4th and final
CAC frequency
coordination meeting
on the use of the VHF band (174-216 MHz) and the UHF band (470-806 MHz)

Belize City 11-14 September 2018

Radiocommunication Bureau
DSO World (196 countries)

Completed

Ongoing

**Definitions**

**Digital Switch Over (DSO)**

DSO is the process in which analogue television broadcasting is replaced by digital television broadcasting.

DSO normally involves the following steps:

- **Simulcasting**: Establish the new digital services on temporary frequencies, if required, and operate both analogue and digital services for a period of time.

- **Analogue Switch-off (ASO)**: Switch off the analogue services.

- **Re-stacking**: Change the frequencies of the digital services to their final frequencies, if required.
DSO and DD Benefits

• Instead of one analog program, many **digital programs** of equivalent or better quality can be broadcast in the same 6, 7 or 8 MHz wide channel
• **Improved picture and sound** quality and potential for **interactivity** (**HDTV, ...**)  
• **Financial benefits** for broadcasters (less power, less transmitters, more attractive service, new business opportunities...)
• **Digital Dividend (DD):** release a part of the band to Mobile Broadband

A significant amount of high quality **radio spectrum** can be made **available for new services** (such as IMT) or to increase TV offer and new TV services.
• Support national economic and social development

**DD is the amount of spectrum made available by the transition of terrestrial television broadcasting from analogue to digital.**
**Digital Dividend (s) following WRCs decisions**

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>470-806 MHz</td>
<td>Broadcasting</td>
</tr>
<tr>
<td>470-610/614 MHz</td>
<td>Broadcasting</td>
</tr>
</tbody>
</table>

**Need for more DTT channels in the band 470-610/698 MHz to compensate for the loss of the 600 and/or 700 MHz band**

**In Bahamas, Barbados, Belize, Canada, Colombia, United States and Mexico**
Frequency Coordination is Key for both transition to digital TV and release of the digital dividend!

To avoid harmful interference

Effective and harmonized use of the spectrum

Protection of current and future national plans
VHF/UHF frequency coordination in Central America & Caribbean

To secure the operation of broadcasting stations and Enable the Digital Dividend

Following the:
- Central American Summit on Digital Terrestrial Television and the Digital Dividend, El Salvador on 25 and 26 July 2016, and
- the “San Salvador Declaration” adopted by COMTELCA Members on 26 July 2016

With the participation of:
- CITEL
- COMTELCA
- CTU
Regional Frequency Coordination for Central America and Caribbean

Considered area:
- Parallels: 122 to 50 W
- Meridians: 0 to 38 N

Numbers:
- Adm.: 30
- Geographical area: 41

Adm.: ATG, B, BAH, BLZ, BRB, CLM, CTR, CUB, DMA, DOM, F, G, GTM, GRD, GUY, HOL, HON, HTI, JMC, KNA, LCA, NCG, MEX, PNR, SLV, SUR, TRD, USA, VCT, VEN
Purpose of the frequency coordination meeting

The Regional Frequency Coordination Meeting on the use of the VHF band (174-216 MHz) and the UHF band (470-790 MHz)

Objective

- Facilitate the transition from analog to Digital Television (DTT) and the use of the Digital Dividend,
- Avoid harmful interference,
- Build informal consensus in the region towards the conclusion of formal agreements between the administrations involved before notification of the frequency assignments to the ITU.
The meeting focuses on ensuring the compatibility of the national frequency plans in support of terrestrial television broadcasting and mobile broadband, taking into account:

- Existing analog television broadcasting emissions and broadband mobile transmissions,
- Current and future plans, if any, for DTT and Mobile Broadband,
- The need, where applicable, for simulcast digital and analog transmissions,
- The standards adopted at national level for DTT and Mobile Broadband,
- The timelines and activities for frequency assignment and planning.
Use of the compatibility analysis software used for GE-06 Planning, suitably modified to take into account:

- Channeling arrangements
- Standards and sharing criteria
- Need for capacity building and assistance
Coordination process

An iteration every other week

Results of each iteration published on the ITU web site

Digital television planning technical criteria and assumptions discussed by ITU-R WP 6A.

Administrations notify operating and planned assignments

Takes into account:
- 6/8 MHz bandwidth for DTT requirements;
- Analogue and Digital recorded assignments
Results up to now...
VHF Band

Percentage of assignable channels-VHF
margin 1.25 ignoring multiple ignoring self ignoring interferers

CAC - Average percentage of assignable DTT Channels in VHF (1.25 dB margin)

<table>
<thead>
<tr>
<th>Iteration</th>
<th>Average assignable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iteration1</td>
<td>92.91%</td>
</tr>
<tr>
<td>Iteration8</td>
<td>54.29%</td>
</tr>
<tr>
<td>Iteration16</td>
<td>61.35%</td>
</tr>
<tr>
<td>Iteration24</td>
<td>73.07%</td>
</tr>
<tr>
<td>Iteration25</td>
<td>75.84%</td>
</tr>
</tbody>
</table>
Results up to now...

UHF Band

Percentage assignable channels-UHF
margin 1.25 dBignoringMultipleignoringSelfignoringInterferers

CAC - Average percentage of assignable DTT Channels in UHF (1.25 dB margin)

<table>
<thead>
<tr>
<th>Series1</th>
<th>Iteration1</th>
<th>Iteration7</th>
<th>Iteration13</th>
<th>Iteration 19</th>
<th>Iteration 37</th>
<th>Iteration38</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22.45%</td>
<td>17.41%</td>
<td>17.41%</td>
<td>9.83%</td>
<td>69.90%</td>
<td>69.90%</td>
</tr>
</tbody>
</table>
Results according to the adopted coordination margin

Outcome of the meetings

700 MHz
Harmonize the use of the 700 MHz by Mobile Services, to the maximum extent possible.

600 MHz
Avoid the assignment of DTT channels in the band during the frequency coordination if the Administration intends to use the band for Mobile Services.

No new or modified assignments to the MIFR in the concerned bands, until after the last iteration at the 4th meeting (around 6 months).

Freeze the last iteration’s assignable or agreed channels and keep a reference list of assigned frequencies.

Administrations made a step forward towards a successful coordination agreement.

4th and final CAC meeting.
Schedule for the CAC frequency coordination meetings

First meeting
Managua
March 2017

2nd meeting
Guatemala City
August 2017

3rd meeting
Panama City
May 2018

4th and final meeting:
Belize City
September 2018

Notification to the MIFR
Adoption of the frequency reference list
Thank you