

African Telecommunications Union

Summary of Developments since 2nd Summit

a presentation to the 3rd ATU Digital Migration and Spectrum Policy Summit

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Presentation outline: the agenda

- 1. 1st & 2nd Summit recommendations implementation: deeds are better ...
- 2. Other developments: other notables ...
- 3. Notable developments in other places: because we are not an island ...
- 4. Where things stand: self evaluation...
- 5. Ultimate goal: the bottom line...
- 6. **Observations:** what we have seen...
- 7. Recommendations: issues to consider...
- 8. Conclusions: when all is said and done ...



1st & 2nd Summit recommendations implementation status: because deeds are better ... 1/4

1. GE06 plan modification coordination with support of ITU (the BR)

- Successful concluded and all objectives achieved (DTT in the range 470-694MHz with min of 4 mux)
- ITU notification going on well

2. Consolidation of roadmaps

- Achieved at the 2nd Summit: recommendation 1 read together with recommendation e of Annex A;
- All non-national roadmap milestones achieved thus far: Adoption of a common standard and GE06 mods

3. Collaborate with ITU and other RTOs on the harmonization of DD

- Going on very well 3 out of 5 elements concluded: Allocation, band edge, protection of channel 48 sealed
- Channeling and OoBE elements still yet to be concluded
- Robust liaison with CEPT as the main partner, also with Australia as the lead implementer

4. Involvement of all stakeholders in coordination and transition discussions

- Going on very well: this Summit is attended by all stakeholders [Admins (Policy, Regulators, Media), ITU, AUC, AUB, RECs, Industry (DTT, IMT), Financiers (the World Bank), Innovators, etc]
- However, we seem to be missing the 'consumer'



1st & 2nd Summit recommendations implementation status: because deeds are better ... 2/4

5. DTT special desk at ATU GS

- Implemented: Technical Coordinator engaged 1st October 2012
- ATU through the TC or the SG himself have attended nearly all sub-regional DTT meetings/forums
- Intended purpose achieved

6. Establishment of the Summit as an annual event

Implemented: However, due to ITU major events, this 3rd Summit could not be held in the recommended 3/4 quarters

7. Sensitization of governments/policy makers on urgency and challenges

- Implemented: Through the Summits, sub-regional events, even national (in the case of Libya), this sensitization has been undertaken.
- Funding has emerged as the major challenge followed by legal hitches

8. Consideration of environmental issues

- ATU has since partnered with the Africa Institute in championing mainstreaming of e-waste issues
- Focused events/programmes planned



1st & 2nd Summit recommendations implementation status: because deeds are better ... 3/4

- 8. Assessment of the DTT spectrum requirements in the UHF band
 - Implemented through responses to ITU's WP6A questionnaire
 - Majority viewed the range 470 694 MHz as sufficient planned and future growth of DTT
- 9. Pursuing allocation of the DD2 at WRC-12
 - Implemented: WRC-12 Resolution 232, however allocation to take effect immediately after WRC-15
 - WRC-15 to specify the technical and regulatory conditions

10.Adoption of a common standard

- Achieved at the 2nd Summit: recommendation 3: DVB-T2; MPEG-4 or higher variants
- So far, only 1 country is officially known to have chosen another standard (ISDB-T) also as provided for

11.Channeling plans adapted to 700/800MHz band to foster economies of scale

- Going on well: Working documents within ITU's WP5D include favorable options including the SADC's SDL, full and/or partial harmonization with APT700 plan
- However, more work still remains as these options are discussed further



1st & 2nd Summit recommendations implementation status: because deeds are better ... 4/4

- 11.Mechanism for interrogation of channeling options (+ other issues) and reflection of regional views into the work of ITU's WP5D and JTG 4-5-6-7
 - Implemented: Establishment of AfriSWoG with input contributions to 5D and JTG influencing decisions particularly the lower edge under AI 1.2 and the OoBE limits
- 12.Holding of the 3rd Summit with the support of ITU (the BR)
 - Implemented: this 3rd Summit

13. Countries are invited to access implementation of recommendations on:

- Engagement of all stakeholders at national level in particular consumers
- Handling of incumbent licensees in the DD spectrum
- The crucial role of governments in particular relating to funding and enabling policy/regulations
- Implementation including separation between carriers and content providers, infrastructure sharing, etc



Other developments: other notables ...

1. AUC assessment of DSO costs via a questionnaire

(Examples: Algeria (50); Benin (10); Egypt (19); Ghana (118); Nigeria (200); Senegal (100) and South Africa (1000))

- 2. SADC and ECOWAS adoption of STBs minimum standards
- 3. ITU's good progress on DD2 issues via the JTG 4-5-6-7 and WP5D (support of the allocation; agreement on lower edge; protection of channel 48)
- Start of TV white space debate (ITU Biennial seminar/AfriSWoG/Dynamic Spectrum Access forum)
- 5. DTT funding facility at the World Bank
- ITU-R Report M.2290: ITU's global IMT spectrum estimates by the year 2020 (1340 – 1960 MHz)
- 7. Actual Analogue Switch-Off: Mauritius, Mauritania and Tanzania leading the way
- 8. Validation of Harmonized Calculation Method for Africa (HCM4A) agreement



Notable developments in other places: because we are not an island ...

- 1. USA policy to designate the 470Mhz band for DTT and IMT on co-primary basis
 - USA now taking active steps within CITEL and ITU to 'effect' this policy
 - CITEL (and hence Region 2) is divided on policy

2. DD spectrum auctions in UK (DD1), France (DD1), Australia (DD2), etc

- The UK Case: A total of 60MHz (2X30MHz) spectrum in the 800MHz band yielded about USD2,000m translating to about USD34m per MHz. The potential for DD2 would be USD2,000m
- Examples of DTT Cost in Africa (USD million): Algeria (50); Benin (10); Egypt (19); Ghana (118); Nigeria (200);
 Senegal (100) and South Africa (1000) [Source: AUC November 2012]
- Clearly, DD spectrum proceeds are able to fund DTT migration in respective cases
- Regulatory certainty crucial for long term licences and high fee revenues

3. Network trials/actual implementation in Australia on the DD2 range

- To validate the APT700 systems compatibility and DTT in 470-694MHz
- Full commercial services planned for January 2015 having enough vendors supplying user device



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Notable developments in other places: because we are not an island ...

1. Positive white space technology trail results: South Africa, Malawi, Kenya...

Stakeholders are moving to development White Space guidelines (according to Google and XYZ)

2. CEPT decision on the OoBE limit in the DD2

- CEPT has settled for an OoBE value of -42dBm/8MHz as a compromise value between in the IMT/DTT communities
- CEPT wishes to have this value incorporated in ETSI, and crucially in 3GPP and ITU regulations
- Effectively, this would create a dual limit with the APTs -33dBm/8MHz limited to 803MHz+ range with the -42dBm/8MHz applying below 803MHz and with channeling of 10MHz.
- CEPT believes doing so will NOT negatively impact on global harmonization

3. Maturity of DVB-T2/ establishment of HEVC (April 13, 2013)

- In theory, HEVC is 100% more efficient than MPEG-4 effectively doubling capacity of DVB-T2/Mpeg4
- CEPT countries supporting DD2 in particular Italy as a result of HEVC
- DVB-T2 can now 'add-drop' signals allowing for flexible implementation of national/regional coverages

4. UAE's band plan for DD2 announcement (May 2013) and release of DD1



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Where things stand: check point.... 1/2



 Compression of DTT range from 48 x8MHz channels (392 MHz) to 28 x 8MHz channels (224 MHz) which in theory represents a near 60% efficiency



Where things stand: check point.... 2/2

- 1. UHF band segmentation between DTT and IMT at 694MHz
 - DTT in the range 470 694MHz
 - IMT in the range 694 862MHz
- 2. Status of issues for DD2 (under WRC-15 Agenda Item 1.2)
 - Allocation: Support the allocation
 - **Band Edge**: Support the 694MHz as band edge
 - Protection of Channel 48 of DTT: Support protection of Channel 48 of DTT
 - Channeling: Full or partial harmonization with the APT Plan to foster economies of scale
 - Out of Band Emission: Similar with APT700 applicable values
- 3. Actual ASO (migration) needs to be evaluated by individual countries



Ultimate goal: the bottom line ...

- 1. More efficient and effective use of the crucial UHF spectrum resource
- 2. More Foreign Direct Investment (FDI)
- 3. Revenue potential from DD licensing proceeds
- 4. Universal access to broadband (Mobile IMT in particular in rural areas)
- 5. Improved GDPs
 - 1. Value added services
 - 2. Content generation
 - 3. Widespread e-commerce and digital driven economies
 - 4. Widespread e-government
- 6. Broadband for all in Africa
- 7. Enhanced social-economic development



- The conclusion and resounding success of the GE06 Plan modification exercise : DTT confined to 470 – 694MHz with 4 mux largely achieved.
- 2. The modification and coordination exercise has had a tremendous positive effect of attaining a significantly much higher degree of spectrum use efficiency and effectiveness in the UHF DTT band
- 3. Unwavering support of ITU, through the Director of BR and his staff, has been key the success of the exercise.
- 4. The majority (53) African countries are likely to implement the recommended DVB-T family of standard for DTT



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- 5. Appointment of the Technical Coordinator since 1 October 2012, whose role includes coordinating ATU activities on DSO
- 6. Establishment and operationalization of the African Spectrum Working Group (AfriSWoG)
- 7. Good liaison and collaboration on DSO with ATU, its Member States and African countries in general from the key stakeholders notably the ITU, AUB, RECs, ...
- 8. The partnership between ATU and the African Institute in the area of e-waste management
- 9. Digital migration financing facility at World Bank



Recommendations: issues to consider...

Countries are invited to ensure implementation of recommendations on national matters, including:

- 1. Engagement of all stakeholders at national level in particular consumers
- 2. Handling of incumbent licensees in the DD spectrum
- 3. The crucial role of governments in particular relating to funding and enabling policy/regulations
- 4. Implementation including separation between carriers and content providers, infrastructure sharing, etc
- 5. Focus on replacing Analogue transmissions with digital transmissions particularly in the DD range 694 - 862 MHz



Conclusions: when all is said and done ...

- Close liaison and collaboration with key stakeholders remains crucial to DSO
- 2. Membership support and active participation in these matters and the work of ATU in general, remains crucial
- 3. And because of the active support of stakeholders, issues requiring regional collaboration/action have either been done well or are going on well



thank you all: a grateful heart is a health heart

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