

Modern Spectrum Management and Transition from Analogue to Digital Broadcasting

AFRICA FORUM

Presented by: Jonathan Pinifolo



OUTLINE

- 1.0 Introduction.
- 2.0 Spectrum
- 3.0 Digital Migration
- 4.0 SADC Band Plan
- 5.0 Challenge
- 6.0 Way Forward
- 7.0 Considerations



SPECTRUM

WHY SPECTRUM PLANNING?

Technology - Wireless Demand - Spectrum



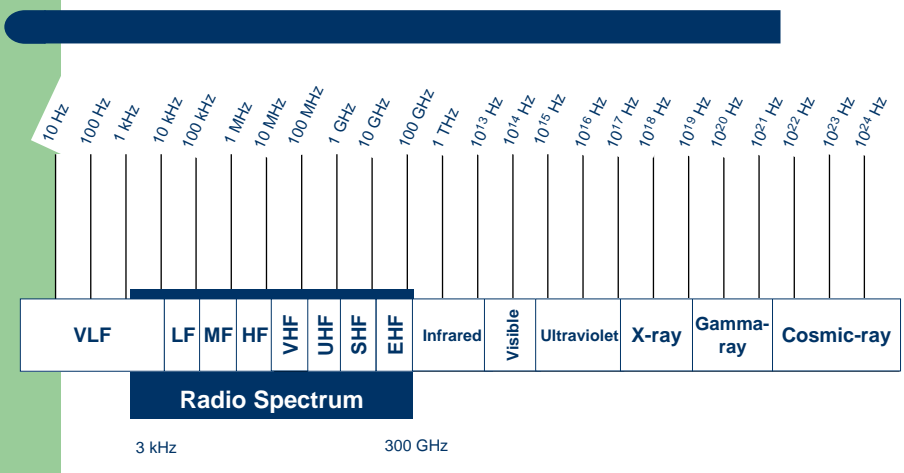
WHY SPECTRUM PLANNING ?

- To let the regulators prepare an appropriate response for the future events.
- To meet the growth in spectrum demand (The demand for spectrum is rapidly increasing day by day).
- To achieve the social and economic importance of spectrum use.
- Spectrum is finite (limited) non-renewable natural resource.
- It is necessary to manage radio interference (detection & resolution) between users.
- To achieve the social and economic importance of spectrum use.

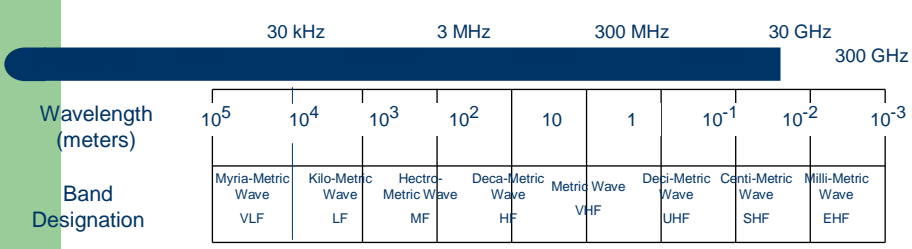
SPECTRUM PLANNING

- Developing and implementing spectrum management tools, techniques, and policies to introduce efficient spectrum utilization.
- Spectrum efficiency can be defined as the least amount of spectrum that can be used to transmit a given amount of information.
- There are mainly three dimensions to view correctly the spectrum utilization efficiency:
 - Technical efficiency (reduce the assigned spectrum).
 - Economic efficiency (getting money).
 - Functional efficiency(introducing more services).

Electromagnetic Spectrum



Frequency–Wavelengths–Band Designations



- VLF: Data, Low Freq Broadcast, Radio Telegraphy
- LF: Low Freq Broadcast, Markers, Low Freq Beacons
- MF: Commercial Use, Scientific use, AM Broadcast
- HF: Amateurs, Long Haul Comm, FM Broadcasts, Mobile, International Broadcast
- VHF: Air/Ground Comm, Tactical Radio, LMR Radio, Taxi, TV Broadcast
- UHF: Air/Ground Comm, SATCOM, LMR, Radars, TV Broadcasts, Low-Power Devices, Radio Astronomy
- SHF: Radars, Microwaves, SATCOM, Satellite TV, Police Radars, Radio Astronomy, Earth-Exploration Satellites
- EHF: LASERS, Satellite, Radio Astronomy, Earth-Exploration Satellites

SADC BAND PLAN

- SADC region has recently reviewed its Regional frequency Allocation Plan (RFAP).
- The revised RFAP was agreed upon for adoption and harmonisation with the national Frequency Band Plans in the respective Member States.
- Malawi was the Chair of this exercise where the aspects of digital migration in the SADC region were also discussed.



SADC MIGRATION UPDATE

- Set aside June 2013 as deadline for Migrating from Analogue to Digital Broadcasting
- SADC has had several meetings on Digital Broadcasting standard



CHALLENGE

- The major outstanding challenge in the region remains as the choice of the transmission standard to be adopted for the whole region.
- The two main standards under consideration are;
- **Digital Video Broadcasting- Terrestrial (DVB-T) – European ITU-Region 1**
Vs
- ***Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) Japan / Brazil***



SADC MEETINGS

- SADC working forum on Digital migration standards was held in Maseru-Lesotho (26th to 28th April,2010), the meeting however failed to reach a consensus on the unified standard to be adopted for the region.
- This was forwarded to the ICT ministers meeting in Angola for further guidance

SADC MEETINGS

- SADC ICT ministers meeting was held in Luanda - Angola (10th-13th May,2010).
- Ministers were briefed that the technical working group as well as the Senior Officials meeting failed to reach a consensus on a unified regional standard and presentations by both standard groups (DVB-T & ISDB-T) were made before the Ministers.

WAY FORWARD

- It was decided by the Ministers that a Special Working Committee be set-up involving representation from all countries to re-look at the issue and come up with a final recommendation with a view of reaching a consensus and adopting a unified standard within the region.

WAY FORWARD

- The Working Group was tasked to meet within a period of two months and make a recommendation to the Ministers so that a special session of Ministers can be convened for the Ministers to debate and/or approve the recommendation.
- Zambia offered to host this meeting.

CONSIDERATIONS

- Time period for transition
- Transition procedure
- Available spectrum
- Available/mature technology
- Costs

END PIECE

*Thank you for
your attention*



QUESTIONS

Email: jpinifolo@macra.org.mw

Cell: +265 999940 907