D		Deu	CZE	RPR	TCH	8087						
5930	1700	1730	99		LIT	100	290	0	206	1234567	311010	270311	D		Eng	CZE	RPR	TCH	8089						
		1800	27,28		LIT	100	260	0	206	1234567	311010	270311	D		Fra	CZE	RPR	TCH	8090						
5930	1800				LIT	100	290	0	206	1234567	311010	270311	D		Eng	CZE	RPR	TCH	8091						
5930	1900	2000	27,28,36,37		LIT	100	245	0	894	1234567	311010	270311	D		SpaFra	CZE	RPR	TCH	8094						
5930	2000	2100	27,28,36,37		LIT	100	245	0	894	1234567	311010	270311	D		SpaCes	CZE	RPR	TCH	8093						
5930	2100	2130	27,28		LIT	100	290	0	206	1234567	311010	270311	D		Eng	CZE	RPR	TCH	6346						
5930	2130	2230	13,14,37		LIT	100	365	0	894	1234567	311010	270311	D		SpaCes	CZE	RPR	TCH	14123						
5930	2300	2400	3-10		LIT	100	310	0	146	1234567	311010	270311	D		FraEng	CZE	RPR	TCH	8084						
5980	0500	0530	28-30		LIT	100	60	0	206	1234567	311010	270311	D		Rus	CZE	RPR	TCH	8096						
5995	1830	1900	28-31		LIT	100	60	0	206	1234567	311010	270311	D		Rus	CZE	RPR	TCH	12238						
6055	1230	1300	28-31		LIT	100	60	0	206	1234567	311010	270311	D		Rus	CZE	RPR	TCH	8097						
6055	1300	1400	18,27,28		LIT	100	0	0	927	1234567	311010	270311	D		DeuCes	CZE	RPR	TCH	6351						
7280	1630	1700	38-40		LIT	100	125	0	891	1234567	311010	270311	D		Ces	CZE	RPR	TCH	14122						
7345	0300	0330	12-16		LIT	100	245	0	894	1234567	311010	270311	D		Spa	CZE	RPR	TCH	15132						
7345	0330	0430	7-10		LIT	200	310	0	146	1234567	311010	270311	D		CesEng	CZE	RPR	TCH	15131						
7345	0800	0830	27		LIT	100	290	0	206	1234567	311010	270311	D		Eng	CZE	RPR	TCH	6360						
7345	1100	1130	27-29		LIT	200	0	0	926	1234567	311010	270311	D		Deu	CZE	RPR	TCH	6358						
7355	2230	2300	37,38,46,47		LIT	100	199	0	146	1234567	311010	270311	D		Eng	CZE	RPR	TCH	6392						
7410	0100	0300	7-10		LIT	100	310	0	146	1234567	311010	270311	D		EngSpaCes	CZE	RPR	TCH	14074						
7420	1530	1600	29-32		LIT	100	60	0	206	1234567	311010	270311	D		Rus	CZE	RPR	TCH	14143						
9790	0000	0100	12-16		LIT	100	245	0	878	1234567	311010	270311	D		SpaCes	CZE	RPR	TCH	8085						
9855	0430	0500	38,39,48		LIT	100	144	0	892	1234567	311010	270311	D		Eng	CZE	RPR	TCH	6369						
9880	1130	1230	18,28		LIT	100	356	0	878	1234567	311010	270311	D		EngCes	CZE	RPR	TCH	8101						
21745	1000	1100	37,46		LIT	100	210	0	878	1234567	311010	270311	D		EngCes	CZE	RPR	TCH	6387						

HFBC ANT

Antenna calculation program

- Theoretical approach based on Recommendation ITU-R BS.705
- Calculates the radiation patterns and gain of the most common used HF antennas.
- Provide quick reference for administrations and broadcasters in identifying antennas.

HFBC ANT



English
Español
Français

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

Antenna Code

800

Antenna Type

Horizontal log-periodic

Antenna designation

LPH18/35/30/30/3/26/89

Ground dielectric constant (3 - 80)

4

Shortest to longest element distance (m)

35

Ground conductivity (.00003 - 5.0 S/m)

0.01

Height of the shortest element (m)

30

Operating frequency (2 - 30 MHz)

10

Height of the longest element (m)

30

Number of elements (20 max)

18

Feeder impedance (999 ohm max)

89

Half-length of the shortest element (m)

3

Half-length of the longest element (m)

26

Azimuth at Gain max (degrees)

0

Directivity Gain (dBi)

11.8

Elevation at Gain max (degrees)

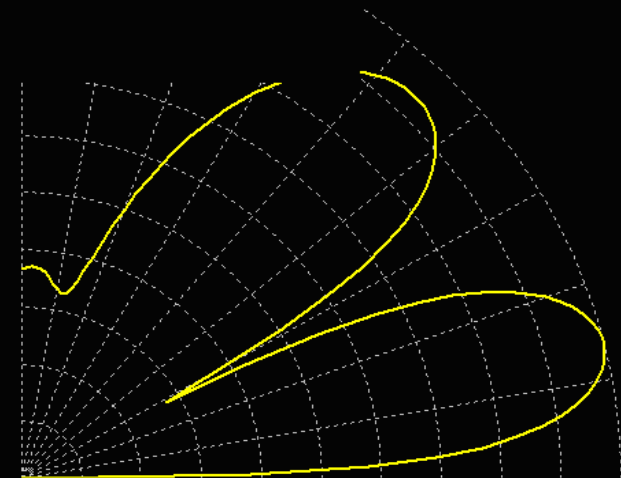
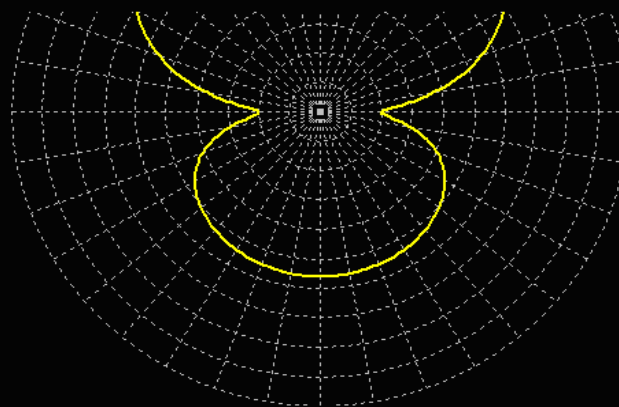
14

Floor/Step value (dB)

-30/3

Horizontal pattern at 14° elevation

Vertical pattern at 0° azimuth



Thank you for your attention

Questions

