



# EVENT REPORT

## Summary

The 11th annual Digital Broadcasting Africa Forum (DBAF) of the Commonwealth Telecommunications Organisation took place on the 11th – 13th May 2016 at Eko Hotels & Suites, Plot 1415 Adetokunbo Ademola Street, PMB 12724, Victoria Island, Lagos, Nigeria. The event was organised by the CTO and hosted by the Nigerian Federal Ministry of Information and Culture (FMIC), the Nigerian Federal Ministry of Communications and Technology (FMCT), the National Broadcasting Communication (NBC) and the Nigerian Communications Commission NCC).

This event is a continuation of the successful Digital Broadcasting Switchover Forum Africa events that have taken place over the last decade – the new title for the event recognises the changes that have taken place in broadcasting during that time. The Forum was held under the theme, “The Pan-Africa Transition: Achieving Digital Migration Success”

The Digital Broadcasting Africa Forum 2016 (DBAF 2016) with the theme, “The Pan-Africa Transition: Achieving Digital Migration Success”

DBAF 2016 was attended by more than 200 delegates from 14 countries including CTO members from the countries of Botswana, Cameroon, Ghana, Kenya, Malawi, Mozambique, Sierra Leone, Uganda and Zambia. who included top government policy makers, policy advisors, regulators, broadcasters, content developers, content distributors, network infrastructure providers, network operators, equipment manufacturers, systems integrators, academia, the media, and opinion leaders from across the globe.

The Forum was held with the support of the following sponsors; MTN, Verimatrix, MultiChoice, Inview and the following supporting partners; HbbTV, France 24, BBC News, World Digital Audio Broadcasting, Association for International Broadcasting, Southern African Digital Broadcasting Association (SADIBA), and NigComSat.



## DAY 1

### OPENING CEREMONY

- Digital technologies offer the potential for more channels, greater content choice and inter-active viewing, and how this new landscape presents broadcasters with challenges and opportunities with emerging competition from Internet content delivery, on top of offerings from satellite, cable and IPTV.
- Broadcasters must adapt to remain relevant in the digital era. In the case of Nigeria, after many years of consultation, planning, ground breaking work and a final push by ministerial impetus, on 30 April 2016, Nigeria piloted its digital switchover in the city of Jos, Plateau State. This small but significant step provided critical lessons and insights into furthering models, implementation, strategies and value-chain models that will lead the way as the light of the digital switchover.
- African broadcasters need to produce more local content and congratulated the NBC for championing the National Broadcasting Code which requires broadcasters to transmit local content during prime time.
- African countries must meet the obligations from the treaty agreements that they sign. A greater effort was needed, and this, in part, would accelerate the completion of the digital switchover process. It is necessary to address the key challenges of funding, adequate regulatory frameworks consistent with new digital multimedia services, as well as the need for effective coordination with their neighbours.
- African countries need to better value spectrum.
- For the ICT sector to continue growing there needs to be regulatory certainty and African governments need to distinguish between and respect the different roles of the policy maker and the regulator.
- The implementation of DSO in Africa has encountered many hurdles and pointed out that in order to achieve this transition we must as a continent focus on the inherent benefits of the switchover.
- DSO will benefit all stakeholders and that the Federal Government is taking all necessary steps to ensure switchover is in effect by June 2017.
- NBC and NCC are in the process of relocating broadcasters from the 700 MHz band and the exercise should be completed before the deadline.
- Rollout of broadband services to Nigerians is proceeding as stated in the Nigerian Broadband Plan and will reach all un-served areas.
- Opportunities abound in the Nigerian telecoms industry



- State and local governments need to institute enabling right of way policies so that their communities benefit from these services.
- Terrestrial broadcasting started in Nigeria in the 60s and 70s most people were not able to afford TVs in their homes, broadcasts lasted 6 to 10 hours, but nevertheless, television brought about a fundamental change in how people accessed information.
- For most African countries, migration from analogue to digital has been a slow process and the challenges have been similar; financial, technical, and political among others.
- The digital age in other sectors such as mobile telephony and the Internet has been vastly positive, and the digital broadcasting environment will bring similar benefits to citizens and the economy.
- Citizens must be aware of the economic and social dividends that digital broadcasting avails for the society.
- Nigeria is working hard towards meeting the ECOWAS deadline of June 2017.
- There is a need to understand the importance of quality and dynamic content as what will determine the real success of digital migration.

## COUNTRY PROGRESS REPORTS

- Ghana is set to complete rollout by December 2016.
- The key objectives of the National Communications Authority (NCA) are to: stimulate mobile service growth; rollout a nationwide DTT network; facilitate universal access to Internet data service.
- In Malawi Digital migration started in 2010
- Malawi has adopted a phased analogue switch off and officially switched off analogue TV broadcasting on 17th June, 2015 in two cities of Mzuzu and Zomba. Total switch off for the two cities scheduled for 30th June, 2016.
- In Nigeria much progress has been made but two major areas responsible for Nigeria not meeting the ITU deadline of 17th June, 2015 as; a) Commitment on the part of Government; b) Funding. Both are being overcome with the appointment of the Minister of Information and Culture.
- In Nigeria a Pilot Programme was kicked off on 30th April, 2016. The transition will be a phased transition and cities will be turned over a period of 1 year.
- In most rural areas viewers can only get the Nigerian Television Authority (NTA) after the migration all rural areas will receive all 32 FTA channels.



- All transmissions were pushed to the UHF platform and upon transition all VHF & UHF transmitters will be switched off.
- Digital Dividend 1 (2 x 10MHz) is what has been sold by auction at the price of NGN 32 billion and that is what is driving the transition.
- In Kenya, at present, there is 60% population DTT coverage.
- In Kenya, litigation challenges by broadcasters to stop the Digital Migration occurred between 2012 - 2015. This led to delays in the network rollout, availability of STBs, misinformation of the public by broadcasters and inadequate funding.
- Initially the Kenyan government was the source of funding but eventually sold a BSD license to continue the funding.
- Kenyan broadcasters saw the transition as a big 'game changer' as broadcasters realized that they would not have the advantage of monopoly over advertising revenue after the transition. Government amended the ICT Policy to enable these broadcasters the option of 'Self Provisioning Network' Licenses. An application is currently pending.
- Sierra Leone is in the very early stages but will meet the ECOWAS deadline of June 2017.

## WRC-15 AND SPECTRUM IMPLICATIONS FOR BROADCASTING

- Convergence is not expected between DTT and Wireless Broadband (WBB) in the foreseeable future.
- The future of UHF Broadcasting is in the hands of ITU Membership and will depend on decisions that will be taken at WRC-23. He pointed out that actual convergence may happen between traditional broadcasting, WBB and other delivery platforms at the service level.
- The UHF band will depend on how individual administrations prioritise it and that market penetration of different TV platforms is country dependent.
- Mobile consumption of audio-visual content it is necessary to consider how broadcasting and mobile services can complement each other in the delivery of same to mobile terminals.
- Terrestrial broadcast undertakes a key role in many countries to support social inclusion, has political implications which need to be maintained.
- The GE-06 agreement planned Digital TV service for the EMEA. As TV broadcasting moved to digital, more channels and services can be offered using less spectrum. This provided a 'unique opportunity' to transition some of the spectrum to Mobile, to provide improved coverage



for Mobile Broadband Services, and to also allow Mobile Spectrum to bridge the Digital Divide.

- The 2 Digital Dividends allows Africa to license spectrum in the 800 MHz and 700 MHz frequencies. For Africa to realize the potential of Digital Dividends, appropriate Spectrum Policies must be on the ground using economic policies providing a level playing field and being consistent and transparent.
- Migrating analogue TV Signals to transmission by digital means, the Broadcast Industry requires less spectrum and the unused spectrum is the Digital Dividend.
- Possible applications for the unused spectrum include Mobile Broadband (MBB), Mobile TV, Mobile Telephony, Mobile Internet and Mobile Data/Multimedia.
- In countries with multiple regulators for the ICT sector, there is a raging battle on who should take over the newly vacant spectrum or how to share it. Embracing convergence is the best way to avoid controversy thereby maximizing the benefits of the freed up spectrum.
- Implementing Policy Convergence would lead to Converged Licensing; Converged Spectrum; Converged Regulator.
- Digital Dividend Spectrum should be assigned through a transparent auction process.
- The Industry Model can be exported to other countries, if content is not attractive the platform will not grow.
- Technology brings about policy development. Policy is to guide the usage of Technology as technology evolves policy is devised to use it efficiently. Policy and Technology must go hand in hand in order to use Frequency Spectrum efficiently.
- The “use it or lose it” policy; It’s a limited resource which cannot be left idle. The Regulator has the right to withdraw a license if not utilized properly.
- Spectrum Re-farming Policy as Technology evolves, users can adapt to take advantage.
- Every nation has to decide its Spectrum Policy objectives and must be able to prioritize them. A good policy must balance social and economic benefits.
- Policy cannot exist in isolation as it is closely related to Technology, therefore, Technology must not be killed by Policy serving to ‘over-regulate’ it. A good balance needs be achieved.
- Technology improves spectrum efficiency as it helps to expand the availability of Spectrum.



- The use of the UHF band is dependent on the individual administrations. Administrations need to decide what use they would place on the Spectrum. Administration should follow the studies from the ITU groups, educate and avail themselves of the opportunities in these studies.

## BROADCASTING INNOVATIONS

- DTT is revolutionizing the African audio-visual and telecoms landscape and will require major investments.
- The benefits of DTT Broadcasting (DTTB) as saving Spectrum, better audio and video quality, the potential reduction in transmission network energy usage, Interactive TV, better signal processing, Employment in Content Production, manufacturing of STBs, and Infrastructure extension.
- Increased Revenue for Governments will all aid in the development of the African economy. The UK example where DTTB has grown to be the UK's leading TV platform being used by 75% of the households. Revenue has hit the £3 billion mark, 15,000 jobs added in the sector. GSMA projects the dividend to Nigeria from sales of spectrum could be up to \$ 2 billion.
- Revenue security solutions are needed for multi-network, multi-screen video services for IPTV, DTT, Internet TV and other users such as Content Providers. To make money out of content it has to be secure on TV as well as over the Internet.
- Wireless broadband (being controlled to a large degree by Mobile Phone Operators) is key and these operators are now engaging in the roll-out of DTT to position for Over -The-Top (OTT) services.
- Security requirements are increasing for premium content and 'premium content' requires premium security. Operators must make sure to pick the right security provider.
- The next generation satellites will be lightweight, focus on beam efficiency and quick to put into service. There is a mass and cost savings achieved when electric propulsion is used. Improvements will extend operational life times with ability of in-orbit replacement.
- The communication ecosystem is evolving as the traditional ecosystem mainly connected linear broadcast customers but the modern ecosystem also includes deeper networks/applications with a magnitude of connectivity options.
- Spectrum efficiency is improved with hybrid satellites by using a combination of shaped and spot beams. Capacity allocation is increased



with the use of digital processing. Satellites transmissions are complementary to DTT because they are quick, cost effective, ubiquitous, and provide high quality.

- DTH satellite platforms have evolved over time, dishes have become more compact, of higher quality and cheaper. NIGCOMSAT 1R has been in orbit since 19<sup>th</sup> December, 2011 and has the capacity to offer high quality radio and TV transmissions.
- The C band covers West and Central Africa; the ECOWAS 1 KU band covers Nigeria, W. Africa and some S. W. African countries; the ECOWAS 2 KU band covers Northern Nigeria and more S. W. African countries; Asia KU band; KA band spot beam Nigeria for local transmissions; KA band South Africa spot beam; KA band Europe spot beam.
- NIGCOMSAT has built a DTH center which is designed to offer viewers all the standard and premium services. With DTT satellite platforms have a major role to play as they deliver content in a cost effective manner to DTT transmitters regionally or nationally.
- Inview combines technology with operational expertise to provide a “win, win, win” situation for consumers, the TV industry and the Government. In the UK, Inview created a \$3bn per annum industry through FREEVIEW and a \$2bn+ cash receipt from the sale of freed-up spectrum (“digital dividend”) giving consumers 40 high quality free TV channels as well as catch-up and on demand service.
- The Inview concept is a Set Top Box that's an entertainment tool which features a choice of FTA channels via a simple Electronic Programme Guide (EPG), EPG advertising, Value Added Services including News & Public service info, Personal Video Recorder (PVR) functionality via memory stick (Viewers can record, pause and rewind live TV), Premium Pay-tv if desired, etc.
- Consumers get high quality FTA TV, low cost STB, upgradable to PVR. Broadcasters get additional advertising and more platforms. Government gets TV licence income, Government Info systems, etc.
- The digital world allows the broadcaster to reduce ycosts but afee is paid to the BSD for carrying the signal. In effect, the transmission is being received throughout the whole country. This made possible by DTT and without the benefit of a National Licence.
- The Mobile Telecom companies will be encouraged to provide the ‘triple play’ capability service at a lower rate.





## LOCAL CONTENT CREATION FOR AFRICA

- Content is a critical area in Digital Migration and content development and channel building must be taken seriously.
- Audience measurement is key, and understanding this will enable Content Providers (CP) to provide what the populace would like to see.
- CPs need to decide the platforms where their content can be seen and must be able to determine how their product would look on smaller devices as going into the future these devices will become smaller and smarter.
- As a CP/Producer/Director, one must hone shooting angles down to a science. The attention span is diminishing as most households are TV free as game consoles are becoming the device of choice for the younger generation.
- CPs need to understand the regulatory environment as regulation will be more complicated as we go forward. What about convergence, will the content be accepted across all platforms? There is the need to be informed about the various technological platforms that are available. CPs to concentrate on local content. Basketmouth, a Nigerian Comedian, is popular in South Africa and on the Comedy Channel. Content must be compelling across the board, we must be able to enrich and develop our culture. Africa is a creative canvass; it is unparalleled, untapped and unmatched. Africa must take the issue of content seriously.
- Local content creation in Africa is undergoing an aggressive growth spurt. **Nigerian film industry** is the most vibrant in terms of volume, contributing an equivalent of N9 trillion (\$45m) total earnings as part of the entertainment industry. **South African film industry** contributes approximately R3.5bn (\$230m) to the country's GDP according to government's figures.
- CPs must develop Local Content (LC) to show the richness of the African culture . It will create an opportunity to earn forex, create jobs and develop the economy, change perceptions about Nigeria & Africa as a whole, and improve the art of film making using modern technology. To develop content you must have a story to tell, have to plan, produce the film, edit and distribute.
- The challenges mitigating against CP are piracy, funding, dearth of local content, dearth of skills, infrastructure, finding an audience, and distribution. DSTV/GoTV is helping to develop LC by creating a market, created a platform to showcase internationally, providing funding through commissioning and buying, capacity building through workshops and own productions, fighting piracy.



- Today there is better technology available and affordable, better trained staff but not enough people to fill these positions as demand for LC is growing exponentially.
- One of the challenges is that few local universities carry a specific curriculum on film-making. AT BOB TV, a film festival tailored to Nigerian and African needs, has a five day crash course on film making. One of the challenges facing new entrants is that there is very little investment channeled at the production of content and content producers have to find creative ways of sourcing for funds.
- Another challenge that ASO brings is the quality of the audio and video. This will further magnify flaws in the film making process. Content creators must clean up and recalibrate their content. He proposed that one solution is to create an online platform to register Content Creators. South Africa created a Content Hub.
- DSTV provides grants, invest in equity and hold workshops to attract investors.
- Piracy is a cultural issue. We need to go back to knowing what is right and what is wrong.
- We must place content production on the front burner. A content market should be created, where contents are show-cased, purchased and resold. This will create more value for content.
- The value chain in content production, from the idea owner to the concept developer, the producer, all those who work on synopsis and come out with creatives must be recognized, respected, and well appreciated within the African continent if progress is to be recorded.
- Low budget does not mean poor quality, the following criteria should be adhered to:
  - Visual Quality – how clear?
  - Sound Quality – how clean and clear is it?
  - Is the story compelling?
- There is nothing in the white paper about direct funding of production, but it identifies some level of capacity building, institutions should be empowered to train people for content creation in the digital age. An indirect source of funding that is likely to be considered is the Digital Access Fee managed through the conditional access fees STBs per year.



## DAY 2

### THE CURRENT STATE OF DIGITAL MIGRATION

- As of May 2016, only 55 countries have completed the ASO status, 68 countries have their status as ongoing while 75 countries have an unknown status or have not started.
- In the GE-06 Region only 4 African countries have completed the DSO. Most administrations have not completed the ASO. Africa has the advantage to do 1 transition while Europe is currently going through the 2<sup>nd</sup> transition.
- The EBU is the world's leading alliance of public service media with 73 members in 53 countries operating 913 TV and 854 radio services. It broadcasts in 96 languages with the task of informing, educating and entertaining a potential audience of 1.02 billion people.
- The EBU is a centre of excellence for spectrum planning. He identified four main criteria for DSO success in Africa as funding (network and Set Top Boxes), local content, enhanced quality (HD, UHD) and spectrum stability. In concluding his presentation.
- DTT is the reference platform for delivery of TV services in Europe
- Wireless broadband is currently not a real alternative to DTT but a complement
- WRC-15 provided spectrum stability for DTT, it is an opportunity not to be wasted
- In Uganda the ASO was implemented in 2 phases 1) Kampala covering a 70 km radius ASO completed by July 2015; 2) the installation of 17 sites country wide, the plan is to totally switch off analogue by June 2016
- Uganda's challenges were the cost of acquiring STBs as there was no subsidy, the opposition by broadcasters and Legal challenges.
- In Kenya DTT was commissioned in Nairobi in December 2009 with DVB 1 standard. The 2010 standard was changed to DVB-T2
- The 2011 Licensed the 2<sup>nd</sup> SD through a competitive bidding process
- The Kenyan government set June 2012 as the initial switch off date and pushed this to December 2012. This was not achieved due to:
  - litigation from Consumer and Media groups
  - the low supply of DVB-T2 STBs.
- Kenyan switch off dates were moved 3 times due to more litigation but by December 2014 the switch off was implemented.



- Kenya's Phase I switch off was achieved in 14 cities in February 2015 while Phase II switch off was achieved before the ITU deadline.
- Sierra Leone is definitely going to meet the ECOWAS deadline in June 2017
- A UK company has been identified to carry out the Signal Distribution in Sierra Leone.
- Sierra Leone is prioritizing Content Production
- The problem of DTT receivers on Mobile devices is a problem of manufacturers not of Governments. Only a few manufacturers are willing to provide DTT access on mobile devices.
- If an administration does not reach the transition, the ITU does not have any power to sanction any administration.
- There is so much for independent producers as there will be increased demand for local content. Producers need to start developing and warehousing content in anticipation of the boom that is coming on the horizon.
- In Kenya, the Government decided to let benefits accrue to all by zero-rating the import duty of STBs, reduced certification fees for STBs, waived the fee for licensing of suppliers, and full liberalization of supply of STBs.
- ITU sent out a questionnaire in 2012 to administrations. This is the information that was used to create the database. Administrations are to contact the ITU when there are changes in the status of their switchover.

## PROTECTING THE CONSUMER: LEGISLATION AND CONSUMER RIGHTS

- Customer service is about fulfilling our promise to our Customers by delivering what they want, when they want it, where they want it, in the most satisfying way possible.
- The importance of consumer research in satisfying customers, to understand customer's needs, one must listen to the voice of the customer (through Research) and take action accordingly.
- Quality service is all about customer/client satisfaction, about understanding and appreciation customer/client desires, about giving value for money and time. Above all it is about capturing the minds and imagination and purse of customers and clients.
- Consumers always want to know their rights and benefits, with digital comes more choices which also results into competition. Apart from that,



the mobile industry has emancipated the consumer, they are now more aware and have power to make their choices in different ways. But in conclusion, when the service providers' offering meets the consumer's needs, then there is a happy medium.

- Consumers themselves have a lot of issues from different perspectives, e.g. Set Top Boxes, Content itself etc.
- For consumers to enjoy their rights, there first need to be adequate consumer awareness on their rights on existing services offered by providers. Also the customer should be consulted and involved in the formulation of various laws as it's targeted towards providing solutions to their challenges. In essence, there should be nothing for the consumer without the consumer.
- The regulator sets standards, the signal distributor transmits contents, and the content provider develops content. At some point, they are all responsible for quality of service on different levels. Consumers have to be educated or made aware of duties of each service providers to know which to interact with.



## DAY 3

### DIGITAL BROADCASTING TRENDS

- African Administrations should start considering digital radio in parallel with digital television, and take the lessons of digital television and apply them to radio because radio is a vital medium in Africa.
- The DRM consortium, which was founded in 1998, a not-for-profit, with 100 international members (broadcasters, manufacturers, network operators, regulators, research institutes, etc.) of experts & technologists and has an open membership.
- The advantages of digital radio against analogue, mainly, better sound quality, more channels plus data and energy efficiency. DRM is a Global Digital Radio Standard for all Bands Below and Above 30 MHz. It is one of at least three major digital standards in the world and only standard that works all frequency bands, it is tested and recommended. ITU endorsed it for worldwide operation.
- DRM for Large-Area Coverage; works anytime & anywhere, suitable for all areas, largest radio deployments, energy efficient, reduced maintenance effort, service & operational costs.
- DRM features: more choice for listeners (up to 4 programs on 1 frequency), excellent audio quality (no distortion, stereo & 5.1 surround sound), good coverage, automatic tuning (by station name, no longer by frequency), emergency warning & alert.
- The organization World Digital Audio Broadcasting (WorldDAB) whose primary mission is to facilitate adoption of DAB digital radio around the world. He highlighted the need for DAB and DAB+, stating that FM channels are already overcrowded. With DAB comes more channels with data. DAB is free to air and open standard.
- The benefits of DAB radio:
  - For Listeners: clearer sound, greater choice and new data services.
  - For Broadcasters: innovation, brand extensions, and cost efficiencies.
  - For Society: greener distribution, free to air/universal, open standard and emergency alerts
- DAB+ is core future platform for radio – in multiple territories, and a Cost-effective solution for cities and national coverage.
- The advent of mobile technology brought a drastic change to broadcasting and consumers are changing, they have more exposure with acquired sophistication on different platforms with so many options. This has given them the freedom to be able to decide where and how they



want information whenever they demand it. In conclusion, he advised as far as disruption is concerned, in any sector, regulators should not stand in the way of development; they should be flexible with technological advancement.

- HbbTV, connects web technology with broadcasting. It's an open standard, broadcast centric, uses web technologies, is fast and of low cost application developments. It has over 100 services and is deployed in 20 countries. He further talked about HbbTV architecture, standards, services, attributes (Video on demand, Push video on demand, Interactive advertising, enriched program guide, etc.) and values.
- Internet and broadcasting are two different things. Internet is a valuable discovery with numerous socio economic benefits. Internet experiences server overload/breakdown when everyone is trying to reach same information at same time, but this isn't so with broadcast, quite a large number of people can access/view same information at same time, it's the same signal. Internet adds additional attributes to broadcasting. The importance of radio is that it is usually the last line of resistance in any emergency or disaster, as telecoms and television towers are the first to be destroyed.
- Terrestrial broadcast need not compete with the Internet, but integrate it to its own benefits.
- Internet is both an opportunity and a threat, there's a growing competition between mobile devices and linear TV, and consumers tend to get more on their mobile platforms. Broadcasters should embrace this necessity and find a way to link, promote and get their services on those platforms.
- The Internet is more of an enabler, but its ability to crush what does not flow should not be underestimated. There is now more access to contents on multiple devices and platforms in which broadcasting has benefited from this opportunity.
- From a Set Top Box point of view, there is an additional cost on any service one gets through another medium. But radios services can be added to DVB-T and DVB-T2.
- DAB+ and DRM+ can work together, they both share a lot of technical features and are totally compatible, with open standards. The industry could manufacture compatible receivers.
- Digital radio provides a screen that's able to display scripts of what's being broadcasted, and also alert in emergencies. From a Set Top Box point of view, contents providers and broadcasters should provide support for subtitles. This On DRM, there's an existing solution in which signal is broadcasted in DRM, but its decoded back to FM for analogue



to receive. This is an interim solution and eventually a digital receiver must be acquired to enjoy all benefits of digital radio.

## CAPACITY BUILDING IN BROADCASTING

- The BBC Media Action group as a BBC international developmental organisation, is donor funded and aims to transform lives by using the media for communications for development, giving people access to information through the media and using the media to share and discuss issues and help make informed decisions. This is achieved in three key priority areas, Government, Health & Humanitarian services.
- BBC Media action initiatives are informed by research. They format and brand BBC Media Action contents via multiple platforms and also engage in capacity building by providing training, support, and supply need-based equipment to their partners.
- The benefits of DTT for developing educational contents were highlighted for users, broadcasters, content providers and regulators. In conclusion, DTT is an essential platform to deliver targeted content to increase Educational aims such as literacy, numeracy and increase governmental engagement at an affordable price for citizens.
- The two fundamental equalizers in the global economy are the internet and education and therefore, capacity building across all spheres of the ICT value chain is imperative to maintain a growth outlook for Africa's telecoms, media and entertainment sectors and to build on the existing competitive advantage that Africa holds as an emerging economic force in the digital media content industry.
- For the value of content to be recognized, there must be an in depth understanding of such value no matter how content is reformatted or redistributed. Also from the perspective of an international development organization, there needs to be more investment in better audience research. This will lead to a better understanding of what or type of content people like.
- BBC ran a series of television programs alongside range of computer products, the program is called 'microbits'. Low cost computers are going to be given to children in the primary level alongside television programs Internet distributed programs that will feature rich educational contents. Such programs need to be exciting and engaging for people because the experience in the UK is that if content isn't exciting and engaging with a lot fantastic graphic features values, young people tend not be interested.





- There is s need for those in decision making positions to recognize the importance of providing resources for capacity building and to be aware that investments in capacity will not yield immediate benefits, but build up in the long run.

## Annex One

### Participating countries and organisations

Country	Organisation
Belgium	Eurofins Digital Testing
Botswana	Botswana Communications Regulatory Authority
France	France24
Kenya	Communications Authority
Malawi	Malawi Digital Broadcast Network Limited (MDBNL)
Mozambique	Telecomunicações de Moçambique
Nigeria	Abubakar Rimi Television
	African Telecommunications & Technologies Ltd
	Bayelsa State Broadcasting Corporation (Glory FM)
	Brila Broadcasting
	Brila Broadcasting Services Ltd
	Broadcasting Corporation of Abia State
	Cable Digit Nigeria
	Cool TV
	Core TV News
	Daily Champion
	Daily Trust Newspaper
	Digiafrik Ltd
	Digital Bridge Institute, Nigeria
	Digiteam
	Eagle Nest Media International
	Eagle Nest Media International
	eBusiness Life Magazine
	Etisalat
	Paradigm Initiative Nigeria
	Nigerian Communications Commission (NCC)
	Federal Radio Corporation of Nigeria, Lagos
	FikiyaTech
	Galaxi Television



	Globe Broadcasting & Communications Ltd
	Gombe Media Corporation
	Grooming for Greatness
	IT & Telecom Digest
	Kayafas Konsult Ltd
	Kings Broadcasting Ltd
	Kwara State Broadcasting Corporation (Radio Kwara)
	Law Alliance Cambers, Nigeria
	LS telcom SAS
	Megalectrics
	Ministry of Information and Civic education
	Ministry of Information and Culture
	Ministry of Information Communications Technology
	MTN Nigeria
	MultiChoice Nigeria
	National Broadcasting Commission
	Digital Migration Committee
	NIGCOMSAT Nigeria
	Niger Delta Television
	Nigeria Communication Week
	Nigerian Communication Satellite Limited
	Nigerian Communications Commission (NCC)
	Nigerian Newsdirect
	Nigerian Television Authority (NTA)
	Nollywood
	NTA
	Ogun State Broadcasting Corporation
	OGUN STATE TELEVISION, ABEOKUTA
	Platinum Radio 91.1Fm Keffi
	Rave TV
	Rivers State Broadcasting Corporation (Radio Rivers 99.1FM)
	Royal Roots Communication Network Limited
	Royal Roots Television (R2TV)
	SADIBA
	Samsung Nigeria
	Saturn Communications Ltd
	SES



**DIGITAL  
BROADCASTING  
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11 - 13 MAY 2016, LAGOS, NIGERIA

	Silverbird Communications Limited
	Silverbird Group
	SmardTV
	Spectrum Broadcasting Co Nig Ltd.
	Steam Broadcasting & Communications Ltd
	Tard Engineering Limited
	The First Group
	The Media Development and Diversity Agency
	Theudembagroup (TUG) Nigeria
	ULTIMA LIMITED/General Entertainment Television
	Voice of Nigeria
Sierra Leone	NATCOM
South Africa	FikiyaTech Ltd
	MultiChoice
	NAGRA
U.A.E.	Dolby Middle East
Uganda	Uganda Communications Commission
United Kingdom	BBC
	BBC Media Action
	BBC World Service Distribution
	DRM Consortium
	Inview
	SES
United States of America	Verimatrix
Zambia	Zambia Information & Communications Technology Authority
Regional / International	African Union of Broadcasting
	Commonwealth Telecommunications Organisation
	Economic Community Of West African States
	European Broadcasting Union
	GSM Association
	International Telecommunications Union

