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By

Uchenna Jerome Orji

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PREFACE

The 19th Century can be described as a turning point in the development of advanced telecommunication systems following the invention of the electric telegraph in 1837 and the telephone in 1876. However, with the development of advanced telecommunication systems, telecommunication networks have hardly been confined within national borders. For example, the first submarine telegraph cable between England and France was laid in 1851, while the first commercially successful trans-Atlantic telegraph cable was completed in 1866. Thus, it appears to a large extent that one of the fundamental goals for the development of the early telecommunications industry was to provide channels for the fast delivery of communications across national borders. The existence of the transnational telecommunication networks demand the efficient coordination of scarce spectrum resources as well as the construction of physical communications links across territories that are subject to international law. This makes the telecommunications industry to be subject to aspects of public international law that regulate the use of common natural resources which are classified as the 'common heritage of mankind' such as the sea and outer space. Furthermore, the strategic importance of telecommunication networks to international trade has also made the telecommunications industry to be subject to legal regimes that govern international trade.

In addition, most developing countries, especially those within the African region consider regional economic and political integration as a major component of their development strategies, in order to promote objectives such as regional political cooperation as well as economic objectives such as free trade, and the development of common markets. Within that context, telecommunications has been seen as a strategic tool for promoting regional integration and development. Therefore, telecommunications has been subject to regional regimes that seek to promote objectives such as legal and regulatory harmonization and regional integration.

This book discusses the international regulatory regime for telecommunications. In this regard, the book examines telecommunication

regimes within the framework of international and regional organizations such as the United Nations, the International Telecommunication Union, the World Trade Organization, the African Union, the African Telecommunications Union, the Economic Community of West African States, the Common Market for Eastern and Southern Africa, the Economic Community of Central African States, the Economic and Monetary Community of Central Africa, the East African Community, and the Southern African Development Community.

The book comprises eleven chapters. Chapter one sets out the introduction and discusses the meaning of telecommunications, the history and evolution of telecommunications, and the concept of international telecommunications law.

Chapter two examines international telecommunications regulatory regimes under the United Nations framework. In particular, the chapter examines telecommunication regimes that exist under United Nations instruments that deal with the international law of the sea and international space law. Within that context, chapter discusses the international legal regime governing submarine telecommunication cables under the United Nations Convention on the Law of the Sea, the Convention for the Protection of Telegraph Cables, and the Convention on the Continental Shelf. The chapter also discusses the international regime governing the use of the earth's outer space for telecommunication related activities under the United Nations Outer Space Treaty and other relevant instruments

Chapter three discusses the history of the International Telecommunication Union (ITU) and the mandate and functions of the ITU. The chapter also examines the legal instruments of the ITU including its Constitution, as well as the composition and structure of the ITU, the rights and obligations of Member States and Sector Members, and the ITU's dispute resolution mechanism.

Chapter four discusses the history of the International Telecommunication Regulations (ITRs). The chapter also examines the provisions of the 1988 ITRs and the proposals that were advanced by ITU Member States for its review at the World Conference on International Telecommunications (WCIT) in 2012. In this respect, the chapter discusses WCIT proposals from States and regions including the United States, China, Russian, the African region and the European Union. Through the discussion, the

chapter attempts to identify the major elements that influenced the proposals and positions of States at the WCIT 2012.

Chapter five provides an analysis of the ITRs that was adopted in 2012. Through the analysis, the chapter revisits the arguments that were made against the new provisions of the ITRs by some ITU Member States. Chapter six discusses the history and basic principles of the International Radio Regulations, and also considers the challenge of ‘paper satellites’.

Chapter seven examines the telecommunications regime of the World Trade Organization (WTO). Within that context, the chapter discusses the factors that led to the emergence of telecommunications in the agenda of the Uruguay Round of Trade Negotiations (1986-1994) and also examines the telecommunications regime under the WTO’s General Agreement on Trade in Services (GATS), including the Telecommunications Annex, the Fourth Protocol, and the Reference Paper. The chapter also examines the status of the WTO’s legal instruments (such as the GATS) in the domestic legal order of Member States and further discusses the WTO’s dispute resolution mechanism.

Chapter eight examines the African Union’s telecommunication initiatives that seek to promote objectives such as regional cooperation, economic integration and the harmonization of national telecommunication regimes. The chapter also examines the challenges affecting the regional harmonization of telecommunication regimes within the framework of the African Union. Chapter nine discusses the African Telecommunications Union (ATU) and other African regional telecommunications harmonization initiatives. Issues that are discussed within the context of the ATU include: the functions and legal instruments of the ATU; the composition of the ATU; the rights and obligations of Member States and Associate Members; the ATU’s Dispute Resolution Mechanism; and, telecommunications harmonization initiatives undertaken by the ATU. Other African regional telecommunications harmonization initiatives that are discussed include those undertaken by the United Nations Economic Commission for Africa, (the African Information Society Initiative and the African Regional Action Plan on the Knowledge Economy), and the Regional African Satellite Communications Organization.

Chapter ten examines telecommunication regimes established by the Economic Community of West African States (ECOWAS). In particular, the chapter analyzes a set of legal instruments which are regarded as the

'ECOWAS Telecommunications Package', and examines their status and implementation in the domestic legal systems of Member States. The chapter also examines the challenges impeding telecommunications regulatory harmonization measures within the ECOWAS framework.

Chapter eleven examines sub-regional telecommunication regimes in southern, eastern and central Africa. In this regard, the chapter analyzes telecommunication regimes within the framework of sub-regional organizations such as the Common Market for Eastern and Southern Africa (COMESA), the Economic Community of Central African States (ECCAS), the Economic and Monetary Community of Central Africa (CEMAC), the East African Community (EAC), and the Southern African Development Community (SADC). Through the discourse, the chapter identifies challenges that impede the effective harmonization of telecommunication regimes in those sub-regions of Africa.

Some parts of the outline of this book were originally developed from a brief draft chapter on international and regional telecommunications regulation in my doctoral thesis. Although, that draft chapter was not included in the final version of the submitted thesis, it however helped me to identify an existing knowledge gap on regional telecommunications regulation in Africa. This prompted me to undertake further independent research on international and regional telecommunications regulation with a view to developing a text that would cover both international telecommunication regimes and African regional telecommunication regimes. This book is a product of that independent research. The book is largely written as a standard text with each chapter standing alone, and it is meant to serve as a reference material for both academic and professional audiences.

While there is no doubt that developments in the field of telecommunications would continue to race ahead of the ability of international/regional and national regulatory frameworks to keep up, issues addressed in this book will remain relevant for a long time to policy makers, lawyers, researchers, economists, regulators, investors, operators, law students and any person interested in international and African regional telecommunication regimes.

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Dr Uchenna Jerome Orji is an Attorney admitted to the Nigerian Bar. He holds an LL.B (Hons.) degree from the University of Nigeria, and an LL.M from the University of Ibadan, with specialization in cybersecurity and information technology law. He also holds a PhD in Law from Nnamdi Azikiwe University, Nigeria, with specialization in telecommunications law. Uchenna is a Fellow of the African Center for Cyber Law and Cybercrime Prevention (ACCP), located within the United Nations African Institute for the Prevention of Crime in Kampala, Uganda. He is the author of *Cybersecurity Law and Regulation* (Wolf Legal Publishers: The Netherlands, 2012), and *Telecommunications Law and Regulation in Nigeria* (Cambridge Scholars Publishing: United Kingdom, 2018), in addition to over 70 peer reviewed papers on cybersecurity, data protection, telecommunications regulation, and other aspects of law. His articles have appeared in *Journal of African Law*; *Commonwealth Law Bulletin*; *Computer Law Review International*; *Computer and Telecommunications Law Review*; *International Data Privacy Law*; *Journal of World Investment & Trade*; *Journal of International Banking Law and Regulation*; *International Energy Law Review*; *Defence Against Terrorism Review*; and, *OPEC Energy Review*, amongst others. He is a recipient of a national award (the *Dangote Prize*) for the best overall essay in the fourth edition of the Nigerian Ships & Ports National Essay Competition (2010).

Uchenna has also worked as an expert for the Council of Europe, the Commonwealth, and the Dutch Government. He has participated in notable projects such as the Council of Europe Cybercrime@Octopus Project; the Commonwealth Virtual Currency Project; the Dutch Terre des Hommes' *Sweetie 2.0* Project; and, the GSMA E-Health Regulatory Framework for Africa. In 2016, the Council for the Development of Social Science Research in Africa (CODESRIA) appointed him as a resource person/professor of cybersecurity law and policy for the 2016 African Cybersecurity Governance Institute in Dakar, Senegal. He has also been a speaker at several high-level international conferences including, the Hague Global Conference on Cyber Space; the NATO CCD COE's International Conference on Cyber Conflict; and, the Asian Security Conference. Email: jeromuch@yahoo.com

LIST OF ABBREVIATIONS

AFDB	African Development Bank
AISI	African Information Society Initiative
AMU	Arab Maghreb Union
APRM	African Peer Review Mechanism
ARAPKE	African Regional Action Plan on the Knowledge Economy
ARICEA	Association of Regulators of Information and Communications for Eastern and Southern Africa
ARPANET	Advanced Research Projects Agency Network
ARTAC	Telecommunications Regulators Association of Central Africa
ATU	African Telecommunications Union
AU	African Union
CDMA	Code Division Multiple Access
CEMAC	Economic and Monetary Community of Central Africa
CISA	Comprehensive Continental ICT Strategy for Africa
COMESA	Common Market for Eastern and Southern Africa
CRASA	Communications Regulatory Authority of Southern Africa
EAC	East African Community
EACO	East African Communications Organization
EASSY	Eastern Africa Submarine Cable System
ECCAS	Economic Community of Central African States
ECJ	European Court of Justice
ECOWAS	Economic Community of West African States
ECR	European Court Reports
edn	Edition
EU	European Union
GAC	Governmental Advisory Committee
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GSM	Global System for Mobile Communications
GSMA	GSM Association
IANA	Internet Assigned Numbers Authority

ICANN	Internet Corporation for Assigned Names and Numbers
ICC	International Chamber of Commerce
ICCPR	International Convention on Civil and Political Rights
ICJ	International Court of Justice
ICT	Information Communications Technology
IETF	Internet Engineering Task Force
IGAD	Intergovernmental Authority on Development
IGF	Internet Governance Forum
IMF	International Monetary Fund
IoT	Internet of Things
IP	Internet Protocol
ISD	Division of Information Society
ISP	Internet Service Provider
ITRs	International Telecommunications Regulations
ITU	International Telecommunication Union
ITU-R	ITU Radiocommunications Sector
ITU-T	ITU Telecommunication Standardization Sector
ITU-D	ITU Telecommunication Development Sector
LTE	Long Term Evolution
MDGs	Millennium Development Goals
NEPAD	New Partnership for Africa's Development
NGN	Next Generation Networks
NSA	National Security Agency
NTIA	National Telecommunications and Information Administration
OAU	Organization of African Unity
OECD	Organization for Economic Cooperation and Development
OFCOM	Office of Communications
PATU	Pan-African Telecommunications Union
PIDA	Programme for Infrastructure Development in Africa
QoS	Quality of Service
RASCOM	Regional African Satellite Communications Organization
RIRs	Regional Internet Registries
SADC	Southern African Development Community
SATCC	Southern African Transport and Communications Commission
TRASA	Telecommunications Regulators Association of Southern Africa
UEMOA	West African Economic and Monetary Union

UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNECA	United Nations Economic Commission for Africa
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDHR	Universal Declaration of Human Rights
UNDP	United Nations Development Programme
USD	United States Dollars
USSR	Union of the Soviet Socialist Republics
W3C	World Wide Web Consortium
WATTC	World Administrative Telegraph and Telephone Conference
WATRA	West African Telecommunications Regulators Assembly
WCIT	World Conference on International Telecommunications
WGIG	Working Group on Internet Governance
WHO	World Health Organization
WIMAX	World Wide Interoperability for Microwaves Access
WRC	World Radiocommunication Conference
WSIS	World Summit on the Information Society
WTO	World Trade Organization

CHAPTER ONE

INTRODUCTION

Since the beginning of the telecommunications revolution that followed the invention of the electric telegraph and the telephone during the 19th century,¹ telecommunication networks have hardly been confined within national boundaries. To a great extent, it is apparent that one of the fundamental goals for the development of the early telecommunications industry was to provide channels for the fast delivery of communications between parties in different countries. This has been taken further by the evolution of modern telecommunication networks into a global network of networks connecting individuals, organizations, and businesses as well as national and international critical infrastructure.² Thus, telecommunication networks are inherently transnational and borderless in nature.³ This natural characteristic of telecommunication networks has underscored the need for cooperation between countries in the development of telecommunications and also provided the basis for the development of relevant international regulatory regimes. Accordingly, it has been aptly noted that “from a legal perspective, the transnational nature of telecommunications has demanded considerable coordination and cooperation between countries, which has mirrored their regulation at the international level”.⁴

¹ The electric telegraph was invented in 1837, while the telephone was invented in 1876.

² See Uchenna Jerome Orji, *Cybersecurity Law and Regulation* (Wolf Legal Publishers: Nijmegen, The Netherlands, 2012) pp.1-10.

³ See Mira Burri Nenova, ‘The Law of the World Trade Organization and the Communications Law of the European Community: On a Path of Harmony or Discord?’, *Journal of World Trade* (2007), Vol. 41 (4), p.833. See also, Ian Walden, ‘International Telecommunications Law’, in Ian Walden (ed) *Telecommunications Law and Regulation* (3rd edn, Oxford University Press: New York, 2009) p.715.

⁴ See Mira Nenova, *ibid.*

Professor Ian Walden also captured the essence of international telecommunications regulation when he observed that the nature of the telecommunications industry “demands the construction of communications links across jurisdictions subject to both domestic and international law” which has made the industry to be “subject to Treaties and Conventions established under public international law for the treatment and use of common natural resources, specifically the law of the sea and outer space law”.⁵ Therefore, a major reason for the development of international telecommunication regimes is to regulate the usage of areas or territories such as the moon, the outer space and the sea by either State or private actors for the purpose of telecommunications. Such areas or territories are classified as the ‘common heritage of mankind’⁶ and subject to principles of international law which require that defined areas and elements of humanity’s common heritage should be held in trust for future generations and also protected from individual exploitation by State actors or corporations. Another major reason that has spurred the international regulation of telecommunications can be traced to the overwhelming significance of telecommunications to the globalization of trade. For example, telecommunications is now considered as “a distinct economic activity, a trade service, rather than simply as a medium or conduit for conducting trade”.⁷

In addition, most developing countries especially within the African region, consider regional economic and political integration as a major component of their development strategies in order to facilitate regional cooperation, as well as economic objectives such as free trade, and the development of common markets. Within that context, telecommunications has been seen as a strategic tool for promoting regional integration and development, and therefore telecommunications has been subject to regional regimes that seek to promote objectives that include the

⁵ See Ian Walden, ‘International Regulatory Law’, in Ian Walden (ed) *Telecommunications Law and Regulation* (4th edn, Oxford University Press: New York, 2012) p. 751.

⁶ ‘Common heritage of mankind’ is a term that is commonly used to refer to “the parts of the earth and cosmos that can be said to belong to all humanity, without regard to geographic location, and that should be protected and administered for its benefit”. See Bryan A. Garner (ed), *The Black’s Law Dictionary* (9th edn, St Paul MN, United States: West Publishing Co, 2009) p.313.

⁷ See Ian Walden, ‘International Telecommunication Law’, in Ian Walden, *Telecommunications Law and Regulation* (3rd edn, Oxford University Press: New York, 2009) p.716.

harmonization of national regulatory instruments (such as national telecommunications laws and policies) and the effective integration of Member States.

Major issues that feature in the arena of international telecommunication law and policy include: the regulation of communication satellites; the regulation of activities in the outer space; the regulation of international submarine cables; the development and implementation of technical standards for telecommunication networks and equipment; the allocation and management of radio frequency spectrum; the liberalization of telecommunication markets and the implementation of free trade principles; the international and regional harmonization of telecommunication regulations; and, the general regulation of international telecommunication services.

This book is an attempt to discuss the international regulatory regime that applies to telecommunications. Within that context, the book examines telecommunication regimes within the framework of international and regional organizations such as the United Nations, the International Telecommunication Union, the World Trade Organization, the African Union, the African Telecommunications Union, the Economic Community of West African States, the Common Market for Eastern and Southern Africa, the Economic Community of Central African States, the Economic and Monetary Community of Central Africa, the East African Community, and the Southern African Development Community.

1.1 Defining Telecommunications

“The essence of all communications systems is that a message is exchanged between a sender and one or more receivers”.⁸

The term ‘telecommunication’ is derived from a compound of the Greek word *tele* (τηλε-) which means ‘distant’ or ‘far off’ and the Latin word *commūnicāre* which means ‘to share’.⁹ However, the term was first coined as a French word - *télécommunication* in 1904 by Edouard Estaunié, a

⁸ See Andrew Sharpe, ‘Communications Technologies Services, and Markets’ in Ian Walden (ed), *Telecommunications Law and Regulation* (3rd edn, Oxford University Press: New York, 2009) p.23.

⁹ See Harper Douglas, ‘Communication’, *Online Etymology Dictionary*, available at <<http://www.etymonline.com/index.php?term=communication>> last accessed on 30 January, 2018.

French writer and engineer.¹⁰¹¹ Generally, ‘telecommunication’ is used to refer to communications that involve the electronic transmission of information over long distances.¹² According to *Newton’s Telecom Dictionary* ‘telecommunication’ refers to “the art and science of communicating over a distance by telephone, telegraph and radio [which includes] the transmission, reception and switching of signals, such as electrical or optical, by wire, fiber or electromagnetic means”.¹³

The International Telecommunication Union (ITU) has proffered a broad and more technical definition of ‘telecommunication’. In this respect the Constitution of the ITU defines ‘telecommunication’ as:

“any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems”.¹⁴

The above definition by the ITU attempts to broadly cover all critical elements of any activity that may be classified within the scope of telecommunicating. Accordingly, the ITU’s definition of telecommunications can be classified into the following elements:

- (a) the *transmission* of signs, signals, writing, images, sounds or intelligence of any nature by wire, radio, visual or other electronic – magnetic systems;
- (b) the *emission* of signs, signals, writing, images, sounds or intelligence of any nature by wire, radio, visual or other electromagnetic systems; and,
- (c) the *reception* of signs, signals, writing, images, sounds, or intelligence of any nature by wire, radio, visual or other electromagnetic systems.

¹⁰ See J-M Dilhac, ‘From *tele*-communicare to Telecommunications’ available at <[http:// www.ieeeeghn.org/wiki/images/8c/Dilhac-2004.pdf](http://www.ieeeeghn.org/wiki/images/8c/Dilhac-2004.pdf)> last accessed on 30 January, 2018.

¹¹ The French word ‘télécommunication’ was first invented in the French Grande Ecole ‘Telecom ParisTech’ formerly known as “Ecole nationale supérieure des telecommunications” in 1904 by the French engineer and novelist Édouard Estaunié. See J-M Dilhac, *ibid*.

¹² See *The Oxford Advanced Learner’s Dictionary* (6th edn) p.1231.

¹³ See Harry Newton’s *Telecom Dictionary*, (18th edn, 2002) p. 733.

¹⁴ See Paragraph 1012 Annex to the Constitution of the International Telecommunication Union (ITU) published in ITU, *Collection of the Basic Texts of the International Telecommunication Union* (ITU: Geneva, 2011), p.56.