



BR software tools for terrestrial services

ITUEvents

4th ITU Regional Frequency Coordination Meeting for Central America and the Caribbean Region

On the use of the VHF and UHF bands

11 - 14 September 2018
Belize City, Belize

www.itu.int/go/belize



Organized with the support of:



Organized by:



Andrea Manara

Broadcasting Services Division
International Telecommunication Union



Agenda

- **Overview of BR International Frequency Information Circular (BRIFIC): software and database**
- **Overview of BR online tools**
 - **Online Validation and eMIFR tools, WISFAT (official submission to the BR) for all terrestrial services**
 - **The eBCD2.0 platform for broadcasting services**
 - **eTools: Compatibility analyses calculations**
- **Compatibility Analyses Display software (CA Display)**



BR IFIC

For subscribers

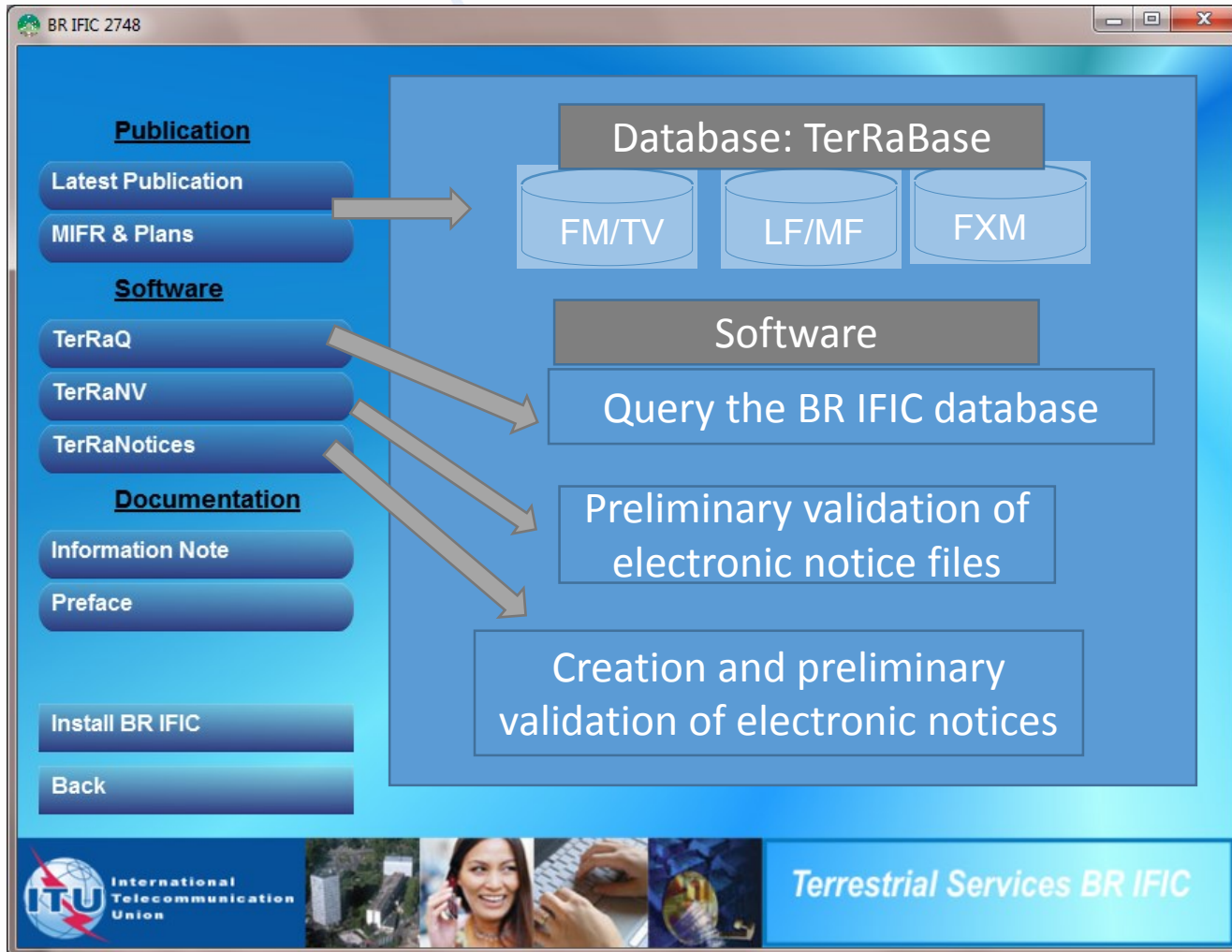
BR International Frequency information Circular

- Provide information on the frequency assignments and allotments recorded in the Master International Frequency Register and World-wide or Regional Plans, as well as on frequencies prescribed for common use.
- Published once every two weeks
- Arabic, Chinese, English, French, Russian and Spanish

BR IFIC (Terrestrial Services)



BR IFIC Contents



Install on PC
Run from the DVD

More during
demo session!

TerRaQ 2016 [PROD Live]

File View Tools Preferences Window Help

Session Queries Tracker

- New GPQ Query
- New LPQ Query
- New SQL Query
- Quick Queries
- Open Existing Query
- Current BRIFIC Publication Content

Name	Type	Is New	
Query_1	GPQ	Yes	X N

Query Settings

- Administrative Data
- Frequency Data
- Geographic Data
- Coordination Data

Fragment(s) BR Assigned Id(s) Administration(s) Station Information Notice Information Receipt Date(s)

For this query, select assignments and / or notices notified by the following Administrations

Available Administrations: AFG, AFS, AGL, ALB, ALG, AND, ARG, ARM, ARS, ATG, AUS

Selected Administrations: MEX

Specify unique identifier(s) given by the Administration

Unique Id given by the Administration

Query Definition [Query_1] Summary Last Run Query Results

Query_1: 303 rows Sorting by [Identifier assigned by the BR - ASC]

List view World map view Spectrum occupancy

Show problematic items only (no validation applied) Check all Uncheck all

	Identifier assigned by the BR	Fragment	Administration	Unique identifier given by the Administration	Receipt Date	Assigned Frequency	Geographic Coordinates	Intent	Geographic Area	Class of Station	Site Name
1	117006940	NTFD_RR	MEX	TVXHCD00P00CAM0022	24/01/2017	521 MHz	91°50'31"W - 18°39'21"N	RECORDED	MEX	BT	CD DEL CARMEN CAMP
2	117006941	NTFD_RR	MEX	TVXHAN00P00CAM0022	24/01/2017	521 MHz	90°34'41"W - 19°49'11"N	RECORDED	MEX	BT	CAMPECHE CAMP
3	117006942	NTFD_RR	MEX	TVXHOC00P00CHP0032	24/01/2017	581 MHz	92°06'04"W - 16°54'32"N	RECORDED	MEX	BT	OCOSINGO CHIS
4	117006943	NTFD_RR	MEX	TVXHCSA00P00CHP0015	24/01/2017	479 MHz	92°41'19"W - 16°44'12"N	RECORDED	MEX	BT	SAN CRISTOBAL DE LAS CASA CHIS
5	117006944	NTFD_RR	MEX	TVXHCSA00C01CHP0015	24/01/2017	479 MHz	92°43'30"W - 15°52'20"N	RECORDED	MEX	BT	Angel Albino Corzo CHIS
6	117006945	NTFD_RR	MEX	TVXHCSA00C02CHP0015	24/01/2017	479 MHz	93°00'48"W - 16°42'30"N	RECORDED	MEX	BT	Chiapa de Corzo CHIS
7	117006946	NTFD_RR	MEX	TVXHCSA00C03CHP0015	24/01/2017	479 MHz	93°43'18"W - 16°41'42"N	RECORDED	MEX	BT	Cintalapa CHIS
8	117006947	NTFD_RR	MEX	TVXHCSA00C04CHP0015	24/01/2017	479 MHz	93°22'28"W - 16°46'01"N	RECORDED	MEX	BT	Ocozocuaulia CHIS
9	117006948	NTFD_RR	MEX	TVXHCSA00C05CHP0015	24/01/2017	479 MHz	91°58'56"W - 17°30'33"N	RECORDED	MEX	BT	Palenque CHIS
10	117006949	NTFD_RR	MEX	TVXHCSA00C06CHP0015	24/01/2017	479 MHz	93°12'30"W - 15°41'29"N	RECORDED	MEX		117006948 - MEX - 479 MHz - 6M00 Details Allocations details
11	117006950	NTFD_RR	MEX	TVXHCSA00C07CHP0015	24/01/2017	479 MHz	92°42'55"W - 17°08'31"N	RECORDED	MEX		Broadcasting station, television



Online Validation

More than TerRaNotices:
Validation also against the MIFR database

The [Online Validation](#) tool allows administrations to validate their notice file, before official submission via WISFAT

The processing system is currently **ONLINE**
Contact: brtpr_dp@itu.int

New Validation Logout
Refresh

Jobs History for user: manara

Test Packages 31412: click to show all

Job summary [Delete](#)

job id	job name	job status
31412	ugatest	Completed

Job Input

Adm	E-notice file	Number of Notices
UGA	UGAtest.txt	1

Job Output

Parse status: **T_PARSE_HAS_WARNINGS**

Total number of errors: 4

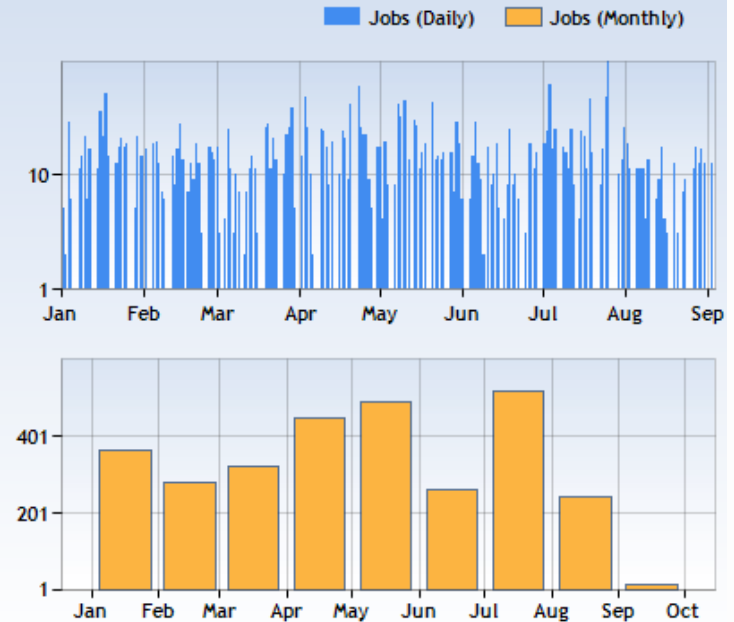
Total number of warnings: 1

Notice 1 (Line 4) - GT1/MODIFY

Line 4 : DeepVal Warning - Could not perform further notices validation checking, due to previous errors.
Line 1 (4) : Error : Either t_ref_plan_cfg OR t_sys_var & t_rx_mode should be submitted for this notice type.
Line 17 (20) : Error : t_ref_plan_cfg : invalid value or make sure that the value is typed correctly
Line 9 (12) : Error : t_site_nae : is EITHER not applicable in this case OR check the spelling.
Line 1 : Error : t_site_name : mandatory key missing or the associated key value is invalid.

Reuses TerRaNotice validation software and eTools functionalities in a SOA architecture

2018 Statistics



- 50 Administrations
- 90 Users
- > 700 Validation jobs

More during demo session!



eMIFR



Delivered prior to WRC-15



MIFR (Terrestrial Services) on-line query (BETA release)

Query system for the simultaneous retrieval of data from the terrestrial portion of the MIFR (FMTV, LFMF and FXM)

MIFR (Broadcasting)
 MIFR (FXM)
 MIFR (all)

MIFR (ALL): Selection Criteria

Administration	Geographic Area	Notice Type	Class of Station
AFG > >> < <<	ABW > >> < <<	1A1 > >> < <<	AL > >> < <<
AFS	AFG	1A2	FA
AGL	AFS	1A4	FB
ALB	AGL	1A5	FC
ALG	AIA	1A7	FD
ARG	ALB	1B1	FG
ARM	ALG	1C1	FL
ARS	ALS	1Z0	FP
			AM
			BC
			BT

Recorded
 Pending

Assigned Frequency MHz: f_{min} f_{max} f_{min} ≤ Assigned Frequency ≤ f_{max} only

Unique Id. code given by Administration:
 Identifier assigned by the BR: from to

Date of Receipt (from):
 Date of Receipt (to):

Site Name: TORINO

MIFR (ALL) | IFL: 080623514

Administrative

Emission Characteristics

Assigned Frequency (MHz) **1052** Nature of Service
 Reference (carrier) Frequency
 Class of Emission **PXX-** Energy dispersal (kHz)
 Bandwidth Code **700K** System Type Code(s)

Station and Site Information

Operations

Operation 1

General Characteristics

Power Type **X** Polarization
 Power to the Antenna (dBW) **30** Antenna Directivity
 Radiated Power (dBW) **30 E** Azimuth of Maximum Radiation (°)
 Maximum Antenna Gain (dB) Maximum Effective Antenna Height (m)
 Maximum Gain Toward the Local Horizon (dB) Height of Antenna Above Ground Level (m)
 Gain Type Elevation Angle (°)
 Maximum Power Density (dBW/Hz) Beamwidth (°)
 Reference Antenna

Receiving Station Information

RX1

Site Name Geographical Type **CIRCLE**
 Geographical Area Zone ID
 Region **1** Geographical coordinates **007°39'00" E - 45°11'00" N**
 Radius (km) **80**

Findings Information

MIFR (All) Total number of records 10. Click on headers to sort

Export to Excel | Google Earth

BR Id	Adm	Geo Area	Site Name	Location	Assigned Frequency (MHz)	Intent	Notice Type	Stn
080015495	I	I	TORINO	007°44'00" E - 45°02'00" N	0.657	RECORDED	1A2	BC
080225070	I	I	TORINO COLLINA	007°42'00" E - 45°06'00" N	212.5	RECORDED	1A4	BT
080606153	I	I	TORINO COLLINA	007°40'00" E - 45°04'00" N	522	RECORDED	1A4	BT
080607250	I	I	TORINO	007°44'00" E - 45°02'00" N	546	RECORDED	1A4	BT
080608609	I	I	TORINO	007°39'00" E - 45°04'00" N	578	RECORDED	1A4	BT
080610086	I	I	TORINO	007°44'00" E - 45°02'00" N	626	RECORDED	1A4	BT
103046152	I	I	TORINO	007°44'00" E - 45°02'00" N	746	RECORDED	TB2	BT
080623514	I	I	TORINO CASELLE	007°39'00" E - 45°11'00" N	1052	RECORDED	1B1	AM
080623522	I	I	TORINO CASELLE	007°39'00" E - 45°12'00" N	1056	RECORDED	1B1	AM
080623683	I	I	TORINO POIRINO	007°52'00" E - 44°55'00" N	1116	RECORDED	1B1	AM

Export data to Excel, Google Earth

More during demo session!



WISFAT

Web Interface for Submission of Frequency Assignments/allotments for Terrestrial Services

Submission of Notices for Terrestrial Services

YOU ARE HERE [HOME](#) > [ITU-R](#) > [TERRESTRIAL SERVICES](#) > [TERRESTRIAL PUBLICATION AND REGISTRATION DIVISION](#) > [SUBMISSION OF NOTICES FOR TERRESTRIAL SERVICES](#)

SHARE    

Submission of frequency assignment/allotment notices for terrestrial services to the BR for the update of the Master International Frequency Register (MIFR) and/or for the modification of Plans shall be made via the secured web interface WISFAT (Web Interface for Submission of Frequency Assignments/allotments for Terrestrial Services).

As stipulated in BR Circular-letter CR/297 dated 20 January 2009, only notices received via WISFAT, are considered as official submissions.

Access to this interface is restricted to registered notifiers, therefore administrations shall appoint notifier(s) for their administration and inform the BR by sending an official e-mail to brmail@itu.int giving the TIES username, name, position and official e-mail address.

Before submitting notices via WISFAT, administrations are strongly recommended to validate their submissions using the [Online Validation](#) tool. Please note that incomplete notices will be returned to the notifying administration in accordance with provision No. 11.27 of the Radio Regulations.

In addition, administrations are encouraged when submitting many files on the same day, to compress their files into one single file by using for example WinZip or WinRAR.

RELATED
LINKS

CONTACT
PERSON

[Notification Tutorial](#)

[Guidance for notification for Terrestrial Services](#)

Validation of Terrestrial Frequency Assignment/Allotment Notices

This tool is to assist administrations to validate their frequency assignment/allotment notices before their official submission via WISFAT.

- ▶ [How to use the online validation tool](#)

[Access to Online Validation](#)

For Official Submission of notices

This web interface is accessible only to registered notifiers, having a TIES account.

- ▶ [WISFAT Information document](#)
- ▶ [WISFAT Video example](#)

[Access to WISFAT](#)



eBCD2.0 platform for broadcasting services

[Portal description](#)



Objectives

Bring the BR closer to Administrations with added-value services

- Up-to-date broadcasting data
- Special Section at publication date
- Calculation-on-demand
- Easily follow-up on plan modification procedures and related deadlines

Outcome

- Reduce workload on both BR and administrations
- Reduce the need for printed documents

not TIES users? Use user1 credential
N.B. TIES email addresses are not be supported any longer as of September 2017

Output

eQry

ePub

eTools

myAdmin

Focal point only

TIES users

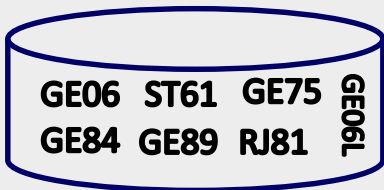


eBCD2.0
Broadcasting Online



eQry

“Online search on
Plans and MIFR”



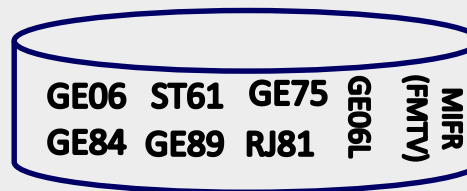
Read-Only copy of BR
Database (Updated daily)

Search by:

- Administration
- Geographic Area
- Frequency
- Administration Unique Identifier
- BR Identification number
- Status (Recorded/Published)
- Site/Allotment name

ePub

“Special Sections,
the publication day!”



Database Snapshots
at publication date

Search by:

- BR IFIC number
- Administration
 - My notifications
 - Notifications which affects me



"On-demand test calculations"

eTools

2018 statistics

More than **5500 jobs** run by **225 users** from **95 Administrations**

Calculation Type

GE06D Plan Modification

GE06D Compatibility Analyses

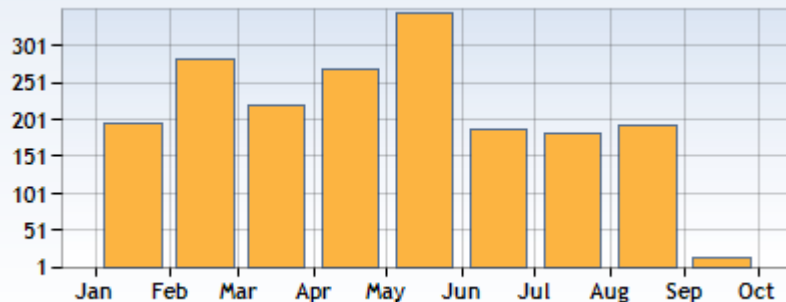
GE84 Compatibility Analyses

CA Compatibility Analyses



RJ81 Plan modification and what-if studies

ITU-R P.1812 v4 & P.1546 v5



Back-end infrastructure

Calculation farm



30 processes

ITU internal farm: 30 processes distributed in such a way to minimize waiting time.



eTools: e-notice submission

GE06, RJ81, CA Compatibility

GE84

eTools

Validate e-notice files

Upload e-notices

Multiple files from different administrations.

Complete submission

The Online Validation (reuse TerRaNotices software in a SOA architecture) was integrated for GE84 calculation. Integration planned also for GE06, RJ81 and the CA compatibility software



The ITU distributed processing infrastructure will treat your test submission and inform you at completion!



Check your E-mail account!



eTools: job processing, privacy and collaboration

Job processing

The processing system is currently **ONLINE** (28 processes available)

Please select the calculation type

CA_compat CA_compat

New Calculation

Refresh manara

Jobs History for user: manara

Test Packages: click to hide all

Job Id	Job Name	Job Status	Job Type	Date of Request	Date of Start Run	Date of Completion
34977	1st iteration	Success	CA_compat	3/3/2017 8:03:32 PM	3/4/2017 11:56:00 AM	3/4/2017 12:00:06 PM
35012	testVIR	Failed	CA_compat	3/6/2017 5:20:07 PM	3/6/2017 5:20:09 PM	3/6/2017 5:20:10 PM
34912	test	Success	CA_compat	3/2/2017 2:59:18 PM	3/2/2017 3:20:17 PM	3/2/2017 3:21:28 PM

Job summary [Delete](#) [Share](#)

job id	job name	job status
35012	testVIR	Failed

Job Input

Adm	E-notice file	Number of Notices
USA	testVIR.txt	1

Job Output: ERROR

Problem parsing notices:
Missing effective antenna height pattern for adm: USA site name: CHARLOTTE AMALIE

Please contact brbcd@itu.int if the error message is unclear

Privacy and collaboration

Jobs (e-notice and results) are owned and visible ONLY by submitter...BUT...



... facilitate coordination!



...you can now share them with other eBCD registered users! (web2.0)



Around **200 jobs** shared by **72 users** from **45 Administrations**





eTools: Compatibility calculations



Interference calculations between **new requirements** (from electronic notification files) and **existing MIFR notices and recorded assignments**

Job summary		
Delete Share		
job id	job name	job status
34899	test	Success

Job Input		
Adm	E-notification file	Number of Notices
TRD	TRD_34869_IN.txt	1

Job Output	
Download results	

MS Access mdb file to be visualized with CA Display

Similar software was instrumental in planning activities in regional organizations

ATU (2012-2013)

ASMG (2014-2015)

- Based on the EBU software developed for the RRC06 planning
- Main changes
 - Propagation model ITU-R P.1546-5 (refractive index correction) vs ITU-R P.1546-2 (propagation zones)
 - Protection ratios for all digital standards (vs. DVB-T only)

More during demo session!



eTools: RJ81 plan modification and what-if studies

Following CITELE requests (2014-2015)

[eTools Disclaimer](#) [eTools Documentations](#)
The processing system is currently **ONLINE** (28 processes available)

Please select the calculation type

RJ81 **RJ81 what-if studies** **Beta Release**

Job Input

Adm	E-notice file	Number of Notices
ARG	ARG_13493_IN.txt	2

Job Output

Proposed Modification	Administrations with incompatibilities
760kHz_LU6	CHL B ARG
1140kHz_LU22	CHL ARG

Select the proposed modification	Select the affected protected station
All	All

RJ81

- Plan Modification
- What-if studies
- What-if studies configurable Enom

Results sw_50%_A sw_BC gw_D gw_N

ID Number	Frequency Assigned (kHz)	Country	Station Name	Class of Station	BR Serial Number Affected	Frequency Assigned Affected (kHz)	Country Affected	Station Name Affected	Class of Station Affected	RJ81 List Affected	Time of Operation	Azimuth (deg)	Distance (km)	Symbol	Protected Value (mV/m)	NFS (mV/m)	NFS or EU before (mV/m)	EU after (mV/m)	Note
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	0	14	Y	2.65	2.39	4.56	5.15	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	20	14	Y	2.65	2.39	4.56	5.15	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	40	14	Y	2.65	2.39	4.56	5.15	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	60	14	Y	2.65	2.41	4.56	5.16	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	80	14	Y	2.65	2.42	4.56	5.16	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	100	14	Y	2.65	2.44	4.56	5.17	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	120	14	Y	2.65	2.46	4.56	5.18	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	140	14	Y	2.65	2.48	4.56	5.19	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	160	14	Y	2.65	2.5	4.56	5.2	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	180	14	Y	2.65	2.51	4.56	5.21	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	200	14	Y	2.65	2.51	4.56	5.21	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	220	14	Y	2.65	2.5	4.56	5.2	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	240	14	Y	2.65	2.49	4.56	5.2	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	260	14	Y	2.65	2.48	4.56	5.19	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	280	14	Y	2.65	2.46	4.56	5.18	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	300	14	Y	2.65	2.44	4.56	5.17	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	320	14	Y	2.65	2.42	4.56	5.16	
1	760	ARG	LU6	B	090001717	760	B	PLANALTO	B	A	N	340	14	Y	2.65	2.4	4.56	5.16	
1	760	ARG	LU6	B	081010190	760	B	CANDELARIA	C	A	N	200	11	Y	4.18	3.63	7.25	8.11	





eTools: ITU-R P series calculations

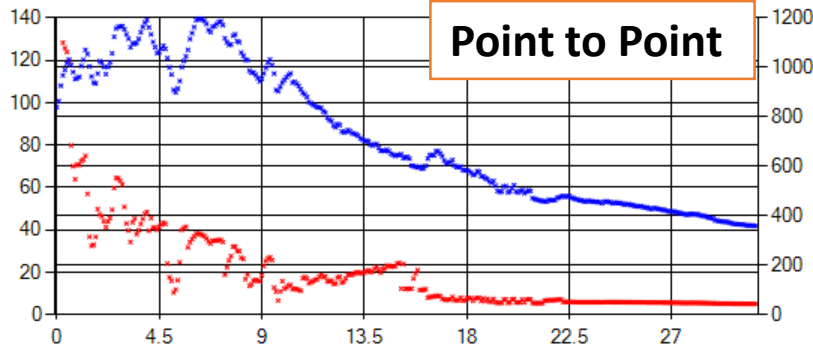
P.1812-4(07-15)

Beta Release!

Propagation prediction using terrain profile (deterministic model)

- 30 MHz - 3 GHz
- 0.25 km - 3000 km
- 1% < time < 50%
- 1% < locations < 99%
- Rx and Tx hgt agl <= 3km

SRTM3 terrain database 3 arc-sec resol. (90 m)
Planned to move to 1 arc-sec (30m) early 2018



Point to Point

P.1546-5(09-13)

Beta Release!

Propagation prediction (empirical model)

- 30 MHz - 3 GHz
- 1 km - 1000 km
- 1% < time < 50%
- 1% < locations < 99%
- TX eff hgt <= 3km

Terrain database can be used (clearance angle correction) to improve accuracy

Point to Area



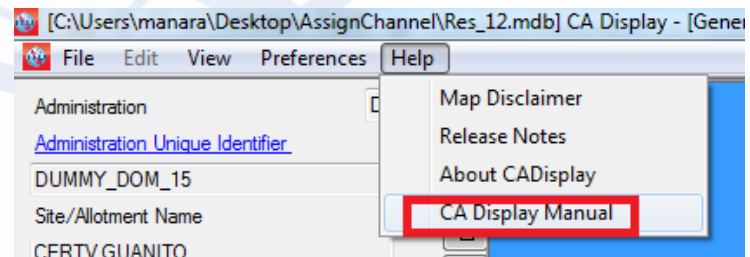
More during demo session!



CA Display

- Standalone application for the visualization of compatibility analyses results and search for new channels
- Web-based installation from the **ITU Regional Frequency Coordination for Central America and Caribbean** [web page](#)
- Automatic updates (check for updates at application startup)
- Input: MS Access database downloaded from eTools
- Possibility to perform detailed one-to-one interference calculations

Manual available from
the Help Menu





CA Display

Compatibility status

Administration: DOM → All

Type of Analysis:

- Digital-to-Digital
- Digital-to-Analogue
- Analogue-to-Digital

Show only pairs of requirements with calculated interference

Frequency:

- UHF(470-698 MHz)

Margin:

- Do not set a filter on Margin
- Maximum Margin (dB) []
- Minimum Margin (dB) []

[C:\Users\manara\Desktop\AssignChannel\DOM_HTI_1808.mdb] CA Display - [Selected Compatibility Status]

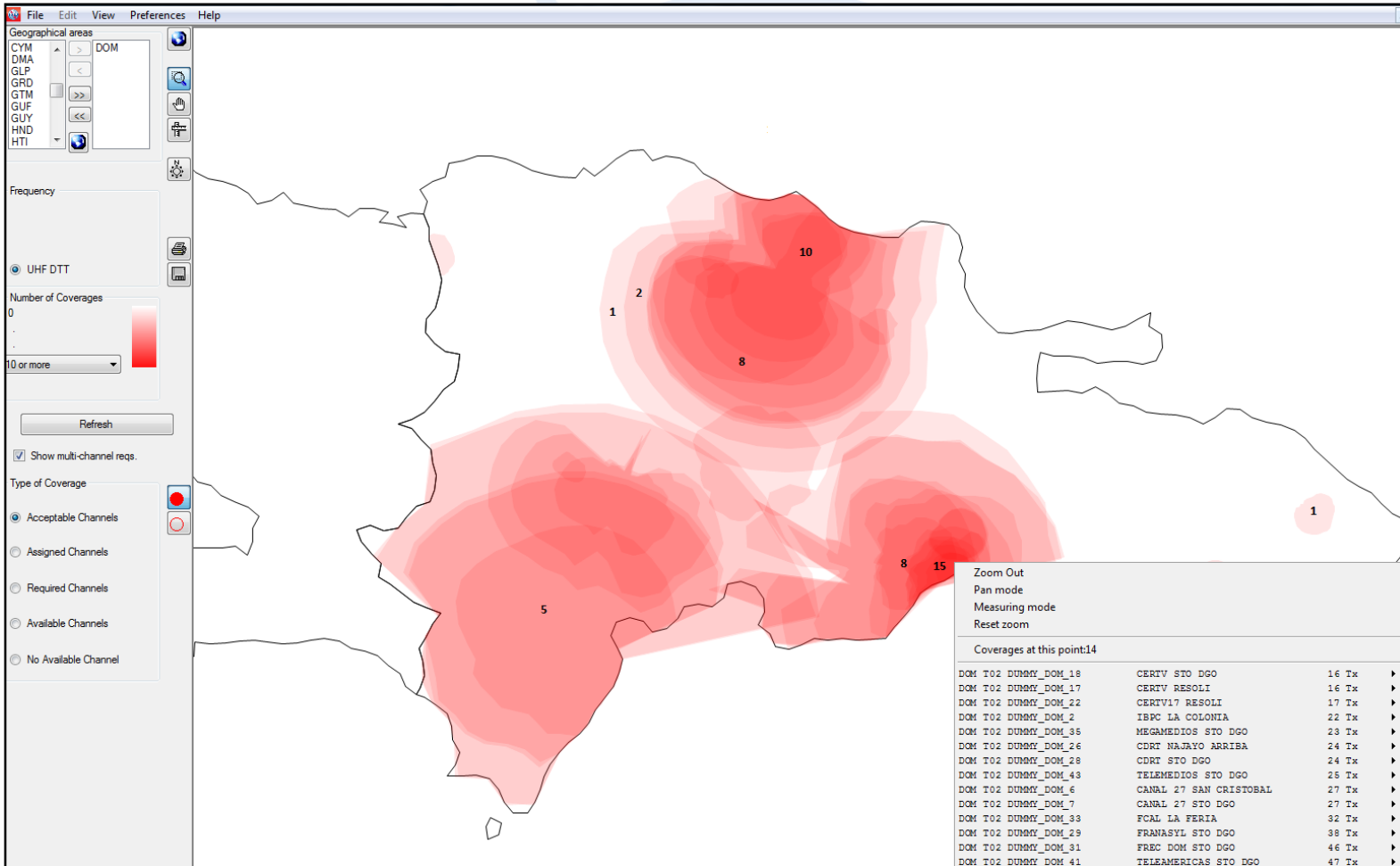
	Id	Aff Ad	Aff Ge	Aff N	Aff AdmRefId	Aff Site/Allot Name	Aff Ac C	Aff Ch	Int Ad	Int Geo	Int Not.Ty	Int AdmRefId	Int Site/Allot Name	Int Ac Ch	Int C	8BH (dB)	8BV (dBW)	Distance (CNFS	Margin (d	Relation		
	46	DOM	DOM	T02	DUMMY_DOM_	CDRT ESPALLAT	24	24	DOM	DOM	T02	DUMMY_DOM_	CDRT NAJAYO ARRIBA	24	24	45.2					Overlap		
	47	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 STO DGO	27	27	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 SAN CRISTO	27	27	26.9						Overlap	
	48	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 LA HOZ	27	27	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 SAN CRISTO	27	27	26.9						Overlap	
	49	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 LA HOZ	27	27	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 EL MOGOTE	27	27	26.9						Overlap	
	50	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 SAN CRISTO	27	27	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 LA HOZ	27	27	23.9						Overlap	
	51	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 EL MOGOTE	27	27	DOM	DOM	T02	DUMMY_DOM_	CANAL 27 LA HOZ	27	27	23.9						Overlap	
	52	DOM	DOM	T02	DUMMY_DOM_	PROGRESSIO STGO	29	29	DOM	DOM	T02	DUMMY_DOM_	PROGRESSIO EL MOGO	29	29	30						Overlap	
	53	DOM	DOM	T02	DUMMY_DOM_	SPORT VISION LOMA D	35	35	DOM	DOM	T02	DUMMY_DOM_	SPORT VISION ALTO BA	35	35	9.9						Overlap	
	54	DOM	DOM	T02	DUMMY_DOM_	SPORT VISION ALTO BA	35	35	DOM	DOM	T02	DUMMY_DOM_	SPORT VISION STO DG	35	35	23.8						Overlap	
	55	DOM	DOM	T02	DUMMY_DOM_	SPORT VISION STO DG	35	35	DOM	DOM	T02	DUMMY_DOM_	SPORT VISION ALTO BA	35	35	9.9						Overlap	
	56	DOM	DOM	T02	DUMMY_DOM_	SPORT VISION ALTO BA	35	35	DOM	DOM	T02	DUMMY_DOM_	SPORT VISION LOMA D	35	35	9.9						Overlap	
	57	HTI	HTI	T02	BOUTILLIERS 2	BOUTILLIERS	14-51	16	DOM	DOM	T02	DUMMY_DOM_	CERTV LA HOZ					9	83.8	33.49	Interference		
	58	HTI	HTI	T02	BOUTILLIERS 4	BOUTILLIERS	14-51	16	DOM	DOM	T02	DUMMY_DOM_	CERTV LA HOZ					9	83.8	33.49	Interference		
	59	HTI	HTI	T02	BOUTILLIERS 3	BOUTILLIERS	14-51	16	DOM	DOM	T02	DUMMY_DOM_	CERTV LA HOZ					9	83.8	33.49	Interference		
	60	HTI	HTI	T02	BOUTILLIERS 1	BOUTILLIERS	14-51	16	DOM	DOM	T02	DUMMY_DOM_	CERTV LA HOZ					9	83.8	33.49	Interference		
	61	HTI	HTI	T02	BOUTILLIERS 4	BOUTILLIERS	14-51	22	DOM	DOM	T02	DUMMY_DOM_	IBPC LA HOZ					2	82.7	32.43	Interference		
	62	HTI	HTI	T02	BOUTILLIERS 2	BOUTILLIERS	14-51	22	DOM	DOM	T02	DUMMY_DOM_	IBPC LA HOZ					2	82.7	32.43	Interference		
	63	HTI	HTI	T02	BOUTILLIERS 3	BOUTILLIERS	14-51	22	DOM	DOM	T02	DUMMY_DOM_	IBPC LA HOZ					2	82.7	32.43	Interference		
	64	HTI	HTI	T02	BOUTILLIERS 1	BOUTILLIERS	14-51	22	DOM	DOM	T02	DUMMY_DOM_	IBPC LA HOZ					2	82.7	32.43	Interference		
	65	DOM	DOM	T02	DUMMY_DOM_	CERTV DAJABON	16	16	DOM	DOM	T02	DUMMY_DOM_	CERTV LA HOZ					16	39	162.4	60.7	22.28	Interference
	66	HTI	HTI	T02	BOUTILLIERS 4	BOUTILLIERS	14-51	32	DOM	DOM	T02	DUMMY_DOM_	FCAL LA HOZ					71.2	72.2	21.95	Interference		
	67	HTI	HTI	T02	BOUTILLIERS 3	BOUTILLIERS	14-51	32	DOM	DOM	T02	DUMMY_DOM_	FCAL LA HOZ					71.2	72.2	21.95	Interference		
	68	HTI	HTI	T02	BOUTILLIERS 2	BOUTILLIERS	14-51	32	DOM	DOM	T02	DUMMY_DOM_	FCAL LA HOZ					71.2	72.2	21.95	Interference		
	69	HTI	HTI	T02	BOUTILLIERS 1	BOUTILLIERS	14-51	32	DOM	DOM	T02	DUMMY_DOM_	FCAL LA HOZ					71.2	72.2	21.95	Interference		

- Show input data details for affected
- Show general analysis results for affected
- Show input data details for interferer
- Show general analysis results for interferer
- Copy value to clipboard
- Find...



CA Display

Coverage Analyses





CA Display

Channel Distribution Statistics

The screenshot displays the 'Channel Distribution Statistics' software interface. The main window shows a map of the Caribbean region with a yellow highlighted area. The interface includes several panels:

- Administration:** Set to 'DOM'. Includes a 'Refresh' button and checkboxes for showing assignable channels based on maximum acceptable margin (1.25 dB) and ignoring incompatibilities.
- Channel Distribution Statistics:** A summary table showing the status of assignments.
- Channel Distribution Details - Digital assignments with no available channel or frequency block:** A table listing specific assignments.
- Administration - Issue Identifier:** A panel showing details for 'DUMMY_DOM_15' at 'CERTV GUANITO'.
- Digital Interference:** A table at the bottom showing interference details for 'HTI HTI'.

Submitted	No available channel or frequency block	No assignable channel or frequency block	Having an assignable channel or a frequency block
43	5	43	0

No.	Adm	Geo Ar	Adm Ref Id	Not	Site/Allot Name	Ch	Avail.	Ch	Assignable Ch
1	DOM	DOM	DUMMY_DOM_14	T02	CERTV EL MOGOTE	16			
2	DOM	DOM	DUMMY_DOM_15	T02	CERTV GUANITO	16			
3	DOM	DOM	DUMMY_DOM_16	T02	CERTV LA HOZ	16			
4	DOM	DOM	DUMMY_DOM_32	T02	FCAL LA HOZ	32			
5	DOM	DOM	DUMMY_DOM_3	T02	IBPC LA HOZ	22			

No.	Adm	Geo Area	Adm Ref Id	SR ID	SR Name	Analog Ch.	Interf. Dig. Ch.	88V (dBm)	89V (dBm)	Distance (km)	NFS (dB(uV/m))	Margin (dB)	Relation
1	HTI	HTI		117028684	BOUTILLIERS	16	16	36.4	81.3	63.9	2.34		Interference

Channel definition (see manual)

- **Acceptable:** Notified (but not yet in the MIFR)
- **Available:** Acceptable but not interfering with existing analogue or FXM
- **Assignable:** Available compatible with analogue, FXM, and digital (assign. + req.)
- **Assigned:** Already recorded in the MIFR (never for requirements)



“Thanks for your attention!”

