

Information Memorandum on 3.5 GHz Spectrum Auction

Nigerian Communications Commission

November, 2021

I. IMPORTANT NOTICE

The Nigerian Communications Commission (the Commission), pursuant to its powers under Section 121 of the Nigerian Communications Act 2003, has commenced the process of licensing the 3.5GHz Spectrum towards the deployment of IMT services. The proposed deployment is in line with the 5G Deployment Plan and in fulfilment of one of the key initiatives of the Nigerian National Broadband Plan 2020 – 2025 (NNBP). The Information Memorandum (IM) is to provide guidance on the Auction process.

This IM is for information purposes only. It is not intended to form the sole basis of an investment decision and should not be considered as a recommendation by the Commission to any stakeholder to participate in the Auction. Independent assessment of the potential value of the assignment of the 3.5 GHz Spectrum should be made as deemed necessary. This IM may be subject to update, modification and amendment. The Commission, its Commissioners, directors, officers, employees and partners, do not make any representation or warranty (express or implied) as to the accuracy or completeness of the contents of this IM. Furthermore, they do not take any responsibility or accept liability as to the IM or any other written or oral information made available to any interested party or its advisers. Any liability in respect of such information, inaccuracy or omission in the IM, is expressly disclaimed.

The IM does not constitute an offer or invitation to participate in the Auction, nor does it constitute the basis of any contract that may be concluded in relation to the Auction or in respect of any assignment of the 3.5 GHz Spectrum. Recipients are not to construe the content of this IM or any other communication by or on behalf of the Commission, as financial, legal, technical or other advice. Accordingly, each prospective bidder should consult its own professional advisers on any financial, legal, technical and other matters concerning any potential participation in the Auction or any assignment of the 3.5 GHz Spectrum. The Commission does not accept any liability whatsoever based on the issuance of this IM and in particular shall not be liable to any Bidder, Applicant or any person whomsoever for any pecuniary loss, consequential or contingent damages; including but not limited to loss of goodwill, downtime and revenue, consequent upon the publication of and/or reliance of such person on this IM or participation in the Auction.

This IM is available at the Commission's Head Office at Plot 423, Aguiyi Ironsi Street, Maitama, Abuja, and on its website (www.ncc.gov.ng). In the event of any discrepancy between the electronic and printed versions, the certified printed version is definitive.

II. ADDITIONAL INFORMATION

Pursuant to the issuance of this IM, the Commission reserves the right to make available additional information through the publication of further documentation. Where questions appropriate to the licensing process and submitted through the correct channel have been received, the Commission reserves the right to publish in whole or in part questions from recipients of this IM and the answers provided on its website, www.ncc.gov.ng. Note that questions may be edited to remove personally identifiable references.

Copies of this and other documents relevant to this licensing process are available and can be downloaded from the Commission's website. Interested parties are encouraged to stay abreast of developments in this licensing process by referring to the Commission's website regularly.

III. EXECUTIVE SUMMARY

a. BACKGROUND

Through the years, the Commission has implemented a number of initiatives and policies that have stimulated the growth and development of the communications sector. As a result, significant improvement has been achieved leading to major increases in mobile subscriptions, internet and broadband penetration engendered by the competitive environment in the sector. In its drive to deepen broadband penetration in the country, the Commission has decided to auction two (2) lots of 100 MHz TDD slots available in the 3.5 GHz band to support the delivery of ubiquitous broadband services.

Nigeria has an estimated population of 214 million¹, with an average growth rate of 2.6% annually. Approximately 76.46%² of the population is under the age of 35. In line with these demographic changes, internet penetration grew from 3% in 2004 to 74.2% as at April, 2021 and broadband penetration increased from less than 10% in 2015 to 40.66% in April, 2021³.

Given key demographic and economic developments throughout the country, and in particular the subsequent potential scale of potentials and the exponential growth of internet penetration in Nigeria, the next phase of expansion in the telecommunications sector provides a number of major opportunities for telecommunications operators, subscribers and the economy in general.

This IM defines the process that the Commission has decided to adopt for the licensing of two (2) lots of 100 MHz TDD each in the 3.5 GHz band. It provides information on the Nigerian communications market, details of the Spectrum to be made available, the pregualification process, the Auction process and indicative timetable.

b. SPECTRUM LICENCE ASSIGNMENT

Since the year 2000, the Nigerian communications market has witnessed major increase in competition driven by the Government's liberalization policies. The competition has in turn led to increased growth in the number of connections and improved services for subscribers as anticipated. To continually provide the required frequency resources to support this growth, the Commission plans transparent assignment processes when frequencies are available and/or allocated to it. In this regard, the Commission has initiated the process of 3.5 GHz Spectrum Auction.

The proposed licensing of 3.5 GHz Spectrum has been influenced by the need to open up the space for the delivery of present and future generations of broadband services to subscribers in line with the Nigerian National Broadband Plan (NNBP) 2020-2025. The Commission has consulted with relevant industry stakeholders to determine the demand and the best way to assign the Spectrum. Arising from these, and in line with global trends, the Commission further to its powers has commenced the licencing process for 2 lots of 100 MHz each through the Spectrum auction process.

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¹ Data accessed from United Nations Population Fund via https://www.unfpa.org/data/world-population/NG on Wednesday June 23, 2021

² <u>https://www.unfpa.org/data/world-population/NG</u> <u>accessed on June_23, 2021</u>

³ Data accessible on www.ncc.gov.ng

c. The Spectrum and Reserve Price

The Commission is offering 2 Lots of 100 MHz each in the 3.5 GHz band ranging from 3500 – 3600 MHz and 3700 to 3800 MHz for auction. The Lots are shown in the Table below:

Frequency MHz
3500 - 3600
3700 - 3800

Table 1-1: Available 3.5 GHz Lots

The Spectrum is offered by the Commission on a technology neutral basis for provision of communications service. The Commission intends to adhere to International standards for roll-out of services on the band.

The Generic Reserve Price (GR) is the minimum price at which a Lot shall be sold. This is the Reserve Price for one Lot of 100 MHz and has a value of: One Hundred and Ninety-Seven Million and Four Hundred Thousand United States Dollars (US\$197,400,000.00) or its equivalent in Naira at the prevailing Central Bank of Nigeria (CBN) rates at the time of the auction.

Each lot of 1 X 100 MHz represents 1 eligibility point.

The Spectrum lot won by each Bidder will be assigned on a nationwide basis covering all the Statesof the Federation and the Federal Capital Territory (FCT)⁴. The Commission has a subsisting policy on "use-it or lose-it" with respect to the use of assigned Spectrum. Where a winner does not hold a Unified Access Service Licence (UASL) which is the Operational Licence for the frequency Spectrum slated for auction, it will be issued at an additional fee of Three Hundred and Seventy-Four Million, Six Hundred Thousand Naira only (N374, 600,000.00) or at the subsisting licence fee at the time of the auction.

i. Prequalification Criteria

Applicants in this auction process will not be required as a pre-qualification criterion to hold any operational licence in Nigeria prior to the auction. However, each applicant must fulfil the following prequalification criteria:

- An Applicant must be a company incorporated in Nigeria.
- An Applicant must be independent (10% ownership interest test as defined in Section 7.6.2 of this IM) from all other Applicants under this auction process
- Applicants must transfer an Intention-to-Bid Deposit (IBD) for the amount described in Table 2 into the designated account in cleared funds. This deposit will bind the Applicant to take up a Licence, should it be a Successful Bidder, at the Reserve Price or any higher bid value submitted during the process.
- Licenced Operators participating in the process must be in good regulatory standing with

⁴ The capital of Nigeria and an autonomous administrative territory under a Federal Ministry

the Commission.

ii. The Assignment Process

The assignment process will comprise an Auction to be held in Abuja. It is planned that the Auction will take place during the week commencing 13 December, 2021. The Auction will be an Ascending Clock Auction with exit bids described in more details in Section 7.

Media briefings will be provided at various stages during the process, leading to the public announcement of the final Auction result.

iii. Next steps

The next step for Applicants, in accordance with the full instructions laid out within this IM, is to submit a completed application, including appropriate template documentation and confirmation of transfer of the IBD, by 17.00 hours West African Time (WAT) on 24 November 2021.

All documentation relating to the process, including the Public Notice already published concerning the process will be made available on the Commission's website (www.ncc.gov.ng). Questions or requests for further information should be submitted by email to: Spectrum auction@ncc.gov.ng or delivered to the Commission's Head Office before 15.00 hours WAT on 27 October 2021. The Commission will publish responses, where appropriate, by 17.00 hours WAT 10 November 2021, on its website.

The Timetable is subject to change. Interested parties are therefore advised to visit the Commission's website on a regular basis to ensure they have the latest information.

The attention of all applicants taking part in all or part of this process is drawn to the "Important Notice" preceding this Executive Summary.

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1 INTRODUCTION

a. LICENSING OF 3.5 GHz SPECTRUM

This IM defines the process for the licensing of Spectrum in the 3.5 GHz band by the Nigerian Communications Commission (the Commission).

The process for the licensing of the 3.5 GHz Spectrum is predicated on technological advancements and demand for broadband services and applications in line with international trends. This is also in furtherance of the objectives of the Federal Government of Nigeria as set out in the National Digital Economy Policy and Strategy (2020 – 2030) (NDEPS) and the Nigerian National Broadband Plan (2020 – 2025) (NNBP).

As a necessary prelude to the licensing process, the Commission developed a draft Deployment Plan for 5G further to which it carried out stakeholder consultations. Thereafter, the Deployment Plan for 5G in Nigeria was published. Consideration has also been given to the demand level for the Spectrum as well as the approach to licensing and the potential interest of the consumers, amongst other objectives. Based on the positive outcome of these exercises, the Commission decided to undertake an Auction to award Spectrum licences to build and operate networks in the 3.5GHz band to enhance the provision of communications services in Nigeria.

To qualify to bid in the Auction, the Applicants will not have to be Licenced Network Operators in Nigeria. However, any successful Bidder who does not have a Unified Access Service Licence (UASL) will be granted one upon payment of the specified fee. The tenure for the UASL will be Ten (10) years, subject to renewal.

b. THE NIGERIAN COMMUNICATIONS SECTOR

The Communications Sector in Nigeria is made up of the following key stakeholders: the Government, Regulator, Licensees and Consumers.

i. The Government

The Federal Government, through the Ministry of Communications and Digital Economy, sets the general policy direction for the sector.

ii. The Regulator

The Nigerian Communications Commission is the independent National Regulatory Authority established by the Nigerian Communications Act, 2003 (NCA 2003) for the communications sector. It is responsible for developing the communications sector, encouraging competition and ensuring that licensees provide high quality and efficient services throughout the country. The Commission is one of the most progressive National Regulatory Authorities in Africa.

iii. The Licensees

There are currently five major mobile licensees in Nigeria; Airtel Networks Limited (Airtel), Emerging Markets Telecommunications Services Limited (EMTS) (Trading as 9Mobile), Globacom Limited (Glo), NATCOMS Development Investment Limited

(Trading as Ntel), and MTN Nigeria Communications PLC (MTN). This is in addition to several other service providers offering fixed and wireless broadband services.

The growth of the Nigerian communications sector, since liberalization, makes this Auction a unique investment opportunity. Nigeria is the most populous nation in Africa with a population of over 200 million people and has grown at an average rate of approximately 2.6% annually from 2000⁵. The country has a young demographic index of 76.46% population under the age of 35 (Source of information⁶ with urban rural population distribution of 51. 2% and 48.8% respectively⁷.

Growth in the sector has been spectacular with mobile penetration increase from less than 1% in 2001 to over 98% as at April 20218. In addition, Internet penetration grew from 3% in 2004 to74.2% (141,766,721) as at April, 20219 and broadband penetration increased from less than 10% as at 2015 to 40.66% (77,605,500) in April, 202110

c. 3.5 GHz SPECTRUM AVAILABILITY

The Commission is offering 2 Lots of 100 MHz TDD Spectrum in the 3.5 GHz band ranging from 3500 - 3600 MHz and 3700 – 3800 MHz (totalling 200 MHz) for auction. This will be awarded to winning Bidders in 100 MHz Lot. The Lots of frequency is shown in Table 1-1 below;

Frequency MHz
3500 - 3600
3700 - 3800

Table 1-1 Available 3.5GHz lots

d. RESERVE PRICE

The Generic Reserve (GR) price is the minimum price at which a Lot shall be sold, which is the Reserve Price for one Lot of 100MHz and has a value of One Hundred and Ninety-Seven Million and Four Hundred Thousand United States Dollars only (US\$197,400,000.00). Each lot of 100 MHz represents 1 eligibility point.

e. THE AUCTION PROCESS

The Commission has determined that Auction is a fair, transparent and efficient means of assigning the Spectrum . The Auction of the available Lots in the entire 200 MHz block of the 3.5 GHz Spectrum band will take place in the city of Abuja in the Federal Republic of Nigeria at a location to be specified by the Commission.

⁵ Data accessed from United Nations Population Fund via https://www.unfpa.org/data/world-population/NG on Wednesday June 23, 2021

⁶ Ibid

⁷ https://www.worldometers.info/demographics/nigeria-demographics/#population-pyramid

⁸ Data available on <u>www.ncc.gov.ng</u>

⁹ Data available on www.ncc.gov.ng

¹⁰ Data available on <u>www.ncc.gov.ng</u>

This Auction process commenced with the publication of the "3.5 GHz Frequency Spectrum Auction" Notice on 6 October, 2021. The release of this IM will be followed by a period for the submission of questions to the Commission relating directly to the licensing process defined in this IM. All additional information, including the answers to questions raised during the specified period will be made available through the Commission's website and will form part of this IM. The identity of questioners will not be revealed without their consent. The auction will be an Ascending Clock Auction with Exit Bids as described in Section 7.

This Spectrum is considered to be a valuable national resource for which commercial opportunities exist. The Reserve Price for a ten (10) year licence is the Generic Reserve Price (GR) of this auction.

The GR is the minimum price at which a Lot shall be sold, which is the Reserve Price for one Lot of 100MHz and has a value of One Hundred and Ninety Seven Million and Four Hundred Thousand United States Dollars only (US\$197,400,000.00) or its equivalent in Naira at the prevailing Central Bank of Nigeria (CBN) rates at the time of the auction.

On completion of the Auction, each Successful Bidder will be deemed to have been awarded a provisional licence and will be required to pay the balance (Winning Bid Amount Less the IBD) of the Spectrum licence fees due to the Commission on or before 25 February, 2022.

f. THE PRE-QUALIFICATION PROCESS

To qualify to bid in the Auction, Applicants will not have to be Licenced Network Operators in Nigeria. However, an Applicant must be a company incorporated in Nigeria. Interested parties will be subject to a set of pre-qualification criteria and only parties that meet these criteria will be allowed to take part in the Auction. The criteria are:

- Applicants will not be required to submit financial and/or technical plans in the prequalification process, however, details of necessary information must be provided in accordance with the compliance requirements laid out in Section 6.5.2.
- Applicants will be required to submit information using the templates provided in this IM.
- Applicants must transfer an IBD corresponding to a lot (Please refer to Table 2) into the designated account in cleared funds not later than 17.00 hours West African Time on 2.4 November 2021. A Bank Guarantee, or similar instruments, will not be acceptable. This deposit will bind the Applicant to take up a licence, should it be a Successful Bidder, at the Reserve Price or any higher bid value submitted during the process.
- Bidders must not have a relationship with another Bidder. A relationship is defined as a situation where a Bidder has a direct or indirect ownership stake of 10% or more in another Bidder.
- The Commission does not have any plans to reserve Spectrum for any group. Reservation is considered as not being fair and not making the playing field level.
- Interested parties should note that information in this IM does not purport to be

complete or totally accurate. The IM is provided to highlight a number of issues relating to the licensing process and Applicants are advised to undertake their own due diligence.

g. INFORMATION MEMORANDUM STRUCTURE

The remainder of this document is structured as follows:

SECTION	CONTENT
Section 2	The Nigerian Telecommunications market – information on the development and current state of the Nigerian telecommunications industry and its key players
Section 3	Profile of Network Operators - The profile of Network Operators in Nigeria, demand for services and the current state of competition in the communications sector in Nigeria.
Section 4	The Regulatory Environment – overview of the Commission's regulatory remit and selected regulatory frameworks governing the licensing and operation of telecommunications services in Nigeria
Section 5	Overview of Frequency Licensing Terms - This provides an overview of frequency licensing terms, summary of licence terms and coverage area of the licence.
Section 6	Spectrum offered – specific description of the Spectrum block on offer and its relationship to the National Frequency Plan, in addition to information on various technical and operational topics
Section 7	Network Security – This section looks at information security, infrastructure sharing and performance reporting.
Section 8	Auction process – information on the specific style of the Auction procedure including information on pre-qualification criteria, Auction timing and Auction rules
Section 9	Auction Logistics – This section provides details on the auction day, the location and notifications.
Section 10 & 11	Licensing Process – The different stages and the Auction Rules
Section 12	Instructions to Applicants – information and instructions for parties wishing to apply to take part in the process. Instructions relate to template documentation, licence applications forms and the IBD
Section 12	Contact details and further information – contact details relating to specific activities within this process and for the submission of questions
Appendices	Template documentation examples, copies of the applicable licences and an Auction process overview diagram.

V. DEVELOPMENT IN THE NIGERIAN COMMUNICATIONS MARKET

a. INTRODUCTION

This section summarises selected demographic data for the Nigerian market, historical developments and overview of the performance of Nigerian Communications sector.

b. NIGERIA'S POPULATION DEMOGRAPHICS

i. Population Evolution

Nigeria with a population of over 200 million is the largest single market in the whole of Africa. It has grown, on average, at a rate of approximately 2.6% annually since 2000¹¹ as shown in Figure 1.In addition, Nigeria has a young population with approximately 76.46% under the age of 35¹²

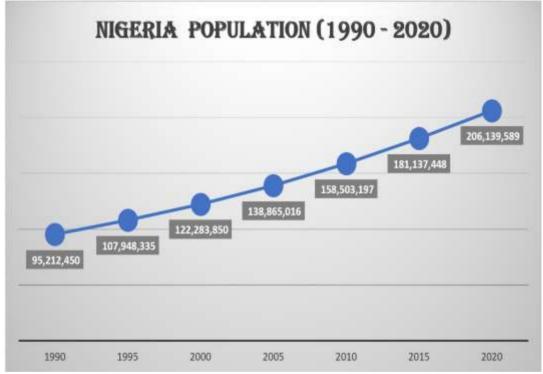


Figure 1: Nigeria's Population Evolution (1990 -2020)

ii. GDP Growth

Nigeria's GDP has grown steadily over the years despite the Global economic meltdown experienced in 2016 and the negative economic impact of the Covid-19 pandemic in the year 2020, the economy continues to rebound in quick succession.

Despite the economic headwinds of 2020, the National Bureau of Statistics (NBS) of

¹¹ Data accessed from United Nations Population Fund via https://www.unfpa.org/data/world-population/NG on Wednesday June 23, 2021

¹² Ibid

Nigeria reported that the Nigerian Economy grew by 0.11% in the fourth quarter of 2020¹³, effectively signalling the country's exit from recession as depicted in Figure 2.



Figure V: Nigeria's GDP Growth Rate (Quarterly)

Year

c. DEVELOPMENT OF THE NIGERIAN COMMUNICATIONS MARKET

The Commission was created in 1992 and established as the independent national regulatory authority for the communications sector in Nigeria. It is responsible for creating an enabling environment for competition among operators in the industry, as well as ensuring the provision of high quality and efficient communications services throughout the country.

The sector has been vibrant for the last 20 years, as illustrated in Figures 3

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¹³ Data can be accessed on www.nbs.gov.ng

Figure 3: Selected Developments in the Nigerian Telecommunications Market



Figure 2: Selected Developments in the Nigerian Telecommunications Market (1992 – 2002)



Figure 3: Selected Developments in the Nigerian Telecommunications Market 2 (2003 – 2007)

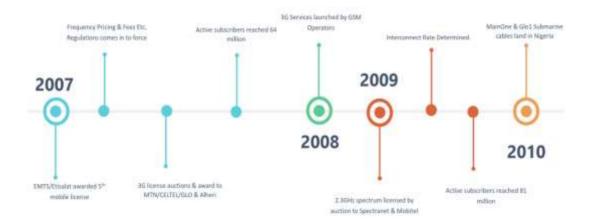


Figure 4: Selected Developments in the Nigerian Telecommunications Market 3 (2007 – 2010)

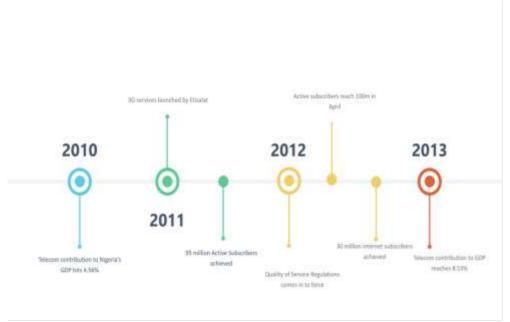


Figure 5: Selected Developments in the Nigerian Telecommunications Market 4 (2010 – 2013)

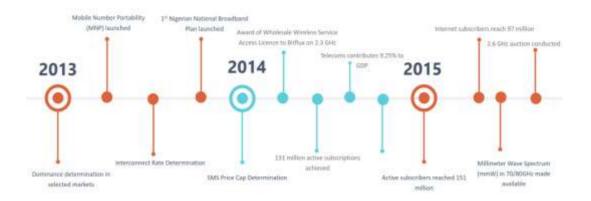


Figure 6: Selected Developments in the Nigerian Telecommunications Market 5 (2013 – 2015)



Figure 7: Selected Developments in the Nigerian Telecommunications Market 6 (2016 – 2021)

Source: NCC 2016 NBS 2014

The deregulation of the communications market commenced with the enactment of the Nigerian Communications Commission Decree No. 75 of 1992. The Decree permitted licensing of private companies to invest, participate and compete in the development of communications infrastructure and services in Nigeria.

In 2000, Nigerian Telecoms Policy (NTP) was issued, which set the tone for future development of the communications sector. While in 2001, the Commission issued Digital Mobile Licences (DML) to three companies (Econet, MTN, and MTEL) through an auction process that was widely adjudged to have been transparent and highly successful. The commencement of services by the DML operators effectively marked the end of the monopoly of the state-owned telecoms company, Nigerian Telecommunications Limited (NITEL).

In 2003, the Nigerian Communications Act was signed into law to strengthen the regulatory framework as well as to enhance the independence of the Commission as the regulator of the communications sector. By the end of 2004, there were two National Carriers, four DML Operators and 24 Fixed Telephony Providers (of which six were FWA Operators).

In 2006, the Commission introduced the Unified Access Service Licences (UASL) regime, to enable operators take advantage of convergence in technology and services. While the Commission in 2007 awarded another UASL and Spectrum licence to EMTS (Trading as 9Mobile). This brought the number of companies with national mobile licences to five. Licences were awarded to the following companies in the stipulated bands in the same year;

- ➤ Visafone Communications Limited 800MHz band
- ➤ Alheri Engineering Company Limited 1900 / 2100MHz band
- Celtel Nigeria Limited (Now Airtel Networks Limited) 1900 / 2100MHz band
- ➤ Globacom Limited 1900 / 2100MHz band
- >MTN Nigeria Communications PLC 1900 / 2100MHz band

In 2008, the Commission issued International Submarine Cable Infrastructure and Landing Stations services licence to Main One Cable Company Limited. In 2009, the Commission awarded the 2.3GHz Spectrum to Spectranet Limited and Mobitel Nigeria Limited.

In 2010, the Commission issued International Submarine Cable Infrastructure and Landing Stations services licence to MTN Nigeria Communications Plc. While in 2012, the Commission issued International Submarine Cable Infrastructure and Landing Stations services licence to ETG Integrated Services Limited. The National ICT Policy was approved in principle by the Federal Government in the same year.

In 2013, the Commission launched the Mobile Number Portability (MNP) scheme in Nigeria. The Commission also determined dominance in certain market segments of the communications Industry and issued the determination of Interconnection rates. In addition, the Federal Government approved the Nigeria National Broadband Plan for the fiscal years 2013-2018.

In 2014, the Commission through an Auction process awarded Frequency Licence in the 2.3 GHz band to Bitflux Communications Limited. This was bundled with a Wholesale Wireless Access Service Licence. The Determination for Off-Net SMS Price Cap was published in the same year.

In 2015, the Commission opened the Millimeter Wave Spectrum (mmW) in the 70/80GHz band for utilization. In 2016, the Code of Corporate Governance for the communications industry published by the Commission transited the compliance of corporate governance from voluntary to mandatory regime. In the same year, the Commission via an Auction process, awarded a Frequency Licence in the 2.6GHz band to MTN Nigeria Communications PLC.

In 2017, the Commission published the Guidelines on SIM Replacement and in 2018, the Commission published the Spectrum Trading Guidelines and this enabled MTN and Airtel to purchase 800MHz and 900MHz respectively from Intercellular Nigeria Plc. In 2018, the Commission published the VAS Aggregator Framework in the industry and has licenced 28 VAS Aggregators as at April, 2021.

In 2018, the Commission published the Commercial Satellite Communications Guidelines for the industry and 73 Landing Permits has been issued to Space segment providers as at June 7, 2021. In 2018, The Commission published the Guidelines on the Use of Short Range Devices in Nigeria for the industry. In 2019, the Commission supported and facilitated the listing of MTN in the Nigeria Stock Exchange (NSE).

In 2019, the Commission enabled trials for 5G technology. In addition, the Commission granted permission for some MNOs to be licenced by Central Bank of Nigeria (CBN) as Payment Service Banks allowing them to provide mobile money services. Furthermore, the NDEPS was developed to assist in transforming Nigeria into a leading global digital economy providing quality life and digital economies for all.

In 2020, the broadband penetration increased from 6% (2015) to 45.07%¹⁴. Finally, in 2021, the Commission published the Guidelines on National Roaming and amended the Guidelines on Collocation and Infrastructure Sharing to give effect to Active Infrastructure Sharing in the industry.

d. THE TELECOMMUNICATIONS MARKET

i. Market Growth

The Nigerian Telecommunications market has experienced significant growth in recent years. As at April 2021, the market had increased from about 400,000 active subscribers in 2001 to 187.8million active subscribers as shown in Figures 9 and 10. Key features of this growth include 15:

- O Mobile penetration grew from less than 1% in 2001 to more than 98% in July 2021.
- Nigeria has significant potential, being a large nation with growing population and economy.
- Nigeria has growing levels of ICT adoption, Internet take-up and broadband services

¹⁴ Comparative data available on www.ncc.gov.ng

¹⁵ All the data can be accessed on www.ncc.gov.ng

SUBSCRIBER/TELEDENSITY DATA August 2020 - July 2021

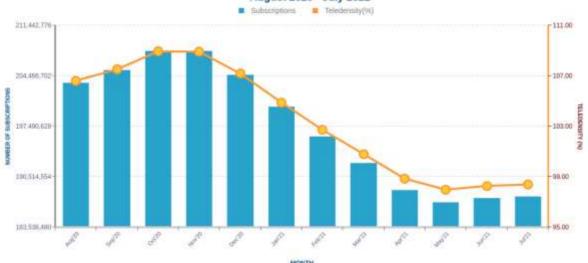


Figure 8: Subscriber Data- Total Active Subscribers (220 - 2021)

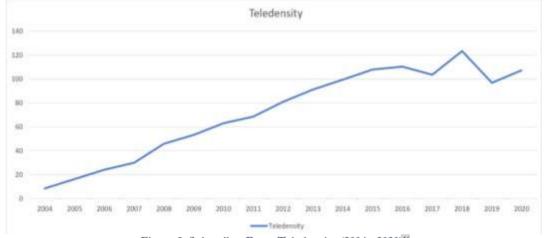


Figure 9: Subscriber Data- Teledensity (2004 - 2020) 16

ii. INTERNET SUBSCRIPTIONS

As at May 2020, the total active internet subscriptions for all market segments stood at 141,069,537. From May 2020 to November 2020, the internet subscription grew steadily reaching a peak of 154,878,203, despite the prevalence of Covid-19 pandemic economic headwinds. However, there was marginal reduction from August 2020 to July 2021, occasioned by Government's suspension of new activation and replacement of SIM cards due to the need to synchronize the National Identity Number database to enhance security, amongst others as shown in the Figures below:

¹⁶ Ibid

ACTIVE INTERNET SUBSCRIPTIONS BY TECHNOLOGY August 2020 - July 2021

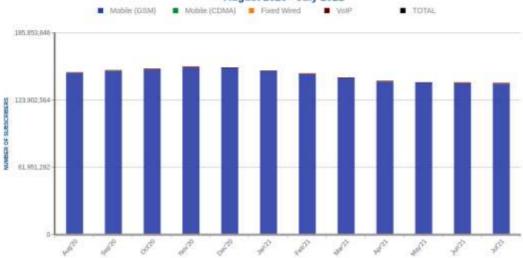


Figure 10: Active Internet Subscriptions (August 2020 - July 2021)

iii. Broadband Penetration in Nigeria

Broadband penetration in Nigeria has been on an upward trend with regards to Mobile subscriptions; however, the penetration of fixed services is still low. Over the years, Broadband penetration increased from less than 10% as at 2015 to 40.66% (77.6million) in April, 2021.

As at May 2020, Broadband subscriptions in Nigeria stood at 76.5 million representing 40.09% Broadband penetration, which grew rapidly to 87.6 million as at October 2020 representing 45.93%. It is worth noting that this high growth in performance was recorded within quarter 2 and quarter 3, 2020, when the negative economic impact of the Covid-19 pandemic was experienced.

The gradual reduction in broadband subscriptions between December 2020 and April 2021, was occasioned by Government's suspension of new activation and replacement of SIM cards due to the need to synchronize the National Identity Number database to enhance security, amongst others. This is depicted in Figure 3.x.¹⁷

24

¹⁷ Ibid





Figure 11 Broadband Penetration August 2020 - July 2021

iv. Value Added Services

Value Added Services of different types are available in the Nigerian market under the following categories:

- o Content Services using Short codes.
- o Call Centre Services.
- o Call Directory Services
- o Vehicle Tracking Services
- o Aggregator Services
- o Special Numbering Service

VI. PROFILE OF NETWORK OPERATORS

i. Network and Service Providers

Since the full liberalisation of the Nigerian Telecommunications Market in 2000, there has been considerable growth in the number of active network operators and service providers. Some are shown in Table VI-1 below¹⁸:

Table VI-1 Active Network Operators

Company	Technology Deployed	Coverage Areas
Airtel	GSM/WCDMA/UMTS/LTE (FDD)	Nationwide
Globacom	GSM/ WCDMA/UMTS/LTE(FDD)	Nationwide
Ntel	LTE(FDD)	Nationwide
MTN	GSM/ WCDMA/UMTS/LTE (FDD)	Nationwide
EMTS	GSM/ WCDMA/UMTS/LTE (FDD)	Nationwide
Spectranet	LTE (TDD)	Nationwide
Mobitel	LTE (TDD)	Nationwide
Swift Networks	LTE (TDD)	Abuja, Lagos, PHC
Smile Communications	LTE (FDD)	Nationwide

-

¹⁸ Data available on www.ncc.gov.ng

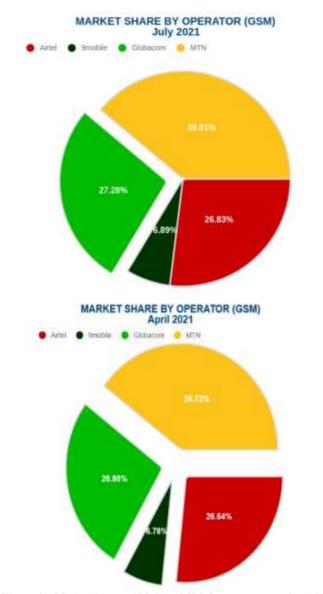


Figure 13: Market Share of Mobile GSM Operators as at April 2021

Source: NCC, 202119

ii. Demand for High Speed Internet

Fixed Internet access in Nigeria is limited while mobile internet services are more readilyavailable.

There are a wide range of economic sectors which need higher speed Internet access, some of these include:

1. Government Services

The NNBP lists wide range of e-government services which need to be introduced to the economy. These are dependent on high speed internet.

¹⁹ ibid

2. Agriculture

Nigeria is a large country with an area of over 900,000 km²⁰ having a huge and diverse agricultural sector. 44.6% of the labour force is engaged in agriculture and its businesses have a potential need for internet access for services and applications.

3. Commerce

There is a considerable market gap for reliable and affordable high-speed internet access for Micro, Small and Medium Enterprises (MSMEs) in Nigeria. These Companies are very keen to make greater use of the internet because of the opportunities to improve efficiency and enable cost savings. The increased usage of Point of Sale (POS) Terminals, ecommerce and electronic payment systems has increased the addressable Internet access market.

4. Education

Several educational institutions in Nigeria lack reliable and widespread broadband access, so there is a large demand for high speed services and applications. These would be used for teaching, learning and research purposes as well as improving the efficiencies of the institutions.

5. Entertainment

There are several industries in the entertainment sector which will be able to develop their content and businesses if high speed internet access is more widely available. Video streaming services are constrained in Nigeria because of a lack of widespread broadband services. Being able to expand this area would greatly benefit the entertainment industry.

6. Public Safety

Close Circuit Television (CCTV) services could expand greatly with access to broadband services, as these make the remote monitoring of video footage much easier among others. The potential expansion here would cover government, business and residential users. In emergency situations coordination of rescue efforts becomes much easier with high-speed internet access.

iii. Existing Competitors in the Internet Access Market

There are many operators providing access to the Internet in one form or the other in Nigeria. Internet connections are mostly via Mobile devices. There is a need for higher speed connections for data–intensive services required by modern communications devices to serve Nigerian population (of more than 70% below the age of 35).

Some companies providing internet access include:

- o Mobile operators providing 2G, 3G and 4G services, principally to smartphone users, WiFi and MiFi devices.
- o Operators already using the 2.3 GHz band
- Others including but not limited to, Fixed Wireless Access operators and ISP's

In conclusion, the availability of broadband internet access has the potential to contribute

²⁰ Data available on www.noa.gov.ng

positively to the growth of the economy and enable investors take advantage of the inherent growth in internet usage in the country.

¹ World Bank, 2005

VII. REGULATORY ENVIRONMENT

a. INTRODUCTION

This section summarises selected aspects of the regulatory environment governing the communications sector in Nigeria. It also highlights some regulatory policies relevant to interested parties who are nonetheless advised to conduct their own review of all relevant Nigerian legislation and regulations. Furthermore, it provides information on setting the opening bid for the Auction and enumerates a number of conditions of the applicable licence.

b. REGULATORY ENVIRONMENT

i. The Nigerian Communications Commission

The Commission is the independent National Regulatory Authority for the Communications sector in Nigeria. The Commission is responsible for creating an enabling environment for competition among Operators in the industry in addition to ensuring the provision of high quality and efficient communications services throughout the country as laid out in the Nigerian Communications Act 2003.

Over the years, the Commission has earned a reputation as one of the foremost Communications regulatory agencies in Africa. It aims to exploit Information and Communications Technology to drive and assist different aspects of national development and assist in stimulating demand to accelerate the uptake of communications services and several other Universal Access and Service Projects necessary for the establishment of a knowledge-based society in Nigeria.

Presently, the Commission is executing strategies for deploying Fixed Broadband to the entire metropolis in the Country on an Open Access basis. The Open Access model enables access to transmission resources on a fair and non-discriminatory basis.

ii. The Regulatory Landscape

The Commission operates under the terms of the Regulatory Framework set out in the Nigerian Communications Act of 2003 and its subsidiary legislation and the Wireless Telegraphy Act of 1990, hereafter referred to as 'WTA'. Pursuant to Section 121 of the NCA 2003, the Commission has the sole and exclusive power to administer, licence and manage the use of Frequency Spectrum for the Communications sector. Copies of the WTA and the Act are available on the Commission's Website (www.ncc.gov.ng).

The Commission relies on the Act and its subsidiary legislation to provide guidelines on the different aspects of the communications market in Nigeria. The instruments cover issues of interconnection, competition regulation, Quality of Service (QoS), approval of equipment, colocation and infrastructure sharing and other aspects of the market. These regulatory instruments are available on the Commission's website.

Prospective Bidders should conduct their own review of all Legislation and Regulations pertinent to the Nigerian market.

c. APPLICABLE LICENCE

Prospective Bidders are not required to hold any operational licence as a pre-qualification criterion; however, Applicants must have submitted details in accordance with the compliance requirements laid out in Section 7.5.2. A Successful Bidder without an applicable operational licence shall be required to obtain a Unified Access Service Licence (UASL) before roll-out.

The Successful Bidder(s) at the Auction will be issued a ten (10) year national Spectrum Licence. However, an option of paying for a 15 year Spectrum Licence Tenure is available at the pro-rated Auction Price. This Licence will authorise the licensee to make use of the designated part of the Electromagnetic Spectrum for the purpose of providing Broadband Service according to the terms of the relevant operating UASL.

A copy of the UASL template detailing full terms is referenced in Appendix E of this IM.

The successful Bidder will be granted a UASL and pay the specified fee before being issued thelicence. The tenure for the UASL will be 10 years.

d. INTERCONNECTION

Under the provision of the Nigerian Communications Act 2003, as applicable to existing Operators as well as prospective Licensees, the Act makes reference to interconnection in Sections 96 and 97 (1) & (2) as follows:

"If a network services or facilities provider receives a request for interconnection from another licensee, then the service or facilities provider shall have an obligation to interconnect its communication system with the other licensee's network at technically feasible locations, in accordance with the principles specified in Section 97 of this Act and pursuant to terms and conditions negotiated between the parties in good faith".

While Section 97, provides that:

- 1. All interconnection agreements between licensees shall be in writing and shallcomply with:
- a) This Act, the regulations and guidelines published from time to time by the Commissionpursuant to this Act; and
- b) The principles of neutrality, transparency, non-discrimination, fair competition, universal coverage, access to information, equality of access and equal terms and conditions.
- 2. The terms and conditions of interconnection agreements shall primarily be agreed upon between parties thereto and the Commission may intervene and make binding rulings at its instance or at the instance of either or both parties to the agreement:
- a) If the Commission determines that the agreement or any provision thereof is inconsistent with the provisions of this Act or its subsidiary legislation; or
- b) In the event of a failure of consensus between the parties on specific issues or a delay inreaching such consensus; or
- c) If the Commission considers it in the public interest for it to so intervene at its own instanceand without any invitation from either or both parties to the agreement.

Where Licensees and/or Operators fail to agree on the right to interconnect or on the

terms of interconnection, the parties are authorised to seek dispute resolution through a process of arbitration. The Commission is further authorised to set out the principles that shall apply, whereone party is adjudged by the Commission to be acting unreasonably or contrary to the terms of the applicable licences. These principles include but are not limited to the charges payable, or between licences and the Carrier or other Operators for the following:

- o Interconnection of facilities to networks of another party.
- O Interconnection and carriage of communications across networks of another party
- The supply of facilities and services for the purpose of interconnection and carriage
- o All other matters relating to interconnection and carriage of communications more generally.

Additional terms under the Act apply and Bidders are advised to review the terms and other Commission publications in full.

e. ANTI-COMPETITIVE BEHAVIOUR

To fulfil its mandate to encourage competition under Sections 4 and 90 of the Act, as well as the Competition Practices Regulations, 2007, the Commission has the authority to impose sanctions on any Licensee deemed to be engaging in anti-competitive activities.

Activities deemed to be anti-competitive include, but are not limited to the following:

- Collusion: agreement between licensees to fix the prices of access to services, supplies or equipment
- Exclusivity: entering into arrangements that unduly preclude or boycott competitors from similar access to services, supplies or equipment.
- Cartel behaviour: agreement between licensees to divide the available market between them in order to exclude other parties.
- Cross-subsidy: improper subsidy of the business under Licence from another source. In circumstances where the Licensee is under specific obligation to provide communications services to an area of insufficient prospective demand, the Licensee may enter into special negotiation with the Commission.
- Auxiliary obligations: facilitating or entering into agreements that requires a party to also commit to supplementary obligations that are not part of the main terms.
- Withholding: services or products from another licensee without any justification.
- Other unfair and undue preference for certain services from affiliates or associate licensees that will impact on access to such services by other players.
- Any other unfair and undue preference.

f. DETERMINATION OF DOMINANCE

The Commission is empowered under the Act and the Competition Practices Regulations 2007 to determine licensees that may be in a dominant position in any segment of the Nigeria Communications market.

An operator declared dominant in any segment of the market shall be required by the Commission to abide by certain obligations specified in the Competition Practices Regulations 2007.

g. NUMBER ALLOCATION

The Licensee can apply for a number range as may be required. The Commission will assign such numbers as are available and required by the Licensee for the provision of services within the scope of its Operational Licence. Numbers shall be assigned by the Commission subject to the payment of prevailing fees.

h. NUMBER PORTABILITY

The Commission has implemented a mobile number portability scheme and licensees are mandated to comply with the scheme where applicable in line with the Mobile Number Portability Regulations 2014.

i. OVERVIEW OF FREQUENCY LICENSING TERMS

i. Licence to be awarded

The Commission offers 2 Lots of 100 MHz each (TDD) Spectrum in the 3.5 GHz band ranging from 3500 - 3600 MHz and 3700 - 3800 MHz (Totalling 200 MHz) for auction. The Lots are shown in the Table 4-1 below;

Table VII-1: available lots on the 3.5 GHz Band on offer

LOT	FREQUENCY (MHz)	
1	3500 – 3600	
2	3700 – 3800	

ii. Reserve Price, Licence Fees and Payment Arrangements

The Generic Reserve Price (GR) is the minimum price at which a Lot shall be sold, which is the Reserve Price for one Lot of 100MHz TDD and has a value of: **US\$197,400,000.00**United States Dollars only

Each lot of 100 MHz TDD represents 1 eligibility point.

Table 2: Lots & Prices for 3.5 GHz Band

S/N	NO OF LOTS	RESERVE	INTENTION TO	ELIGIBILITY
	APPLIED FOR	PRICE (US\$)	BID DEPOSIT	POINTS
		, ,	(IBD) (US\$)	

1 1 197,400,000.00 19,740,000.00 1

The fee for the ten (10) year Spectrum Licence will be determined at Auction. As noted above, the Reserve Price will be US US\$197,400,000.00 The Opening Bid will be one increment higher than the Reserve Price in the Opening Round of the Auction. The Spectrum Licence fee is not subject to Value Added Tax (VAT). In addition, no VAT will be applicable to the UASL fee. The Reserve Price is based on a 10 year Licence Tenure. However, a winner has the option of paying for a 15 year Spectrum Licence Tenure at the pro-rated Auction Price.

The successful bidder at Auction will be expected to pay a sum equal to the amount of their winning bid minus the IBD, as well as an operational Licence fee as detailed below:

Operator type	Explanatory Notes	UASL Fee (N374.6m)	
Existing UASL holder	An existing UASL holder will not be required to obtain any additional Licence, but will use its UASL subject to the conditions contained in the 3.5GHz Spectrum Licence	No	
New UASL Applicant	Will be issued a UASL for 10 year tenure subject to renewal	Yes	

Table VII-2: Payment of Operational Licence Fees

At Auction Closure, each successful Bidder will automatically be deemed to have been awarded a provisional licence. The balance (Winning Bid Amount Less the IBD) of the Auction licence fee shall be paid to the Commission on or before 25 February, 2022. Failure to pay withinthis stipulated time or date, the award will automatically lapse and IBD forfeited. The Commission expects every bidder to develop a business Plan to guide its bid. Bidders are expected also to bid based on the assessment of their Business Plans.

The payment of the operational Licence fee shall be required to be made within 30 calendar days of the issuance of the Offer letter. Successful bidders are allowed to provide all telecommunication service permissible under the UASL. To ensure the alignment of the Operational Licence tenure with the Frequency Spectrum Licence tenure for new entrant(s), each licence shall have a tenure of ten (10) years which will run concurrently and renewable for a period as determined by the Commission. However, an option of paying for a 15 year Spectrum Licence Tenure is available at the pro-rated Auction Price.

iii. Annual Operating Levy

The conditions of the Operational Licence require an Annual Operating Levy (AOL) to be paid to the Commission. This Levy is set at 2.5% of the Licensee's audited net revenues. This Levy shall be paid within three months of the end of the first year of the licence. Thereafter payments shall be made on quarterly basis on the Licensee's assessed net revenues and within thirty calendar days of the end of each quarter. The sum paid shall be adjusted immediately on receipt of the audited, annual financial statements of the Licensee. This is in accordance with the subsisting AOL Regulations 2014 or as may be

stipulated by any succeeding Regulations.

iv. Summary of Licence Terms

A copy of the UASL template detailing full terms is referenced in Appendix E. A copy of the FrequencyLicence template detailing full terms is referenced in Appendix F.

Highlights of the Frequency Licence are set out below.

v. Commencement Date, Duration and Geographical Area Coverage of Frequency Licence

The Frequency Licence shall commence upon full payment of the Licence fee, as shall be stated in the licence document. The tenure of the Licence shall be 10 years. However, an option of paying for a 15 year Spectrum Licence Tenure is available at the pro-rated Auction Price. The Spectrum lot won by each Bidder will be assigned on a nationwide basis covering all the States of the Federation and the FCT.

1. Licence Assignment

The Licence authorises the Licensee with regard to radio equipment operating within the frequency ranges specified for that Licence.

The Licence shall not be transferred or traded, except with the prior and express authorisation of the Commission in accordance with subsisting Spectrum Trading Guidelines issued by the Commission.

2. Access and Inspection

The Licensee shall permit members of the Commission, or persons authorised by the Commission, to gain access to radio and associated equipment at any reasonable time, or when, in the opinion of those persons an urgent situation has arisen, for the purpose of inspection and in order to ensure that equipment is being used in full compliance with the full terms and conditions of the licence.

3. Roaming

The Licensee shall be encouraged to enter into such roaming agreements with other existing Operators and any new operator as may be required in order to offer ubiquitous and seamless communications services across the country. The Commission encourages roaming on Commercial basis as provided in the terms and conditions for roaming in the UASL.

However, for the purpose of this Licence, National Roaming on the 5G Network shall only be allowed at such a time when all the five slots of the C-Band are licensed or 5 years after this Auction, which ever occurred first. However, a winner who intends to roam may apply to the Commission for consideration.

The terms of such agreements will be subject to prior approval by the Commission as well assubject to existing regulations governing interconnection and anti-competitive

behaviour.

The Licensee may also provide international roaming services on request.

4. Commercial Launch Date

The launch of commercial services shall be not later than 12 months after the effective date of the Licence.

5. Roll Out, Coverage and Service Obligations

The successful bidder shall be assigned the 3.5 GHz Frequency licence and the UASL where applicable and shall roll out services as follows:

Year 1 to 2

Starting from the effective date of the licence. Rollout service in at least two States in each geo-political zone: SW, SS, SE, NC (Including FCT), NW and NE.

Year 3 to 5

Additional 6 States other than those in Year 1 to 2, across the six geo-political zones.

Year 6 to 10

Operators are encouraged to roll out across all other States.

Please note that Service in each state would mean a minimum of 5 sites in a state. Minimum speed of 100 Mbps DL using applicable test measurement tools.

In the event of the Successful Licensee's inability to deploy services as specified herein, the Commission reserves the right to sanction the Licensee based on relevant sections of existing regulations except for areas where Force Majeure is established.

6. Tariffs

The Commission requires initial tariff and tariff changes to be submitted for approval. Tariffs must be submitted in a format approved by the Commission no later than one calendar month before the launch of commercial services or the publication of details thereof. The Commission will advise of approval or otherwise in writing within 45 days.

For the avoidance of doubt, it is not the intention of the Commission to regulate retail tariff levels. However, the Commission has consistently adopted a price cap and price floor approach.

7. Site / Network Sharing

The sharing of network, transmission and associated infrastructure and facilities with other licenced parties is subject to the provisions of the Commission's Colocation/Infrastructure Sharing Guidelines. These are available on the Commission's website and are subject to update from time to time.

Further regulation appropriate to, inter alia, site clearance, site maintenance and equipment height shall be deemed to apply to both the registered site owner and/or site tenant and the subcontracting party.

8. Further Operational and Technical Requirements

The Licence will set out further conditions for licensees in respect of operational and technical requirements including the following, inter alia:

- ➤ Site clearance
- ➤ Technical equipment specifications
- ➤ Co-location of equipment

9. Licence Renewal fee:

The licence shall be subject to renewal upon expiration and payment of renewal fee as determined by the Commission.

VIII. SPECTRUM OFFERED

a. INTRODUCTION

The following section outlines the packaging of the 3.5 GHz Spectrum being made available at Auction and addresses a number of related issues such as interference, cross-border co-ordination, frequency band clearance and synchronization schemes.

b. SPECTRUM PACKAGING

The use of radio Spectrum is planned both at National and International levels in order to co-ordinate the utilization of particular frequency bands for different services.

The current frequency band plan for 3.5 GHz band is shown in Figure 14.

3400 - 3500 MHz	3500 - 3600 MHz	3600 - 3700 MHz	3700 - 3800 MHz	3800 - 3900 MHz
LOTA	LOT 8	LOTC	LOT D	LOTE
100 MHz				

Figure 14: Nigerian Communications Commission 3.5 GHz frequency band plan

Source: NCC 21

5.2.1 3.5 GHz Spectrum Auction Package

In this Auction process, the Commission is offering 2 Lots of 100 MHz TDD Spectrum in the 3.5 GHz band ranging from 3500 – 3600 MHz and 3700 – 3800 MHz (totalling 200 MHz). For this auction, a fixed band plan is adopted. The Spectrum package is shown in Figure 15 below:

3400 - 3500 MHz	3500 - 3600 MHz	3600 - 3700 MHz	3700 - 3800 MHz	3800 - 3900 MHz
LOT A 100 MHz	LOT B 100 MHz	LOT C 100 MHz	LOT D 100 MHz	LOT E 100 MHz
NOT YET AVAILABLE	AVAILABLE FOR AUCTION	NOT YET AVAILABLE	AVAILABLE FOR AUCTION	NOT YET AVAILABLE

Figure 15: Spectrum status in the 3.5 GHz band

i. SPECTRUM CAP

A Spectrum cap not exceeding 100 MHz per bidder is applicable in the auction. This implies that a bidder is limited to only one (1) lot.

²¹ This is extract from an Internal Spectrum Pricing document of the NCC.

c. SPECTRUM CO-ORDINATION

A Licensee will be required to co-ordinate Spectrum use to avoid interference with other operators and parties making use of adjacent frequencies. The Commission will however resolve any dispute where parties are unable to reach agreement on co-ordinating the use of Spectrum .

d. INTERFERENCE

Any equipment installed, maintained and used by a Licensee shall, throughout the tenure of the Licence, conform to such specifications and standards as prescribed by the Commission and relevant ITU recommendations. The Commission will define spectral masks for the Spectrum band. The Commission shall also define a "default" mask that shall be used for technologies not covered by technology-specific masks. Bidders must perform their own analysis of potential interference scenarios. Where equipment is colocated, or located close to other equipment, the Licensee should enter into its own negotiations with third parties. Transmit Power limits are as specified for Region 1 of ITU in the Radio Regulation and Recommendations.

As the Spectrum being licenced is for use in TDD format, operators should agree with other operators as it concerns adjacent frequency bands with respect to synchronization scheme to adopt, or other technical possibilities to avoid interference.

e. CROSS BORDER CO-ORDINATION

The Commission in conjunction with relevant agencies of Government may vary the technical parameters of licences subject to co-ordination activities with neighbouring countries. The variance of such parameters will usually take the form of a Memorandum of Understanding (MoU) with foreign Administrations/Regulators and other parties. Such MoU would seek to place restrictions on the native operator's signal strength permissible at the neighbouring country's borders. The Commission expects to reach such agreements with neighbouring countries to implement reciprocal restrictions on native operators. Nigerian licensees shall be required to comply with the terms of those agreements. The licence includes a requirement for operators to comply with the conditions of future MoUs. The Commission complies with ITU Coordination Procedures specified in the Radio Regulation.

f. BAND CLEARANCE

The Commission has undertaken to ensure that the Spectrum being offered for Auction is available and clear of all encumbrances. The Commission will continue to enforce a policy whereby all licensed operators neither cause, nor are affected by, interference to / from other Spectrum users.

Lots 3500-3600 and 3700-3800 of 100 MHz bandwidth each, shall be cleared and made available for commercial roll out after the auction.

The Commission reaffirms its intention to systematically migrate incumbent users of the remaining portion of the C-band in the future to free up Spectrum and make it available for the deployment of new services. In such instances, the Commission will issue information and carry out appropriate consultations with the industry.

g. SPECTRUM ASSIGNMENT FOR NETWORK BACKHAUL

This Auction is for 3.5 GHz Spectrum. The Successful Bidder will be issued a licence to use the Spectrum. The terms of the licence authorise the use of the specified Spectrum for the provision of communications services. Access to additional Spectrum for the purposes of, inter alia, transmission and backhaul falls under the terms of a separate licensing process. The process and conditions for such additional licensing are available on the Commission's website.

h. SPECTRUM TRADING

Requirement for trading of acquired Spectrum shall be in accordance with the provisions of the Spectrum Trading Guidelines issued by the Commission.

i. RF EXPOSURE GUIDELINES

RF exposure limit for the 3.5 GHz frequency band shall be in conformity with the International Commission on Non Ionizing Radiations Protection (ICNIRP) 2020 Guidelines, for the protection of humans exposed to radio Frequency Electromagnetic Fields (EMFs) in the range 100 kHz to 300 GHz. Operators are required to conduct Environmental Impact Assessment as specified in the relevant Nigerian Environmental Laws.

IX. NETWORK SECURITY

a. INTRODUCTION

This section deals with aspects of network security as it concerns 5G networks, licensees are required to carry out their own assessment and take steps to ensure the security of their networks in line with global best practices.

b. INFORMATION SECURITY

5G networks in comparison to the existing networks and generations of the communications technology are fundamentally different. While the previous technology generations mostly relied on hardware components which often get outdated, the 5G technology largely relies on the software and cloud infrastructure to *virtualize* network functions. Cloud services will play very critical roles in the 5G technology, and both the virtualization and *cloudification* of network functions will unlock a myriad of new possibilities for managing and securing networks. Software Defined Networks will facilitate the creation of tailored virtual environments which will apply security controls customized to the data and devices used within the virtual environment.

Operators are required to consider and implement measures towards securing the 5G ecosystem, addressing 5G Cybersecurity Risks and taking into cognizance 3GPP Security Provisions as enumerated below:

6.2.1 Securing the 5G ecosystem

The reliance of 5G on software makes the mitigation of risks of software vulnerabilities exceedingly critical. Network Virtualization, Virtualized Radio Access Network (vRAN), Open RAN technologies, Software- Defined Networking (SDN), Network Slicing, Cybersecurity are some of the reasons why security is paramount in 5G therefore operators are expected to invest in piloting these technologies to test out new security techniques such as segregation of suspicious traffic, protection of sensitive information, authentication of users and other fundamental security needs.

The security of 5G network cuts across the 5G infrastructure and extends to the vast and dynamic ecosystem of devices connected to the network hence the design, deployment, configuration and maintenance of 5G networks to ensure true end-to-end security is critical.

The Commission is developing a 5G risk management framework. Further to this, Licensees shall be required to comply with any Regulations, Guidelines, direction, determination or order that the Commission may make to ensure the security of 5G networks, systems and infrastructure in Nigeria.

6.2.2 5G Cybersecurity Risks

The evolution of 5G network into a primarily software-driven system presents new vulnerabilities to cyber-attacks such as, distributed software-defined digital routing, large bandwidth of 5G networks, astronomical increase in connected device density, virtualization of higher-level network functions and network management via artificial intelligence.

6.2.3 3GPP Security Provision

The 3GPP Releases provide for the security of the 5G networks and provide specifications for the following:

- 1. Security architecture
- 2. Secure protocols
- 3. Authentication & Authorization
- 4. Security assurance
- 5. Extendable Authentication Framework (EAP) for Subscriber Authentication.
- 6. Integrity protection of User Plane mandatory on User Equipment (UE) and gNB.
- 7. Data confidentiality and integrity.
- 8. Protection against changes of data integrity,
- 9. Protection against changes of data confidentiality and protection of data (at rest, in transit and in use) etc.

Operators will be required to adhere to relevant policy and regulatory instruments.

c. INFRASTRUCTURE SHARING

The Commission has issued Guidelines on Co-location and Infrastructure Sharing which will amongst others facilitate roll out of services using this band.

d. PERFORMANCE REPORTING

The Commission has developed Network Key Performance Indicators (KPI) for network service providers. KPIs are usually assessed on a monthly basis with a view to ensuring compliance with set standards. The KPIs for 5G shall be developed in line with Evolving Technology in conjunction with the industry and relevant ITU-T standards.

X. LICENSING PROCESS

a. INTRODUCTION

This section outlines the end-to-end licensing process including the Auction process to determine the Successful Bidders and the granting of appropriate Licences as set out below:

- 1. An overview of the licensing process and the indicative timetable
- 2. Definition of key Auction roles (see Glossary for further definitions)
- 3. Description of Auction logistics
- 4. Description of the Auction process
- 5. Definition of the Auction rules.

It is important to note that Applicants / Bidders will be responsible for all costs they incur in relation to this licensing process.

b. OVERVIEW OF LICENSING SCHEDULE AND TIMETABLE

The licensing process will consist of a four-stage procedure, as set out in Figure 16 below:

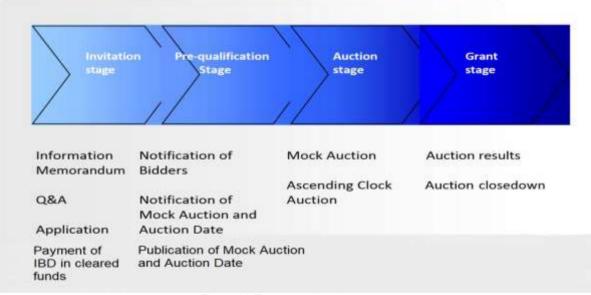


Figure 16: Four stage licensing process

c. KEY AUCTION ROLES

i. Auction Overseer

The Auction Overseer is responsible for the monitoring of the Auction process and providing assurance to Approved Bidders with respect to Auction results. The Auction Overseer is also responsible for resolving any Auction process complaints.

ii. Auction Manager

The Auction Manager is responsible for the operation of the Auction process itself, in particular the determination of the bidding increments for each round.

iii. Auction Administrator

The Auction Administrator is assigned to ensure the smooth running of the administration of the Auction process.

iv. External Communication Manager

The External Communication Manager is responsible for the communication of the final Auction results and any appropriate interim results and / or information.

v. Applicant

An Applicant is a corporate body that has submitted a completed bid application form, the prequalification criteria check-list, bid deposit payment form and the IBD but has not yet been qualified as an Approved Bidder by the Commission.

vi. Approved Bidder

An Approved Bidder is a corporate body that has met the criteria of Section 7.3.5 and received formal approval from the Commission to participate in the 3.5 GHz Spectrum Auction.

vii. Bid Teams

The Bid Team will consist of a maximum of four Qualified Representatives for each Approved Bidder who will participate in the Auction process and fulfil the terms of the Bidder Compliance Certificate. A list of Bid Team members must be submitted to the Commission at least five working days before the Auction Date.

viii. Bid Team Member

A Bid Team Member is a Qualified Representative authorised to act on behalf of the Approved Bidder.

ix. Commission Observer

Observers from the Commission will be in attendance in Auction Rooms to ensure compliance with the Auction Rules.

d. AUCTION LOGISTICS

i. Auction Day

The Auction Day of the Auction process will commence at 11.00 hours (WAT) and finish at approximately 18.00 hours (WAT). Tea Break and Lunch will be provided at the individual Auction Rooms.

ii. Auction Location

The Auction Location is the venue that will be used to host the Auction process in Abuja.

iii. Auction Room

The Auction Room is an allocated room within the Auction Location where the Approved Bidder Bid Team will be situated each Auction Day with a Commission Observer.

iv. Notification and changes to Bid Team Members

The Commission reserves the right to request the nomination of an alternative Bid Team member.

Requests for changes to Bid Team members must be made twenty-four hours in advance, and are subject to the Commission's agreement. Any deviation due to exceptional circumstances will be at the sole discretion of the Commission.

e. LICENSING PROCESS

i. Stage 1: Invitation Stage

Public Notice has been issued highlighting the Spectrum that are available for Auction. This IM is made available to all interested parties through the Commission's website (www.ncc.gov.ng) and in hard copy at the Commission's Head Office from 6 October, 2021.

ii. Stage 2: Pre-Qualification Stage

The pre-qualification stage outlines the steps to be carried out and the requirements to be met by any corporate body seeking approval to participate in the 3.5 GHz Spectrum Auction.

Interested parties must submit any questions concerning the IM by 15.00 hours (WAT) on or before 27 October, 2021.

Answers to these questions will be published, where appropriate, on the Commission's website by 17.00 hours (WAT) 10 November, 2021.

Applications from all interested parties to enter the Auction stage must be submitted to the Commission by 17.00 hours (WAT) on or before 24 November, 2021.

All Applicants are required to confirm that they meet the qualification criteria detailed in Appendix B.5, as submitted in their respective applications:

Approved Bidders are required to be independent of one another (as defined in Section 7.6.2 Bidder Relationships section under Auction Rules). Each applicant must highlight to the Commission any direct or indirect cross-ownership of 5 % or more with any other Licenced Network Operator in Nigeria in order for the Commission to be confident of the independence of Approved Bidders. Each applicant is required to submit its Statement of Share Capital and Return of Allotment of Shares duly filed with the Corporate Affairs Commission (CAC) establishing its current shareholding structure.

Each applicant must provide Remita Payment Advice, confirming that the IBD has been deposited in the designated account using Remita Payment Gateway.

The IBD is a commitment from the Applicant to pay at least the Opening Bid for the licence, as specified in this IM, and to participate in the Auction process. Failure to participate in the Auction process shall result in the forfeiture of the IBD. The Commission reserves the right to request additional information and / or clarification based on an Applicant's submission. Each Applicant is required to comply with all such requests.

Each applicant will be informed in writing by 17.00 hours (WAT) on 30 November, 2021 if it has been successful in its application to compete in the Auction stage of the licensing process by meeting the prequalification criteria. Such applicant will be awarded the status of Approved Bidders.

Any unsuccessful applicant will be informed and its IBD will be returned as detailed in Section 7.6.5.

Stage 3: Auction Stage

The Auction stage of the licensing process details the controls and procedures in place to manage the competitive bidding between Approved Bidders for the award of the Spectrum licences.

Note that if the aggregate demand from the Approved Bidders is less than or equal to the number of Lots on offer, then the Commission will provisionally award the Licence(s) to those party / parties at the Reserve Price.

It is not envisaged that Auction Days will occur on weekends or national public holidays.

The Commission reserves the right to make necessary and reasonable adjustments to the process in the overall interests of achieving a fair and transparent outcome.

The following sub-sections set out the approach to be adopted for the Auction.

1. SAFEGUARDS AGAINST ANTI-COMPETITIVE BEHAVIOUR

i. Each Bid Team will consist of no more than four Bid Team Members as detailed on the bidding application form. The Commission will review the proposed Bid Team members and reserves the right to request alternative nominations. The Commission must be provided with at least 24 hours' notice of any proposed changes to personnel.

- ii. Each Bid Team will be allocated an individual Auction Room within the Auction Location. Commission Observer will accompany the Bid Team at all times during the bidding process.
- iii. The Auction Room will be equipped with a computer connected through a secure Internet link to the Auction Software that will be used by the Bidders to remotely participate in the Auction.
- iv. The Auction will be run in a series of Rounds and the Bidding Schedule will be provided to the Bid Teams.
- v. The Bid Teams will access the Auction Software using secured passwords to place their respective Bids electronically in each Bidding Round until the end of the Auction.
- vi. Bid Teams are forbidden from using any type of communication method or device, electronic or otherwise, to communicate with parties outside their allocated Auction Room. This includes, but is not limited to, the use of any personal electronic device/s such as laptop computers, Personal Digital Assistants (PDAs) and mobile phones. All bidding materials will be in the format defined and provided by the Auction Manager.
- vii. If a Bid Team is found to be communicating with person / persons outside their Auction Room, that Bidder shall be excluded from further participation in the Auction and the Bidder's IBD shall be forfeited.

2. ASCENDING CLOCK AUCTION

a. GENERAL AUCTION RULES

Bidding will commence at 11:00 hours on the first day of the Auction. If this start time is delayed, the Commission will notify the Bidders. The Auction will proceed as follows:

In the Opening Round of the auction, a bidder is not permitted to bid more than one lot in the Opening Round of bidding, an Approved Bidder will be requested to indicate its acceptance or rejection of the Opening Bid at the indicated Round Price.

The Lot price in the Opening Round will be the Generic Reserve Price (GR) plus the Bid Increment (BI). (i.e. GR + BI). The BI for the Opening Round will range from 1% to 2.5% of the GR.

If there is excess demand in subsequent rounds, the Round Price will increase by the BI for that round of the Auction.

Bidders must bid in every round of the Auction. Failure to bid in any round will automatically make such bidder(s) not eligible to bid in subsequent rounds of the Auction.

As the Auction progresses, the Auction Manager, in consultation with members of the Auction Team will, at his/her discretion vary the increment within the following range: 0.001% to 5% if they feel that this will promote competition and lead to an efficient outcome of the Auction. The percentage bid increment may also be reduced at the discretion of the Auction Manager in consultation with the Auction Team.

In every round where demand exceeds 2 Lots, the auction continues.

At any round where demand is equal to 2, the auction ends and all the winning Bidders will be awarded the lots bidded for and the Auction will proceed to the Assignment Stage.

At any round where demand is less than 2 Lots, the winning Bidder will be entitled to its bid lot and the remaining lot will be given to the Bidder who have made exit bid, otherwise the process goes to the Unsold Lot Round.

Each bidder will be required to place a bid within the time allotted for each round in order to be entitled to continue in the Auction process except in a situation where the Auction ends at that round and there remains some unsold lots. Failure to place a bid will be treated as a zero bid.

A bidder is not permitted in any round to bid more than one lot in that round.

Bidders are permitted to enter exit bids in any round except the Opening Round.

A Bidder is entitled but not obligated to place an exit bid when unwilling to meet the Bid Round price.

All bids placed at each round are binding commitments on the bidder.

In the event that a Tiebreaker Round is required, and the tied bidders offer the same amount in the Tiebreaker Round then the winner will be chosen by Throw of Dice. The Bidder who throws the highest number will be declared the winner.

At the end of the auction when the won lots have been assigned, all non-winning bids including exit bids placed during the auction will cease to be legally binding commitment to pay.

3. EXIT BIDS

Exit Bid refers to the bid amount placed when a Bidder exits the auction by reducing eligibility from 1 to zero.

- i. Exit Bids in the round will be considered in descending order with unsold Lots going first to the Bidder who made the highest Exit Bids, then to the Bidder who made the second highest Exit Bid and continuing in that fashion until all Lots are allocated.
- ii. A Bidder is only permitted to place an exit bid in an auction round when its eligibility point is 1 and it wishes to exit the auction by placing a zero bid. Placing Exit Bids is a commitment on the bidder to accept and pay for the lot won.
- iii. Without prejudice to the preceding paragraph, in the event that a Bidder did not win any lot in the clock auction round, only one lot can be won in the exit bid round, or tiebreaker round.
- iv. The Price offered in the exit bid must be more than the round price of the previous round, but less than the Round price in the current Round.

If at the final round of the auction there remains an unsold lot, the demand of the bidders that made exit bids will be satisfied first before considering the bidders who did not place any exit bid(s).

4. THE UNSOLD LOTS ROUND

Unsold Lots are remaining Lots after all the exit bids have been considered in the final round of the Clock Auction Rounds. Every Bidder who bidded in the round before the final clock round will be eligible to take part in the unsold lots round. The specific rules applicable to this Round are as described below:

- i. Bids made in the unsold lots round must be greater than the round price in the penultimate round but there is no upper limit.
- ii. Placing bids in unsold lots round is a commitment on the bidder to accept and pay for the lot won. Without prejudice to the preceding paragraph, in the event that a Bidder did not win any lot in the clock auction round, the minimum lots to be won in the unsold lots bid round is 1 lot.
- iii. In the event that a bidder that placed an unsold lots bid refuses to pay for the lots won, the Bidder shall forfeit its IBD.
- iv. In the event that winning bids within the unsold lots round are tied then this tie will be resolved via the Tiebreaker rules.
- v. If the Unsold Lots Round/s closes with demand still less than supply then the unsold lots will be retained by the Commission.

5. TIEBREAKER RULES

- i. A tie occurs when two or more winning bidders at the exit bid or Unsold Lots Round place thesame bid amount.
- ii. The Bid at the tiebreaker round shall be at an amount greater than the amount at which the tie occurred.
- iii. The winner in case of a tie will be determined by the highest bidding amount.
- iv. If bids are still tied after the Tiebreaker Round, then the winner shall be chosen by Throw of Dice. The Bidder who throws the highest number will be declared the winner. This process will be repeated if the same number is thrown by two or more parties until the winner emerges.

6. ASSIGNMENT STAGE:

- i. Each winner will be assigned one lot of 100 MHz Bandwidth
- ii. If a winner has a preference for a particular Frequency Lot, they can express it by taking part in the Assignment stage.
- iii. The assignment stage is a single round with no upper or lower limit for each selection.
- iv. Any winner not interested in participating in the Assignment stage will be offered the available Lot after the assignment round has been concluded.
- v. The right of first choice of a frequency lot shall be given to the Bidder that offers the highest amount in the Assignment stage.
- vi. The Commission reserves the right to determine the band plans from which bidders may choose available Frequency Lots.
- vii. The Successful Bidders and their final Bids will be made public via a press statement. This will mark the end of the Auction process.

- viii. To guard against the unlikely situation in which the Auction Management Software (AMS) cannot be used or fails during the Auction, the Commission will establish an alternative system of bidding using "runners" to deliver bids from Approved Bidders to the Auction Manager and Auction Overseer in the Auction Room.
- ix. Under this system, each Approved Bidder will be given a secure 10 digits "key" which it will affix to each bid that it sends by runner to the Auction Room. Each bid will also be signed by two members of the Bidding Team.
- x. If the AMS fails, a runner for each Approved Bidder will be dispatched from the Auction Room with a bidding form for each bidder and an envelope for them to use to seal their bid.
- xi. To enter its bid, an Approved Bidder will fill out the bid form by indicating either its acceptance of the bidor an exit bid and affixing its key and two signatures to the bid form and sealing the form in the envelope.
- xii. Runners will take these sealed bids back to the Auction Manager and Auction Overseer who will have a matching "key" for each Approved Bidder. They will use these "keys" to authenticate the bids brought by the runner and record these bids in an Excel spreadsheet. This system will be employed until Provisional Licence Winners are determined.

iii. GRANT

The Auction Closure will occur when the Public Announcement is made by the Auction Overseer/Manager, revealing the winners to be awarded the Licences under this process. At this point each successful Bidder will automatically be deemed to have been awarded a Provisional Licence. The balance (Winning Bid Amount Less the IBD) of the Auction fee shall be paid to the Commission on or before 25 February, 2022.

f. AUCTION RULES

The Auction rules are based on the following principles:

- The Licensing Process will be conducted in a fair, open and transparent manner. All participants in the Auction will be expected to embrace the same principles.
- The Commission reserves the right to exclude any party that has been deemed not to have conducted itself in this way. In addition, the IBD can be forfeited under such circumstances.
- All participants must abide by the Auction Rules or face disqualification.

i. Financial penalties

By entering into this licensing process, all Applicants / Bidders are making a commitment to abide by the requirements and rules in relation to this Spectrum licensing process as communicated by the Commission. The Commission reserves the right to impose financial penalties on Applicants / Bidders in the event of infringement of these requirements and rules. The Financial penalties will be deducted from the Intention-to- Bid deposits provided by Applicants / Bidders and the Commission's decision in these matters will be final.

ii. Behaviour and Relationships

1. Bidder Relationships

It is not allowed for a Bidder to have a relationship with another Bidder during the licensing process. For the purposes of this licensing process, this period starts with the issue of the IM and stops at the grant of the Licences. A relationship is defined as where a Bidder owns directly or indirectly an ownership stake of 10% or more in another Bidder.

In order to avoid a Bidder relationship conflict, Applicants are required to notify the Commission of any cross-investments with other Licenced Network Operators in Nigeria of 5% or more and any other information of which they are aware that could give rise to such a Bidder relationship conflict.

Where it is shown that such a relationship exists, or has existed during the licensing phase, the Commissionreserves the right to exclude any or both of the Bidders from the process and withhold the IBD.

The Commission reserves the right to impose financial penalties (see Section 7.6.1) and/or exclude any Bidder where it has been demonstrated that the Bidder is involved in an anti-competitive relationship against the principles guiding the Auction. The Commission also reserves the right to exclude these Bidders from future Spectrum auction events.

2. Anti-Competitive Behaviour

Bidders must not enter into any arrangement with any party that would restrict the ability of other Bidders to plan, build or operate their networks under the Spectrum Licence.

Bidders are not permitted to engage in any type of restriction on the costs of software or equipment with suppliers that would influence the ability of other Bidders to plan, build or operate their networks under the Spectrum Licence.

Applicants are not permitted to receive advice on 3.5 GHz Spectrum Auction matters from any persons retained as an advisor by another Bidder in the Spectrum licensing process.

iii. Confidentiality

1. Confidentiality

Any confidential information that is submitted to the Commission by Bidders will not be disclosed to other parties unless it is deemed essential to the fair running of the licensing process or required by law. Under these circumstances, full consultation will take place with the affected party.

Confidential information will include items such as business cases, bidding details and bidding strategies.

All information issued by the Commission in relation to this 3.5 GHz Spectrum licensing process should be regarded as non-confidential unless explicitly stated.

Notwithstanding the above, Bidders must not make any public statement concerning the Auction duringits progress.

iv. Process

1. Question and Answer Period

The period between the publication of the IM and the application closure dateallows all interested parties to seek for clarifications on the IM and request additional information. The Commission, however, reserves the right not to respond to a particular question in whole or in part.

Questions and their corresponding responses will be published on the Commission's website which will be available from 17.00 hours (WAT) on 10 November, 2021 and will form part of the IM. Note that questions may be edited to remove personally identifiable information such as references, names, vendors, etc. where appropriate.

Requests for clarifications and questions during the specified communication period should be addressed to either:

Executive Vice Chairman/CEO Nigerian Communications CommissionPlot 423 Aguiyi Ironsi Street Maitama, Abuja, Federal Capital Territory, Nigeria

or

The electronic copies should be sent to Spectrum auction@ncc.gov.ng,

In both instances, all communication should be clearly titled '3.5 GHz Spectrum Auction'.

2. Complaints, Grievances and Resolutions

The details of all complaints and grievances should be submitted in writing to the Commission. No other method of submission is permissible.

Complaints and grievances will be accepted during and up to one day after the Auction.

Resolution will be in the form of a formal documented reply from the Commission with clearly defined actions to be taken where appropriate. The Commission's decision is final.

3. Communication

All communication between Bidders relating to the 3.5 GHz Spectrum licensing process is prohibited. This includes but not limited to: bid strategy, valuations and budgets. If a Bidder knowingly and purposely communicates with another Bidder during the licensing process, the Commission has the right to impose financial penalties, at the Commission's discretion as defined in Section 7.6.1. It also reserves the right to exclude the party or parties from further participation in the Auction.

Should a Bid Team require to communicate with the Auction Manager on the Auction Day, it should submit a sealed written communication document to the Commission Observer present in the Auction Room. This communication will then be passed to the Auction Manager for immediate response.

4. Disqualification from the Process

In the event of a Bidder being disqualified from the process, the Commission reserves the right to impose apenalty. The maximum penalty may result in forfeiture of the full IBD paid and barred from future auction.

5. Restart of the Auction

The Commission reserves the right to exclude one or more Bidders from the Auction where it has been shown due reason to do so. An example warranting exclusion could be contravention of the Auction rules.

Under such circumstances, it is at the Commission's discretion—whether the Auction will continue orbe restarted. Mitigating circumstances for an Auction restart would include instances where the bidding process has been influenced or where bids have been excluded or distorted in the Auction process.

Opening Bid: The opening bid shall be a minimum value of the Reserve Price plus the Bid Increment.

6. Late Bid Team Arrival

Only where it can be shown that exceptional circumstances have prevented the Bid Team arriving on time for an Auction Day will the Auction be paused. Approved Bidders may be required to get in touch with the Auction Manager before arrival and provide official proof for any lateness on arrival.

It is at the sole discretion of the Commission to determine if the circumstances stated are acceptable.

7. Late Bid Circumstances

The Auction Software will reject late bid submissions on the Auction Day(s). If a Bidder fails to enter a bid inany round, its eligibility to continue will automatically lapse.

8. Changes in Applicants' Circumstances

Any change to a Bidder's circumstances during the licensing process that would affect the process should be reported in writing to the Commission at the earliest opportunity at least 24hrs before the Auction Day.

9. Application Withdrawal Policy

An application to participate in the licensing process cannot be withdrawn.

10. Auction Process Briefing

Approved Bidders will be required to participate in a Mock Auction that will replicate the actual Auction process. This Mock Auction will take place on 6 December, 2021. It is mandatory for Approved Bidders to attend the Mock Auction. Details of this event will be communicated to the Approved Bidders and published on the Commission's website.

11. Language

All communication shall be in English.

12. Governing Law

National Law – This IM and any licence issued shall be exclusively subject to, and interpreted in accordance with the laws of the Federal Republic of Nigeria.

Dispute Resolution – Any dispute over the licensing process shall be settled by the Commission under the terms of this IM and in accordance with the dispute resolution processes of the Commission.

13. Taxes

The Spectrum Licence fee will not incur Value Added Tax (VAT). In addition, no VAT will be applicable to the UASL fee.

14. Currency

All currency amounts stated throughout this document are in US Dollars (US\$) except where it is specified otherwise. All currency amounts used in all bidding stages must also be in US Dollars (US\$).

v. Financial

INTENTION-TO-BID DEPOSIT (IBD)

Applicants must pay an Intention-to-Bid Deposit (IBD) for a Lot which is 10% of the cost of the lot into the designated account in cleared funds. This deposit will bind the Applicant to take up a Licence, should it be a Successful Bidder, at the Reserve Price or any higher bid value submitted during the process.

The IBD is the deposit payment required to be made by all Applicants as part of the Prequalification process. This payment must be confirmed received by the Commission before the application submission deadline (as defined in the licensing process timetable).

The IBD is a commitment from the Applicant to pay at least the Opening Bid for the licence, as specified in this IM, to enable participation in the Auction process.

Failure to meet any of the stipulated obligations in relation to this Auction shall result in the forfeiture of the IBD.

In the event that any Approved Bidder is successful in the Auction process, the full IBD will be offset against payment for the actual licence. This is subject to no penalty having been incurred during the Auction.

Approved Bidders who have been unsuccessful in the Auction process will have their IBD returned to them in full, subject to no penalty having been incurred during the Auction. The IBD will be refunded to unsuccessful bidders within 30 days from the close of the Auction.

By 17.00 hours (WAT) on 24 November, 2021 Applicants must have transferred the IBD so that it is confirmed received by the Commission into the designated account. This is part of the pre- qualification process.

The designated bank accounts details to which Applicants must send the funds are as follows:

UNITED STATES DOLLAR ACCOUNT:

Account Name: CBN-Nigerian Communications Commission

Account Number: 100367-USD-CLBANK-21

Swift Code: FBNIGB2L

IBAN Number: GB80FBNI40520410036721
Bank Name: First Bank UK Limited
Bank Address: 28, Finsbury Circus,

London EC2M 7DT, United Kingdom

Currency: United States Dollars (USD)

APPLICANTS / BIDDERS THAT INTEND TO PAY IN NAIRA

Note: Companies that wish to pay in Naira should pay the Naira equivalent of the designated amounts atthe prevailing Central Bank of Nigeria (CBN) official Exchange Rate at the date of the payment.

Account Name: Nigerian Communications Commission

Account Number: 002 016 906 1018
Bank: Central Bank of Nigeria

Any penalty will be deducted on the day that it is incurred. Bidders will be informed in writing of any such penalties.

Both the IBD and the Spectrum Licence fees can be paid for in Naira at the Central Bank of Nigeria (CBN)exchange rate prevailing on the date of auction.

XI. APPLICATION REQUIREMENTS

a. INTRODUCTION

This section provides a summary of the actions required to be taken by Applicants to submit an application to participate in the 3.5 GHz Spectrum Auction.

In the event of any discrepancy between the application instructions contained in this section and the licensing process descriptions provided above, the licensing process descriptions shall prevail.

b. APPLICATION INSTRUCTIONS

Interested Applicants under this auction process are not allowed to apply for more than 1 Lot (100MHz TDD).

Each Lot of 100MHz TDD corresponds to 1 Eligibility Point.

The minimum eligibility point required to qualify to participate in the auction is 1 point.

The maximum eligibility point permitted to qualify to participate in the auction is 1 point.

i. Application Format, Address and Delivery

All applications must be submitted using the standard templates that are included in this IM (see Compliance Checklist).

Applications should be submitted in a sealed envelope, marked as follows: "3.5 GHz Spectrum Auction"

Addressed to:

Executive Vice Chairman/CEO Nigerian Communications Commission Plot 423 Aguiyi Ironsi Street Maitama, Abuja, Federal Capital Territory Nigeria

Applications should reach the above address on or before the Application Deadline.

It is strongly advised that all Applications should be delivered in a secure manner and that legal representatives accompany the delivery of the Application Form.

ii. Application Deposit

By 17.00 hours (WAT) on 24 November, 2021 Applicants must have transferred the IBD so that it is received as cleared funds in the designated account; see Section 7.6.5. This forms part of the pre-qualification criteria.

APPLICATION DOCUMENTATION

Part 1 – Cover Letter

A duly completed Cover Letter, as contained in Appendix B.2, should be signed and dated by an Authorised Signatory of the Applicant. This Authorised Signatory should be included as a member of the Bid Team, as detailed in the Bidder Compliance Certificate template, found in Appendix B.7.

iii. Part 2 - Pre-Qualification Criteria Table

A duly completed pre-qualification criteria table, contained in Appendix B.5, should be signed and dated by an Authorised Signatory of the Applicant. This Authorised Signatory should be included as a member of the Bid Team, detailed in the Bidder Compliance Certificate template in Appendix B.7.

The pre-qualification criteria table requires the Applicant to self-certify against the following criteria:

- Incorporated as a company in Nigeria (attach Certificate of Incorporation, Particulars of Directors, Statement of Authorised Share Capital, Return of Allotment of Shares and Memorandum & Articles of Association)
- Independence from other Applicants
- Notification of Advisors
- Payment of Intention-to-Bid Deposit
- Fulfilment of regulatory obligations.

Part 3 – Intention-to-Bid Deposit

The IBD submitted by Applicants shall:

- Be 10% of the reserve price
- Be deposited and have been confirmed received by the Commission into the designated account before the Application deadline.
- Form part of the legal commitment of the Applicant to participate in the Auction process if the approved bidder status is confirmed, and also the commitment to take up a Licence if the Applicant becomes one of the successful Bidders.

iv. Bid Deposit Payment Form

A duly completed Bid Deposit Payment Form contained in Appendix B.6 should be completed, signed and dated by an Authorised Signatory of the Applicant.

v. Binding Nature of Application

By submitting an application, the Applicant will be bound by the information provided therein and the commitments outlined in this IM and any subsequent notices and communications by the Commission relating to the 3.5 GHz Spectrum Auction.

vi. Completeness of Applications

Incomplete applications will not be considered by the Commission. If there is any doubt surrounding the completion of applications, this should be addressed in writing to the Executive Vice Chairman, clearly marked "3.5 GHz Spectrum Auction", at least two business days before the application deadline. A scanned copy of such request for clarification should also be sent to Spectrum auction@ncc.gov.ng within the same timeline.

c. CONTACTS, COMMUNICATIONS AND INDICATIVE TIMETABLE

i. CONTACTS FOR ENQUIRIES

Enquiries relating to the IM should be addressed during the specified communication period to:

Executive Vice Chairman/CEO Nigerian Communications Commission Plot 423, Aguiyi Ironsi Street Maitama, Abuja, Federal Capital Territory Nigeria

OR

Spectrum auction@ncc.gov.ng

The Executive Vice Chairman of the Nigerian Communications Commission.

In both instances, all communication should be clearly marked"3.5 GHz Spectrum Auction".

d. COMMUNICATION PROCESS

Following the issuance of this IM, the Commission may publish further information as well as any questions received and any answers provided. The Commission, however, reserves the right not to respond to a particular question.

The Commission reserves the right to publish in whole or in parts, questions from recipients of this IM and the answers provided on its website (<u>www.ncc.gov.ng</u>). Note that questions may be edited to remove personally identifiable references.

A twenty-one (21) Day window for questions will commence immediately following the release of this IM. Questions will only be entertained through the official communication channels outlined above. Communication outside this period and channels will not receive a reply.

e. AUCTION TIMETABLE

The timetable for the licensing process, including the Auction stage, is set out in Table 8-1 below. Thetimetable is indicative and subject to amendment by the Commission

Table XI-1: Indicative Timetable

DATE	ACTIVITY		
	Invitation Stage		
October 6, 2021	Publication of Draft Information Memorandum		
October 27, 2021	End date for comments and questions on Draft IM		
November 3, 2021	Stakeholder Engagement		
November 6, 2021	Review of Draft Information Memorandum		
November 10, 2021	Publication of responses to comments and questions on Draft IM and Publication of Final Information Memorandum / Application Start Date		
November 24, 2021	End of submission of Application		
	End Date for Payment of mandatory Intention to Bid Deposit (IBD)		
	Pre-Qualification Stage		
November 30, 2021	Notification of Qualified Bidders		
	Notification of Mock Auction and Auction date		
	Publication of Mock Auction and Auction date		
	Auction Stage		
December 10, 2021	Mock Auction		
December 13, 2021	Auction		
	Grant Stage		
December 28, 2021	Publication of Provisional winners		
Í	Notification of provisional award of licence		
February 25, 2022	Payment for Licence		
February 28, 2022	Publication of Final result		

XII. APPENDICES

a. APPENDIX A: Glossary of Terms.

3.5 GHz Spectrum Auction	The end-to-end Spectrum licensing process addressed by this Information Memorandum
Active Bid	Any submitted Bid value featuring in the bidding round
Active Bidder	A Bid Team that has not withdrawn from Auction proceedings
Applicant	A party that has submitted an application and associated Intention-to-Bid Deposit in order to be considered for Approved Bidder status
Approved Bidder	An organisation that has met the pre- qualification criteria and received formal approval from the Commission to participate in the 3.5 GHz Spectrum Auction and has committed itself to compete in the Auction
Ascending Clock Auction	An auction design where the Auction Manager receives Bids and implements Bid Increment in every Round where demand for the item being auctioned exceeds the supply until demand is equal to or less than supply.
Auction	The stage of the licensing process where competitive bidding is undertaken to purchase a Spectrum licence.
Auction Administrator	Person assigned to ensure the smooth running of the administrative functions during the Auction phase of the 3.5 GHz Spectrum licensing process
Auction Closure	The public announcement of the conclusion of the licensing process following the completion of the Auction.
Auction Location	The Venue that will be used to host the Auction stage of thelicensing process
Auction Management Software	The secure, Internet-based software that Bidders will use to enter their Bids in each Round of the Auction
Auction Manager	Person responsible for the Auction process
Auction Overseer	Person responsible for monitoring the Auction process, providing assurance to Approved Bidders with respect to the final Auction result and resolution of any Auction process issues
Auction Rooms	Secure, individual rooms provided for and used by each BidTeam for the duration of the Auction process

Auction Round	The period of time during which each of the Active Bidders must carry out an action, the end of which is signified by the Auction Manager publishing the number of active bids and bid values
Authorised Officer	A person authorised by an Applicant to act on its behalf, as defined in the Bidder Compliance Certificate
Authorised Signatory	A person authorised to contract on behalf of the Applicant /Bidder
Bid	The value that an Approved Bidder has declared to be willingto pay for a Spectrum licence in any Auction round
Bidding Action	The process by which a Bid Team indicates willingness or otherwise to pay the current price for a Spectrum block in the 3.5 GHz band Auction. There are three types of Bidding Action: bid, non-bid, exit bid
Bidder	A Bidder is a corporate body that has been prequalified to participate in the Auction process for award of a Spectrum licence
Bid Increment	The amount by which a bid is increased between Auction rounds. The increment will vary within the following range: 0.001% to 5%.
Bid Form	The paper form on which an Approved Bidder makes anaction known in each round
Bid Team	A group of people authorised by an Applicant to participate in the Auction process, comprising no more than four people, one of whom should be the Authorised Officer (as defined in the Bidder Compliance Certificate template).
Bid Team Member	A Member of the Bid Team authorised to act on behalf of theBidder
Commission	The Nigerian Communications Commission
Commission Observer	A person(s) on behalf of the Commission who will be in attendance in an Auction Room to ensure compliance with the Auction Rules
Generic Reserve Price (GR)	The minimum price for one Lot of 100 MHz TDD
Increase	The act of raising the bid value that an Approved Bidder is willing to pay for a licence, by at least the minimum bid increment as defined by the Auction Manager

Intention-to-Bid Deposit (IBD)	A sum deposited by an Applicant with the Commission to demonstrate intention to participate in the Auction and willingness to take up a licence for at least the Reserve Price
Licence Award	Notification of award of a Spectrum licence
Licenced Network Operator	A Licenced Network Operator is any Operator licenced by the Commission to own and / or operate a Telecommunications Network in Nigeria.
Lot	One Spectrum bandwidth of 100 MHz TDD in the 3.5 GHz band
Mock Auction	A preparatory run-through of the Auction process to familiarise Approved Bidders with the Auction procedures
NBS	National Bureau of Statistics
Opening Bid	The minimum acceptable Bid for the item(s) on offer in the Opening Round. Often set as one Increment above the Reserve Price.
Opening Round	The first round of an auction during which the item(s) being auctioned are offered to Bidders at the Opening Bid
Operational Licence	A communication licence issued by the Nigerian Communications Commission under its powers in Chapter IV of the Nigerian Communications Act 2003
Previous Round	The Auction round preceding the current round
Relationship	A relationship is defined as a situation where a Bidder has a direct or indirect ownership stake of 10% or more in another Bidder. Relationship in the sense defined in this IM is strictly Ownership relationship and not Contractual relationship.
Reserve Price	The price announced as the minimum at which a licence willbe awarded in the licensing process.
Successful Bidder	A Successful Bidder is a Bidder to whom a ProvisionalSpectrum licence is awarded
The Act	Nigerian Communications Act, 2003

Throw of Dice	The process used to determine the provisional winner when two or more Bidders are tied at the end of the Auction. One die will be used in this process with the Bidder whose company name starts with the letter nearest to the start of the alphabet throwing first.
Tied bid	Submitted bids of the same value in the final round of theauction.
WAT	West African Time

b. APPENDIX B APPLICATION FORMS

INTRODUCTION

This section contains all appropriate forms for interested parties wishing to be considered for inclusion in the Auction process.

Templates: Cover Letter Template Applied "Lots Confirmation" Form Compliance Statement Pre-qualification Criteria Check-list Bid Deposit Payment Form Bidder Compliance Certificate.

All templates and forms must be submitted on the Applicant's letter headed paper. The Commission expects applicants to provide complete information as required in the templates.

i. B2. COVER LETTER TEMPLATE

Executive Vice Chairman/CEO Nigerian Communications Commission Plot 423, Aguiyi Ironsi Street Maitama, Abuja Federal Capital Territory, Nigeria

Applicant's details, including mailing address, contact telephone number and email address>

<insert date>

Dear Sir

We the undersigned, having carefully read the Information Memorandum pertaining to the Auction for Spectrum in the 3.5 GHz band, including the disclaimer and all appropriate adjuncts, we herewith submitan application to take part in the auction for the award of licence in the 3.5 GHz frequency band.

Should our application be successful in the Auction, we hereby undertake to pay all fees relating to the acquisition of, and operation under, the licence, as well as abide by all appropriate terms and conditions as set out in the Information Memorandum, including the referenced licences.

By submitting this letter, we certify that we have lodged an Intention-to-Bid Deposit of US\$XXX__(
____United States Dollars with the Commission's bankers to qualify us to bid for one Lot of 100MHz TDD Spectrum.

By submitting this application and deposit we understand that we have entered the licensing process to purchase a Spectrum Licence for a nationwide coverage and will perform all obligations as stipulated in the Information Memorandum.

We understand that by entering into this licensing process we are making a commitment to abide by the requirements and rules in relation to this 3.5 GHz Spectrum licensing process as communicated by the Commission. We equally accept that the Commission reserves the right to disqualify and/or impose financial penalties in the event of infringement of these requirements and rules, and such financial penalties will be deducted from our Intention- to-Bid Deposit. We have completed and enclosed the following:

Applied "Lot Confirmation" Form

Compliance Statement

Pre-qualification Criteria Check-list Intention to Bid Deposit Payment Form

Bidder Compliance Certificate (containing details of Bid Team members).

We confirm that all the information provided in our application and associated documents are accurate and true to the best of our knowledge.

We acknowledge that this letter and all associated documentation relating to this process and our participation in it are governed by Nigerian law.

Yours sincerely,

<insert signature of authorised signatory>
<insert name of signatory>

<insert name of Applicant>

<insert date of signature>

ii. B. 3. APPLIED "LOT CONFIRMATION" FORM

The und	lersigned	confirm	that	we	are	applying	g for	<u>one</u>	Lot and	that	we i	have	mad	e an
Intention	ı to BidD	Deposit of	US\$	_(_		United	l Stat	es Do	ollars).					

<insert signature of authorised signatory>
<insert name of signatory>
<insert name of Applicant>
<insert date of signature>

iii. B. 4 COMPLIANCE STATEMENT

Executive Vice Chairman/CEO Nigerian Communications Commission Plot 423, Aguiyi Ironsi Street Maitama, Abuja Federal Capital Territory, Nigeria

Date	
Name of Applicant	

Request for Applications for the Licensing of 3.5 GHz Spectrum in the Federal Republic of Nigeria

Category	Criteria	Proof
Template	Application to take part at Auction in the licensing process for 3.5 GHz Spectrum	Cover Letter
Template	Confirmation that the Applicant meets all defined pre-qualification criteria	Pre-qualification Criteria Check- list
Template	Confirmation that the Applicant understands the nature of the Intention- to-Bid Deposit	Bid Deposit Payment Form
Template	Confirmation of the Lot applied for.	Applied "Lot Confirmation" Form
Template	Applicant's nomination of the bid teamauthorised to take part at Auction	Bidder Compliance Certificate

<insert signature of authorised signatory>

<insert name of signatory>

<insert name of Applicant>

<insert date of signature>

iv. B. 5 PRE-QUALIFICATION CRITERIA CHECK-LIST

[Note to applicants: Please complete and return this form as part of the bidding application]

Characteristic	Criteria	Compliance (Yes/No)
Eligibility	Applicant must be a company incorporated in Nigeria, as defined in Section 8.2.3. Applicant must confirm all participating entities and their relationships in the context of this Application. [To be provided as an attachment to the Cover Letter]	
Independence	Confirmation of independence from all other Licenced Network Operators participating in the 3.5 GHz Spectrum Auction. Indication of cross-ownerships and/or other issues which could affect Bidder Relationships (as defined in Bidder Relationships section under Auction rules). [To be provided as an attachment to the Cover Letter]	
Advisors	Identification of professional advisors supporting the Applicant's submission. *To be provided as an attachment to the Cover Letter]	
Financial (deposit)	US\$XXX United States Dollars) Intention-to-Bid Deposit has been confirmed paid into the designatedaccount to qualify Applicant to compete for One Lot.	
Fulfilment of regulatory obligations	Applicant must confirm that it is up to date with all administration, licence and operating fees due to the Commission	

- <insert signature of authorised signatory>
- <insert name of signatory>
- <insert name of Applicant>
- <insert date of signature>

v. B. 6 INTENTION TO BID DEPOSIT PAYMENT FORM

The Applicant certifies, agrees and undertakes that:

- i. It has paid a deposit of US\$ (XXX United States Dollars) to the Commission as required by the Information Memorandum issued for the 3.5 GHz Spectrum licensing process.
- ii. Where the Commission makes an offer to assign Spectrum to a Successful Bidder and the Successful Bidder accepts the offer and pays for the Spectrum within the period as specified by the Commission, then the deposit US\$ XXX (XXX__ United States Dollars), will form part of the payment for the price of the Spectrum that will be assigned to the Successful Bidder.
- iii. Where the Commission makes an offer to the Successful Bidder and the Successful Bidder fails to make full payment in accordance with the conditions of the Auction and the Information Memorandum, the deposit will be forfeited to the Commission.
- iv. Where the Commission makes the offer to a Successful Bidder and the Successful Bidder fails to accept the offer within the time specified by the Commission for the acceptance of the offer, the Successful Bidder will forfeit the US\$ XXX (XXX_United States Dollars) deposit.
- v. Where no offer is made to the Bidder by the Commission but the Bidder has contravened any of the Auction rules as set out by the Commission, the Bidder accepts to forfeit the IBD.
- vi. Where no offer is made to the Bidder by the Commission, and the Bidder has not contravened any of the Auction rules as set out by the Commission, the deposit of US\$ XXX (XXX United States Dollars) will be refunded to the Bidder.

Please refer to Table 2 for guide in completing the monetary figures. The common seal of the Bidder is hereby attached in presence of:

DIRECTOR		SECRETARY

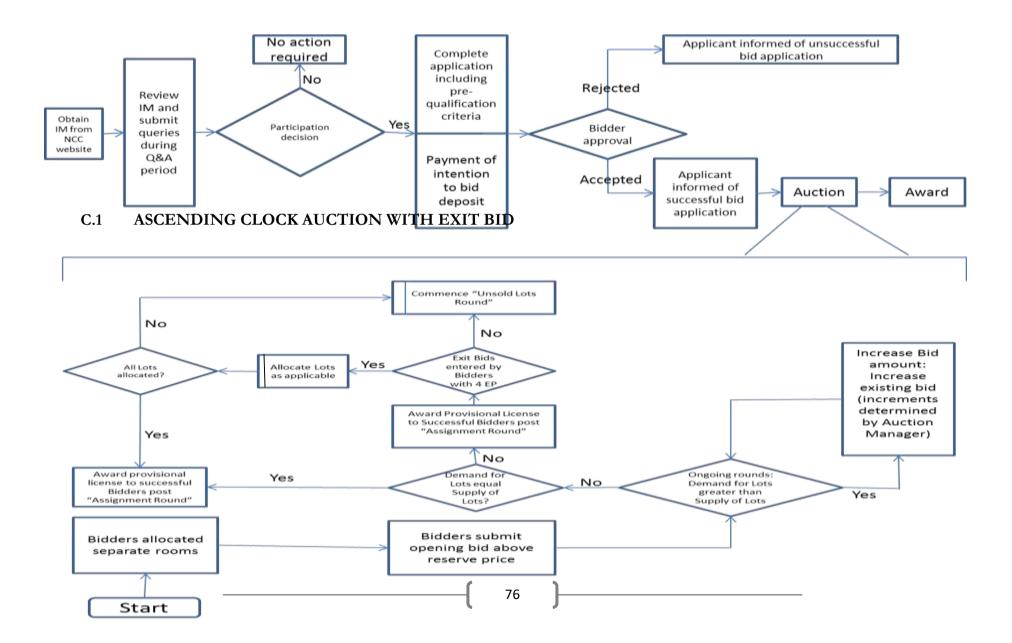
vi. B. 7 BIDDER COMPLIANCE CERTIFICATE

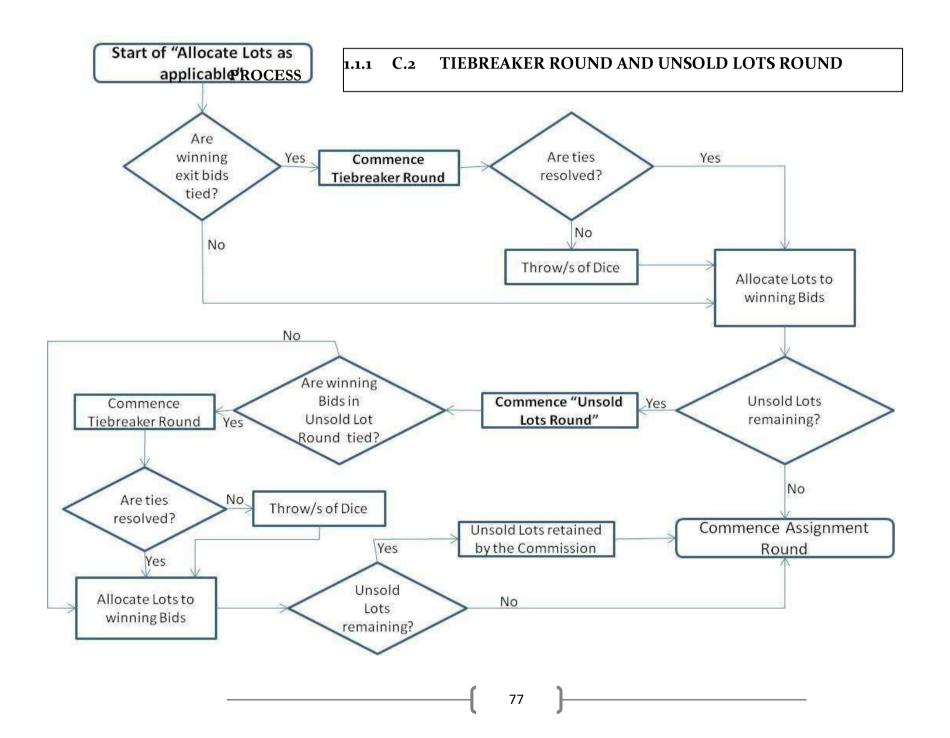
- i. The Bidder certifies and undertakes that:
- ii. The Authorized Officers of the Bidder have read and understood the relevant legislation and the Information Memorandum.
- iii. The Bidder is legally capable of bidding in the Auction and has in place all necessary consents, permissions and board approval for this purpose, save those which, by virtue of legal or regulatory process, are not obtainable until after the results of the Auction are known and the Bidder further understands that it will bear the risk of failure to obtain such consents, permissions and approvals that are not obtainable until after the results of the Auction are known.
- iv. The Bidder understands and will be legally capable of satisfying its obligations under the terms and conditions of the Licence granted pursuant to the Auction and the terms of any Licence granted as a consequence of winning a Spectrum Licence in the Auction.
- v. The actual information provided in, or in support of, the Application is, to the best of the Bidder's knowledge and belief, true, accurate and complete in all material respects and that any opinion expressed is honestly held.
- vi. The Bidder in the Application is not the subject, and none of its Directors, officers or representatives are the subject, of criminal investigation or proceedings in Nigeria or abroad which might reasonably be expected to affect adversely their business or materially affect the Bidder's ability to bid in the Auction or to satisfy the terms of any Licence awarded pursuant to the Auction, and that there is no reason to believe that such investigations or proceedings might occur during the Auction.
- vii. The following Officers representing the Bidder in the Auction have been duly and properly delegated by the Bidder to do so and they have the authority and power to bind the Bidder in the transaction.

Numbe r	Name	Designation
1		
2		

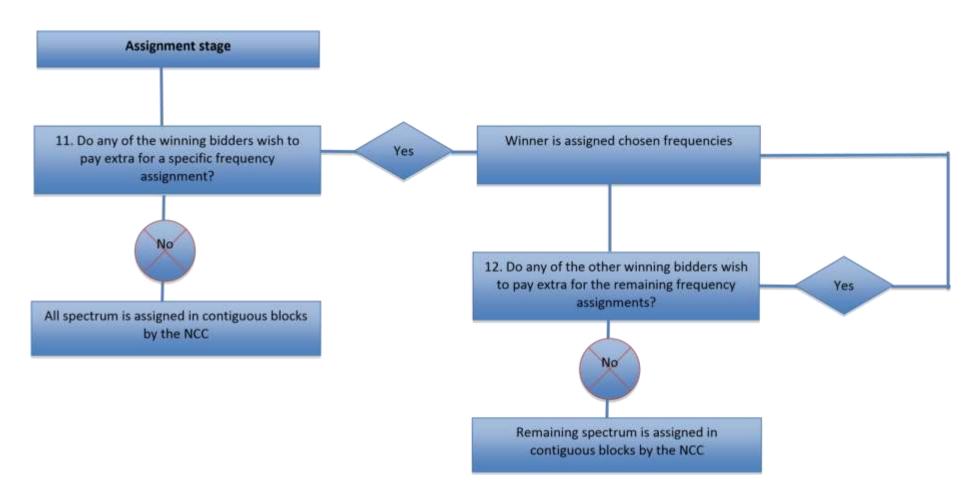
3			
4			
The Common seal of the Bidder is hereby attached in presence of:			
DIRECTOR	_	SECRETARY	

c. APPENDIX C LICENSING PROCESS DIAGRAM OVERVIEW





i. C.3 ASSIGNMENT ROUND



d. APPENDIX D: BIDDER REGISTRATION, AUTHENTICATION AND BIDDING FORMS

Bidder Registration and Authentication Form

Purpose and Instructions:

The purpose of this form is to register and authenticate you for the auction of Spectrum in the 3.5 GHz Frequency band. The form contains information on the name, signature and initials of Designated Bidders to fulfil the function of delivering the round-by-round bids to the Auction Manager and Auction Overseer.

All Bidders, Runners, the Auction Manager and Auction Overseer must sign and initial this witnessed form.

Authorized Individuals:	Date:
Name: Signature:	Initials:
Name: Signature:	Initials:
Runner: Name: Signature:	Initials:
Auction Manager:Name: Signature:	Initials:
Auction Overseer:Name: Signature:	Initials:

Round-by-round Bidding Form for the 3.5 GHz Band

Round by Round Bidding for the 3.5 GHz Frequency Band				
Bidder Name:	Bid Number:			
ACCEPT BID (ENTER 1 IF YES, OTHERWISE GO TO "ENTER EXIT BID"				
ENTER EXIT BID (ENTER VALUE BETWEEN LAST BID AND CURRENT BID)				
Authorized Individual's Name:	Authorized Individual's Signature:			
Auction Manager's Name:	Auction Manager's Signature:			
Auction Overseer:	Auction Overseers' Signature:			

e. APPENDIX E: UNIFIED ACCESS SERVICE LICENCE (UASL)OPERATIONAL LICENCE

Refer to "Unified Access Service Licence (UASL) Operational Licence" document

f. APPENDIX F: 3.5 GHz FREQUENCY LICENCE

Refer to "3.5 GHz Frequency Licence" document