
**Operational Rules and Regulations for the
Nigeria Central Switch (NCS)**

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1.0 Terms & Definitions

ACQUIRER	Financial Institution or any other person authorized by the Central Bank of Nigeria; that enables merchants or retailers to accept payment cards as a means of payment for goods and services and is responsible for merchant settlement or enables cardholders to withdraw cash at acceptance devices including but not limited to ATMs and PoS terminals.
ACQUIRER PROCESSOR	Financial Institution or any other person authorized by the Central Bank of Nigeria, and licensed by a Card or Payment scheme to provide the services of and enabling data traffic between the network or Switch of the Card or Payment Scheme and an acquiring device including but not limited to ATM, PoS Terminal – Internet or Hardware, etc.
ADVERSE EFFECT ON COMPETITION	Activities limiting and affecting: the growth in the industry; the choice of users/cardholders; the choice of financial institutions; the growth of the payments system; monetary policy implementation; free competition such as restricting new entry to the system and innovations in the industry
ATMs	Automated Teller Machines
CARD SCHEME	An entity, company, association or consortium that owns a trademark, sign, name, logo or other signage which is displayed on payment cards or tokens and at/on merchant locations, Points of Sale, Automatic Teller Machines (ATM) or any acceptance device or location indicating usage or acceptance of cards bearing the trademark, sign, name, logo, or other signage.
CBN	Central Bank of Nigeria
DOMINANT POSITION	A position of strength, enjoyed by a switching company, in the relevant market, in Nigeria, which enables it to: <ul style="list-style-type: none"><input type="checkbox"/> Operate independently of competitive forces prevailing in the market in its favour<input type="checkbox"/> Affect its competitors or consumers or the relevant market in its favour<input type="checkbox"/> Control more than 35% of such other percentage of the volume and value of transactions switched in Nigeria as may be determined from time to time
EFT	Electronic Funds Transfer
EXCLUSIVE SWITCHING	Any agreement restricting the user in the course of business from acquiring or otherwise dealing in any services other

SERVICE AGREEMENT	than those of the provider or any other provider
FEP	Front End Processors are connecting switches' software deployed to enable connection to the NCS
HSM	Hardware Security Module
ISO	International Standards Organization
ISSUER	Financial Institution or any other person authorized by the Central Bank of Nigeria to issue plastic cards to customers
ISSUER – PROCESSOR	Financial Institution or any other person authorized by the Central Bank of Nigeria; and licensed by a Card or Payment scheme to provide the services of and enabling data traffic between the network or Switch of the Card or Payment Scheme and the Issuing Institution or Issuer.
MERCHANT	Party accepting the card and presenting transaction data to an acquirer
NCS	Nigeria Central Switch
NOT-ON-US	Transactions acquired by a financial institution on behalf of another and to whom the transaction is referred for authorization.
OFF-LINE	This describes a state when the authorizing institution's network is unavailable to accept, authorize and process EFT transactions
ON-LINE	This describes the availability of authorizing institution's network to accept, authorize and process EFT transactions
PAYMENT TOKENS	Any authorized payment instrument (physical or electronic) used to initiate a transaction e.g. Payment Cards, Mobile, etc
PIN	Personal Identification Number
POS	Point of Sale
PREDATORY FEE	The provision of services at a fee which is below the cost, as may be determined by regulations, or provision of services, with a view to reduce competition or eliminate the competitors
REFUSAL TO DEAL	Any agreement which restricts, or is likely to restrict by any method the user/provider or classes of users/providers to whom services are rendered or from whom services are procured

TCP/IP	Transmission Control Protocol/Internet Protocol
THE BANKERS COMMITTEE	A Committee of all Chief Executives of Banks and Discount Houses under the Chairmanship of the Governor of Central Bank of Nigeria.
TIES-IN ARRANGEMENT	Any agreement requiring a user of switching service to use some other service(s) of the provider as a condition to using the switching service
UNCITRAL	United Nations Commission on International Trade Law

2.0 Background

Nigeria Inter-Bank Settlement System (NIBSS) Plc was incorporated in April 1993 on the mandate of The Bankers Committee, *to facilitate transfer of funds between the banks and discount houses*. NIBSS is owned by all Licensed Banks (in equal proportion) and Discount Houses in Nigeria, including the Central Bank of Nigeria (CBN). It commenced operation in June 1994. The operations of NIBSS takes the form of banks transmitting financial transaction data on-line and retrieving reports and statements of accounts on-line via secure technology networks.

Highlight of the mandate of NIBSS as entrenched in her memorandum and article of association is to:

- Carry on business as a service oriented institution that provide the mechanism for same day clearing and settlement of inter-bank transfers and payments
- Provide the infrastructure for the automated processing and settlement of transactions between banks
- Provide framework for elevating the level of efficiency in funds transfer services generally
- Initiate and develop an integrated nationwide network for the electronic or paperless funds transfer and settlement of transactions.

The mandate to develop and operate a national switch for Nigeria was formally issued by The Bankers Committee to NIBSS Plc in May 2006.

2.1 The Objectives of the Nigeria Central Switch (NCS)

The Nigeria Central Switch is designed to:

- Provide interconnectivity and interoperability amongst approved EFT switch initiatives in Nigeria;
- Specify the Nigeria EFT interface standards
- Provide vital retail payment statistics for tactical & strategic planning purposes;
- Provide a mechanism for proactive detection of card frauds;
- Provide a central switch which integrates modules for accessing external content, transaction service networks, internal billing applications and related packages;
- Provide seamless integration of the Nigeria retail payment system with the West African Monetary Zone retail payment plan and beyond.
- Deploy a central switch network which complies with all relevant international standards

Operationally, the NCS:

- Provides a single point of access.
- Enables sharing of common technology infrastructure
- Enables new entrants to effectively build only one interface to the system.
- Conforms to International Switch and Messaging standards ISO 8583.

3.0 Scope

This document (Operational Rules and Regulations for the Nigeria Central Switch) specifies the rules and general guidelines for the operation of the NCS. Its provisions shall be binding on all partner institutions.

4.0 Partner Institutions

4.1 Switching Companies

These are electronic funds transfer and transaction switching and processing service providers that operates within Nigeria. It also includes future service providers. The switching companies facilitate the exchange of value between financial service providers, merchants, their customers and other stakeholders.

4.2 Deposit Money Banks

These are financial institutions operating in the country and are otherwise called issuers of payment tokens (cards, vouchers, etc), which are used on the network of switches. They may equally assume the title of Acquirers if they own Automated Teller Machines (ATMs), Point of Sale (POS) terminals, and / or other payment service channels.

4.3 Others

These are other financial institutions such as Independent Service Operators, payments processing institutions and solution providers.

5.0 Responsibilities

5.1 Partner Institutions

Each Partner Institution shall undertake to satisfy and ensure continued compliance with the eligibility criteria and conditions for admission as outlined in the operational rules and regulations of the Nigeria Central Switch (NCS) and should:

1. Implement the interface connectivity to the NCS
2. Ensure availability of secure connectivity to the NCS and duly notify of any service failure.
3. Maintain a record of all service failure times in a log report, which shall include date, time and period of service failure.
4. Ensure message format conform to the ISO 8583 standard.
5. Ensure that their banks pledge securities that provide 110% protection for their operations
6. Maintain and provide audit trails of transactions flowing through its systems and the NCS for a minimum period of seven years.
7. Adhere to confidentiality and privacy rules.
8. Ensure that all its transaction acquiring channels (ATM, POS, Web, etc) accept payment tokens of all NCS partner switches, in compliance with the NCS minimum transaction set, subject to the user of the channel or device paying such fees as the owner of the acquiring channel or device will stipulate including but not limited to transaction fees pursuant to Rule 8.3.
9. Shall provide transaction logs and traces when requested, to aid resolution of disputes arising from financial transactions.
10. Shall provide a transaction log promptly to any requesting partner institution concerning any NCS-routed transaction, to aid resolution of card transaction complaints and disputes.

5.2 The Nigeria Central Switch (NCS)

The NCS shall after certification of the partner Institutions ensure:

1. A secure connectivity to the central switch based on the specifications in the NCS Secure Interconnectivity Requirements document (September, 2007).
2. Routing and switching of transactions amongst Partner Institutions.
3. Switching of transactions between all transacting parties
4. Maintenance and distribution of statistics relating to availability and service performance of the NCS and Partner Institutions.
5. The enforcement of all agreements reached with the participant institutions and communications providers.
6. To apply the appropriate fees and charges to all transactions passing through the NCS

7. Generation and secure distribution of reports as illustrated in the Service Level.
8. The maintenance of transaction integrity and security for all transactions passing through the NCS.
9. Notification of Partner Institutions on status of Settlement Transactions.
10. Notify all existing partner and institutions of the joining of a new partner institution to enable them configure their systems to accept payment tokens of the new institution

6.0 Technical Requirements

6.1 Interface Specification

The interface specifications will be provided to all Parties to Switching Services as part of the NCS Interconnectivity requirements.

All interface specifications will conform to the international ISO8583; 1993 standards.

All NCS Partner Institutions will have to develop both Issuer and Acquirer Interfaces that comply with the NCS Interface Specification as described in the following documents:

A	BASE24-es_ISO_8583_1993_Host_External_Message_Manual.pdf	Dec 2006
B	BASE24_es_ISO_8583_1993_Host_Ext_Msg_Manual_Future_Up_date_Feb-2007.pdf	Feb 2007

6.2 Communication and Message Protocol

The NCS ISO 8583; 1993 Host External Message is based on the standard external message developed by the International Standards Organization (ISO). It is a variable-length and variable-content message that can be configured differently, based on the type of message being sent.

The NCS ISO Host Interface component creates and interprets external messages according to the specifications in the NCS Interface specification document.

The NCS ISO 8583; 1993 host external message allows incoming and outgoing messages to be configured individually by a host, depending on the information the host chooses to send and receive.

1. The message format will be ISO 8583. Details are provided in the NCS Interface Specification document.
2. All Partner Institutions would maintain secure dedicated Virtual Private Network TCP/IP data communication to the NCS.
3. The communication protocol will be TCP/IP.
4. The Hardware Security Module (HSM) Connectivity - TCP/IP

6.3 Connection to NCS by Institutions

The Nigerian Central Switch project requires a secure connectivity to all existing Switches in Nigeria and future new entrants. A secure interconnectivity has to be established with the NCS, as specified in the NCS Secure Interconnectivity Requirements (Sept. 2007).

6.4 Security

Parties to Switching Services involved in card-operated devices, must be capable of providing secure hardware encryption/decryption of customer PINs and messages for onward transmission to the NCS network.

PIN numbers will be 4 digits.

PINs and messages of transactions must be hardware encrypted using keys provided by NIBSS.

7.0 Nigeria Central Switch (NCS) Operations

7.1 The NCS Minimum Transactions Standard

The following minimum transaction set must be supported by all switches in order to achieve interoperability:

7.1.1 POS Transaction Types

- Purchase
- Purchase Reversal

7.1.2 ATM Transaction Types

- Withdrawal
- Balance Enquiry

Reversal Transaction will be available for each

7.1.3 Transactions from Other Devices/Channels

Because the source of all transactions will be the Custom NCS Interface, the NCS will process all transactions which are presented in a format recognized by that interface, regardless of which type of device or channel was used to initiate the transaction at the acquiring switch.

This will allow the system to process transactions from, for example, the internet, mobile phones, and IVR (interactive voice response) systems.

7.2 Modus Operandi

Transactions that route to or through the NCS for authorization do so in a series of transaction messages.

Transaction processing through the NCS includes the following components, depending on the source of the transaction and the routing configuration:

- Message Delivery (foundation)

- Acquirer Interface or Channel Manager (business)
- Prefix (business)
- Router (business)
- Issuer Authorization and/or Issuer Interface (business)
- Journal (business)

There are many different components involved in any one transaction. Those listed above provide a basic list of components for the NCS payment engine processing.

7.3 Off-line Services

The NCS will not provide off line authentication or authorization of transactions. All authorizations shall come from the issuer.

7.4 Reports

The following reports are to be generated and circulated via secured online mode.

S/N	Description
1	Daily Activity Report By Source Switch; By Bank
2	Daily Activity Report By Destination Switch; By Bank
3	Interchange Fees By Switch; By Bank
4	Net Settlement Report By Switch; By Bank
5	Detailed transaction report
6	Audit trail / History report
7	Transaction volume and value by terminal type and location

8.0 Fees and Charges

The NCS shall be kept operational at all times and as a result; all participants in the network shall bear the joint responsibility of supporting its operations. NIBSS considers the opportunity of participants to share ATM/POS networks that do not belong to them and thereby reducing investments in building infrastructures as a huge cost saving benefit.

The associated cost for the discharge of the functions of the NCS is as follows:

8.1 Joining Fees

All parties to the Switching Services joining the NCS will be required to pay a one off fee. It is expected that these joining fees will cater for the efforts in infrastructure installation and systems delivery as well as contributory license for the development of payment system in Nigeria.

8.2 Transaction Charges

The Transaction Charges are of two types;

1. Switching Charge – NIBSS will charge for every financial transaction that hits the NCS; as shown in the table below.

Device	Payer	Recovery Of Fee
ATM	Issuer	NCS to recover fee from Issuer, through NIBSS, monthly.
POS	Acquirer OR Acquirer network processor	NCS to compute fee monthly and recover such fee on 15 th of following month from bank account nominated by paying acquirer processor, who would have recovered the fee upfront from acquirer.

2. Settlement Charge – NIBSS will charge for every settlement transaction which normally is received on net basis.

Charges will be reviewed at regular interval by the Management of NIBSS and approved by the Board of Directors, to ensure continuous operations of The NCS for the benefit of all stakeholders.

8.3 Transaction Fees Payable To Device Owners

Fees payable to device owners shall be as agreed by individual card schemes. With respect to transactions at POS terminals, Acquirers/Users should agree with Device Owners, the amount payable to Device Owners while amount payable to ATM owners/acquirers shall be agreed between the Owners/Acquirers and the Users/Issuers.

ATM Acquirer/Device owners are required to display applicable Transaction Fees clearly on their devices, and obtain cardholder's consent during transaction processing.

9.0 Service Level

The four basic design goals that govern the development of the NCS are:

- Availability
- Data Integrity
- Performance and Scalability
- Open Interfaces

It is therefore expected that all other connecting Partner Institutions must have similar architecture, as transactions are mission critical and pivotal to EFT processing.

As a result, the following draft service levels are expected as a minimum requirement.

The NCS would be available for transactions 24 hours and 7 days a week.

The NCS system's performance will be measured in terms of:

- a) Up-Time
- b) Response Time

The performance of the Partner Institutions systems will be measured by:

- a) Success Rates – successful transactions as a percentage of all transactions switched to Partner Institutions for authorization.
- b) Response Times

The NCS would maintain an uptime of at least 99% during any 24 hour period, to all Partner Institutions.

Partner Institutions connected to the NCS as Issuers must achieve transaction success rates of at least 97% any 24-hour period.

For all transaction requests routed to authorizing institutions a timeout period will be set after which the institution node will be deemed to be down and the transaction will be classified as a failed transaction and declined. This period will be agreed with the authorizing institution but will be no longer than 90 seconds.

The NCS will be responsible for maintaining and distributing all statistics relevant to the above.

All NCS Partner Institutions will conform to these and other performance standards, which may be agreed from time to time.

All NCS Partner Institutions will maintain and provide audit trails for all transactions which pass between their systems and the NCS for a minimum of 7 years.

The timeout parameters on every terminal that allows access to the NCS must be no less than 40 seconds and not more than 90 seconds.

10.0 Settlement

10.1 Business Day

A Business Day for the NCS will be a 24-hour period. A typical business day will start from 12.00.00am to 11.59.59 pm.

10.2 Transaction Settlement Procedure

1. Settlement among the NCS Partner Institutions will be processed through the NIBSS Inter Bank Engine.
2. The NCS end-of-day processing cycle will commence 12.00am, at the close of each Business Day.
3. A Settlement report file consisting of the net position of each Partner Institution will be generated.
4. The Settlement report file will be sent to Partner Institutions in a secure electronic format.
5. Postings to the CBN accounts will take place once a day at the close of business.

10.2.1 Settlement during Weekends/Non Working Days

1. Transaction settlement will be done every day except on weekends and/or public holidays or non working days. However, Settlement Report Files will be generated every day including weekends and on non working days
2. Settlement Report Files generated for each non working day will be processed on the next working day.
3. NIBSS will send settlement confirmation reports to Partner Institutions, confirming the settlement (or non settlement) of daily transactions

10.3 Settlement of Transactions

10.3.1 Settlement Risk Mitigation

- Settlement risk shall be mitigated by the Proactive Risk Management (PRM) functionality of the NCS.
- The switches shall ensure that member banks in their scheme pledge securities that provide for 110% protection for their operations.
- Partner Institutions may be required to increase their value of securities pledged as and when required as approved by the CBN from time to time.
- The NCS shall settle all transactions that pass through into bank accounts.

10.4 Notifications on Settlement

- NIBSS will notify Partner Institutions of the success or failure of each settlement transaction.

11.0 Governing Law

This agreement shall be governed and construed in accordance with the laws of the Federal Republic of Nigeria and be subject to the jurisdiction of the Nigerian Courts.

All disputes shall be settled under the law of the Federal Republic of Nigeria.

12.0 Penalties And Dispute Resolution

12.1 Penalties

Failure to comply with the provisions of these guidelines shall be referred to the CBN for the appropriate regulatory sanctions.

12.2 Dispute Resolution

Should any dispute arise from the operation and performance of the NCS, it shall be settled first by a meeting of at least one senior executive officer of each Party. If upon exercise of due diligence, the latter does not resolve a dispute within 15 days of the notifying Party's calling of the meeting, either Party may refer the matter to binding arbitration. Parties shall agree to abide by the decision of the arbitration panel. Dispute resolution shall be conducted under the rules of UNCITRAL, in Nigeria unless the Parties mutually agree upon another jurisdiction. A panel of three (3) arbitrators shall conduct the dispute resolution; one each appointed by each Party and the third appointed by the other two. The arbitrators appointed shall be English speaking and the arbitral proceedings shall be conducted in English. The arbitrators' award shall be binding on the Parties, without recourse to court. The Parties to a dispute shall evenly bear the cost of the arbitration except for their own respective individual costs, which they shall bear individually.

13.0 Confidentiality Rule and Prohibitions

The rule governing the NCS is such that each of the Parties and their Advisors will disclose and provide to each other such Confidential Information as the Disclosing Party deems necessary for the relevant business purpose under the NCS.

13.0.1 "Confidential Information" shall for the purposes of these Rules mean any and all information that a Party discloses to the other in connection with the relevant business purpose, which includes, but is not limited to the following:

Any customer information, technical, commercial, financial, marketing or business information and know-how, including without limitation, all correspondence, notes, computer disks and tapes, documents, records, data, services, financial information, marketing brochures or other information in whatever form relating to the parties, their operating documents, standard forms which information has been communicated to the other, or otherwise acquired by the other during the course of these services, whether such information is formally designated as confidential or not.

13.0.2 The Receiving Party will not disclose Confidential Information to any person, firm, corporation, association or any other entity for any reason or purpose whatsoever, provided however, that the Receiving Party may disclose the Confidential Information on a need-to-know basis to its internal management who are directly involved in the development and operation of the NCS, legal and financial advisors retained specifically to provide advisory services and provided that the Receiving Party ensures that such persons are bound by an equivalent duty of confidentiality.

13.0.3 The Disclosing Party may give notice in writing at any time requiring that any part of the Confidential Information disclosed be either returned or destroyed, such return or

destruction to be combined with a notice to the Disclosing Party to the effect that upon such return or destruction the Receiving Party has not knowingly retained in its possession or under its control, either directly or indirectly, any Confidential Information or copies thereof. In any case, the Receiving Party must comply with any such request within thirty (30) days of receipt of such request.

13.0.4 All parties to Switching Services shall ensure that all notifications and information that its employees have obtained in the course of discharging their responsibilities are treated as confidential.

13.1 Prohibition of Anti-competition Agreements

No parties to Switching Services in Nigeria shall enter into any agreement in respect of any switching service that shall cause or is likely to cause adverse effect on competition. Any agreement entered into in contravention of this provision shall be null and void and of no effect.

13.1.1 Any agreement entered into between parties to Switching Services or decision taken by any association of switching companies or association of persons, including cartels engaged in identical or similar provision of switching services, which:

- a. Limits or controls markets, technical development, investment or provision of Switching Services
- b. Shares the market or provision of services by way of allocation of geographical area of market, or number of customers in the market or any other similar way; shall be considered an anti-competition agreement.

13.1.2 Any agreement amongst parties to Switching Services, in respect of switching services, including:

- a. Tie-In Agreement;
- b. Exclusive Service Agreement
- c. refusal to deal;

shall be considered an agreement in contravention of anti-competition agreement if such agreement causes or is likely to cause adverse effect on competition in Nigeria.

13.2 Prohibition of Abuse of Dominant Position

- 13.2.1 No parties to Switching Services shall abuse its dominant position by directly or indirectly imposing unfair or discriminatory condition and fees in the provision of its services.
- 13.2.2 Equally, no parties to Switching Services shall limit or restrict the provision of switching services or market thereof or technical or scientific development relating to switching services to the prejudice of consumers.
- 13.2.3 No parties shall indulge in practice or practices resulting in denial of market access.

13.3 Prohibition of Competition by NIBSS/NCS

Nigeria Inter-Bank Settlement System Plc (NIBSS), the Nigeria Central Switch (NCS) and any company, person or group of persons performing the roles, duties or functions of the Nigeria Central Switch SHALL NOT under any circumstance whatsoever or howsoever engage in competition with any Payment Card Industry Scheme, Operator or Service Provider. Accordingly, Nigeria Inter-Bank Settlement System Plc (NIBSS), the Nigeria Central Switch (NCS) and any company, person or group of persons performing the roles, duties or functions of the Nigeria Central Switch shall not:

- 13.3.1 Be or engage in any business as:
 - a. A Card Scheme
 - b. Issuer of Payment Cards
 - c. Issuer-Processor
 - d. Acquirer
 - e. Acquirer-Processor
- 13.3.2 Support or promote any Card scheme
- 13.3.3 Own, deploy, maintain or install acceptance and acquiring devices such as Point of Sale terminals and Automatic teller Machine.

14.0 Amendments

Any NCS stakeholder wishing to propose amendments to the NCS rules shall forward such proposals to the MD/CEO of NIBSS. The amendments shall be widely circulated among stakeholders and sufficient notice given to all before the effective date of the amendment, if approved.

Appendix A

Sign-off Page