



**BR assistance in Regional frequency
coordination meetings for ATU,
ASMG and Central America and
Caribbean area
On the use UHF for DTT and DD**

Radiocommunication Bureau



GE06 planning

The diagram consists of two overlapping light blue arrows. The left arrow points left and contains the text 'GE06 planning'. The right arrow points right and contains the text 'Sub-Saharan Africa (ATU) & Arab Region (ASMG)'. The arrows overlap in the center, with the right arrow appearing to be on top.

Sub-Saharan Africa (ATU)
&
Arab Region (ASMG)



WRC decisions for Region 1



470-862
MHz: BC

470-790
MHz: BC

790-862
MHz:
MO/BC

470-694
MHz: BC

694-790
MHz:
MO/BC

790-862
MHz:
MO/BC



Need for more DTT channels in the band 470-694 MHz



Start of the frequency coordination meetings



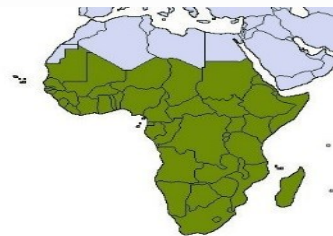
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Digital migration and spectrum Policy summits:

- December 2011: Nairobi
- September 2012: Accra

need to establish minimum
spectrum requirements for
broadcasting and broadband at the
national level

Charge ATU, with the assistance of
the BR/ITU



In accordance with the recommendation:

35th meeting of the Permanent Arab
Committee for Communications and
Information (Cairo : 4-5/3/2014) ,
and contributions of the Technical
Secretariat of the Council of Arab Ministers
for Communications and Information

Arab countries to ensure sufficient
spectrum for broadcasting in the 470-
694 MHz and be able to release the
700/800 MHz

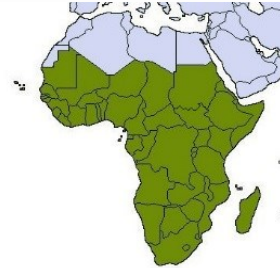
Charge ASMG with the assistance of
the BR



To consider the adoption of **MPEG4** and **DVB-T2** standards, and dual **HDTV/SD** format

Maximum acceptable interfering margin is **4dB**

4 layers. Administrations having more were encouraged to make the **utmost effort** to release part of it to neighbouring countries to reach up to that level of resource.

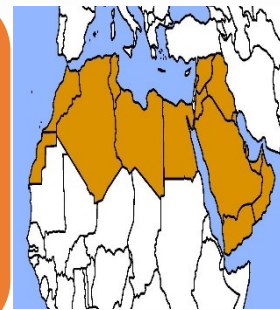


Invite the countries to use modern techniques for such service: **DVB-T2/MPEG-4** or later.

Maximum acceptable margin is **4dB (3 dB or 1.25 dB in special cases)**

4 layers per Administration for this coordination period,

This number can be increased in the future, individually,, according to GE06 Article 4 Procedures.



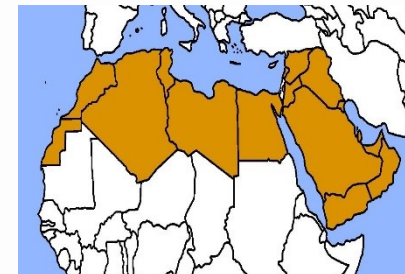
Results of the GE06 coordination meeting



- Average of satisfied requirements: **97.37%**
- Duration: **18 months**.
- **47** countries participated (except Mauritius).
- 2 African summits: Nairobi 2011 and Accra 2012 to launch the process.
- **3 planning and coordination meetings:** Bamako, Kampala and Nairobi.
- **33 iterations** for the compatibility analysis, based on the requirements submitted by administrations.
- **7107** submitted frequency requirements in 470-694 MHz (**11406** at the RRC-06 for the band 470-862 MHz).



- Average of satisfied requirements: **76.87%**:
- Duration: **11 months**.
- **17** countries participated.
- **3 planning and coordination meetings:** Dubai, Hammamet and Marrakech.
- **27 iterations** for the compatibility analysis, based on the requirements submitted by administrations.
- **4346** submitted frequency requirements in 470-694 MHz (**9151** at the RRC-06 for the band 470-862 MHz).



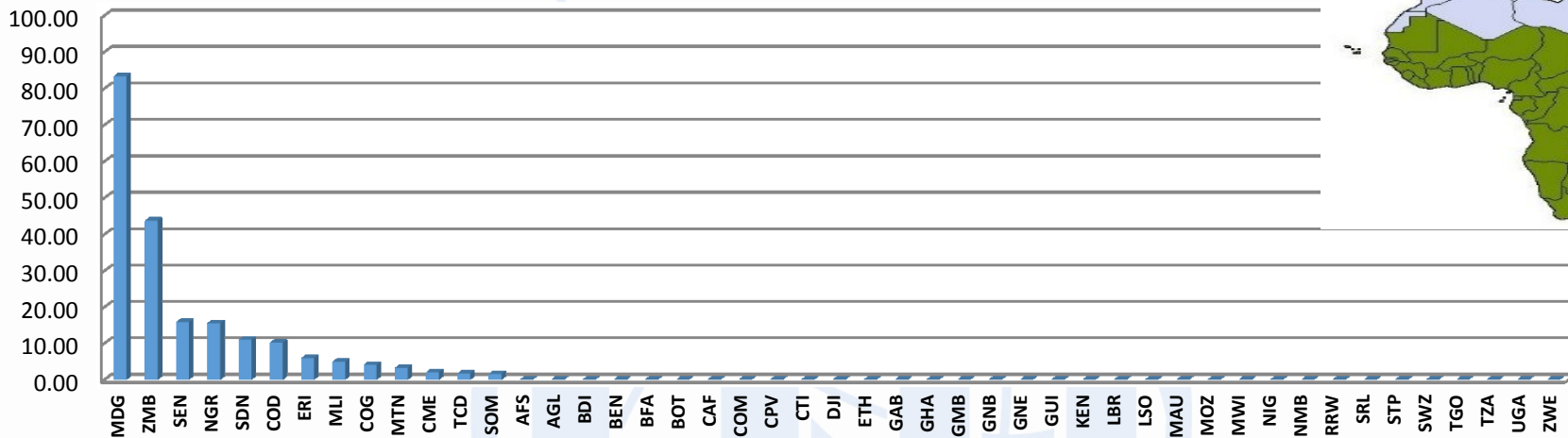


Results: 1st and last iterations for SSA

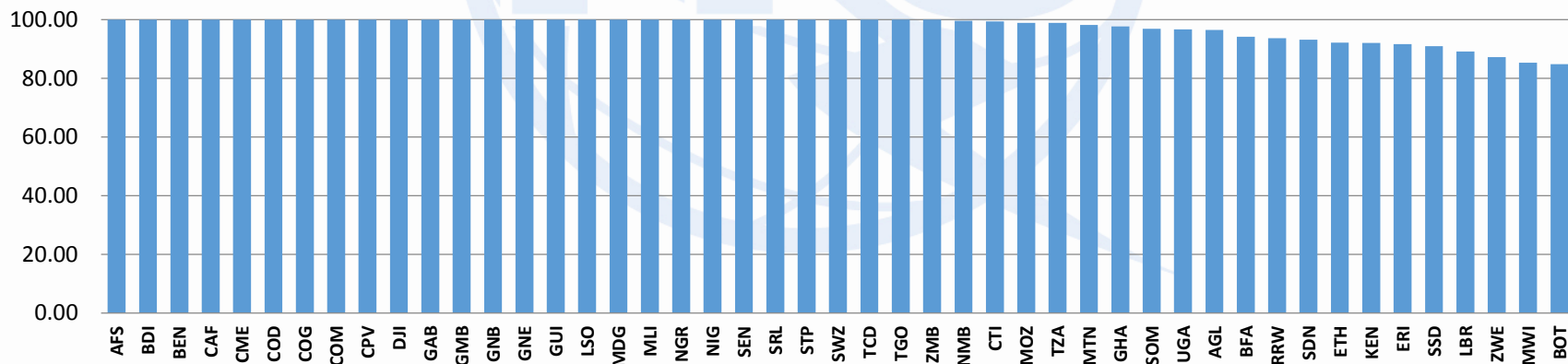


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Iteration 1, percentage of assigned channels



Iteration 33- Nairobi-2

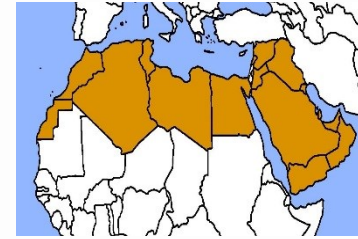


■ Percentage Assignable/submitted

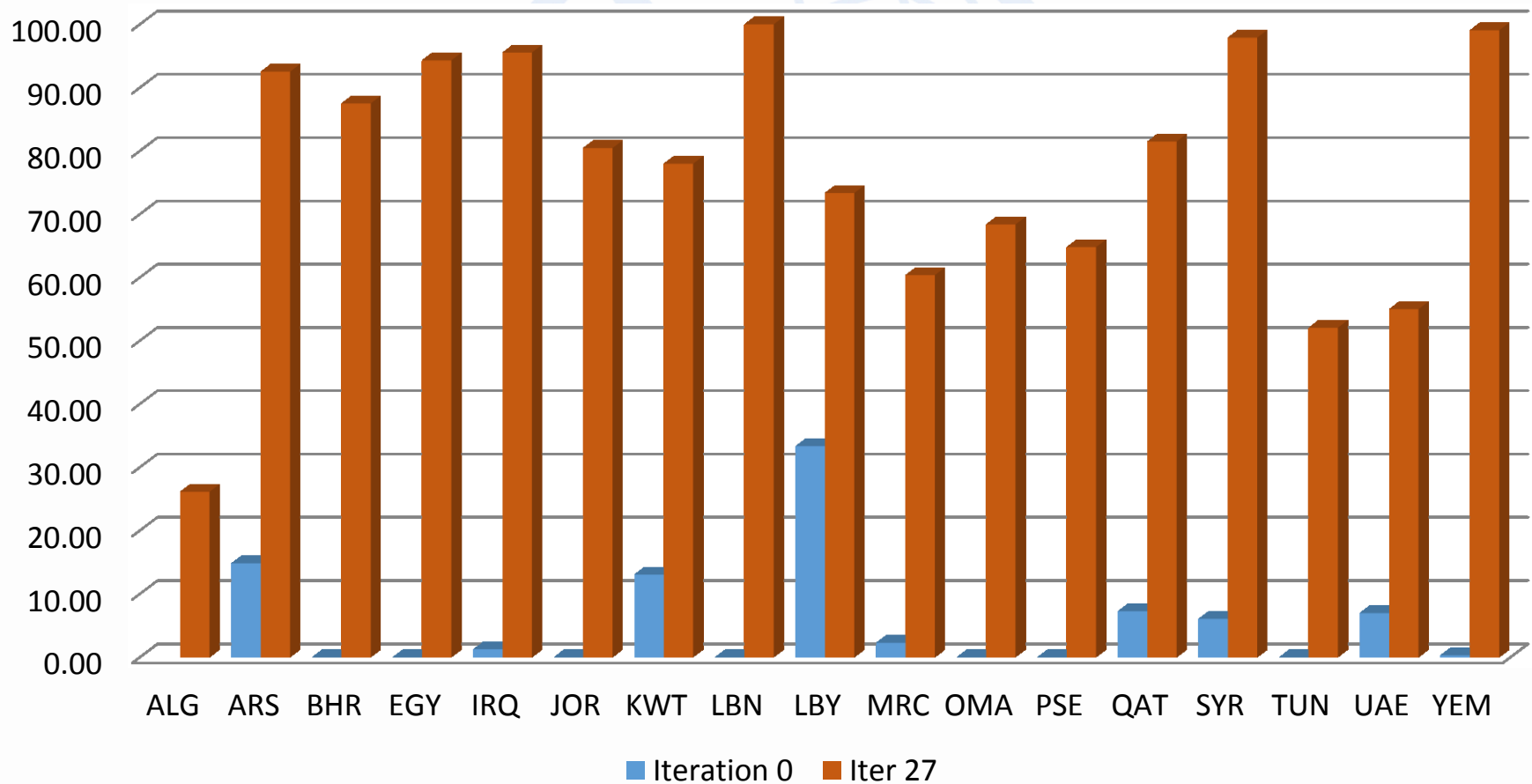
1st and last iterations for ASMG



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Evolution of assignable channels





Conclusion on BR actions



Provided and adapted the necessary software and tools;

Generated the initial requirements with flexible channels (to reach at least 4 layers);

Workshops and training on the GE06 tools and frequency planning:

- To generate the requirements;
- Assess technical compatibility;

Assistance in sub regional coordination meetings;

An Iteration each 2 weeks (from the beginning of the process until its end), and analysis of the results;

Generates the requirements for the 'absent' administrations (4 layers);

Assistance all along the process.

VHF and UHF
frequency planning

Central America
&
Caribbean

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



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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)

**is intended
to :**

- facilitate the processes of transition from analog to Digital Television (DTT) and allocation of the Digital Dividend, taking into account the large separation distances required to ensure mutual compatibility among broadcasting and mobile stations in the VHF and UHF bands.
- to prevent the occurrence of harmful interference situations,

**is not
intended to:**

- conclude any formal agreement, but to build informal consensus in the Central American and Caribbean regions towards the conclusion of formal agreements between the administrations involved before formal notification of the relevant frequency assignments to the ITU.



Technical basis of the compatibility



The meeting will focus 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.

In order to provide support to the meeting, the ITU Radiocommunication Bureau intends to provide the compatibility analysis software based on the GE-06 Planning, and suitably modified to take into account:

channeling arrangements

- *Used in the participating countries,*

standards and sharing criteria

- *that each of the participating countries may wish to retain for this compatibility exercise,*

Training on the:

- compatibility analysis software and
- preparation of the electronic notices for the spectrum requirements and existing assignments,

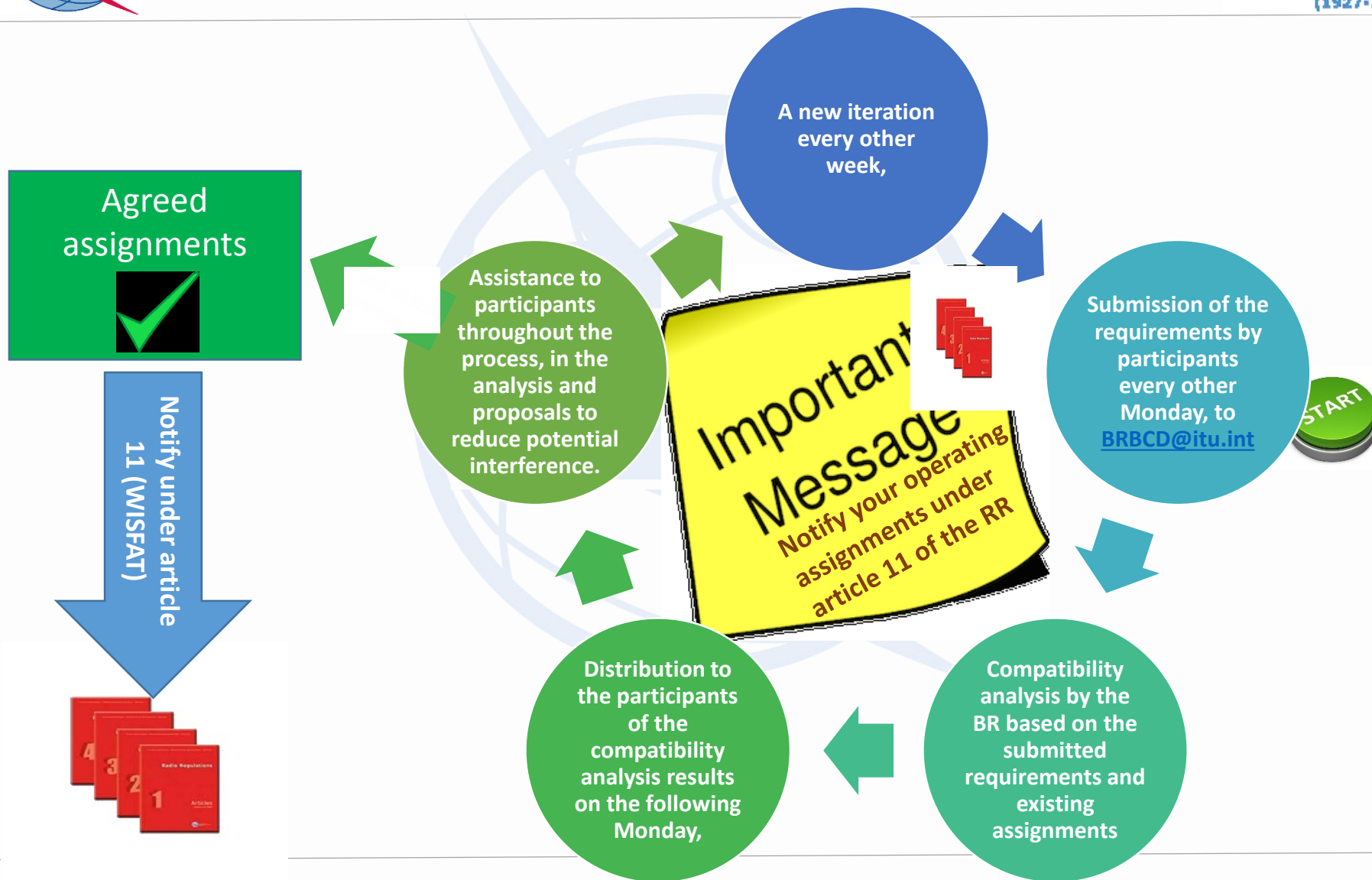
Assist in the submission of

- the spectrum requirements and existing assignments for the first compatibility iteration,

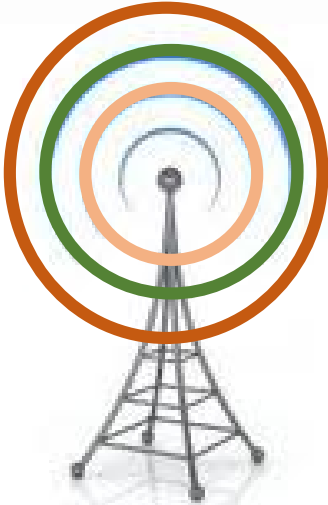
Assessment of the results

- of the compatibility iteration and
- identification of issues to be resolved in subsequent iterations.

Proposed process



Let's get started



The BR created requirements to reach 4 layers, based on:

If BC assignment from MIFR

If no BC assignment in the MIFR

Analogue VHF

Analogue UHF

MIFR digital assignments;

Big cities

Capitals,

- BAH
- BLZ
- CTR
- CYM
- DMA
- DOM
- GRD
- LCA
- TCA
- VRG



CAC agreed coordination process

An iteration every other Monday. Deadline of requirements submission: 18:00 GVA time;

- The notices and results of each iteration will be published on the ITU web site.

CA_compat in eTools and CA Display should be improved to take into account:

- 8 MHz bandwidth for DTT requirements;
- Analogue and FXM services in the UHF (D2D implemented);
- Analogue and Digital in the VHF.

to submit the “Digital television planning technical criteria and assumptions” proposed by the BR to the concerned ITU-R WPs for confirmation and completion.

Administrations committed to notify the operating frequencies in the VHF and UHF bands.

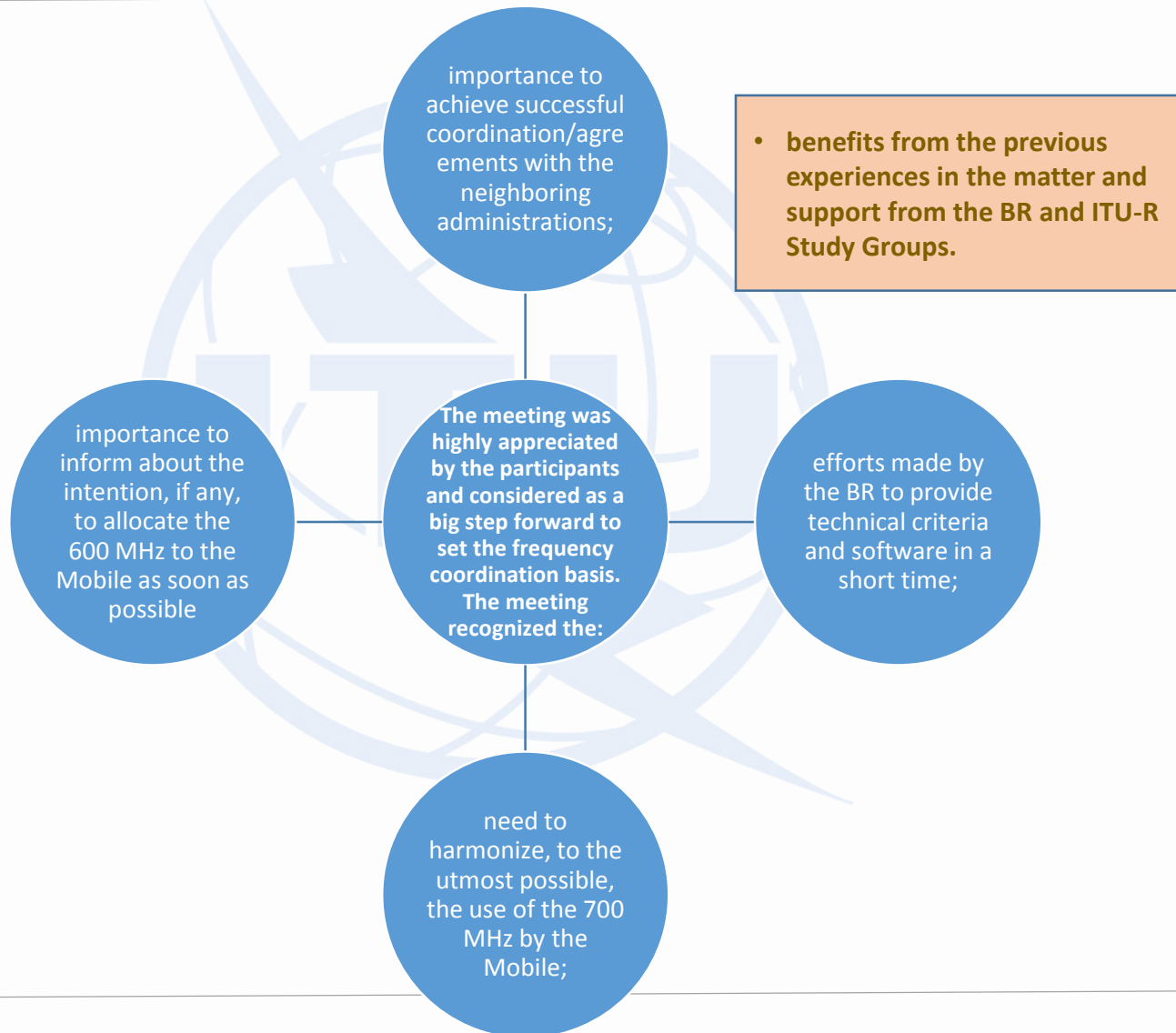
- It was proposed to set a deadline for notification to the MIFR,
- A temporary deadline was proposed as 2 weeks before the next



Conclusions of the 1st frequency meeting - Managua March 2017 -



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Thank you