



Multi-dimensional approach to regulating the convergence of broadcasting and telecommunications: A Cross-Jurisdictional review

Mohammed Suleh-Yusuf

Faculty of Law, Nasarawa State University, Internet Governance, Cyber Security and AML/CFT, Keffi, Nigeria

Abstract

The Paper reviews the convergence of telecommunications and broadcasting, both at the technological and service ends. The Paper looks at the challenges and limitations of the existing legal and regulatory frameworks across jurisdictions and recommended a multidimensional approach that will adequately mirror and align with both convergence and its converged services. The Paper recommends changes to regulatory structures as well as statutory and legislative instruments as a response as well as a potential trigger of convergence of broadcasting and telecommunications.

Keywords: Telecommunications, broadcasting, convergence, divergence, calibration, legal

Introduction

There has been a shift since the emergence of electronic communication markets with several questions around the traditional separate distinctions, this shift relates primarily to the inevitable convergence of Information Technology (IT), Broadcasting and telecommunications. The regulatory lines cutting across the trio are becoming increasingly blurred and the situation calls into question the logic of maintaining existing separate regulatory frameworks for IT, telecommunications and broadcasting. Yet the integration of statutes and regulatory frameworks for the three distinct fields is not simple, requiring a review of the legal and policy Frameworks covering the formerly distinct sectors and the creation of a single policy framework. This can in turn lead to the coherence needed to manage both the regulatory approaches and legal frameworks. The second situation that springs out of this convergence is that platforms and services, in particular broadband Internet, and the services provided on these platforms have already begun to compete with traditional services provided over broadcasting and telecommunications infrastructures. This is not only a challenge but even a threat to existing regulatory systems. This is the question that faces this Paper on whether existing regulations need to extend their coverage over other platforms or services or even a merger of sort that create a linear regulatory approach. While responding to this existential question, this Paper also see an opportunity to review and lighten existing regulations to accommodate these changes and shifts that are either the consequence of convergence or even as a trigger of the convergence in the first place.

The convergence in the broadcasting sector may have been as a result of digitalization, the emergence of digital television, the increasing impact of Internet audio-visual services, and convergence at the technological and service level. Clearly, digital technologies and the diffusion of new transmission technologies have a twin effect on the broadcasting sector. First, there has been a steady increase in the number of platforms capable of providing video transmission through the internet, without any interface with the traditional broadcasting systems. Secondly, shifts in service provisioning and technology in the broadcasting sector has also altered the traditional characteristics of

broadcasting, such as lack of interactivity and the concept of broadcasting as a mass service, converting it into a niche service. These changes have implications for broadcasting regulation, and in particular criteria and methods of licensing market entry. Historically, governments when regulating broadcasting decided on the number of Market players, provided the individual licenses to the players and determined their service offerings through a range of license conditions and regulations. Globally, governments have determined the number of broadcast licenses based on both spectrum and economic considerations. Scarcity of spectrum has become less of a constraint as a result of digitalization and compression technologies, while it has also been argued by some that the range of technologies capable of providing 'broadcasting', or 'Webcasting' to households is steadily weakening the argument that terrestrial broadcasting has a significant territorial implication for countries or even national security implications. This traditional thought process has been overtaken by the availability of different approaches that are not in any way similar or linked to traditional broadcasting systems.

This Paper also reviews the important trend in convergence of broadcasting distribution networks and the telecommunications networks that are the main providers of the digital infrastructure. It is well known that the telecommunications networks are primarily relied on telephony as well as data services, and now Internet services. While broadcasting services are still mainly distributed over separate networks, but some broadcasting can also take place via the Internet. On the other hand, cable-TV networks can offer telecommunications services as well. In the United Kingdom (UK), United States (US) and some other countries^[1], cable operators have upgraded their cable networks to provide telephony, and cable modems are used to offer Internet access in many countries. Therefore, this Paper focuses on the convergence between telecommunications, IT and broadcasting that have occurred due to technological evolutions and certain convergence tendencies. This Paper will come to a conclusion that the regulations of hitherto separate communication areas must at least adapt to or accommodate the new convergence environment. Whether this also must lead to regulatory convergence in terms of merging existing regulatory

agencies or building totally new converged regulatory entities is a matter requiring further examination. Although it is possible to regulate a converging communications market by means of separate regulatory entities, there may be a number of advantages in merging them. This Paper hesitates to recommend a 'one-shoe-fits-all' approach to regulating convergence, but it will advocate a multidimensional approach that will provide an umbrella guide to the best approach, without recommending a specific system.

Convergence within the IT sector as it relates to telecommunications tilts towards a merging of networks, services, firms, and devices^[2]. Although convergence in IT represents different trends, this Paper considers services convergence, that is, the arrangement where multiple services use the same medium or network facility. The convergence of many services onto one network brings up very specific and complex regulatory challenges. In the IT sector, a number of technology and market drivers have contributed to the rise of convergence. On the technological front, digitization combined with the reducing cost and increasing computing power, and the development of the universal IP standard, has made it possible to have almost ubiquitous low-cost multimedia devices. In addition, convergence offers service providers a chance to reduce costs and increase revenues while offering multimedia services. These and other factors come together to drive the take-up of convergence across different markets. Therefore, the distinctiveness of IT system and services has been eroded by the continual offering of IT-related services through telecommunications interfaces and platforms. In this regard it is almost technically and practically impossible to demarcate the lines between IT and telecommunications.

In this review, this Paper have also concluded that the task of managing convergence is complex and it will be uncharitable to give the impression that mere mergers of agencies or harmonization of regulatory frameworks and approaches will solve the situation and lead to a hygienic regulatory environment for the three sectors in the communications market. The first complex issue is that fact that current policies, regulations and statutes are varied and are implemented by different agencies, with distinct mandates and expectations. In fact the convergence we are discussing today may have reduced the effectiveness of some of these policies, regulations and statutes. The second complex issue is the fact that there is considerable uncertainty as to the extent and direction of the invasiveness and flexibility of technology and the attendant commercial forces leading the metaphasis. This uncertainty also relates to the speed at which the convergence is occurring and this makes it difficult for governments to determine the priority that should be given to reform and the extent it will take. Lastly, while convergence may not necessarily affect or distort governments' objectives, it will influence the effectiveness with which existing policies meet those objectives. Therefore, the diversity of governmental objectives, will create a complex barrier or enablement in managing the potential impact of convergence and achieving consensus on the best approach towards managing it.

In the last two decades^[3], convergence has continued to take a hold on the media and telecommunications sectors and it has led to a significant number of countries around the world allowing converged service offerings over

telecommunications network infrastructures. The inevitable consequence of this is that regulators have to begin considering serious responses to convergence. These responses can lead to multidimensional approaches that will enable countries to enter the next era in communications services – improving both the performance and offerings of the IT, telecommunications and broadcasting sectors. It can also culminate into increasing universal access to services for the general population. We must also acknowledge that the timing of this changes or review in approach is tied to local dynamics and depends on several national factors, rather than international imperatives. The increase in convergence in the communications industry raises specific regulatory challenges given the merging of firms, sub-sectors, and facilities. This Paper proposes a framework to analyze different countries' responses to regulatory challenges posed by convergence. The Paper believes the source of this challenge is the need to reconcile different regulatory philosophies in the sub-sectors of the communications industry. On the one hand, broadcasting is heavily regulated, is less competitive, and often has a merged service provisioning. Whilst, Telecommunications services, on the other hand, are regulated to a lesser extent, with little to no control exerted over content, a greater emphasis on carriage regulation, and with competition in most markets. Within this general framework, specific issues such as authorization and licensing, management of scarce resources^[4], competition policy, and service regulation are dealt with very differently in the different sub-sectors. But the IT sector has unique externalities that made its regulatory environment amoebic and in most instances not clearly defined. This is the intersection this Paper intends to navigate around.

Multi-dimensional approach to regulating convergence

Preliminary analysis will show that technology has been the catalyst that has been bringing telecommunications, broadcasting and the Internet closer together, this has not translated into adaptation of the regulatory frameworks within which the different sectors operate. There has been a global liberalization of the telecommunications market, with attendant development of regulatory frameworks specifically to manage the transition from monopoly to competition and to stimulate the roll-out of new technologies and services. While most countries^[5] have adopted sector specific legislation and independent regulators, the medium-term objective is to move eventually toward greater collaborative regulatory approaches that will meet challenges of managing service diversity and technological evolutions. In spite of this evolutionary objective in most climes to accommodate changes in service offerings and technological changes in telecommunications, in direct contrast broadcasting remains highly regulated and hinged on static principles that are entrenched in social, economic and cultural principles in most countries. Hence, while Licences are used to control entry and a wide range of technical and content conditions are attached to licenses for telecommunications and broadcasting. In contrast to telecommunications and broadcasting, the IT sector has faced little sector specific regulation.

Therefore, the regulation of the telecommunications and broadcasting systems, digitizing networks and making possible an increasing array of Internet services through IT devices and platforms requires a multidimensional approach

that swallows the contradictions. This multidimensional approach will focus on actual regulation of issues such as cyber and information security, data privacy and consumer protection. This Paper outlines this convergence showing that, it has many dimensions and trade-offs and is proceeding with varying speeds at different points in the value chain and among different network elements and technologies; it is accompanied by divergence and disintegration developments as well as convergence and integration; technology trends and market trends can be very different; and the processes of convergence are far from complete and subject to unpredictable change.

The convergence is gradually leading to the integration of telecommunications and broadcasting services ^[6] and this requires a deliberate integration of regulatory frameworks and potential harmonization of regulatory processes. As networks become digitized and broadband capacity is established, telecommunications broadcast services can be provided over the enhanced information infrastructure and on the Internet. There is a potential integration of telecommunications network carriage and broadcast content. Yet the carriage and content regulation have been about quite different issues and applied within very different regulatory frameworks. This is more so because traditionally, regulatory frameworks for communications are meant for functional differences that have always existed between services and infrastructures, but these distinctive regulations are increasingly inadequate for dealing with the output of these converged services. Analysts and regulators around the world accept that convergence challenges the foundations of licensing and regulation of the three identified sectors of telecommunications, broadcasting and IT.

The main underlying problem for creating or adopting a multidimensional approach to managing the converged market arena is the fundamental regulatory concern that arises because of asymmetric regulation across the three sectors. Simply put, this is the condition where different services are regulated by different regulations, statutes and processes. Therefore, asymmetric regulation that works in that distinctive manner, where each service had a one-to-one mapping with a specific regulator, will be challenged by convergence. Secondly, in a converged environment, this asymmetry approach can lead to the possibility of creating regulatory confusion, arbitrage and inadequate delineation of jurisdictions, particularly in approaches where different agencies are responsible for regulating different aspects of the communications industry. A clear illustration is where a company holding a telecommunications services licence decides to offer IPTV based television broadcasting, it might have to follow content regulation guidelines that otherwise are usually absent in telecommunications services. On the other hand, if a cable operator begins to offer VoIP based telephony, it might require telecommunications services licence, with its unique conditions and regulatory principles. In this instance, a linear approach will complicate and aggravate the situation and only a multidimensional solution can work effectively.

To create this multidimensional approach, we will situate our analysis into different thematic areas:

1. Authorizations and licensing: Traditionally, the licensing of telecommunications services and broadcasting are different, both in process and requirements. Therefore, the entry of new operators that

use VoIP or IPTV changes established market structures and processes. In fact in most instances the extant licensing regime is unable to reconcile the entry of an existing licence holder into new service areas. One of the key notions of convergence is that Licensees can offer different services using different access networks. Hence, a multidimensional approach will succumb to the ideas of technology and service neutrality in licensing as a solution to the identified contradictions. Because in the traditional licensing regimes, authorization and licensing of service providers could be based on the type of service they offer. For example in traditional telecommunications licensing a Network Operator can offer voice, data, and video services. The licence can also indicate the technology for the telecommunications services as cellular or fixed telephony. The same licensing categorization can apply to broadcasting with demarcations between terrestrial and non-terrestrial broadcasting. However, in a converged setting, it is difficult to maintain these boundaries because of the overlaps that arise: holders of broadcasting licences can offer telecommunications services, while holders of telecommunications licences can offer broadcasting services.

An example of a multidimensional approach to managing the cross-licensing issues can be located in India ^[7]. A case in point for this approach is the development of IPTV in India and since telecommunications service providers own these networks, and not broadcasters or cable companies in India, it raises a fundamental problem for the licensing structure. The Indian Cable Television (Regulation) Act of 1995 does not allow non-standard broadcasting systems and the Unified Access Service License allows "triple-play". Unfortunately, this led to a confusion about which set of rules applied to IPTV service and there are also concerns related to the introduction of IPTV by an incumbent telecommunications services licensee. Although it was classified as a 'value-added service' for broadband and hence falling under the purview of a telecommunications service licence, it still left some hanging issues. A multidimensional approach will either allow an integrated licence or set out distinctive regulatory principles. This is easier where you have a converged regulator and more challenging where separate entities regulate telecommunications and broadcasting.

2. Competition policy: The convergence of services throws up competition issues and challenges that will require a concerted resolution or mitigation in certain instances. There are very different rules and regulations for telecommunications and broadcasting markets related to mergers and acquisitions, foreign investment, and entry conditions. Therefore, service convergence poses problems because new entrants in these markets can upset service-specific competition policy. Another related issue that arises from the preliminary analysis is interconnection. This is more a telecommunications problem, but it is also an issue in cable television since this is also a facility network separated from content producers. Further, interconnection to the PSTN for non-traditional telephony providers such as cable television providers, and interconnection to content

generators or other broadcasting networks for non-traditional broadcasters will need consideration. This means the traditional competition rules will not be adequate to meet the challenges of convergence and only a cocktail of measures that takes care of peculiar competition matters can work.

Consequently, a multidimensional approach will set uniform rules for connecting new and legacy telecommunications networks; connecting broadcasting and telecommunications networks; fixed-mobile convergence. It will also harmonize the ownership and market share profile to ensure visibility of, market participation across all the sectors. More importantly, the entry of new players into traditionally protected markets will review access to common facilities and how different service providers might gain access to content and services, which might otherwise be taken for granted. Put simply, traditional models of interconnection worked within the same facilities, which were integrated with services. In a converged environment, especially in the converged environment with separated regulatory frameworks. One case ^[8] that exemplifies the role interconnection is going to play in a converged market is how the United States' Federal Communications Commission (FCC) in March 2007 responded to a petition by Time Warner Cable to allow interconnection with the PSTN for their VoIP service. In a press statement, then FCC Chairman Kevin Martin noted that the decision increased competition in the telephone sector, encouraging the deployment of broadband facilities, enhanced competition and hence lowered prices and improved customer choice. This case in point shows that regulators, particularly converged ones, are willing to see the benefits and competition advantages of allowing interconnectivity across telecommunications and broadcasting.

This also raises the fundamental issues of opaque market segregation, potential cross subsidization and predatory bouquet pricing for converged services as erosional possibilities for competition management in the unique telecommunications and broadcasting markets. In this instance, non-converged regulators can easily apply their distinct principles, with limited visibility of the other aspect of the converged services. In such a situation the best approach will be a marriage of competition principles through an *ex-ante* regulatory approach. Yet this approach can only be hinged on a clear understanding of the converged market dynamics by the regulator or regulators to ensure an efficient application of the *ex-ante* principles in competition management.

3. Spectrum licensing: Globally, competitive market mechanisms for spectrum are far more prevalent in telecommunications spectrum bands, while broadcasting networks still tend to use administratively licensed spectrum. Yet VoIP, IPTV, and other systems like digital audio or video broadcasting (DAB/DVB) have changed the approaches and usage of spectrum, and hence might lead to a need for review of spectrum licensing systems. Therefore, a multidimensional approach will focus on spectrum authorizations based on a technology- or service-neutral approach to spectrum use that will align with both convergence in technology and service offerings.

The second aspect of spectrum management through a multidimensional approach is through harmonization of spectrum utilization process and efficiencies based on a two-pronged direction. First, spectrum will be more coherently allocated and assigned in line with the convergence characteristics of beach market. Secondly, this form of convergence can also provide digital dividends that will ginger and support telecommunications services as broadcasting continually migrate unto the telecommunications-enabled platforms. This invariably reduces the spectrum consumption needs and appetite of the hitherto analogue broadcasting sector.

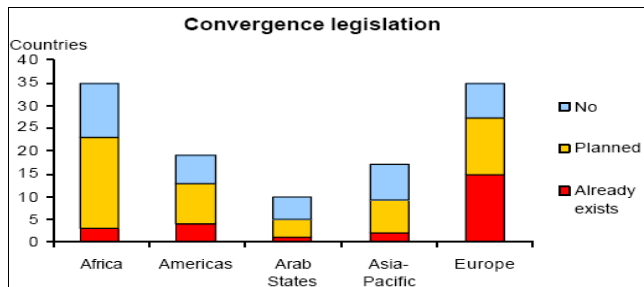
The current comparative allocation of spectrum for broadcasting and telecommunications is becoming increasingly interesting and the spectrum pot for broadcasting is continually shrinking. In fact the International Telecommunications Union (ITU) stated ^[9] that after transition from analogue to digital television across the globe, analogue transmissions will be switched off and that will release valuable spectrum, known as the digital dividend. This new spectrum will become available either for broadcasting (e.g. to provide more TV channels or higher quality TV channels such as HDTV), or for broadband mobile, in order to reduce the digital divide by providing broadband internet access to geographical areas which are still not covered. This can facilitate spectrum optimization across telecommunications and broadcasting sectors in a country.

4. Service regulation: Unlike telecommunications service licensees, broadcasting networks are not the focus of quality of service as outlined by different regulations and frameworks. However, where broadcasting service licensees begin to offer IP-based services, they might need to heed to adhere and comply with telecommunications-focused Quality of Service (QoS) regulations. Therefore, the current approach to QoS parameters and performance measurements will need to be broad enough to accommodate non-telecommunications service providers that benefit from convergence of technology and services. This is also easier with a converged regulator and creates more challenges for climes with separate regulators for telecommunications and broadcasting. On the other hand, barring law enforcement exceptions, telecommunications service providers are typically not regulated for content. However, if a service like IPTV is offered over a telephone company's network, it might need to follow content guidelines – which will need a review of content regulation principles as well.

In summary, achieving multidimensional approaches with the best possible mix between licensing, competition, spectrum and service regulation will require a more detailed and deliberate policy and statutory redirection. First, government must design policies to ensure robust competition and, as a result, maximize consumer welfare, innovation, and investment in a converged environment. Secondly, there should be an efficient allocation and management of assets that government controls or influences, such as spectrum, poles, and rights-of-way, to encourage network upgrades and competitive entry across all the sectors of telecommunications, broadcasting and IT. This will ensure fair and transparent competition as well as

efficiency in colocation and infrastructure sharing across the sectors. Thirdly ^[10], there will be a need to reform current universal service mechanisms to support deployment of converged services and ensure that low-income persons can afford such converged services. Lastly, governments must reform laws, policies, standards, and incentives to support not just convergence but also the services it gives birth to.

Table: Profile of Convergence based on Regions ^[11]



Cross-Jurisdictional Review of Approaches to Regulating Telecommunications Services

There has been a historical debate on whether multi-sectoral regulation by a converged regulator is the way to go ^[12]. According to Schwartz and Satola ^[13], one of the main advantages of multisectoral regulation, is the shield it provides against capture, both by industry and by special interest political forces. The argument is that a multisectoral regulatory agency is more likely to be independent and therefore, gives greater certainty to investors and better protection for consumers through good governance. A second issue, although debatable, is the fact that in certain quarters it is actually believed that a multi-sectoral and converged regulator can be independent of government and political influence and capture by different segments of the ecosystem.

Clearly, in approaching the problem of workable independence from government for the regulatory agency, whether multi sectoral or not, is the necessity to ensure a clear separation of the policy-setting function and the implementation function, with political accountability for the former, and administrative / legal accountability for the latter. A second possible insulation from this situation is to ensure that a regulator has both capacity and wherewithal to develop and deploy multidimensional measures that will tackle convergence from a statutory and regulatory angle, instead of a political approach built on externalities that may contradict regulatory independence.

Below we review selected countries, to evaluate their approach and management of both regulatory expectations and political imperatives in regulating the convergence of telecommunications and broadcasting.

1. United States

The Federal Communications Commission (FCC) regulates interstate and international communications by radio, television, wire, satellite and cable in all 50 states, the District of Columbia and U.S. territories. It is an independent U.S. government agency overseen by Congress and has the primary authority for communications law, regulation and technological innovation. Regulating telecommunications and broadcasting in the United States is based on a complex framework overseen by various governmental bodies, with the primary regulatory authority

resting with the FCC. The regulatory landscape may have evolved over the years in response to technological advancements, market dynamics and changes in service offerings, yet certain aspects of telecommunications and broadcasting regulation in the United States has remained consistent. The FCC is a creation of the Communications Act of 1934 and has since been granted authority over interstate and international communications. The FCC regulates various aspects, including licensing, spectrum allocation, competition, and consumer protection, while it formulates and enforces rules to ensure fair competition, access to communication services, and the protection of consumer interests. The FCC manages the allocation of radio frequencies or spectrum, ensuring that different entities have access to the frequencies they need for communication services. The FCC has licensing authority over telecommunications and broadcasting services and assigns spectrum for various services, such as broadcasting, mobile communication, and satellite services.

The United States approach to managing telecommunications and broadcasting is not a simple process or a clear-cut regulatory map. While the FCC has the sole regulatory authority over the rates and entry of wireless carriers, states also retain authority over other terms and conditions. This is because in the United States telecommunications and broadcasting services are both interstate and intrastate, with laws and regulations at both the federal and state levels. The defining relationship between federal and state legislation and regulation can be exclusive in certain instances, leading to the FCC and state regulators playing distinct roles and any risk of overlapping cushioned by the FCC having the powers of preempting the state regulators in most cases. The roles can also be concurrent with the FCC and state regulators acting on different aspects of the same providers and services. Noteworthy is that the primary sources of federal authority over telecommunications are the Communications Act of 1934 and the Telecommunications Act of 1996. Though puzzling, but States also have authority to prescribe rules and standards for telecommunications and this requires regulatory tact and collaborative engagements between the FCC and state regulators. This puzzle may have been made less confusing as state authority over wireless carriers varies by state and is a dynamic area of law and majority of state legislatures have decided not to regulate wireless services. In addition, Congress has considered several bills promoted by the wireless industry that would broadly preempt state authority over service quality.

Certainly, in regulating telecommunications and broadcasting in the United States, there are valid and cogent reasons for relying on federal preemption to limit state regulators. These reasons revolve around having a common technical, reporting, and accounting standards for a common network. Therefore, the United States has the statutory and regulatory framework in place to manage the convergence of broadcasting and telecommunications services, particularly with the preemptory jurisdiction of the FCC over the two services. Hence FCC will anticipate potential convergence and regulate that area with the benefit of its converged authority over the two services. Furthermore, the evolution of IP based networks and the use of these networks for transmitting content, has left the FCC with no option than to review its regulatory treatment for IP-enabled services including IPTV. A clear demonstration of this

change in approach is the FCC release of a Notice of Proposed Rulemaking to examine issues relating to services and applications making use of Internet Protocol (IP).

2. United Kingdom

In the United Kingdom (UK) the regulator of communications services is the Office of Communications (Ofcom), established by the Office of Communications Act 2002 (the "Ofcom Act"). The Ofcom Act was intended to anticipate and pave the way for the UK Communications Act 2003. The UK Communications Act reset the regulation of telecommunications and broadcasting in the United Kingdom, and empowers Ofcom as the sole regulator of these sectors as a converged regulator^[14]. This approach replaced the previous arrangement of multiple sectoral regulators and intended to reduce the complexity of coordinating the activities of the previously distinct UK regulators. Ofcom replaces and assumes the regulatory responsibilities of five regulatory bodies: Office of Telecommunications (OfTel), previously responsible for regulating the telecommunications sector; Radiocommunications Agency (RA), previously responsible for the allocation and management of non-military radio-frequency spectrum; Independent Television Commission (ITC), previously responsible for licensing and overseeing independent (non-public) television services; Broadcasting Standards Commission (BSC), previously responsible for generally applicable standards in broadcasting; and Radio Authority (Radio Authority), previously responsible for licensing and overseeing independent radio broadcasting services.

In the UK, Ofcom is the main regulator for communications, therefore its regulatory mandate covers telecommunications, TV and radio. It also has oversight over IPTV in that regard it issued the *IPTV Regulations*. The main goal of that regulations is to check content and determination of competition by players in that area. As a result in The UK regulated IPTV channels are subject to content standards set out in Ofcom's Broadcasting Code and the Broadcast Committee of Advertising Practice (BCAP) Code. Further to this, Ofcom commenced a new consultation on IPTV that seeks further views on an aspect of the 2022 to 2023 consultation, relating to the application of the advertising restrictions to internet protocol television (IPTV) services. This consultation closed on 10 October 2024 and it is expected to further deepen advertisement regulation on IPTV in the UK.

In the UK, the convergence has taken effect and broadcasting via telecommunications platform is expanding and Ofcom has been reacting the right way. A good illustration in this regard is the recent news that Verizon and British Telecom are each spending close to \$18 billion to develop converged networks. This is indicative of the future in the UK and it is quite obvious that Ofcom is ready for that transition and regulation of a converged market.

3. India

The Indian review^[15] will show a remarkable and deliberate policy and regulatory quest to meet the challenges of convergence of telecommunications and broadcasting. This is demonstrated in its recent reform of its communications sector through legislation that addresses converged services. India introduced the Communication Convergence Bill^[16] on August 31, 2001. The Convergence Bill was primarily meant to promote and develop the entire communications

sector in India, in the scenario of increasing convergence of technologies. The Convergence Bill was to repeal 5 existing laws-The Indian Telegraph Act-1885, Cable TV Networks Act 1995, Indian Wireless Telegraphy Act-1933, The Telegraph Wires (Unlawful Possession) Act 1950 and the Telecom Regulatory Authority of India (TRAI) Act 1997. It was intended to establish a regulatory framework for carriage and content of communication in the scenario of convergence of telecommunication, broadcasting, data-communication, multimedia and other related technologies and services. The Convergence Bill will have created an autonomous body to be called the Communication Commission of India (CCI). The Convergence Bill lapsed and was never passed by the Indian Parliament.

TRAI issued a Consultation Paper^[17] on Framework for Service Authorizations for provision of Broadcasting Services under the Telecommunications Act, 2023, and it closed the process on October 30 2024. This is intended to deepen the Indian approach to managing broadcasting through the telecommunications networks. Currently, TRAI relies on the Guidelines for provisioning Internet Protocol Television (IPTV) services to enable telecommunications companies to provide Internet Protocol Television (IPTV) services. In October 2006, India witnessed launch of first IPTV service by Mahanagar Telephone Nigam Limited (MTNL). It is important to note that based on TRAI IPTV Guidelines, Telecom Access Service Providers (Unified Access Service Licensees, Cellular Mobile Telephone Service Licensees and Basic Service Licensees) can provide triple play services and cable TV Operators registered under Cable Television Network (Regulation) Amendment Act 2002 can also provide IPTV services, without requiring any further permission. The fluidity has supported the deployment of IPTV services in India, but can be done better. Clearly, the scope of certain telecommunications licences issued by TRAI already covers IPTV services and registered Cable TV Operators, are also permitted under the Cable Television Networks (Regulation) Amendment Act, 2002 to offer IPTV services, this creates multiplicity of regulatory approaches for IPTV.

4. Brazil

In Brazil, its regulatory agency, ANATEL in August 2001 issued Resolution No. 272^[18] that established a new licensing category for Multimedia Communication Services. The Resolution states that Multimedia communications services refer to "audio, video, data, voice (corporate voice) and other sound, image, text and related signals, conveyed, sent, and received through fixed telecommunication services rendered by the private sector in the collective interest, on a domestic or international basis and in any format, to subscribers within a certain service area." It is worth noting that the licence for multimedia communications services do not authorize holders to provide public fixed telephone services, free-to-air television and radio broadcasting, or paid TV services. This is clearly a step taken to reduce or even avoid having multiple authorizations for a wide range of information transmission modes. It replaced the previous licensing classification system, which was based on specific service types, including "specialized limited services" categories of network and circuit services, telecommunication transport network services, packaged commuted network services, and circuit commuted network services.

In Brazil, since 2006, telephone and cable companies have been converging in their services and there have been cross acquisitions across the services. A licensed telecommunications company, Telemar, acquired Way TV, a cable TV company. Another telecommunications company, Telefonica, also bought a stake in TVA, another cable TV entity. Another confirmation of convergence is the introduction of triple-play services by NET Services, a licensed telecommunications company, which has an estimated 400,000 subscribers.

5. Nigeria

As convergence takes a firm hold in the Nigerian communications industry, the process raises specific regulatory challenges given the merging of firms, sub-sectors, and facilities. The fundamental source of this challenge in Nigeria is the need to reconcile different regulatory approaches, mandates and laws in the sub-sectors of the communications industry. The Nigerian Telecommunications sector is an exclusive regulatory area of the independent regulator, the Nigerian Communications Commission (NCC), whilst broadcasting regulation is vested in the National Broadcasting Commission (NBC).

Therefore, there are two key areas of divergence in managing telecommunications and broadcasting in Nigeria. First, there are two separate regulators for broadcasting and telecommunications, with clearly defined areas of oversight, based on the traditional definition of the two sectors. Secondly, there are two different statutory frameworks; whilst telecommunications is regulated based on the provisions of the Nigerian Communications Act 2003, the broadcasting sector is regulated based on the National Broadcasting Act 1992. This clearly shows that the legal and regulatory framework is not tuned to allow or meet the challenges of convergence of broadcasting and telecommunications services.

Recently Coverage Broadband is a subsidiary of Phase3 Telecom^[19], a licensee of the NCC, has been issued a mobile TV/OTT broadcast license from National Broadcasting Commission (NBC) and a VAS licence from Nigerian Communications Commission (NCC). Coverage Broadband is working with Airtel Network Limited, another licensee of the NCC, to provide IPTV services in Nigeria. This is indicative of the situation where companies' criss cross the two sectors and their separate regulators to offer a converged service.

6. South Africa

In South Africa, the Independent Communication Authority of South Africa (ICASA) was established in July 2000^[20], as a merger of the telecommunications regulator, the South African^[21]. The South African law commits the government and the national broadcasting and telecommunications regulator to "promote convergence" specifically between the telecommunications and broadcasting sectors. While this is quite idealistic, it is also a challenging objective. ICASA has met this challenge heads on and it recently issued a discussion document on IPTV, which highlights the uncalculated dangers of an unintended extension of broadcasting regulations to internet audio-visual content in South Africa.

In South Africa, ICASA, a converged regulator, has viewed IPTV in a different way. ICASA considers IPTV services as services that relay scheduled television programming over a

network and additional features such as data, text and audio which are ancillary to the scheduled television programming, are further regarded as broadcasting services. ICASA has decided that an individual broadcasting service (IBS) licence is required where IPTV services are provided on a for-profit basis and that such service will be subject to the various requirements outlined in the South African Electronic Communications Act regarding content. While IPTV service provided by a community broadcasting service (i.e. to service the needs of a particular community and on a non-profit basis), will require a class community television broadcasting service licence. In February of 2010, ICASA published a Discussion Document on the Regulation of Internet Protocol TV, for public comment, where ICASA indicates that the Discussion Document will lead to a regulatory framework for IPTV. It sets out comparative regulatory frameworks in various other jurisdictions and concludes with some questions regarding the appropriate approach to regulate IPTV in South Africa.

7. Kenya

The Communications Authority (CA) of Kenya was established as the national regulatory authority for the ICT sector in 1999 under the Kenya Information and Communications Act (KICA), 1998. The regulator was created as an offshoot of the reforms of the Kenyan telecommunications sector in 1998/99 that culminated in the separation of sector management roles of policy and regulation, and the liberalization of the telecommunications market^[22]. The role and mandate of the CA was expanded under KICA, Cap 411A of 2009, which has since been revised in 2013 and 2015. The KICA (Amendment) 2013 ensured the alignment of the Act to the Constitution of Kenya 2010 and provided for the independence of the then Commission leading to the change of its name to Communications Authority of Kenya. The mandate of the Authority, as defined in the Act, is to facilitate "the development of the information and communications sector, (including broadcasting, multimedia, telecommunications, postal services), and electronic commerce".

The Communications Authority of Kenya is statutorily empowered to licence all systems and services in the communications industry, including; telecommunications, postal, courier and broadcasting. It has issued some regulations in line with its broad mandate, covering telecommunications and broadcasting. Some of these subsidiary legislations are the Kenya Information and Communications (Interconnection and Provision of Fixed Links, Access and Facilities) Regulations, 2010 and the Kenya Communications (Broadcasting) Regulations, 2009.

Calibrating the Regulatory Options

There is a need to open discussions on regulatory approaches as services converged onto the same medium, as it becomes increasingly difficult for traditionally separate regulators dealing with different services to assert their jurisdictions in the converged environment. This is illustrated more clearly where a licensed cable television operator starts offering VoIP services, the telecommunications regulator in that jurisdiction can be constrained by legislations, capacity and regulatory restrictions from regulating the cable operator directly. Yet, in most jurisdictions, the recurring challenge actually revolves around overlapping mandates and powers as both

the telecommunications and broadcasting regulators might assert their rule and role as to the exclusion of the other. In such an untenable scenario, there is a risk that the cable operator, as in the example above, will engage in forum hopping or even trigger regulatory arbitrage that can reduce the efficiency of regulation, which ultimately translates into additional regulatory and compliance burdens on players and licensees. This situation is indicative of the structural and strategic drawbacks of having separate regulators for telecommunications and broadcasting in a jurisdiction.

The ITU lists countries ^[23] with a separate regulatory authority for the Communication sector and some of these agencies are “converged” regulatory authorities. At the beginning of 2011, separate regulators had been established in more than 80 per cent of countries, totaling 158 regulators worldwide, up from 106 regulators a decade ago. Africa has the highest percentage of regulators (relative to the total number of countries in each region) with 93 per cent, followed by the Americas and Europe with 91 and 88 per cent, respectively. Moreover, Asia-Pacific has 73 per cent, Arab States have 71 per cent, and the CIS has the lowest with 50 per cent. In 2010, 16 per cent of regulators had responsibility for broadcasting content, sometimes sharing that responsibility with another ministry. While Internet content is unregulated in more than 44 per cent of countries worldwide, it is around 13 per cent of telecommunication/ICT regulators’ mandates. Information technology is included in the mandate of 30 per cent of regulators, a responsibility that is shared in 12 per cent of cases. Yet the majority focus primarily on the telecommunications sector.

This Paper believes that a converged regulatory agency can facilitate and support the cause of convergence further and improve the rate of deployment of advanced communication services – while simultaneously reducing regulatory uncertainty. But we cannot ignore the fact that there are also potential and possibilities that convergence issues can be dealt with by separate agencies. This acknowledgement will not quieten the clamour that states that it is more efficient to limit the number of policy and regulatory institutions instead of spreading activities across different agencies. The other question regarding institutional frameworks is whether content regulators should be integrated with, or separate from carriage regulators. In the United States, for example, the FCC handles both content and carriage regulation. A similar situation exists in the UK with OFCOM. On the other hand, in some countries, carriage and content regulation in broadcasting is handled by different agencies or ministries. Thus, since content and carriage are easily distinguishable, the separation of regulatory oversight is not an overwhelming obstacle to convergence.

The second calibration considered by this Paper, beyond the convergence in regulatory institutions outlined above, is the review of legislations and statutes regulating communications. Many countries instituted the laws governing telecommunications and broadcasting well before convergence occurred or even the manifestation of any possibility of such services. Therefore, it is quite realistic to expect these laws, legislations and statutes to be both inadequate and unsuited for regulating and managing these converged services. A clearer illustration of this is the situation in India, which has been captured above, particularly where a holder of a telecommunications licences offer IPTV and that raises the difficulty of

determining the appropriate law to apply. Thus, as services and technologies evolve and innovation sweeps across the sectors, it becomes necessary to develop laws, legislations and statutes that can provide stability and a long-term direction to the telecommunications and broadcasting sectors, whilst still allowing for flexibility and adaptability. This legislative approach is based on the development and enactment of legislations that either trigger or respond to convergence, this will be hinged on identified convergence trends. This calibration views Legislative solutions as a key element in meeting the challenges of convergence, through new laws or the creation of new regulatory frameworks to trigger or respond to convergence and guide future policy direction. This can easily be attained by countries by developing and implementing concerted and targeted reform of the entire legal framework for telecommunications and broadcasting through effective reviews and amendments to existing laws. An advantage of this calibration is that it allows the introduction of a new legislative and statutory framework to regulate convergence, less the discomforting constraints of existing legal frameworks, which may not be a good fit for the regulation of convergence. Development and enactment of a new law or an amendment of an existing law can entrench a new framework that will be based on a technology-neutral approach, with a simplified service category that mitigates inevitable contradictions and inconsistencies in regulatory classifications of existing laws. While this Paper admits that calibrating the legislations and statutes to meet convergence and its challenges may involve a modification of the entire legal framework, it may also be carried out through piecemeal reviews. This can also achieve maximum success when carried out in a participatory and regulatory engagement approach. Regulators can elicit actionable feedback from the market, licensees and consumers/subscribers. More so, such reform process can be quite effective in addressing immediate convergence challenges without the time-consuming process required for an entire legal framework reform.

Conclusion

While convergence is an inevitable evolutionary stage for the different markets, it is easy to see the benefits that comes with it and the unmistakable diffusion of communication services through converged medium and platforms. Convergence, especially using telecommunications enabled IPbased networks, has made broadcasting easier and more accessible, which ultimately helps bring down the costs of service provision because IP technology is standardized and relatively inexpensive. Further, convergence will reduce the costs of managing networks because operators can integrate different networks’ order-entry, billing, and fault-reporting systems on the single IP-based network. For developing countries, embracing convergence offers them a chance both to provide advanced communication services but also to attract significant investment. The main advantage of convergence is the shift to multiple-play bundles – where one service provider can even offer multiple services through the same approach and medium.

Our review has shown that traditional telecommunications companies are deploying new networks to provide triple play services, as a response to convergence. In fact, Verizon ^[24] and AT&T, both in the United States, are investing more than \$25 billion combined to upgrade their networks. These

investments are bearing immediate fruits and Verizon's recent financial reports show it has added 263,000 new television customers and 262,000 net new Internet customers on its new fiber network. Verizon has also grown its consumer revenues by about 1 per cent in its traditional telecommunications market, through its video and broadband services. There is no better evidence of convergence and its benefits than this illustration. A second illustration is Skype^[25], an Internet telephony service, with more than 250 million subscribers in 225 countries and territories, which carried 13.75 billion minutes of international PC-to-PC calls in 2007. This Paper argues that the development of new services could be hindered by the existence of a range of barriers, including statutory regulatory barriers, at different aspects of the broadcasting and telecommunications markets of the market. Although there are differing views on the adequacy of existing regulatory frameworks to deal with convergence, the main issues may revolve around unresolved traditional challenges.

This Paper believes that in certain markets, particularly developing ones, the development of new converged products and services are held back by regulatory uncertainty, clearly, the existing statutory and regulatory frameworks in some countries are better defined and suited for a national-based analogue and mono-media environment. This cannot meet the expectations of converged services that increasingly cut across different traditional sectors and geographical boundaries. This calls into question the underlying rationale beneath regulatory approaches in the different sectors affected by convergence. Proponents of this view would argue that such regulatory uncertainty holds back investment and damages the prospects for the implementation of the convergence regime in most climes.

This Paper has come to the conclusion that every government has to make decisions on how to react to convergence in its jurisdiction. In certain instances, the choice is narrowed between sustaining the current structure, which is the status quo or radically alter course in response to convergence. However, given the almost certain and inevitable change in broadcasting from traditional systems to telecommunications enabled IP-based networks, the choice before most countries is actually limited and less optional. While each country must choose its own path and decide what approach is best for its market, we must accept the fact that best practices from other countries can provide guidance and direction to countries seeking to respond to convergence. This Paper has reviewed points of calibration above, but it avoided recommending or even suggesting approaches to countries. It only highlighted the cross-jurisdictional approaches and potential areas of calibration, for effective and appropriate regulatory approach to convergence. While not recommending any approach to regulating convergence, we must acknowledge that the inevitability of convergence has prompted a new and growing trend towards creating converged regulators. This can be either through the creation of fully converged regulators as done in the US, UK and South Africa or through converged carriage regulators as done in Singapore and Brazil. The adoption of a converged regulator might have been motivated by the fact that it might be better suited to respond to new converged services and the interdependency of broadcasting and telecommunications

services. While some countries are departing from sector specific laws and legislations to enactment of laws on all utilities and services, as an omnibus instrument.

In conclusion, we must not complete our review without stating that separate regulators for telecommunications and broadcasting is not entirely a bad idea or a misfit in all cases. One of the benefits of having a separate telecommunications regulator is the fact that that it can be focused on the complex regulatory challenges of the telecommunications sector, including network and service development. Secondly, it can manage competition, resource allocation and technical regulation in a more focused manner. These advantages are more apparent when we realize that a converged regulator, on the other hand, will focus on several situations and matters that can stretch its capacity and inhibit its oversight capabilities.

References

1. MS Yusuf. LL. B (Maiduguri), BL (Lagos), LL.M (Aberdeen), Ph.D. (Keffi)
2. Hayashi S. The Concept of "Communications" and "Broadcasting" in the Era of Digital Convergence. In *Broadcasting in Japan: Challenges and Opportunities*. Singapore: Springer Nature Singapore, 2022, 1-31.
3. *ibid*
4. In certain scholarship it is stated that it may have started in the 1990s
5. This mostly relates to spectrum resources but can extend to numbering and IP resources
6. Du J, Song J, Ren Y, Wang J. Convergence of broadband and broadcast/multicast in maritime information networks. *Tsinghua Science and Technology*,2021;26(5):592-607.
7. Hills J, Michalis M. Restructuring regulation: technological convergence and European telecommunications and broadcasting markets. *Review of International Political Economy*,2000;7(3):434-464.
8. Narechania TN. Convergence and a case for broadband rate regulation. *Berkeley Tech. LJ*,2022;37:339.
9. Finger M, Montero J. Digitalization, efficiency and convergence. In *A Modern Guide to the Digitalization of Infrastructure* (pp. 289-308). Edward Elgar Publishing. Cuaresma, Jesus Crespo, 2021, 289-308.
10. <https://www.itu.int/en/ITU-R/Documents/ITU-R-FAQ-DD-DSO.pdf>
11. Narechania TN. Convergence and a case for broadband rate regulation. *Berkeley Tech. LJ*,2022;37:339.
12. 696740ESW0P1010nvergence0in0Egypt0.doc
13. McKenna A. Emerging issues surrounding the convergence of the telecommunications, broadcasting and information technology sectors. *Information & Communications Technology Law*,2000;9(2):93-127.
14. Telecommunications legislation in transitional and developing economies
15. What is Ofcom? - Ofcom
16. Yoo CS. The convergence of broadcasting and telephony: legal and regulatory implications. *Communications & Convergence*, 2009.
17. https://www.naavi.org/cca_aug31/
18. <https://www.traai.gov.in/consultation-paper-framework-service-authorisations-be-granted-under-telecommunications-act-2023>

19. <https://informacoes.anatel.gov.br/legislacao/en/51-resolutions/740-resolution-614>
20. <https://guardian.ng/technology/airtel-coverage-broadband-launch-3flix-mobile-tv-service-in-nigeria/>
21. <https://www.icasa.org.za/>
22. The Independent Communication Authority of South Africa Amendment Act of 2000, amended in 2005
23. <https://www.ca.go.ke/>
24. https://digitalregulation.org/wp-content/uploads/ITU_Infodev_WB_ICT_Regulation_Toolkit.pdf
25. <https://www.verizon.com/about>
26. Choi H. Broadcasting and telecommunications industries in the convergence age: Toward a sustainable public-centric public interest. *Sustainability*,2018;10(2):544.
27. Tadayoni R, Skouby KE. Terrestrial digital broadcasting: convergence and its regulatory implications, *Telecommunications Policy*,1999;23:175-199
28. Anders Henten, Morten Falch, Reza Tadayoni. Some Implications for Regulation of ICT and Media Convergence, *World Dialogue on Regulation Discussion Paper #0202*, January 30, 2002
29. <http://indiantelevision.com/indianbroadcast/legalreso/ccb2k1.htm>. 6 See Department of Trade and Industry: *A New Future for Communications*, 2001
30. <http://www.communicationswhitepaper.gov.uk> 7 Effective regulation case study: Singapore, at www.itu.int/itu-d/treg;
31. Choi H. Broadcasting and telecommunications industries in the convergence age: Toward a sustainable public-centric public interest. *Sustainability*,2018;10(2):544.
32. McKenna A. Emerging issues surrounding the convergence of the telecommunications, broadcasting and information technology sectors. *Information & Communications Technology Law*,2000;9(2):93-127.
33. Shin DH. Convergence of telecommunications, media and information technology, and implications for regulation. *info*,2006;8(1):42-56.
34. Yoo CS. The convergence of broadcasting and telephony: legal and regulatory implications. *Communications & Convergence*, 2009.
35. Hills J, Michalis M. Restructuring regulation: technological convergence and European telecommunications and broadcasting markets. *Review of International Political Economy*,2000;7(3):434-464.
36. Hayashi S. The Concept of “Communications” and “Broadcasting” in the Era of Digital Convergence. In *Broadcasting in Japan: Challenges and Opportunities*. Singapore: Springer Nature Singapore, 2022, 1-31.
37. Montalban J, Cabrera R, Iradier E, Angueira P, Wu Y, Zhang L, *et al*. Broadcast core-network: Converging broadcasting with the connected world. *IEEE Transactions on Broadcasting*,2021;67(3):558-569.
38. Du J, Song J, Ren Y, Wang J. Convergence of broadband and broadcast/multicast in maritime information networks. *Tsinghua Science and Technology*,2021;26(5):592-607.
39. Narechania TN. Convergence and a case for broadband rate regulation. *Berkeley Tech. LJ*,2022;37:339.
40. Finger M, Montero J. Digitalization, efficiency and convergence. In *A Modern Guide to the Digitalization of Infrastructure*. Edward Elgar Publishing. Cuaresma, Jesus Crespo, 2021, 289-308.
41. Growth and income convergence (English). PRMED knowledge brief Washington, D.C.: World Bank Group.<http://documents.worldbank.org/curated/en/559941468139801747/Growth-and-income-convergence>.