



Harmonization and Implementation Committee

**National Identity Management System
Demographic Data Standards and
Verification Procedure**

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1 Introduction

There is currently no centralized national identity database and no system of National Identity Management which efficiently links public and private sector identity schemes in Nigeria. While the financial services sector has been most proactive in the deployment of identification schemes for delivery of its services, the schemes have differed from institution to institution within the sector. The result has been the creation of several different identification schemes and databases leading to the duplication of an individual's identity data by the various institutions offering services to that person. Government agencies also hold a number of databases with no viable integration of access or interoperability to enhance the delivery of services within these government institutions. This is despite the fact that some of these institutions have recently introduced smart card technology into their schemes. A reliable national system for verification and secure authentication of an individual's identity has thus not been established.

National Identity Management Commission (NIMC) Act, 2007 Act No. 23; An Act to provide for the establishment of a National Identity Database; has been setup by the government of Nigeria with a mandate to issue a Unique National Identification Number (NIN) to all Nigerians and long term residents in the country. NIMC proposes to create a platform to first collect the identity details and then perform authentication that can be used by several government and commercial service providers. A key requirement of NIMC's system is to eliminate duplicate identity.

NIMC has selected biometrics feature set as the primary method to check for duplicate identity. For government and commercial providers to authenticate the identity at the time of service delivery, it is necessary that the biometric information capture and transmission are standardized across all the partners and users of the NIMC's system.

As NIMC proposes to use common demographic data for establishing and verifying identity, it becomes essential to standardize these fields and the verification procedure across registrars and to aid interoperability across many systems that capture and work with resident identity.

Demographic data is used along with the biometric information to improve the de-duplication process. For example, when a duplicate is suspected, a manual review of all

available information of the person will also include a review of the demographic data.

2 Objective

A key requirement of the NIMC's system is to capture necessary demographic data in a standardized manner so that this identity information works across various systems.

1. In order to achieve interoperability of data across various government and private agencies that will use the NIN system, it is important that the capture and verification of basic demographic data for each resident is standardized across all partners of the NIN system.
2. Another important aspect of demographic data collection is to ensure the correctness of the data at the time of enrolment of residents into NIMC's system. While an elaborate verification system based on local enquiries and existing documents issued by various agencies can be used to verify the correctness of the data, these data sources lack integrity and it is likely to result in exclusion of poor and the marginalized who normally do not have any documents to prove their identity nor addresses. As NIMC's mandate is inclusion of all eligible Nigerian residents, the verification procedure has to be formulated in such a manner that while it does not compromise the integrity of the inputs, it also does not result in exclusion and harassment of the poor and fabrication of documents.
3. Nigeria does not have common standards to be used for various governance applications in areas of Personal Identification, Biometrics, and Location Codification Standards. There is therefore a need for NIMC to work out few standards on the respective categories to be uniformly applied for various governance standards.
4. As NIMC will use basic demographic data to establish identity and authentication, it became essential to review the applicability of the existing data and process standards for various Governance applications, modify them for NIMC specific requirements and frame the methodology for its implementation.

3 Committee Charter

- To Recommend the Demographic Data standards (The data fields and their formats/structure etc.) that will ensure interoperability and standardization of basic demographic data and their structure used by various agencies that use the NIN's system.

- To Recommend the Process of Verification of these demographic data in order to ensure that the data captured, at the time of enrolment of the Residents into the NIN system, is correct.

4 Target Audience

Any person or organization involved in designing, testing or implementing NIN system, NIN compatible systems, or NIN enrolment for the central government, state government, commercial organizations, or any users of the NIN system.

5 Know Your Residence (KYR) Demographic Data

5.1 Introduction

NIMC's mandate which defines its purpose is to help residents establish their identity. So, it is important that the KYR data is kept to a usable minimum so as to support goals of NIMC and avoid other profiling and transactional fields.

5.2 Names

Names in Nigeria can be from two words to sometimes even five or more words long depending on the region, religion, etc. A standardized structure for names needs to be created for common KYR and interoperability between various systems.

NIMC has adopted the use of the 3 Name structure with the middle, maiden and other names structure being optional.

<Surname name> <First name> <Middle name> [<Maiden name> <Other name>]

In addition, NIMC will make provision on the system to allow for first time registrars to provide for previous names used in the past. The additional fields will allow for good record keeping of previous names which may have been used vital and important documents.

5.3 Addresses

Similarly, we neither have a standardized address format nor have well defined geographic boundaries beyond villages. This creates issues when trying to map addresses in a standard way. Various forms issued by existing registrars vary greatly when it comes

to capturing addresses. NIMC proposes to standardize the address structure for residents and proposes the following;

5.3.1 Address Structure:

Address Field	Description	Data Type	Mandatory/Optional
Building	Door/House/flat/Bldg number and name	Varchar(60)	Mandatory
Street	Street number and name	Varchar(60)	Optional
Landmark	Major/Minor Landmark	Varchar(60)	Optional
District/Locality	Locality/Area/Suburb /Sector/Block	Varchar(60)	Optional
Post Code	Code number	Varchar(60)	Optional
Village/Town/City	Village/Town/City	Varchar(60)	Mandatory
LGA	LGA	Varchar(60)	Mandatory
State	State	Varchar(60)	Mandatory

5.3.2 Address Display:

The following addressing format shall be the application engine consisting the Urban and Rural segment, construct and element of addresses. The sub-committee recommended the adoption and support the new addressing format proposed by Nigeria Postal Services (NIPOST).

Building
Street No., Thoroughfare, Name, Type
District, Postcode
LGA
Town
State.

5.3.3 Sample for Urban Area Addressing

National Identity Management Commission	Building
No 11 Sokode Crescent Off Dalaba Crescent	Street No., Thoroughfare, Name, Type
Wuse Zone 5, 900254	District, Postcode
AMAC	LGA
Abuja	Town
F.C.T	State

5.3.4 Sample for Rural Area Addressing

Dr Udoh's Compound	Building
Market Road Opposite Qua Ibo Church, Ikot Ubo, 300173	Street No., Thoroughfare, Name, Type District, Postcode
Nsit Ubom	LGA
Ikot Ekpene	Town
Akwa Ibom.	State

6 National Identity Number (NIN) Format

The sub-committee has adopted the proposed NIMC format for NIN. NIN number is a 11-digit number with no intelligence built into it – it is randomly generated number, with as few digits as possible to accommodate the identification needs of the population for the next 100-150 years. NIN number will be assigned only after biometric de-duplication process of the data supplied by the registrars.

The following factors were considered in order to arrive at a design of the NIN number.

1. The date-of-birth and other attribute information should not be embedded in the NIN number. Similarly, place of birth/residence using administrative boundaries (State/LGA/City) should not be embedded in the NIN number. When state/LGA etc are embedded in the NIN number, the number faces the risk of becoming invalid and misleading the authenticator when people move from place to place. It can also lead to profiling/targeting based on the region/state/LGA etc that a person is from.

The approach of storing intelligence in identification numbers was developed to make filing, manual search and book-keeping easier prior to the advent of computers. This is no longer necessary, since centralized database management systems can index the records for rapid search and access without having to section data by location or date of birth.

2. Packing Density is the ratio of valid NIN numbers issued to the total number of possible NIN numbers available given a certain number of digits. The lower the packing density is, the more likely it is that a random guess will not produce a valid

assigned NIN number. In general it is suggested that we keep the packing density to about 20%.

3. The NIMC's mandate intends to assign NIN numbers to all citizens and legal residents who are enrolled in the National Identity Database. NIN number will not be re-used and hence numbering scheme needs to accommodate necessary population growth over the years.

7 NIN for Children

All children will be assigned a NIN, when possible at the time of birth. It is very important for several service organizations such as education and health to be able to identify children uniquely in order to deliver services effectively. Children's fingerprints are not fully formed and hence cannot be used for de-duplication given current state of technology. Hence during enrolment, details of the parents are captured in order to link the child to established NINs so that either of the parents can be used to authenticate the child.

When the child's biometrics are well-formed (as per biometric committee recommendations), biometric capture will take place and the child will be de-duplicated to ensure the uniqueness of the child. Until the child is biometrically de-duplicated, their NINs will be flagged as "De-duplication not performed".

8 NIMS Data Dictionary

The National Identity Management System should have a data dictionary such that sufficient key data points can be collected to use in identify the individual. As important as biometrics is, it is equally important that bio-data fields are will defined to aid in such identification.

The standard defined below is a suggested minimum data fields to be collected. Data fields that are specific to a stakeholder entity may be added and shall remain resident to only that stakeholder.

Certain data points when collected must be one (1) of the only suggested values as specified below. An example shall be that of "Title" when only values of Mr., Mrs., Miss, and Master shall be accepted in conformance to international standards. Stakeholder entity may choose to add field for "designated titles" such as Chief, Dr., Amb., His Excellency, Oba, etc, however, such field shall remain resident only to that stakeholder database.

8.1 Data Fields Summary

Information	Fields	Mandatory/Optional	Updateable	Verifiable	Length & Data Type
Personal Details	Title	M Drop down box for Mr, Mrs, Master, or Miss	Yes	No	6 Alphabets
	Surname	M	Yes	No	16 Alphabets
	First name	M	Yes	No	16 Alphabets
	Middle name	O	Yes	No	16 Alphabets
	Maiden name	O	Yes	No	16 Alphabets
	Other names (to include previous names)	O	Yes	No	16 Alphabets
	Birth date	M	No A box of approximate age to be opened using past events, e.g. (war period). This was to aid those who may not know or remember their date of birth.	No	10 Numeric
	Birth date verify	M	No	No	
	Birth country	M	No	Yes Verifiable for only foreigners. Proof/support document would be birth certificate or passport.	16 Alphabets
	Place of birth village /city/town, LGA, state	M Conditional if you are not born in Nigeria.	No	No	2 Alphabets

	Gender	M	No	No	1 Alphabets
	Marital status	M Drop down box for married, single, divorced, widow or widower.	Yes	No	9 Alphabets

Information	Fields	Mandatory/Optional	Updateable	Verifiable	Length & Data Type
	Age	calculated	No	No	3 Numeric
	Height	O	Yes Wall ruler would be available at registration centers to capture the heights of individuals.	No	3 Numeric
	Residence status	M	Yes	Verifiable only For foreigners.	
	Religion	O	Yes	No	12 Alphabets
	Native spoken language	O	Yes	No	8 Alphabets
	Other spoken language	O	Yes	No	8 Alphabets
	Read write language	O	Yes	No	5 Alphabets
	Education level	O	Yes	No	To be suggested by NIMC
	Profession	O	Yes	No	16 Alphabets
	Employment status	O	Yes	No	12 Alphabets
	Disability	O	Yes	No	
	Physical Features	O	Yes	No	To be suggested by NIMC
	Place of origin village/city/ town, LGA, state	M	No	No	2 Alphabets
Address Details	Country of Residence	M	Yes	No	16 Alphabets
	Place of Residence (see Address structure)	M "Nomad" would be use for homeless persons (wanderers)	Yes	No	
	Postal code	O	Yes	No	6 Numeric
	Polling unit of Registratr - PU, ward, LGA and State of Registration	O	Yes	No	3 Alphabets
Contact Details	Email address	O	Yes	No	20 Alphanumeric

Information	Fields	Mandatory/Optional	Updateable	Verifiable	Length & Data Type
	Telephone no	O Maximum of (4) four numbers would be required	Yes	No	11 Numeric
Parent/ Guardian Details	Father's name	Conditional (Either father, mother or guardian is required for children)	No	No	16 Alphabets
	Father's NIN Number	Conditional (Father or Mother is required for children)	No	No	11 Numeric
	Mother's Name	Conditional (Either father, mother or guardian is required for children)	No	No	16 Alphabets
	Mother's NIN	Conditional (Father or Mother is required for children)	No	No	11 Numeric
	Next of Kin's Name	M	Yes	No	16 Alphabets
	Next of Kin's Address (see addr structure)	M	Yes	No	26 Alphabets
	Next of Kin's Relationship	Conditional Must be provided if NOK is entered	Yes	No	12 Alphabets

9 KYR Verification Procedure

9.1 Introduction

It is essential that key demographic data is verified properly if the data within NIMC system is to be used for authentication of identity by various systems.

There are 3 distinct methods of verification:

- Based on supporting documents
- Based on introducer system.
- Based on the verification with the issuing authorities.

All the above forms of verification are acceptable for NIMS enrolment.

However in order to verify the correctness of certain mandatory fields, such as name, date-of birth and address, there is a concept of 'Proof of Identity' (PoI) and "Proof of Address" (PoA). PoI requires a document containing the resident's name and photograph, whereas the PoA contains the name and address.

9.2 Broad Principles of Verification

One of the key goals of the NIMC system is to be inclusive and ensure every resident is able to establish their identity. There are certain key principles that verification procedure will follow to ensure inclusiveness without compromising data quality.

1. Ease of access
2. No harassment
3. No discrimination
4. No corruption
5. No exclusion

9.3 Verification Summary

Based on the above and the fact that most Nigerians do not have POI and POA, NIMC will enroll every individual based on the information they supply at time of enrolment. No proof is mandatory even where information is mandatory.

9.4 KYR Guidelines

Following are the main guidelines for KYR process.

9.4.1 Uniform process

A uniform procedure for KYR process & verification to be followed by each registrar that is easy to implement. Once a resident obtains a NIN from any one of the registrars in the NIMS ecosystem; all other registrars will honour the validity of the NIN fields obtained through the KYR process described in this document. This can eliminate cost involved in repeated KYR verification by several registrars.

9.4.2 Multiple options for supporting documents

Applicants will be given a choice of supporting documents that they can produce as PoI and PoA. See later sections for supported list of documents.

9.4.3 Lack of Supporting Documents

A process for enrolling residents who have no documented Pol and PoA must be defined.

9.4.4 Archiving Form & Supporting Documents

Clarity in how the forms and supporting documents are archived for later access (dispute resolution, error in data entry etc) should be defined and followed across all enrolling registrars. Detail guidelines regarding this will be issued by NIMC separately.

9.4.5 Accepting changes in demographic information

Some of the fields captured during NIN enrolment could change – such as Name and address. An update process will be supported in order to facilitate this. Upon following this process, the registrars will accept changes in demographic details.

10 Supporting Documentation

During enrolment, the quality of data has to be ensured primarily with supporting documents that the resident provides. Copies of documents provided will be verified against the original. Physical copies of the documentary evidence will be stored by the Registrar and available for audit by the designated audit agencies.

In the case of residents with no documentation, the resident will still be enrolled and NIN issued while information is marked to show no supporting document available.

10.1 Proof of Identity (Pol) Documents

Proof of Identity document **must contain name and photo** of the resident. Any of the following Pol documents are supported;

1. Passport
2. Voter ID Card
3. Driving License
4. Government Photo ID Cards
5. Photo ID issued by Recognized Educational Institution
6. Photo Bank ID Card

NOTE: If any of the above documents submitted do not contain the photograph of the resident, then it will not be accepted as a valid Pol. In order to be inclusive and free of

harassment, documents with older photographs are acceptable. And residents with no documents are also enrolled with a marker showing no supporting document provided.

10.2 Proof of Address (PoA) Documents

Proof of Address document **must contain name and address** of the resident. Any of the following PoA documents are supported:

1. Passport
2. Bank Statement/Passbook
3. Post Office Account Statement/Passbook
4. Voter ID
5. Driving License
6. Government Photo ID Cards
7. Electricity Bill (not older than 3 months)
8. Water Bill (not older than 3 months)
9. Telephone Landline Bill (not older than 3 months)
10. Property Tax Receipt (not older than 3 months)
11. Bank Account Statement (not older than 3 months)
12. Insurance Policy
13. Signed Letter having Photo issued by Recognized Educational Institution
14. LGA Authority (for rural areas)
15. Income Tax Assessment Order
16. Vehicle Registration Certificate
17. Registered Sale / Lease /Rent Agreement
18. Address Card having Photo issued by NIPOST

10.3 Proof of Date of Birth (DoB) Documents

Proof of DoB document **must contain name and DoB** of the resident. Any of the following documents are supported:

1. Birth Certificate
2. Passport
3. Court Affidavit or/and letter issued by an Authorized Government Officer.
4. Letter of Introduction from a chief or respected person of the community.

11 KYR Process

11.1 Verifying Name

Name must be verified against any one of the PoI documents listed in 5.5.1. A copy of PoI should be kept as part of enrolment and verification should be done against the original document only when feasible.

In the case of resident not having a valid PoI document, resident should sign a form stating that the information they have provided is true and correct and that they are aware it's an offence to provide false information.

11.2 Verification for Name Change

A resident may want to change his/her name due to various reasons. Name change should be verified against documents. Following are the reasons and verification method for supporting name changes.

11.2.1 Marriage

Women may want to change their name after marriage. In this case, a copy of the marriage certificate or any acceptable proof of marriage as approved by the registrar should be provided and should be verified against original documents.

11.2.2 Any Other

Residents may change their name for other reason such as self-wish, religion change, numerology, etc. In all these cases, they should provide a copy of legal name change certificate and it should be verified against the original document, in addition, it must meet any other legal requirement such as publication of name change in a national newspaper.

11.3 Verifying DoB

Date of Birth should be verified against any of the Proof of DoB documents listed above in 10.3. In the case of lack of documents, an approximate DoB may be taken and marked as so.

11.4 Verifying Address

The addresses will be verified against any one of the PoA documents listed.

In the case of resident not having a valid PoA document, resident should sign a form stating that the information they have provided is true and correct and that they are aware it's an offence to provide false information.

11.5 Verification for Address Change

Residents can update their address through any of the enrolling registrars. Process for address verification is same as described above.

11.6 Verifying Parents/Spouse/Guardian Information

In the case children, "Name" and "NIN" of one of the parents or guardian is mandatory. Parent/Guardian must bring their NIN letter when enrolling children (or they can be enrolled together) and should be verified.

In the case of an adult, no verification will be done for the information on parent or spouse. They are recorded for internal purposes only.

12 Making Corrections to Initial Data

In the case of mistakes such as spelling errors, address errors, etc., resident should be able to come back and request such corrections. Enrolling agencies should allow making those changes based process similar to initial KYR.

13 Verifying and making changes to other updateable Data

1. **Height:** Wall ruler would be available and positioned at registration centers to capture the heights of individuals.
2. **Residence status:** Provide some certification documents to show your status in Nigeria when it has been established that the individual is a foreigner.

3. **Native and other spoken languages:** No rules for updating this field. Individual can update this field without an proof required.
4. **Educational level:** Relevant documents will be provided to show the educational level. (e.g, HND, B.Sc or PhD).
5. **Profession:** It is recommended that NIMC ask for some kind of certification documents for change of profession.
6. **Physical features:** Previous photograph of the individual should be provided for sighting.
7. **Polling unit:** No rules. May be changed at will and at the request of the individual.
8. **E-mail address:** No rules. May be changed at will and at the request of the individual.
9. **Telephone number:** No rules: May be changes at will and at the request of the individual.

14 Exceptions Handling

There are likely to be several types of exceptions during enrolment process that need to be handled. Following list provide the common exceptions and appropriate verification method.

Exception	Process
DoB Unknown	Record estimated year of birth leaving date and month fields. DoB Type flag set to "Approximate".
Inconsistent Address Document	Quite like name spelling errors, address too is likely to have a large number of inconsistencies across documents. Addresses must be mapped appropriately onto the standard KYR address fields as per specification.
Absence of Original	In instances where original documents are not

	available, copies attested / certified by a public notary / court sworn affidavit will be accepted.
No Supporting Documents	

15 LIST OF APPENDIX

15.1 APPENDIX A: Committee Members List

S/NO	Name of Organization	Representatives
1.	National Identity Management Commission (NIMC)	a) Mfon Udoh (Co-chair) b) Ben Alofoje c) Emmanuel
2.	SageMetrics Nig Ltd	a) Hon. Kenneth Nwabueze b) Onyeka
5.	XDS CREDIT BUREAU	a) Zipporah Anuga (Mrs)
6.	Nigerian Immigration Services (NIS)	Epum Charles
7.	Nigerian Pension Commission (PENCOM)	a) Ekanem Aikhomu a) Kunle Odebiyi
8.	Nigerian Security Adviser (NSA)	a) Magani Niyomdi
9.	Central Bank of Nigeria (CBN)	b) Soji Aminu
10.	Nigerian Prison Services (PRISONS)	a) Agada F. Audu c) Garba Michael
11.	National Population Commission (NPopC)	Amos Helen O. (Mrs.)
12.	Federal Inland Revenue Services (FIRS)	b) Osasere J. Ehigie
13.	ADVANCED MANAGEMENT TECHNOLOGY SOLUTIONS (AMTS)	Dr. Steven Dike a)

15.2 APPENDIX B: Acronym Name List

AMTS	Advanced Management and Technology Solution
AFIS	Automated Fingerprint Identification System
ASP BSP	Application Service Provider Biometrics Service Provider
CAC	Corporate Affairs Commission
CBN	Central Bank of Nigeria
DMZ	Demilitarized Zone
DNS	Domain Name Services
DNCR	Department of National Civic Registration
EFCC	Economic and Financial Crimes Commission
FIRS	Federal Inland Revenue Service
FRSC	Federal Road Safety Commission
GMPC	General Multi-Purpose Card
HAS	Harmonization Assessment Study
ICT	Information and Communication Technology
ID	Identification
INEC	Independent National Electoral Commission
IP	Internet Protocol
ISO	International Standards organization
JTB	Joint Tax Board
MOD	Ministry of Defence
NCC	Nigeria Communication Commission
NEEDS	National Economic Empowerment and Development Strategies
NHIS	National Health Insurance Scheme
NIN	National Identification Number
NIMC	National Identity Management Commission
NIMHC	National Identity Management Harmonization Committee
NIS	Nigerian Immigration Services
NPC	National Population Commission
NPF	The Nigerian Police Force
NPS	Nigerian Prison Services
NSA	National Security Adviser
PENCOM	National Pensions Commission
PII	Personally Identifiable Information
PIV	Person Identification Verification
PVC	Poly Vinyl Chloride
SSS	State Security Services

SQL	Structured Query Language
TCC	Transaction Control Code
TCR	Transaction Control Reference
UTIN	Universal Tax Identification Number
UUID	Universally Unique Identifier
VPN	Virtual Private Network
WAN	Wide Area Network
XML	Extended Markup Language

15.3 APPENDIX C: Acronym Name List Specific to Biometrics

ISO	International Organization for Standardization
IEC	International Electrotechnical Commission
NIN	National Identification Number
IAFIS	Integrated Automated Fingerprint Identification System
ANSI	American National Standards Institute
INCITS	InterNational Committee for Information Technology Standards
ICT	Information and Communications Technology
NID	National Identification
DNA	Deoxyribonucleic Acid
JPEG	Joint Photographic Experts Group
CEN	European Committee for Standardization
NIST	National Institute of Standards and Technology
NFIQ	NIST Fingerprint Image Quality
WSQ	Wavelet Scalar Quantization

