



CONCLUSIONS AND RECOMMENDATIONS
OF THE WORKSHOP AND FREQUENCY COORDINATION MEETING
KAMPALA, UGANDA, 16-20 April 2012

1. Generals

The workshop and frequency coordination meeting on transition to digital television and digital dividend was held from 16 to 20 April 2012 in Kampala, Uganda, at the kind invitation of the Government of Uganda and the Uganda Communications Commission, the African Telecommunications Union (ATU) and the International Telecommunications Union (ITU).

This event followed the ATU Digital Migration and Spectrum Policy Summit that took place in Nairobi, Kenya from 29 November to 1 December 2011. It was held in French and English with simultaneous interpretation and aim to promote the cooperation and exchange of experience within the Eastern and Southern African countries on spectrum issues relating to the transition to digital terrestrial television and the digital dividend. This event also followed a similar event in Bamako, Mali, on 12-16 March 2012 for Western and Central African countries.

As recommended by the Nairobi Summit, this event was also intended to coordinate sub regional Roadmaps and initiate frequency coordination, with a view to facilitating harmonization and use of the digital dividend spectrum.

The frequency coordination meeting focused on re-evaluating the frequency plan adopted by the ITU Regional Radiocommunication Conference in 2006 (GE06 Plan) for terrestrial television

broadcasting in the 174-230 MHz and 470-862 MHz bands and necessary consequential actions, while taking into account:

- Short and medium term spectrum needs of broadcasting and mobile industries and ensure equitable and efficient access to the spectrum
- Establishment of proper timelines and activities for the review and modification of GE06 Plan using the procedure of the GE06 Agreement.

This event was open to all relevant stakeholders (governments, regulators, broadcasters, mobile operators, etc...). 31 countries were represented by 130 delegates. Ten countries having already participated in the Bamako event in March 2012 were also present, which facilitated convergence towards a solution at regional level. The list of participants is attached.

2. Processing of the work

The meeting was opened by the Honourable Minister of ICT of Uganda, Dr. Ruhakana RUGUNDA, with the participation of the Honourable Minister of Information and Communication of Kenya, Mr. Samuel POGHISIO, the Executive Director of the UCC, Mr. Hodge SEMAKULA, the Director of the Radiocommunication Bureau of the ITU, Mr. François RANCY and the Secretary General of the ATU, M. Abdoukarim SOUMAILA. In their opening speeches, all speakers underlined the importance of the workshop and frequency coordination meeting to ensure that African Countries jointly and successfully carry out the transition to digital television and the allocation of the digital dividend, which represent two major milestones in the advent of the information society.

On the first day, the following presentations were made :

- The importance of the transition to digital TV (François RANCY) ;
- The importance of harmonizing the digital dividend (François RANCY) ;
- The ITU activities in support to the transition to digital TV (Jean-Jacques MASSIMA LANDJI) ;
- The recommendations of the Nairobi Summit (Abdoukarim SOUMAILA).

The first day also permitted a rich exchange of experience driven by presentations by the African Union, by African countries (UGANDA, SUDAN, KENYA, GHANA, SOUTH AFRICA and SENEGAL) and by the private sector (GSMA, HARRIS and ENESNYS).

3. Conclusions and recommendations of the workshop and frequency coordination meeting

In order to ensure equitable and efficient access to the spectrum, the frequency coordination meeting focused on the feasibility of establishing a minimum number of four multiplexes with national nationwide coverage for each country in the region in the band 470-694 MHz (UHF channels 21 to 48). With fixed rooftop reception, this would enable, using currently available equipment, the provision (in the case of DVB-T2 and MPEG-4) of up to **80 nationwide standard definition television programs (4 x 20 programs) or up to 20 nationwide high definition television**

programs (4x5 programs), which is likely to satisfy most requirements of countries in the region. In the future, additional requirements may be considered and could be satisfied through further technical discussions.

To this end, a preliminary assessment by the ITU radiocommunication Bureau was made to identify available channels in each geographic area and the associated interference levels that would be produced if these channels were used by administrations in addition to those currently allocated to them in the GE-06 Plan.

On this basis, the delegates present generated notices of additional frequency assignments necessary to complete a minimum of four multiplexes with complete nationwide coverage in channels 21 to 48, in addition to the frequency assignments or allotments already recorded in the GE-06 Plan. Due to the limited time available, these additional frequency assignments had to be limited to border areas.

On the basis of these notices, the ITU radiocommunication Bureau conducted a compatibility analysis on the levels of mutual interference (within countries and between countries) that would result from the addition of the proposed new assignments.

Further refinements were made to the initial input notices to resolve the remaining cases of interference. On the basis of the five iterations conducted between 10 March and 20 April 2012, the following conclusions and recommendations, which were also reached at the Bamako meeting in March, have been adopted:

- a) Modifications of the GE-06 are feasible by which each country in the African region may be provided with the capability of four nationwide coverages with acceptable interference levels.
- b) It is recommended that further bilateral and multilateral discussions be conducted by African States to further refine the results obtained and, where necessary consider further additions or modifications to the GE-06 in order to complete nationwide coverages and meet any additional requirements from the broadcasting service in the band 470-694 MHz.

In considering the establishment of proper timelines and activities for the review and modification of GE06 Plan using the procedure of the GE06 Agreement, and more generally the coordination of sub regional roadmaps to digital switchover and allocation of the digital dividend, the following conclusions were reached:

- c) It is recommended that, in order to achieve economies of scale and development of an African-wide market for digital television set-top boxes, hence minimum cost for this equipment, consideration be urgently given by African States to the possibility of harmonizing the digital TV transmission and definition standard, at subregional or regional level.
- d) It is recommended, in order to facilitate the coordination of the roadmaps of the transition to digital TV throughout the continent, that African States complete, as soon as possible, the questionnaire issued by the ITU-D in response to Question 11-3/2 on this issue (<http://www.itu.int/ITU-D/CDS/gq/generic/questionnaire.asp?ProjectID=201>).

- e) It is recommended that the following timeline be adopted in order to meet the deadline specified by the GE-06 for the cease of analogue transmissions. The dates indicated are the latest possible dates to meet this deadline and it is preferable that they be anticipated, where possible:
- September 2012: ATU Summit in Abuja on the transition to digital TV and harmonization of the digital dividend.
 - September 2012: end of informal frequency coordination discussions and start of formal activities for the modifications of GE-06 Plan.
 - December 2012: adoption of a common digital TV standard at sub-regional or regional level in Africa.
 - June 2013: Finalization of the establishment of national legislative and regulatory frameworks for the transition to digital TV and the allocation of the digital dividend.
 - June 2013: End of frequency planning activities (national and international) for the deployment of digital TV and analog switchoff
 - September 2013: Start of deployment of digital TV
 - June 2014 : start of analog switchoff in the UHF band
 - 17 June 2015 : end of analog switchoff in the UHF band
- f) It is further recommended that African States make available all necessary human, structural and financial resources to ensure that the above dates are met.

In addition to the above conclusions and recommendations, which had also been adopted by the Bamako meeting, the Kampala meeting agreed on the following additional conclusions and recommendations to the next ATU Summit:

- g) Concerning the adoption of an African regional standard for digital terrestrial television on compression and transmission, it was noted that all African countries which have already made a choice on these standards have selected MPEG4 and DVB-T2, and that SADC has recommended their adoption to its members¹. These standards appear to provide the most efficient spectrum usage and the corresponding set-top boxes are now available on the market. **The next ATU Summit is therefore invited to consider the adoption of the MPEG4 and DVB-T2 standards at regional African level.**
- h) Concerning the definition format, **it is also recommended that the ATU summit consider the adoption of the dual HDTV/SD format at African regional level for the set-top boxes**, since this is becoming mainstream on the market, that it is available with a small additional cost and that the adoption of a SD-only format for the set-top boxes would make future evolution towards HDTV difficult.

¹ It was also noted that these standards have also been adopted in United Kingdom, Russian Federation, Turkey, India, Indonesia and a growing number of countries in Europe.

- i) Concerning the on-going discussions between African administrations to coordinate the frequencies of the GE-06 plan in order to ensure a minimum resource of four nationwide coverages in the band 470-694 MHz, it is recommended that those administrations currently having more than this resource be encouraged to make the utmost effort to release part of it to enable neighbouring countries to reach up to that level of resource. This is important to ensure that every country is able to successfully transition to digital television, hence release the digital dividend for its neighbours.
- j) Concerning the transition to digital television, it was noted that it entailed the requirement to separate the activities of content providers and signal distributors, which were historically carried out by the same entities when one signal meant one TV program only. Whilst there may be a need to promote competition by allowing several signal distributors to deploy broadcasting networks, **it is recommended that this should be done by enforcing sharing of transmit sites**, in order to avoid:
 - multiplication of transmit sites and resulting need for final users to buy several antennas,
 - adjacent channel interference, which would result into the impossibility to use certain of the resources or the GE06 plan,
 - additional difficulties related to the protection of the public against electromagnetic waves.
- k) Concerning the information to consumers on set-top boxes, **it is recommended that Member States implement labeling of equipment which are compliant with the standards adopted** to ensure that consumers are not misled into purchasing non compliant equipment.
- l) Concerning the timing of the licensing of mobile operators in the digital dividend bands (700 and/or 800 MHz), **it is recommended that ATU Member States do not award the corresponding licenses before sufficient progress has been made on the following processes:**
 - The situation of incumbent systems in these bands has been clarified and refarming decisions taken and accepted, taking into account worldwide harmonization;
 - Worldwide harmonization for the IMT band plans at 700, 800 and 900 MHz has been stabilized, to ensure that the benefits of economies of scale, roaming and interoperability will be available and the incumbents in these bands are given a fair opportunity to continue business;
 - The corresponding market of handsets has reached maturity in other regions, in order to obtain the best prices for African citizens.

This would also permit maximizing the value of spectrum in the cases where auctions are considered, whilst enabling start of the mobile broadband service by the date of end-2015 decided by WRC-12 for entry into force of the mobile allocation in the 700 MHz band.