

Digitization of Television Broadcasting in Nigeria Review

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Abstract—Information and Communication Technology (ICT) has opened up new and robust ways of sending and receiving information at global level. Any type of information including voice and video is sent to the diverse publics, who equally have variety of choices. Thus, the development of any nation is tied to efficient information dissemination. In Nigeria, television broadcasting started in 1959 with the establishment of the Western Nigeria Television (WNTV) by the opposition leader, Chief Obafemi Awolowo. Later on, the government took over the station and fully controlled it. Subsequently, regional stations were opened to propagate government policies and programs. The television industry in Nigeria continued to grow in terms of viewership and number with over fifty national television stations and twenty five private ones. Thus, existing documents on digitization of television broadcasting industry and related literature were used as the main source of information. Therefore, this paper analyses the efforts being made by the Nigerian government through its ICT policy towards digitization of its television broadcasting in order to cope with the global trend. Recommendations are proffered with a view to achieving the target goal.

Keywords—Broadcasting, Digitization, Information, Television.

I. INTRODUCTION

THE Federal Republic of Nigeria is located in West Africa between Latitudes 4° to 14° North and between Longitudes 2°2' and 14°30' East. It is the most populous country on the African continent. Nigeria shares land borders with the Republic of Benin in the west, Chad and Cameroon in the east, Niger in the north, and borders the Gulf of Guinea in the south. The three former regions (Western, Eastern and Northern) excluding the Midwest were later divided into 12 states in 1967 along with a number of sub-administrative divisions for each state. In 1976 the states were increased to 19, in 1987 to 21 to 30 in 1987 and 36 in 1996. Further changes in the administrative composition of the country include the redefining of the political regions as local government areas (LGAs) and the creation of the new Abuja Federal Capital Territory (FCT) on December 12, 1991. With this, Lagos ceased to be the country's capital, a position that it held right from before independence. Thus, today Abuja is the capital while Lagos is the largest city in terms of population and the main commercial centre. There are now 744 LGAs [9].

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II. BRIEF HISTORY OF BROADCASTING IN NIGERIA

From 1932, when Radio Broadcasting Service started in Nigeria, as Empire Service of the British Broadcasting Corporation (BBC) to 1992 when Broadcasting in Nigeria was de-regulated, the broadcast media were owned either by the National, Regional or State Governments.

The Federal, Regional and State governments continued to monopolize broadcasting in Nigeria, despite the 1979 constitutional provision "*that every person shall be entitled to own, establish and operate any medium for the dissemination of information, ideas and opinion,*" which included the broadcast media.

It was not until the promulgation of Decree 38 of 1992, under the leadership of General Ibrahim Badamasi Babangida, now an Act of the National Assembly that Government really took a decisive step to part with its long-drawn monopoly of the broadcast sector. That decree established the National Broadcasting Commission and charged it with the responsibility of regulating and deregulating broadcasting in the country. The law empowered the Commission to license stations, regulate content and, generally, set standards for quality broadcasting in the country.

Expectedly, the emergence of the Commission heralded a wave of requests from the Nigerian entrepreneurs for broadcast licenses that would enable them to set up private broadcasting stations in the country. This has changed the broadcast landscape tremendously, as it allowed the ownership of radio and television by private companies and organizations in the country.

By the middle of 1992, 27 broadcast licenses, 14 for terrestrial television and 13 for cable television, received presidential approval. Although not all those whose applications for license were initially approved took advantage of the approvals, leading to the lapse of such unutilized approvals, many more licenses were subsequently approved for applicants, including those for radio and DTH transmissions.

Today, as a result of that revolution in the Nigerian broadcast industry, the number of broadcasting stations in the country according to [8] has risen to 394, from less than 30 before deregulation of broadcasting industry in 1992. These include the following number of Private Operators in the broadcast arena:

- 55 companies licensed to offer radio broadcasting services, over 90% of these are operational across the country;
- 25 companies licensed to offer television service;
- 34 Wireless Cable Companies;

- 5 Direct to Home (DTH) Satellite Television Platforms operational in the country.

The National Broadcasting Commission, fully aware of the global drive towards digital broadcasting, insisted on having MMDS licensees digitize their operations for maximum results. Accordingly, a deadline of 31st March, 2008 was set for digitization of all MMDS operations in Nigeria. This has since been realized and the operators in the country are happier for it.

The world is witnessing rapid information and communication transformation through the much talked about and adopted Information and Communication Technology (ICT). The phenomenon has brought about remarkable changes in the way and manner information is gathered, processed and disseminated. For example, people can communicate in real-time with others in different countries using technologies such as instant messaging, video-conferencing etc. Social networking websites like face book allow users from all over the world to remain in contact and communicate on a regular basis.

Prior to the advent of ICT, crude methods were used in communication; so also the machines were analogue in nature that have limited effects as far as efficient information dissemination is concerned. With this development, proper acquisition and utilization of ICT becomes imperative to individuals, organizations, governments and nations so as to be part and parcel of the "Global Village".

III. STATEMENT OF PROBLEM

Nigeria is a major stakeholder in the global move towards broadcasting digitization. Its broadcasting sector - comprising 187 radio stations, 143 television stations, etc is easily the largest on the African continent. Nigeria has joined the global Digitization train. But the speed of decision and implementation has been less than inspiring. The broadcasting regulatory body, National Broadcasting Commission (NBC) embarked on sensitization programs for stakeholders and prepared position papers for the federal government between 2004 and 2006. A country specific switchover date was fixed at June 17, 2012, three years ahead of the global deadline.

But regulatory efforts have not received corresponding pace in the activities of higher government authorities. The government finally approved December 2007 as the country's transition start off date. It took another year for it to take another significant step: Inaugurating a Presidential Advisory Committee (PAC) in October, 2008 to design a roadmap for the Digitization Programme. The 27- member PAC submitted its report to the government in June 2009.

The government has not made the contents of the report public nor announced its decisions on them. The committee argued that since the country was running late, a fast track approach was necessary. It suggested, among other things, that a Digital Transition Implementation Team (DigiTeam Nigeria) should be immediately set up and enabled to hit the ground running. But that has not happened [1].

In view of the foregoing, Nigeria now failed to meet the June 17, 2012 switchover to digitization deadline but left with the alternative of the global deadline of 2015.

IV. AIM AND OBJECTIVES OF THE PAPER

The main aim of this paper is to analyze the effort of Nigeria towards digitizing its broadcast media industry. The objectives of the paper include:

1. To assess the level of Information and Communication Technology penetration in Nigeria;
2. To determine the Information and Communication Technology policy in Nigeria;
3. To ascertain the challenges of digital broadcasting in Nigeria

V. SCOPE OF THE PAPER

This paper specifically deals with the digitization of television broadcasting in Nigeria. Other broadcast media i.e. radio, film, sound recording are not covered by the paper for easy analysis.

VI. METHODOLOGY

This paper adopts documents review method or secondary data such as books, Information and Communication Technology related institutions websites in Nigeria and abroad. This allows for gathering relevant information on the subject matter based on the existing literature.

VII. LITERATURE REVIEW

A. Definition of Information and Communication Technology

Information and Communication Technology is a technology that provides access to information through telecommunication. It focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication media [2].

According to [3] "Information and Communication Technology is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning". ICT in this context applies to all communication devices that man utilizes to effectively communicate with ease in the current wake of computer technology.

In the past few decades, information and communication technologies have provided society with a vast array of new communication capabilities.

B. Digitization Defined

On the other hand, digitization is the process of converting analog information into digital format. The materials to be converted could be letters, manuscripts, books, photographs, maps, audio recordings, microforms, motion pictures, ephemera, etc. Three-dimensional objects can also be

digitized. The goal of digitization is improve access to the materials. To that end, most digitized materials become searchable via databases on the Internet [4].

In order for the materials to be digitized, they must be converted using a method to capture the material digitally (e.g., scanning, digital photography, digital recording) without altering the information that the material contains. That means that the digital representation contains the same information/data as the analog representation.

C. Information and Communication Technology Penetration in Nigeria

Nigeria like other countries invests in ICT for meaningful development to be achieved. The country's ICT penetration rate continues to rise year after year. Reference [7] revealed that Nigeria's population 2012 estimates stood at 170, 123, 740. Out of the figure, according to [6] 48, 366, 179 persons use the Internet as at June, 2012 – a sharp rise from 200, 000 Internet users in the year 2000. The 2012 figure accounts for 28.4% penetration in Nigeria. This rise of figure indicates the need for effective utilization of ICT in the country especially in the media industry so that the challenges facing the sector can be overcome.

The table below shows Internet penetration of some selected years in Nigeria.

TABLE I
INTERNET PENETRATION OF SOME SELECTED YEARS IN NIGERIA

| YEAR | Users | Population | % Pen. | Source |
|------|--------------|---------------|--------|--------|
| 2000 | 200, 000 | 142, 859, 600 | 0.1% | ITU |
| 2006 | 5,000, 000 | 159, 404, 137 | 3.1% | ITU |
| 2009 | 23, 982, 200 | 149, 229, 090 | 16.1% | ITU |
| 2011 | 45, 039, 711 | 155, 215, 573 | 26.5% | ITU |
| 2012 | 48, 366, 179 | 170, 123, 700 | 28.4% | ITU |

Source: Internet World Statistics 2012

D. Nigeria's Information and Communication Technology Policy

Before 1999, the development of IT sector in Nigeria was minimal. For instance, regular Internet users were less than 200, 000 out of a population of over One Hundred and Twenty Million. The Federal Government of Nigeria therefore embarked on major reforms in the sector, which included:

- (i) Development and launch of National Policy on Information Technology in 2001 and the establishment of National Information and Communication Technology Development Agency (NITDA) to implement the policy, coordinate and regulate information technology development in the country, and
- (ii) Establishment of Nigeria Internet Registration Authority (NIRA) in 2006 to increase Nigeria's presence in cyberspace.

NITDA's enabling Act was passed into law by the National Assembly in April, 2007 and the mandates of the Agency include the following:

- (i) create a framework for the planning , research, development, standardization, application, coordination, monitoring, evaluation and regulation of Information Technology practices, activities and system;
- (ii) provide guidelines to formulate the establishment and guideline of appropriate infrastructure for Information and Technology systems;
- (iii) develop guidelines for electronic governance , networking of public and private sector establishments and for the standardization and certification of Information Technology systems in Nigeria;
- (iv) render advisory services in all information technology matters to the public and private sectors and create

incentives to promote the use of Information Technology in all spheres of life in Nigeria including the setting up of information technology parks;

- (v) Introduce appropriate regulatory policies and incentives to encourage private sector investment in the Information Technology industry;
- (vi) determine critical areas in the Information Technology requiring research intervention and facilitate Research and Development in those areas, and;
- (vii)advise the government on ways of promoting the development of information technology in Nigeria including introducing appropriate information technology to enhance national sovereignty and the vibrancy of the industry.

Various efforts by NITDA and other stakeholders have culminated in significant development in IT sector. For instance, Nigeria has moved from about 200, 000 regular Internet users in 1999 to about 2, 418, 679 users in 2005 and to an estimated 10 million internet users in 2008. The country currently has over 48 million Internet users.

VIII. GLOBAL PERSPECTIVES ON DIGITAL BROADCASTING

The development of broadcasting moved to a new, higher level on June 16, 2006. Representatives of 104 countries adopted and signed in Geneva, Switzerland, a treaty at an international conference organized by the International Telecommunications Union (ITU). The agreement was for a switchover of television from analogue to digital broadcasting.

It also put in place a time table: start date for transition from analogue to digital television broadcasting was 17th June, 2006 while the deadline was 17th June, 2015. Some African and Arab countries were granted an extension to protect their

analogue stations till 17th June, 2020 only in Band III, that is 174 230 MHz frequency [8].

Since the coming into force of the 2006 agreement, many countries, among them the United States of America and eighteen (18) European countries have completed their switchover to digital television. Meanwhile, new digital systems for sound broadcasting are being developed but no date has been set for the of FM and AM analogue radio.

Reference [1] asserts that, the International Telecommunication Union's position on migration was informed by the development in telecommunication technologies which enable a more efficient use of radio frequency spectrum and improved quality picture and audio. Previously everyone relied on radio spectrum for TV transmission but this had inherent restriction posed by the analog transmission. Adjacent analog transmission were found to be subject to interference, forcing the regulatory bodies to leave space between channel and only allocate a small percentage of available spectrums for transmission, to ensure high quality transmission and reception throughout the regions served.

All these disadvantages have been surpassed with the arrival of digitization, which gives better clarity and quality of signal and spectrum efficiency. Digitized TV signals in particular are clearer and stronger in their audio and video output. Since digital technology has opened a world of possibilities for broadcasting, a huge spectrum will be available for radio and television broadcast in the country. As a result, more frequencies or wavelengths will be available for broadcasting. Nigerians that do not want to be left behind in the new technological development have two options. The first is for them to buy a digital-compliant television set to enable them enjoy the benefits of the new technology. The second is that even with the analog system, one can set "set-top-box" which is a digital analog signal converter. It is like the ordinary decoder that easily plugs into a television set which will allow you to continue to get your program signals.

IX. BENEFITS OF DIGITAL BROADCASTING

Digital broadcasting carries many benefits over the analogue system. The digital revolution presents broadcasters and broadcasting with vast opportunities to do so many interesting and valuable things they have always wanted to do but constrained by technological, financial and other resources. Among the dividends of broadcasting digitization are:

- (a) Efficient use of available spectrum which will allow more channels to be carried across fewer airwaves, thus bringing more choice to the viewer. Digitization permits the broadcasting of four to six more television channels from only one in the current analogue system. This means that a substantial part of the broadcast spectrum will be freed up for other uses.
- (b) Higher quality audio (sound) and video (images), including the possible deployment of High Definition Television (HDTV).

- (c) Digital television signals can carry extra information such as electronic program guides that can provide additional program and schedule information.
- (d) Interactive programming (two-way data exchanges).
- (e) Mobile reception of video, internet and multimedia data.

X. CHALLENGES OF DIGITAL BROADCASTING IN NIGERIA

Despite the overwhelming benefits of digital broadcasting, [5] observed that Nigeria is bound to face the following challenges resulting from the low level of the nation's technological advancement and the income level of the individuals.

1. With the current way of picking digital signals, using antenna, viewers are limited to whatever channels the antenna picks up and the signals quality will also vary.
2. Digital television signals must also coexist with analog television until the latter is phased out.
3. Analog switch-off would render a non-digital television obsolete, unless it is connected to an external digital tuner or an external converter box for digital signal.
4. The adoption of a broadcast standard incompatible with existing analog receiver has created the problem of large number of analog receivers being discarded during digital transition in the US where an estimate of 99 million unused analog TV receivers are currently in the storage. Same thing is bound to happen in Nigeria.
5. The economic power of all broadcast stations to transit to digital before June 2012 could not be met; hence huge sums of money are involved in this transition.

XI. FINDINGS AND DISCUSSION

From the foregoing, it can be deduced that the Information and Communication Penetration in Nigeria is still low. A country with a population of over 170 million people can boast of only 28% ICT penetration and this technology has a great impact in its digitization effort. It is only when access to the technology is ubiquitous that people will be able to comprehend the switch over issue and act in that direction. Also, despite establishment of the National Information and Communication Technology Development Agency (NITDA) – the body charged with the responsibility of implementing, coordinating and regulating information technology development in the country, and the Nigeria Internet Registration Authority (NIRA) to increase Nigeria's presence in cyberspace, it appears that not much has been achieved as per as the Information and Communication Technology is concerned; hence the country has failed to meet the June 17, 2012 switchover to digital television broadcasting deadline it set for itself. These shortcomings pose serious challenge to the country in its bid to digitize television broadcasting. In essence, the policies did not help in actualizing the set objectives, while the world now is becoming more information technology driven.

XII. CONCLUSION

Despite the effort of Nigeria to put in place the National ICT Policy that spells a roadmap towards meeting the International Telecommunications Union (ITU) standards, so that it can benefit more from the fortunes of globalization, it can be said that a lot of work needs to be done especially in ensuring digital television broadcasting. Notably, the June 17, 2012 deadline could not be met; and it seems that the challenges are enormous. So, even the final switchover from analogue to digital television broadcasting deadline of 17th June, 2020 as stipulated by the ITU may be difficult for the country to realize.

XIII. RECOMMENDATIONS

For attainment of digitization of television broadcasting in Nigeria, the following are recommended:

- (i) There should be effective management of the spectrum dividend that will result from the transition in a manner that brings the greatest benefits to the greatest number of people;
- (ii) There should be suitable infrastructural digital broadcasting standards that would ensure compatibility on both national and international levels;
- (iii) The general public should be able to access and afford the new programming regime, through the traditional Set Top Box;
- (iv) Emphasis should be given to effective training and capacity development in the industry;
- (v) A relentless consumer awareness campaign as well as consumer protection, including controls and distribution of consumer equipment should be ensured.

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