# Finding new channels for DTT and compatibility analysis for new frequency requirements

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# Overview

- **Tools to be used**

- **Frequency bands and TV channels**

- **Procedure diagram**

- **CA Display tool**

# Tools to be used

eBCD 2.0
Broadcasting Online

eQry    ePub
eTools    myAdmin

TerRaQ

TerRaNotices

CA Display

WISFAT

# Frequency bands and TV channels

✓ **Frequency bands:** 174 – 216 MHz
470 – 698 MHz

✓ **TV channels: 7 – 13**
**14 – 51, <span style="color:red">excluding channel 37</span>**

✓ **TV channel 83 – special case (flexible channel)**

✓ **List of TV channels – see Doc. INFO-1**

# Find a channel process diagram



Create/ Modify notice-TerRaNotices

Use eBCD-eTools CA_compat Compatibility analysis

Finding available channel

When ready, submit officially to the BR using WISFAT

Read it using CA Display and analyze results

Save the zipped result file and unzip it

# Creation/Modification of a T02 notice

# Validation and Submission of the notice file to eBCD

✓ **Validate and save the notice file**

✓ **Browse and upload it together with the notice files of neighboring countries to eBCD web-portal - eTools: https://www.itu.int/ITU-R/eBCD/MemberPages/eCalculations.aspx**

✓ **Complete Submission**

# Getting Compatibility Analysis results

- ✓ **Click on Back to calculation history**

- ✓ **Wait for results**

- ✓ **Launch CA Display and open saved .mdb file to view the results**

# CA Display (example)

- ✓ File -> Open compatibility results file GTM_ISDB-T_6MHz_El Rodeo_flex.mdb
- ✓ View -> Channel distribution statistics
- ✓ Check appropriate boxes and set a default margin
- ✓ Select Administration and click Refresh
- ✓ Select item of interest and click on the blue number
- ✓ List of requirements will appear
- ✓ Select the requirement of interest and click on it
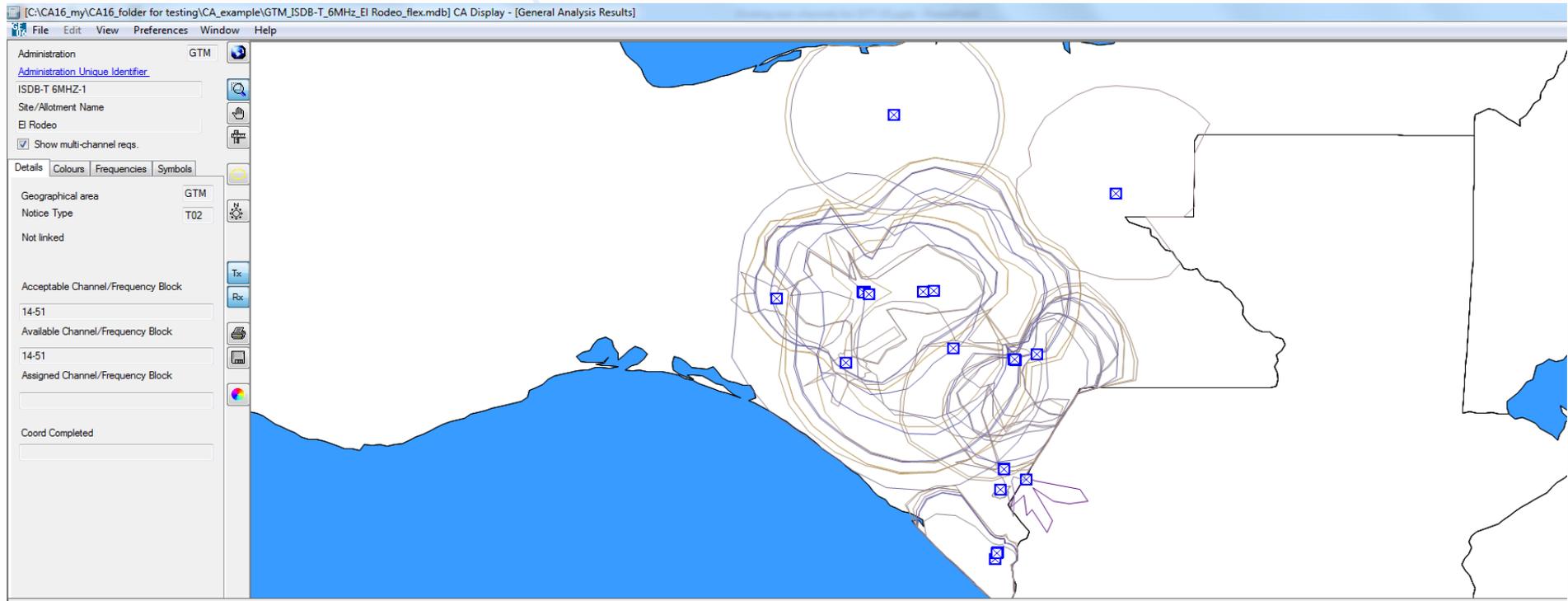
# CA Display
# Setting defaults (cont.)

- ✓ Click on Digital Interferers tag
- ✓ Click on Headings toolbar
- ✓ In the pop-up window set the desired Column Preferences
- ✓ Set them as default and click OK

*Repeat the same procedure for Digital Affected*

# Analysis of the results (example):
## List of interferers on ch. 31

[C:\CA16_my\CA16_folder for testing\CA_example\GTM_ISDB-T_6MHz_El Rodeo_flex.mdb] CA Display - [General Analysis Results]

File  Edit  View  Preferences  Window  Help

Administration                                    GTM
Administration Unique Identifier
ISDB-T 6MHZ-1
Site/Allotment Name
El Rodeo
☑ Show multi-channel reqs.

Details | Colours | Frequencies | Symbols

Geographical area                               GTM
Notice Type                                      T02

Not linked

Acceptable Channel/Frequency Block
14-51
Available Channel/Frequency Block
14-51
Assigned Channel/Frequency Block

Coord Completed

Digital Interferers | Digital Affected

| No. | Adm | Geo Area | Not.Type | Adm Ref Id | Site/Allot Name | SFN Id | Ch/block | Avail. Ch/block | Assigned Ch/bl | 8BH (dBW) | 8BV (dBW) | Wanted Chann | Interf. Channel | Distance (km) | CNFS (dB(uV/ | Margin (dB) | Relation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 44 | MEX | MEX | T02 | TVXHTUA00P00CHP0029 | TUXTLA GUTIERREZ CH | | 29 | 29 | 29 | 46.5 | | 29 | 29 | 138.8 | 37.4 | 1.98 | Interference |
| 45 | MEX | MEX | T02 | TVXHTUA00C04CHP0029 | San Fernando CHIS | | 29 | 29 | 29 | 25.8 | | 29 | 29 | 205.8 | 35.7 | 1.43 | Interference |
| 46 | MEX | MEX | T02 | TVXHTUA00C05CHP0029 | San Francisco Ixhuatan C | | 29 | 29 | 29 | 25.6 | | 29 | 29 | 233.1 | 35 | 1.25 | Interference |
| 47 | MEX | MEX | T02 | TVXHTAP00C02CHP0030 | Motozintla CHIS | | 30 | 30 | 30 | 37.8 | | 30 | 30 | 23 | 94.5 | 54.67 | Interference |
| 48 | MEX | MEX | T02 | TVXHCOM00P00CHP0030 | COMITAN DE DOMINGU | | 30 | 30 | 30 | 36.5 | | 30 | 30 | 38.3 | 70.8 | 31 | Interference |
| 49 | MEX | MEX | T02 | TVXHTAP00C01CHP0030 | Huehuetan CHIS | | 30 | 30 | 30 | 19.5 | | 30 | 30 | 74 | 59.5 | 19.7 | Interference |
| 50 | MEX | MEX | T02 | TVXHTAP00P00CHP0030 | TAPACHULA CHIS | | 30 | 30 | 30 | 47.1 | | 30 | 30 | 56.8 | 57.9 | 18.12 | Interference |
| 51 | MEX | MEX | T02 | TVXHCOM00C01CHP0030 | Las Margaritas CHIS | | 30 | 30 | 30 | 36.1 | | 30 | 30 | 106.1 | 51.4 | 11.88 | Interference |
| 52 | MEX | MEX | T02 | TVXHOPTC0P00CHP0031 | TUXTLA GUTIERREZ CH | | 31 | 31 | 31 | 39.5 | | 31 | 31 | 140.9 | 37.5 | 1.96 | Interference |
| 53 | MEX | MEX | T02 | TVXHHUC00P00CHP0032 | HUIXTLA CHIS | | 32 | 32 | 32 | 46 | | 32 | 32 | 44.2 | 56.3 | 16.37 | Interference |
| 54 | MEX | MEX | T02 | TVXHOCC00P00CHP0032 | OCOSINGO CHIS | | 32 | 32 | 32 | 45.9 | | 32 | 32 | 173 | 40 | 3 | Interference |
| 55 | MEX | MEX | T02 | TVXHTAA00P00CHP0033 | TAPACHULA CHIS | | 33 | 33 | 33 | 44.3 | | 33 | 33 | 46 | 63.5 | 23.45 | Interference |

**Conclusions:**

**1) Calculated margins in both directions (for incoming and outgoing interference) do not exceed the established default margin, therefore channel 31 can be assigned to this site.**

**2) To fix this, it is necessary to modify the initial notice containing flexible channel 83 (assigned frequency 887 MHz) by assigning channel 31 (assigned frequency 575 MHz).**

# What is next?

Repeat the same analysis for the other possible channels.

For this example, it can be noticed that channels:

18, 19, 38, 40, 45, 47, 49, 50 and 51

can also be assigned to that site.

# *Thank you for your attention!*

## *Questions?*

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