



African Telecommunications Union

The digital broadcast transition: Changes in spectrum and their implications

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Balancing Act



The Vision

- Broadcast: Better, more diverse content, wider national coverage, clearer pictures and sound
- Telecoms: Freeing key spectrum for 4G/LTE creating faster broadband and better transition to African data use



Countries meeting ITU deadline

- The Deadline: End of June 2015
- Countries: Algeria, Kenya (hard-stop), Mauritius and Tanzania (hard-stop) – and these countries may provide valuable lessons for others.
- Consequences?



Countries not meeting deadline

- 50 out of 54 countries: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo-Brazzaville, Cote d'Ivoire, Djibouti, DRC, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Togo, Tunisia, Uganda, Zambia and Zimbabwe.. **This is six more countries than when this assessment was conducted in 2012**



Breaking it down

- 2012/2014
- **No announcement of timeline (29/13):** Benin, Chad, Comoros, Djibouti, DRC, Equatorial Guinea, Gambia, Eritrea, Guinea Bissau, Liberia, Libya, Sao Tome, Seychelles, Sierra Leone
- **Affected by civil disturbance (4/4):** Central African Republic, Mali, Somalia and South Sudan



Reasons for delays

- Slow to move, unrealistic deadlines. 4-10+years elsewhere. Mauritius with many advantages: 8 years
- Issues with funding. Options: Government, PPP or handing over process for channels. Examples of Impact: Zimbabwe and Uganda
- Legal challenges, Government changes, disagreements in the Committee

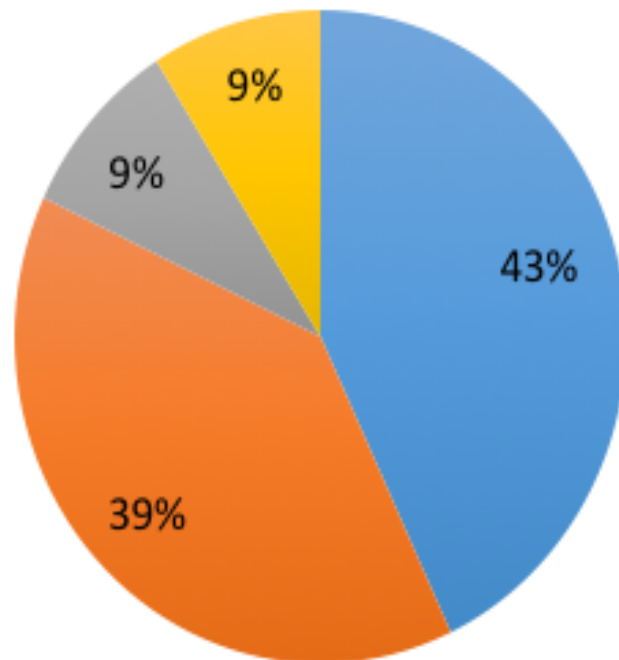


The Hard Stop Approach

- Comparisons with SIM Card Registration
- 31 December 2013 Tanzania's TCRA turned off Dar es Salaam. Research commissioned: 80% of 450,000 TV households had bought set-top box or digital TV
- Left 90,000 households X 5 per household = 450,000 less TV viewers. Impact on TV advertising
- Jan 2014 2 million out of 2.6 million nationally had done so. Scheduled to meet June 2015 deadline
- Mauritius example
- 3.2% of survey respondents said price of STB too high. Subsidy?

TV channels – Current

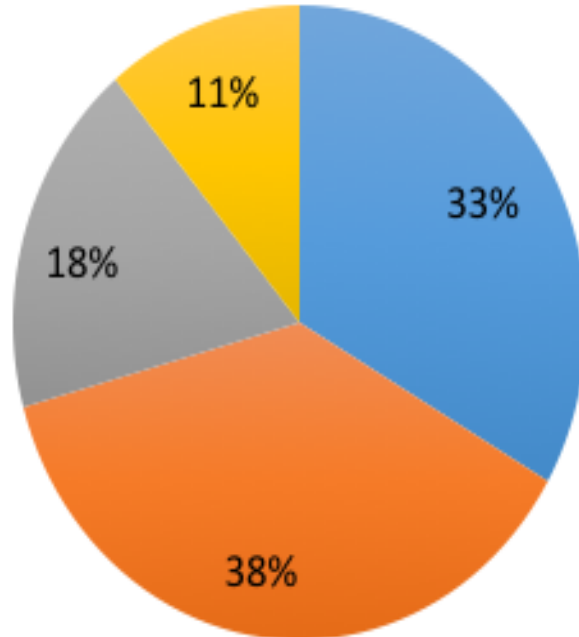
2012



- Countries with 1-2 TV channels
- Countries with 3-9 TV channels
- Countries with 10-19 TV channels
- Countries with 20+ TV channels

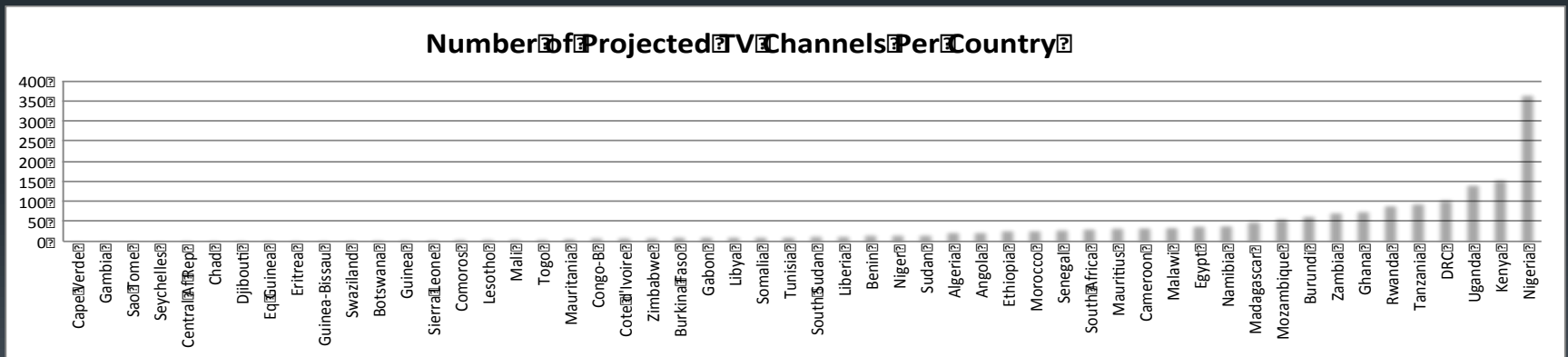
Future TV Channel Demand

2014

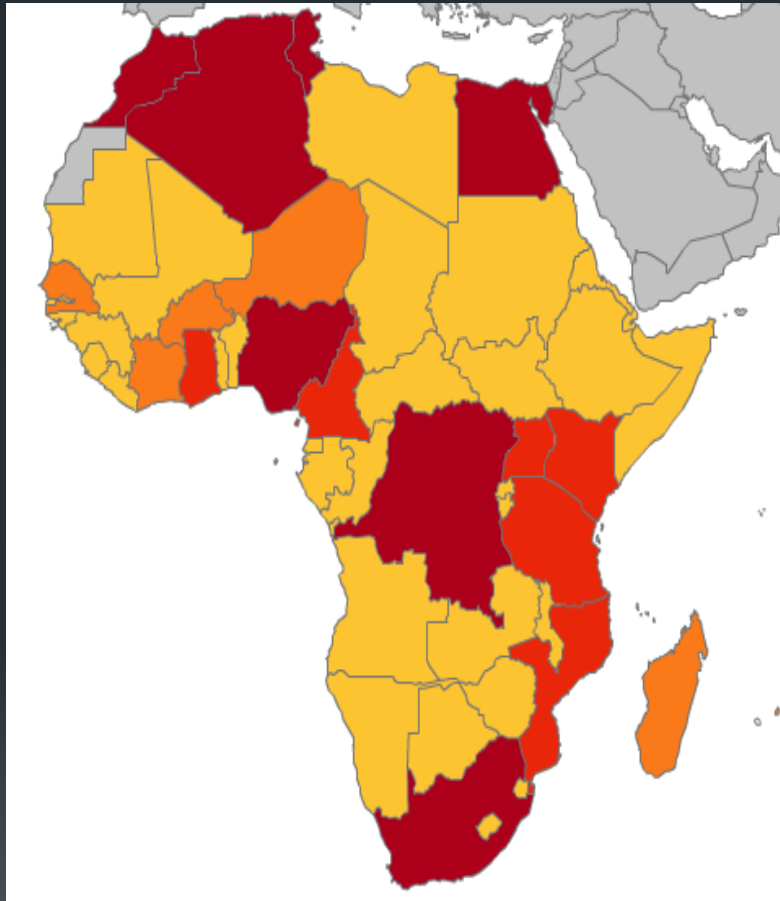


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Number of Channels Per Country



Pressure on Spectrum



Dark red: High spectrum occupancy (most channels occupied) - Algeria, Morocco, Tunisia, Egypt, Nigeria, Congo DRC, South Africa

Dark Orange: Medium spectrum occupancy (Around 20 channels occupied) - Kenya, Uganda, Tanzania, Ghana, Mozambique, Cameroon

Light Orange: Low spectrum occupancy (Less than 10 channels) - Niger, BF, Senegal, Mauritius, Cape Verde, Madagascar, Cote d'Ivoire

Yellow: Low spectrum occupancy (less than 5 channels)

Very Low Occupancy - The remaining countries of Africa



Country Cases

- **Liberia:** Only 6 channels. All transmit with exception of one (extends to Lofa County) in capital Monrovia. One CDMA operator (LibTelco) in 800 MHz.
- **Ghana:** 14 Active analogue TV stations, 17 with channels that fall in 470-862 MHz . One CDMA operator in 800 MHz (Expresso)
- **Nigeria and South Africa:** In Nigeria, 7 TV channels fall into DD spectrum, all Federal or State Owned. 4 CDMA operators in 800 MHz. In South Africa, for example 61 DD spectrum allocations for private TV channels, all regional. One CDMA operator (Neotel) in 800 MHz



4G/LTE take-up (existing & planned)

- 5 operators in 4 countries in 800 MHz (DRC, Lesotho, South Africa, Uganda)
- 32 operators in 19 countries in between 1800-2400 MHz (Algeria, Angola, Cote d'Ivoire, Ethiopia, Egypt, Ghana, Kenya, Madagascar, Mauritius, Morocco, Namibia, Nigeria, Rwanda, Senegal, Somalia, South Africa, Uganda, Zambia and Zimbabwe).
- Some spectrum allocation unidentified but likely to fall into second category



Overall recommendation

- Need for greater transparency so that telcos and broadcasters know what is happening
- Need for greater certainty about timings and deadlines even if there is failure to meet ITU deadline
- Need for plans to get to DTT without damaging the broadcast industry
- Need to accelerate the implementation of 4G/LTE
- All of the above promotes investment and creates jobs