

SATELLITE COMMUNICATION IN NIGERIA

*THE ROLE OF NIGERIAN COMMUNICATIONS COMMISSION IN
FREQUENCY MANAGEMENT, COORDINATION/ALLOCATION AS IT
AFFECTS SATELLITE COMMUNICATION*

*BEING A PAPER PRESENTED AT NASRDA'S STAKEHOLDER
MEETING BY HEAD SPECTRUM ADMINISTRATION,
NIGERIAN COMMUNICATIONS COMMISSION*

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General

Objectives of the NCA 2003 NCA 2003

Section 1 d, e & i NCA 2003, provides (d) encourage local and foreign investments in the Nigerian communications industry and the introduction of innovative services and practices in the industry in accordance with international best practices and trends;

(e) ensure fair competition in all sectors of the Nigerian communications industry and also encourage participation of Nigerians in the ownership, control and management of communications companies and organisations;

(i) ensure an efficient management including planning, coordination, allocation, assignment, registration, monitoring and use of scarce national resources in the communications sub -sector, including but not limited to frequency spectrum, numbers and electronic addresses, and also promote and safeguard national interests, safety and security in the use of the said scarce national resources.

Scope of the ACT NCA 2003

Section 2. provides that ‘This Act applies to the provision and use of all communications services and networks, in whole or in part within Nigeria or on a ship or aircraft registered in Nigeria.’

Section 3. –(1) There is established a commission to be known as the Nigerian Communications Commission with responsibility for the regulation of the communications sector in Nigeria.

SOME FUNCTIONS OF NCC. NCA 2003

- Section 4. –(1) The Commission shall have the following functions-
 - (a) the facilitation of investments in and entry into the Nigerian market for provision and supply of communications services, equipment and facilities;
 - (d) the promotion of fair competition in the communications industry and protection of communications services and facilities providers from misuse of market power or anti-competitive and unfair practices by other service or facilities providers or equipment suppliers;
 - (e) granting and renewing communications licences whether or not the licences themselves provide for renewal in accordance with the provisions of this Act and monitoring and enforcing compliance with licence terms and conditions by licensees;
 - (i) making and enforcement of such regulations as may be necessary under this Act to give full force and effect to the provisions of this Act;
 - (j) management and administration of frequency spectrum for the communications sector and assisting the National Frequency Management (NFM) Council in developing a national frequency plan;

Licensing

Section 31. –(1) No person shall operate a communications system or facility nor provide a communications service in Nigeria unless authorised to do so under a communications licence or exempted under regulations made by the Commission under this Act.

Section 32. –(1) The Commission shall issue communications licences for the operation and provision of communications services or facilities by way of class or individual licences on such terms and conditions as the Commission may from time to time determine taking into consideration the objectives of this Act and the provisions of section 33(3) of this Act.

(2) Subject to subsection (3) of this section, the Commission shall from time to time determine and publish to the general public the communications services that qualify for class or individual licences or that are exempted from licensing.

Licensing 2

Section 39. –(1) Subject to subsection (2) of this section, a person may apply to the Commission, in writing and in such form as the Commission may prescribe, for an individual licence in respect of any matter requiring an individual licence under this Act.

(2) For the purposes of subsection (1) of this section and notwithstanding the provisions of section 33(1) of this Act, the Commission may from time to time specify additional criteria and qualifications that shall be met by persons wishing to apply for individual licences

Commission's Regulations / Guidelines

70. –(1) The Commission may make and publish regulations for all or any of the following issues -
- (a) written authorisations, permits, assignments and licences granted or issued under this Act;
 - (b) assignment of rights to the spectrum or numbers under Chapter VIII, including mechanisms for rate-based assignment;
 - (c) any fees, charges, rates or fines to be imposed pursuant to or under this Act or its subsidiary legislation;
 - (g) such other matters as are necessary for giving full effect to the provisions of this Act and for their due administration.
- (2) The Commission may also make and publish guidelines on any matter for which this Act makes express provision and such other matters as are necessary for giving full effect to the provisions of this Act and for their due administration.

E.T.C

Spectrum Management Powers NCA 2003

Section 121. –(1) Notwithstanding the provisions of any other written law but subject to the provisions of this Act, the Commission shall have the sole and exclusive power to manage and administer the frequency spectrum for the communications sector and in that regard to grant licences for and regulate the use of the said frequency spectrum.

122. –(1) Subject to such exemptions as are contained in this Act or as may be determined by the Commission, no person shall intentionally transmit in any part of the spectrum to provide a service unless the person holds a frequency licence issued under this Part.

Definitions

“Communications” means any communication, whether between persons and Persons, things and things, or persons and things, in the form of sound, data, text, visual images, signals or any other form or any combination of those forms -NCA 2003

“Communications Satellite ” refers to an “artificial satellite stationed in space for the purpose of telecommunications”. Modern communications satellites use a variety of orbits including geostationary orbits, Molniya orbits, other elliptical orbits and low (polar and non-polar) Earth orbits. - Wikipedia.

Definitions 2 NCA 2003

“Communications sector” or “market” means an economic sector or market for a network service, or an applications service, or for goods or services used in conjunction with a network service or an applications service, or for access to facilities used in conjunction with either a network service or an applications service;

“Network service” means a service for carrying communications by means of guided or unguided electromagnetic radiation;

“Network service provider” means a person who provides network services;

Definitions 3 NCA 2003

“Applications service” means a service provided by means of, but not solely by means of one, or more network services;

“Applications service provider” means a person who provides an application service;

“Spectrum” means the continuous range of electromagnetic wave frequencies up to and including a frequency of 420 terahertz;

Nigerian Telecoms Market

- The Nigerian Telecommunications market space is fully liberalized and totally private sector driven.
- It transited from full public driven sector through partial liberalization and now fully liberalized.
- Every segment including networks and applications services are open to competition and substantially licensed.

Nigerian Telecoms Market 2

- The Communications Satellite segment falls into Network services as well as Applications services.
- The segment, in Nigeria, however, is dominated by foreign satellites with only Nigerian Communications Satellite 1, playing in that space.
- Worthy of note is that the Network service segment is equally liberalized and open to Nigerians and foreigners alike who intend to launch satellites of Nigerian origin.
- Nigcomsat is licensed by the Commission for the provision of Satellite services in Nigeria.

Regulatory Instruments

- International Telecommunications Union (ITU) Radio Regulations
- Nigerian Communications Act 2003
- Guidelines on Commercial Satellite Communications.
- Procedure for Management of Satellite filings

REGULATORS/ADMINISTRATORS

Global perspective – ITU

- Spectrum and Orbital resource allocation and management
- Filing and Coordination Management
- Database Management
- Interference Management
- Ensures equitable access

REGULATORS / ADMINISTRATORS - 2

National Perspective – NCC, NFMC and FMIC

- NFMC Spectrum Allocation
- National Database Management
- FMIC Administration, coordinates filing and provides interface to other administrations on coordination and filing
- NCC
Management of Licensing.
Provides interface between Satellite operators and Administration.
Data Management
Technical administration for Communications Satellites

ITU REGULATORY INVOLVEMENT IN SATELLITES MANAGEMENT

- Frequency allocations (Article 5 of Radio Regulation)
- Sets out frequency bands and services to which they are allocated in each region
- Regions are defined in No. 5.2 as 1 (Europe and Africa) 2 (Americas) and 3 (Asia / Oceania)
- Coordination, notification and recording in Master Register (Article 9 and 11 of Radio Regulation)

ITU SATELLITE SERVICES

- Fixed Satellite (FSS)
- Broadcasting Satellite (BSS)
- Mobile Satellite (MSS)
 - Maritime mobile
 - Aeronautical mobile
 - Meteorological mobile
- There are blurred relationship and convergence in the applications of the allocation

ITU SATELLITE SERVICES 2

- Meteorological Satellite
- Space Research Satellite
- Radiodetermination Satellite
- Earth Exploration Satellite
- Aeronautical Radionavigation Satellite

COORDINATION AND FILING

- Same filing is applicable for the GEOs and Non GEOs
- GEOs take precedence and are protected from interference from Non GEOs.
- No. 8.1 RR, “International rights and obligation of administrations in respect of own and other administrations frequency assignments shall be derived from the recording of those assignment in the Master International Frequency Register (The Register) or their conformity, where appropriate with a plan.”
- The International rights are subject to the provisions of the Radio Regulations and those of any relevant frequency allotment or assignment plan

WHY REGULATE SATELLITE FILING

- Spectrum and associated orbital slots are valuable and limited resources
- Spectrum is in very high demand for satellites and other services like mobile and broadband technologies competing for it.
- Orbital slots from which commercially attractive markets can be served are becoming increasingly congested
- There is need to manage efficiency of use in order not to hinder competition, innovation and growth.

WHY REGULATE SATELLITE FILING 2

- To avoid interference, ensuring adequate separation between satellites

ITU AND SATELLITE FILING

- Satellite like any other wireless technology does not respect borders.
- Unlike the other wireless technologies however, Satellite has an international outlook as it transcends many geographies.
- Coordination therefore is done within the framework administered by the ITU.
- Two mechanisms for the sharing of orbit and spectrum resources for satellite applications have been adopted and implemented.

1. A priori planning procedures which guarantees equitable access to orbit / spectrum resources for future use.
2. Coordination procedures. This is an obligatory negotiation process between administrations, to achieve efficiency of use through controlled interference environment.

PLANNED AND NON-PLANNED BANDS

- Assignments on a non-planned band results from processing of application by operators for assignment in a given band, with specified coverage and a particular orbital slot.
- Such applications are processed on a first-come-first – served basis.
- In the planned bands, equitable access to spectrum and orbital slots is guaranteed by a priori planning. This may be by an allotment plan, in which case particular channel, orbital location, technical characteristics and given service area is allotted per administration.

PLANNED AND NON- PLANNED BANDS 2

- Three steps in coordination procedures for non-planned bands
 1. Advanced Publication Information (API)

First stage of coordination process. Administration furnishes a general description of satellite system to ITU-BR
 2. Request for coordination
 3. Notification
- Described in Article 9 of Radio Regulation.

NCC AND SATELLITE FILING

- The FMIC is the Administration of Nigeria that interfaces with the ITU on Filing and coordination matters
- NCC interfaces between the applying entity and the FMIC
- The Commission is finalizing on guidelines to stakeholders on Procedures for Management of Satellite filings.

NCC AND SATELLITE FILINGS

- “Procedures for Management of Satellite filings” has gone through Stakeholders consultation and public enquiry.
- It outlines procedures to be taken by companies in Nigeria wishing to submit applications to ITU through Nigeria for processing of satellite filings.
- Covers also details for coordination and registration to achieve international recognition.
- It describes roles and responsibilities of the NCC and the operator applying for the service, for Coordination – Article 9 RR, Notification and recording Article 8, 11 RR and relevant appendixes 30, 30A, 30B.

Planned Bands

- The Radio Regulations contain three Appendices dealing with planned bands and which contain the associated regulatory procedures and technical annexes for the planned bands as follows:
 - a) Appendix 30, setting out the provisions for all services and associated plans and list for the BSS in certain bands; b) Appendix 30A, setting out the provisions and associated plans and list for feeder links for the BSS in certain bands; and c) Appendix 30B, setting out the provisions and associated plan for the FSS in certain bands.

- The NCA confers spectrum management functions for the communications sector on the Commission and this includes the maintenance of records with respect to the use of the electromagnetic spectrum for wireless telegraphy at places within and outside Nigeria.
- NCC is required to decide whether to process an application for a satellite network filing based on the criteria set out in sections 4.4 to 4.9 of the Satellite Management Filing procedures for further processing with ITU through the present country Administration (MOIC).

PROVISIONS OF SATELLITE MANAGEMENT AND FILING PROCEDURES

- Applications and all related correspondence for satellite networks in planned and non-planned bands are required to be submitted by the applicant to NCC in electronic format, where possible, and in accordance with the format required by the ITU Space Services software.
- Applicants must establish, that they have the required technical, financial and legal credentials to construct, launch and operate the proposed satellite system in conformity with their business plan
- The applicant must be a company or organization registered, or having its headquarters, in Nigeria
- The applicant must meet all relevant costs incurred by NCC and the ITU in the processing and coordination of the satellite network filing(s).
- Filing data, including alphanumeric data, is to be provided in electronic database format utilizing the latest versions of the ITU Space Services software

DUE DILIGENCE

- ITU Resolution 49 requires national administrations to make submissions to the ITU in respect of the construction and launch (including timings) of its satellite networks. In addition to the requirements of Resolution 49, NCC requires to receive commercial information from applicants for the purposes of due diligence to satisfy that a proposed satellite network has an adequate financial backing, that all relevant commercial and other contracts are in place or are about to be entered into and that there is a reasonable probability that the network will be brought into operation