## A. FREQUENT ASKED QUESTIONS (FAQ)'S ON TYPE APPROVAL OF COMMUNICATION DEVICES

1. What are the guiding documents on Device authorization/Type Approval?
   a. NCC Type Approval Regulation
      http://www.ncc.gov.ng/licensing-regulatory/legal/regulations

   b. NCC Type Approval Guideline
      http://www.ncc.gov.ng/licensing-regulatory/legal/guidelines

   c. The Nigerian Communications Act 2003
      http://www.ncc.gov.ng/documents/128-nigerian-communications-act-2003/file

2. Who can apply for equipment authorization in Nigeria?
   Answer: Any corporate bodies such as NCC Licensees, Original Equipment Manufacturers (OEM), Vendors, Test Laboratories, Registered Companies etc. can apply for equipment Type Approval

3. How can the Type Approval forms be obtained?
   Answer: From the NCC website simply click on the Header "Technology Regulation" and then under "Technical Standards" click "Application Forms" and download "Type Approval Application Forms"
   http://www.ncc.gov.ng/technology/standards/standards-applications

4. Do we need the NCC type approval before importing to Nigeria
   Answer: Yes, for all equipment with communication capabilities and that can be connected to a communication network in Nigeria.

5. Where can one obtain the list of Type Approved Equipment?
   Answer: From the NCC website simply click on the Header "Technology Regulation" and then under "Technical Standards" click "Type Approval". Scroll down and click on either "Approved Mobile Handsets" and or "Approved Communications Equipment"
   http://www.ncc.gov.ng/technology/standards/type-approval

6. Can a SONCAP Certificate be used as equipment authorization?
   Answer: No, NCC Type approval is mandatory for all communications equipment to be imported for sale or deployment in Nigeria.

7. What kind of devices must be subjected to the Type Approval Processes?
   Answer: Any and all telecommunication based devices including both radiation emitting and non-emitting devices are subject to the Type

approval process. Some categories of devices to be type approved are (but not limited to the following) :

  a. All telecoms terminal equipment collectively known as Radio and Telecommunications Terminal Equipment(RTTE) i.e. intentional and non-intentional radiators

  b. Major Network Equipment like ISP Switches/MSC, BSC, nodeB, eNodeB, microwave equipment

  c. Short Range Devices and Internet of Things (IOT) Products/Devices including Radio Equipment installed in vehicle, fridges, air conditioners etc.

8. What is the current policy on labelling/e-labelling?

Answer: The Commission encourages e-labelling in addition to the traditional on-the-product labelling.

9. What is the NCC Policy regarding radios operating on 5GHz Band?

Answer: There is a regulatory guideline for deployment of broadband services on the 5.2GHz – 5.9GHz. The guideline is found on the NCC website, please click the link below

http://www.ncc.gov.ng/docman-main/legal-regulatory/guidelines/59-guidelines-for-deployment-of-broadband-services-on-the-5-2-5-9ghz-band/file

Please note the following:

  a. 5.3GHz Band : 5.25GHz-5.35GHz (License free)
  b. 5.4GHz Band, 5.47GHz- 5.725GHz (Licensed Band, frequency license required for operation)
  c. 5.8GHz Band: 5.725GHz- 5.857GHz ( License  Free)

10. Are tablets, and small computing devices operating on 5GHz Band permitted?

Answer: Yes, they are permitted. During the Type Approval process, a declaration of conformity to the guideline on 5GHz operating frequency is required for Access Points, Point-to-Point and Point-to-Multipoint Radios etc. Please note that 5.4GHz Band (5.47GHz-5.75GHz) is a licensed band

11. What is the current policy on submission of samples?

Answer: As of now, the Commission only accepts portable terminal devices which includes but not limited to Mobile phones, Tablet PCs, Laptops, Cameras with Communication modules etc. in the Type approval process. Samples of other devices can be requested from applicants if and when necessary.

12. How best to package an application?

Answer: We recommend that an applicant include a soft copy of all their submission containing ALL the ETSI based Test-Reports in the following areas:

    a. Health and Safety + SAR Test Report ( if applicable)
    b. Electromagnetic Compatibility (EMS and EMI)
    c. Effective Use of the Radio Spectrum

and DoC along with a **HARD COPY** of the Application Form and covering letter addressed to:

*The Executive Vice Chairman/CEO,*
*Nigerian Communications Commission,*
*Plot 423, Aguiyi Ironsi Street,*
*Maitama,*
*Abuja, Nigeria.*

Attention: Director, Technical Standards and Network Integrity

13. What is the policy on manuals?

Answer: A hard-copy manual as part of the packaging is always encouraged.

14. What is the current policy on Short Range Devices?

Answer: The Commission is working on a guideline on the use of Short-Range *Devices in Nigeria.*

15. Is use of In-country test laboratory mandatory?

Answer: No, use of In-Country Test laboratory is not mandatory. However, tests must be carried out in accredited laboratories.

16. Is Local Representative mandatory for the certificate?

Answer: Local representative is not mandatory.

17. **What Test-Reports are accepted by the NCC?**

Answer: the NCC Type Approval Regulation and Guideline hinge basically on the European Norms. However, few extract from other standards such as the American Code of the Federal Regulation (CFR) Title 47 Part 15 B and C- Just few items under the article. Also, IEEE.802.11 family of WLAN Standards and Specifications can also be considered.

18. **What is the life span of the certificate i.e. the validity?**

Answer: NCC type approval certificate does not have an expiry date.

19. **Is NCC Identifier labelling of Type Approved Devices Mandatory?**

Answer: Yes, it is mandatory. However, while enforcement is yet to commence, you are notified that this may change at a moment's notice.

20. **What is the cost of Type Approval (TA) Process?**

Answer: Upon review of the application and device specifications, the equipment is characterized into certain billing classes which ultimately determines the statutory type approval fee.

21. **Can pre-payments be made in advance for Type Approval Applications?**

Answer: No, invoice payment can only be made after the review and approval of an application for Type Approval.

22. **An application can be checked for completeness by having the following:**

- NCC Receipt of Payment of Application Form Fee
- Declaration of Conformity
- A declaration showing conformity to the "*Guidelines for Deployment of Broadband Services on the 5.2-5.9GHz Band*".
- Duly signed cover letter on company letter head
- CD Rom/USB flash containing the following:
  - ✓ Completed application form for type approval for connection of communications equipment (Form AP.03);
  - ✓ Test reports from accredited laboratories ;
  - ✓ A description of the intended use of the R&TTE;
  - ✓ A list of the ETSI specifications with which the RTTE is designed to comply;
  - ✓ Copy of the RTTE user guide in English language;
  - ✓ Photographs of the external and internal feature

23. Can we send application via email in order for you to start review immediately and ship softcopy CD via FedEx for your reference

    Answer: Type Approval application through email is not accepted. Our policy for now is to only review applications that comes through the office of Executive Vice Chairman.

24. Does NCC return Equipment samples after Type Approval application has been reviewed?

    Answer: No, NCC does not return equipment samples.

## B. FREQUENTLY ASKED QUESTIONS ON NATIONAL NUMBERING PLAN

1. How do I apply for allocation of National Numbering Plan?

   Download copy of the Short Code Application form from the Commission's website under Technical Standards webpage. Submit the duly completed application form attaching the requested supporting documents along with a covering letter addressed to the Executive Vice Chairman, Nigerian Communications Commission at the NCC Head office in Abuja or any of its Zonal offices.

2. How much do numbers cost?

   Numbers cost Fifty Naira (₦50.00) per subscriber line plus the appropriate Access Code fee depending on the quantity of numbers applied for. A 5% Admin fee of the total sum is applicable.

3. How long is a numbering assignment valid?

   Numbering assignments are valid for one year.

4. Are assigned numbers renewable annually?

   Yes, numbers are renewable annually and annual renewal fee applies.

5. How long does it take to process a numbering application?

   The Commission Process applications as soon as it is received but sometimes it may deem it necessary to invite a company for meeting/presentation to

provide clarification on some issues pertaining to the applicant's submissions or it might request additional information in writing from the applicant which may impact the processing time.

6. How much does it cost to renew numbers?

Presently the Commission uses the economy of scale principle to compute numbering renewal fees as shown in the table below.

| Price Band | No of Subscriber Lines | Fee Per Annum |
|---|---|---|
| A | First - 1 - 5,000,000 million | N20 per number |
| B | Next – 5 million – 10 million | N15 per number |
| C | Next – 10 million – 30 million | N10 per number |
| D | Next – 30 million and above | N5 per number |

The renewal fee payable is calculated as the sum total of the total subscriber line times the fee per line plus the applicable access code fee and 5% Admin fee.

## C. FREQUENTLY ASKED QUESTIONS ON SHORT CODE ADMINISTRATION

1. How can I apply for Short Code or USSD Code?

Download copy of the Short Code Application form from the Commission's website under Technical Standards webpage. Submit the duly completed application form attaching the requested supporting documents along with a covering letter addressed to the Executive Vice Chairman, Nigerian Communications Commission at the NCC Head office in Abuja or any of its Zonal offices.

2. The following documents are to be submitted along with this Application Form.

1. Photocopy of the applicant's Value Added Service (VAS) license/Offer Letter with evidence of payment (NCC issued receipt) of the license fees. In the case of CBN licensed Mobile Money Operators, attach evidence of grant of license by CBN.

2. Comprehensive list of all Telecommunication Equipment associated with the service (Name, Make, Model, Manufacturer, etc.) including evidence of Type Approval obtained from the Commission.

3. Network Architecture (showing how you intend to Connect with the Network Operators).

4. Utilization plan of previously allocated short code range if any (Any service provider applying for short code range expansion must supply this information)

5. Evidence of payment of **N 1,000** for Application form and **N 10,000** processing fee payable in Bank Draft in favor of the Nigerian Communications Commission

Any other Additional Documents (MOU, etc.)

3.  How can I obtain a Value Added Service License?

    The NCC website provides guidance on how to obtain license for different categories licensees including for the provision of VAS services. Applicants are therefore advised to visit the Licensing web page of the Commission's website.

4.  How long does it take to obtain a Short Code?

    The Commission Process applications as soon as it is received but sometimes it may deem it necessary to invite a company for meeting/presentation to provide clarification on some issues pertaining to the applicant's submissions or it might request additional information in writing from the applicant which may impact the processing time.

5.  Are the operators obliged to connect a company when issued a short code?

    Yes, Operators are under obligation to connect Licensees of the Commission and VAS Operators allocated short code by the Commission. However, VAS Operators are required to have MOU duly signed with operators has a condition for grant of VAS license.

6.  How much does short code cost?

For now Short Code/USSD are allocated free of charge to applicants on duly completion and submission of the application form and who meets the eligibility criteria. However, the application form is One Thousand Naira (₦1, 000.00) and the processing fee is Ten Thousand Naira (₦10, 000.00). All payments should be made through the Federal Government remita platform ([www.remita.net](www.remita.net)) and receipts obtained from the Commission's Finance Cash Office.

7. What is the validity period of short code assignment?

   All short codes/USSD have a validity period of one (1) year effective from the date of assignment and renewable on expiration.

8. Can I obtain a short code without Value Added Service (VAS) License?

   Value Added Service (VAS) License is a prerequisite for short code(s) allocation. However, Mobile Money Operators duly licensed by the CBN are exempted due to the MOU that exist between the Commission and CBN to encourage the growth of mobile money in the country.

9. Is there any guideline that guides the use of short code?

   Yes, "**THE GUIDELINES ON SHORT CODE OPERATION IN NIGERIA**" can be downloaded from the NCC website [www.ncc.gov.ng](www.ncc.gov.ng)  under Regulatory Functions and Guidelines web page.


D. FREQUENT ASKED QUESTIONS (FAQ)'S ON TELECOMMUNICATIONS QUALITY OF SERVICE PROVISION

1. **What are the guiding documents on Quality of Service?**
   d. QoS Regulation 2012. This regulation can be accessed via the link below:
      [http://www.ncc.gov.ng/licensing-regulatory/legal/regulations](http://www.ncc.gov.ng/licensing-regulatory/legal/regulations)

   e. The Nigerian Communications Act 2003. The Act can be accessed via the link below:
      [http://www.ncc.gov.ng/documents/128-nigerian-communications-act-2003/file](http://www.ncc.gov.ng/documents/128-nigerian-communications-act-2003/file)

2. What is Quality of Service

Answer: Quality of service (QoS) is the collective effect of service performance which determines the degree of satisfaction of a user of the service indicating the performance of a network and of the degree to which the network conforms to the stipulated norms.

3. Why are QoS standards important?

**Answer:** The QoS standards ensure that consumers continue to have access to high quality telecommunications service by setting basic minimum quality levels for all operators. These standards define the lower and upper bounds of acceptability of such issues as Call Setup Success Rate, Call Drop Rate, Handover Success Rate, call completion rates, etc. and commercial consumer issues such as access to customer care centres, billing integrity and other characteristics that can be measured and improved.

4. Why does QoS matters?

**Answer:** Quality of service is a major factor in ensuring optimum consumer/provider relations because by demanding a certain 'quality of service 'the consumer is empowered to:

- ✓ Select the service provider that best satisfies their specific needs
- ✓ Obtain optimum value for money
- ✓ Judge the level of service with which they are provided
- ✓ Evaluate service level Agreements correctly
- ✓ Make informed decisions.

5. What levels of service should the consumer expect?

The consumer is entitled to expect the following levels of service or quality of service provision:
- ✓ Value for money
- ✓ Ease of use of the service or product
- ✓ Professionalism, on the part of the service provider, in the provision of the service.
- ✓ Flexibility in the use of the service on the part of the consumer for instance, the ease with which the consumer is able to switch from one operator to another, from one resource to another, etc.
- ✓ The product or service should perform according to expectations and as specified.
- ✓ The consumers are well informed and make an informed choice

6. **What are the QoS metrics being used by NCC to assess the performance of operators?**

   **Answer:** NCC currently uses 13 QoS metrics and are clearly defined in the NCC website. The technical parameters for 2G are enumerated below:

   i. **Call Setup Success Rate** (Number of the unblocked call attempts divided by the total number of call attempts. Or (1 - Blocking Probability) x 100%.

   ii. **Drop Call Rate** (The Dropped Call Rate (sometimes called Call Drop Rate) is the number of dropped calls divided by the total number of call attempts.
   Or (1 - Call Completion Ratio) x 100%)

   iii. **Traffic Channel Congestion Rate** (This is the percentage congestion of the TCH measured at the busy hour)

   iv. **Stand-Alone Dedicated Channel Congestion** (Dropped SDCCH Connections of the Total Number of SDCCH Connections without TCH Congestion)

   v. **Handover Success Rate** (This is the ratio of the number of successfully completed handovers to the total number of initiated handovers. This ratio can be expressed as a percentage)

   vi. **Call Completion Rate** (The ratio of successfully completed calls to the total number of attempted calls (ITU-T E600/2.13). That is, the ratio of the number of completed call attempts to the total number of call attempts, at a given point of a network)

   vii. **Route Congestion** (This is the percentage congestion of the Circuits measured at busy hour).

   viii. **Route Availability** (Amount of time the routes were in/out of service during a given period excluding planned outage

   ix. **Cell Availability** (Amount of time cells were in/out of service during a given period excluding planned outage)

   x. **Call Setup Time** (Time interval between the end of dialing by the user and the reception by him of the appropriate ring back tone or recorded announcement, or the abandonment of the call without a tone.

   xi. **Mean Opinion Score** (is the speech quality perceived by Caller or Called party in accordance with ITU-T P.862.

   xii. **Answer Seizure Ratio (ASR)** (is the ratio of the number of successful calls over the total number of outgoing calls from a carrier's network (i.e. On a route or a Destination Point Code (DPC) basis, and during a specified time interval, the ratio of the number of seizures that result in an answer signal to the total number of seizures: ITU-T E600/2.14).

xiii. **Post Dialing Delay (**In GSM network, is the average time between pressing send button (after pressing correct digits) and getting a ring back tone. This is also called "Call Setup Time" or time to connect a call)

The technical parameters for 3G are enumerated below:
  i. Call Setup Success Rate (PS)
  ii. Call Setup Success Rate (CS)
  iii. RRC connection establishment success rate (PS)
  iv. RRC connection establishment success rate (CS)
  v. RAB Establishment Success Rate
  vi. HSUPA Setup Success Ratio [%] for Streaming(**S**), Interactive(**I**) and Background(**B**) Services
  vii. HSDPA Setup Success Ratio [%] for Streaming(**S**), Interactive(**I**) and Background(**B**)
  viii. Iub Congestion
  ix. RRC Congestion
  x. Circuit Switched RAB Congestion
  xi. Paging Success Rate
  xii. CS RAB Abnormal Release Rate
  xiii. PS RAB Abnormal Release Rate
  xiv. Soft Handover Success Rate
  xv. Inter RAT Handover Success Rate for CS Domain
  xvi. Cell Availability (or Node-B Accumulated downtime (not available for service)
  xvii. Average Downlink Throughput per User
  xviii. CS Call setup time (CST) for on-net calls

7. **How Do NCC measure the performance of operators**
   Answer:
   1. Monthly visitation to operators Network Operating Centers (NOC) to collect raw data of the Key performance Indicators for the purpose of analysis.
   2. Drive test in some major cities.
   3. Automatic collation of QoS data from operators systems and automatic Subscriber perceived QoS measurements.

8. **Why is it that some subscribers experience unacceptable QoS in some locations in a month, but the QoS performance result published on the NCC website shows that the operators met their QoS KPI targets for the month?**
   Answer:
   The QoS KPI performance report is reported as an average at the national and state levels respectively. Hence an area may be having a challenge

with QoS but when the QoS performance in the area is averaged with other areas in the state or at the national level, the averaged result is usually better than unacceptable QoS experienced in any one of the component locations. However, NCC engages operators to ensure the QoS performance challenges in any of the identified locations are resolved.

9. What are In-Building Solutions (IBS)
Answer:
IBS are a system of distributed antennas and base station equipment meant to provide telecommunications coverage in enclosed locations like high rise buildings, large buildings, hotels, shopping malls, offices etc. IBS are needed in these buildings as the telecommunications signal from external sites deployed by operators are absorbed by the building walls and fading degradation of the signal with increasing distance from the telecommunications site.

10. Why is it that sometimes when calls are made to people whose lines are switched on, a message saying the subscriber is unavailable is received?
Answer:
This is due to any or a combination of the following reasons:
i.      The subscriber is in an area with minimal network coverage due to:
   a. The called subscriber being in an location with little or no network coverage like high rise or large buildings or shopping malls without In-building solutions
   b. The called subscriber may be on the highway with no network coverage
   c. The called subscriber may be at the outskirt of town with no network coverage
   d. The shutdown of the operator site serving the area by a landlord, site shutdown due to theft of operator site generator, theft of batteries, theft of diesel, security issues in accessing the site, or community issues preventing an operator from servicing the impacted site, or site shutdown by agencies of government, etc.
   e. Cut in the fibre optic cable that conveys all the calls made in a group of sites across the country due to construction activities, vandalisation, etc.
ii.     The subscriber handset may be of sub-standard
iii.    Planning and optimization errors from operators

11. Why does a subscriber experience dropped calls?
Answer:

Dropped calls are experienced due to gaps in coverage that may have been due to all the reasons stated in item 10 above in addition to the following amongst others:

i.      Inability of operator to deploy required new sites due to difficulties in acquiring new site locations to deploy their equipment
ii.     Sub-optimal definition of neighboring cells by operators
iii.    Inability of operator to cover the site operational expenses for a site to be deployed in the location
iv.     Inadequate network capacity

Compiled by:

Technical Standards and Network Integrity Department

Nigerian Communications Commission (NCC)

# INTERNAL MEMO

| To: | DTS |
| --- | --- |
| Through: | HWN |
| From: | PMTS - Wireless Networks |
| Subject: | **Re: Collation of Frequently Asked Question- Request from Consumer Affairs Bureau** |
| Date: | Tuesday, April 21, 2017 |

The above subject matter refers.

Please find attached the collation of all the Frequently Asked Questions (FAQs) from the three Units of Wireless Networks (WN), Fixed Network and Converged Services (FNCS) and Quality of Service/ Interconnectivity and Network Monitoring (QoS/INM) Unit s of the TSNI Department.

This is for your information and necessary action please.

Thank you sir.

**Engr. Dr. K. Danbata**