



Liberia Telecommunications Authority

**REGULATIONS
ON
NATIONAL NUMBERING RESOURCES**

LTA-REG -0010

August 19, 2024

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PART I: PRELIMINARY

1.0. Preamble

The Liberia Telecommunications Authority (LTA), established by an Act of National Legislature in 2007 as the independent regulatory body with the power and authority to regulate the telecommunications sector, has developed these Regulations pursuant to Part III Section 11 (1) k, q and r, Part IV (14), and Part XII of the Telecommunications Act 2007 (the Act).

2.0. Purpose Of These Regulations

These Regulations provide a framework for the transparent, effective and efficient allocation, assignment, utilization and management of Liberia's National Numbering Resources.

3.0. Scope Of Application

These Regulations shall apply to all licensed Telecommunications Service Providers, government agencies, and all other entities using, or intending to use, National Numbering Resources in the delivery of their services.

4.0. Objectives Of These Regulations

These Regulations are intended to:

- A. Provide a framework for the efficient allocation, assignment, utilization, and management of all Liberia's numbering resources.
- B. Ensure that Allocations and Assignments of National Numbering Resources are transparent, fair and non-discriminatory;
- C. Enhance competition, promote investment and ensure consumer protection;
- D. Provide guidelines on the processes and standards to be followed in applying for and using National Numbering Resources and for resolving disputes, and
- E. Enforce compliance with LTA's National Numbering Plan.

5.0 Definitions & Interpretations

The Act – means the Telecommunications Act 2007

Allocation – means: i) the designation of a number(s) by the LTA for a particular purpose within the National Numbering Plan; or ii) the designation of a number(s) by the LTA for use by a licensee.

Assignment - means the issuing of a number(s) for a specific purpose; or provision of that number(s) to a third party, under relevant terms and conditions, by a licensee.

Authorization - means the permit given by the LTA to licensees and others to utilize Allocated numbers for the approved purpose.

Barring – means 1) to temporarily stop all services to and from a particular numbering resource by a licensee upon request by the LTA; or 2) A service on a licensee’s network that allows subscribers to block SMS, incoming or outgoing calls to and from their phone number.

Calling Line Identity - means a telephone service that transmits a caller's valid, dialable telephone number to the recipient of a telephone call.

Core Services - means the services MNOs and other service providers are authorized by their Licenses to provide. Reference in these Regulations to “own operations” means the use of numbers to facilitate the functioning of network switching and signaling infrastructure.

E.164 Numbers - means a string of decimal digits that satisfies the three characteristics of structure, number length and uniqueness specified in ITU Recommendation ITU-T E.164. The number contains the information necessary to route a call to the end user or to a point where a service is provided. E.164 numbers are composed of a maximum of fifteen (15) digits.

E.212 Numbers - means a string of decimal digits that satisfies the three characteristics of structure, number length and uniqueness specified in ITU Recommendation ITU-T E.212. These numbers define the structure of the International Mobile Subscriber Identity.

GSM – means the Global System for Mobile Communications (GSM), a standard developed by the European Telecommunications Standards Institute (ETSI) to describe the protocols for digital cellular networks used by mobile devices such as mobile phones and tablets.

IMSI – means the International Mobile Subscriber Identity and is a number that uniquely identifies every user of a mobile network. The IMSI is used in *any* mobile network that interconnects with other networks.

ITU – means International Telecommunications Union

Machine-to-Machine Numbers (M2M) – means numbers that are used in the automated exchange of information between devices without human intervention. These numbers enable devices to communicate and share data.

MNO – means Mobile Network Operator

Numbers – means a string of decimal digits that unambiguously identifies an end user, a service, or a device, in a given context. In this document, reference to numbers includes numbers and or number blocks.

Number Blocks – means a range of sequentially ordered numbers.

Numbering Plan - means the method put in place for administering numbering resources. The Plan is structured in a standard format to provide unique telephone addresses and to specify the format and structure of the numbers used in identifying devices, services or subscribers connected to a network.

Premium Numbers - means numbers used to offer services that generally cost higher than the normal call rate, and it is the caller who pays.

Reservation - means a temporary allocation of number(s) by the LTA, on request of a Licensee, pending authorization. Reservation does not apply to SNRs.

Short Codes – means non-geographic and non-network specific numbers of fewer digits than the E.164 format.

Special Numbering Resources - in these Regulations refers to Short Codes, Premium Numbers, Machine to Machine Numbers and Toll-Free Numbers.

Toll Free Numbers - means a single unique number used to call an organization with no charge to the caller.

Unassigned Numbers – means authorized numbers that have not yet been issued by Licensees to end users, or have not yet been utilized for their approved purpose.

USSD – means Unstructured Supplementary Service Data. This is a communications protocol used for real time, menu-based, two-way messaging between a subscriber device and the network. USSD is not dependent on a data connection and may be accessed by any GSM device.

PART II: THE NATIONAL NUMBERING PLAN AND DATABASE

6.0. Preparation, Publication and Management of the National Numbering Plan

6.1. The LTA shall prepare, publish and manage a National Numbering Plan. The National Numbering Plan shall establish the Number Codes, Number Lengths, Number Block Sizes and conditions of use of all the established numbers.

6.2. In preparing and managing the National Numbering Plan, the LTA shall have due regard for the existing allocation of numbers.

6.3. The National Numbering Plan shall be consistent with the requirements of international agreements, conventions, regulations and recommendations to which Liberia has subscribed.

6.4. The LTA shall publish the National Numbering Plan and the National Numbering Database on its website or at any other place it deems appropriate to ensure public accessibility, subject to restrictions that may be appropriate in relation to privacy protection, trade secrets or national interests. The National Numbering Plan shall be annexed to these Regulations.

6.5 In publishing the National Numbering Database, the LTA shall,

- A. State the status of a Number or Number Block;
- B. If a Number or Number Block is assigned, the identity of the assignee; and
- C. The date on which a Number or Number Block would stop being assigned or reserved.

6.6. The status of a Number in the National Numbering Database shall be described as:

- A. **Assigned** (if the Number is assigned)
- B. **Reserved** (if the Number is not available for use at the time)
- C. **Available** (if the Number is available to be authorized for use)
- D. **Protected** (if the Number is being kept for future use or development)
- E. **Unassigned** (if the Number is authorized and available for assignment)

7.0. Modification of the National Numbering Plan

7.1. The LTA may review and modify the National Numbering Plan by publishing a notice to Telecommunications Service Providers, customers and all other users of the National Numbering Resources at least ninety (90) calendar days prior to the date when the modification is to take effect.

7.2. Modification of the National Numbering Plan at any time shall take into consideration the following factors:

- A. Demand for both existing and future services in the short and long terms;
- B. Digit Analysis and Number Portability capabilities of telecommunications networks;
- C. Telecommunications networks' compatibility with agreements, standards and recommendations by the International Telecommunications Union and other relevant organizations;
- D. The expected benefits and costs of possible modifications to the National Numbering Plan; and
- E. The public and stakeholders' views expressed in response to consultation on the proposed modification.

7.3. Modification to the National Numbering Plan may result in changing:

- A. The conditions of use of numbering resources;
- B. The quantity of Numbers or Numbers Blocks;
- C. Protected categories of Numbers; and
- D. The digits in numbers by replacing, inserting, or deleting digit(s).

7.4. If the modification to the National Numbering Plan involves changing digit(s) in numbers, the LTA shall:

- A. Inform all Telecommunications Service Providers, customers, and all other users of the National Numbering Resources at least twelve (12) months prior to the effective date of the modification;
- B. Ensure that there is adequate publicity to inform and make consumers understand the implications of the modification before it occurs;
- C. Inform the ITU and other relevant international organizations about the modification at least six (6) months prior to the effective date of the modification.

7.5. Every Telecommunications Service Provider and other users of National Numbering Resources shall implement the modifications at the time and in the manner established by the LTA through an Order.

7.6. In effecting the modifications, Telecommunications Service Providers and other users of numbering resources shall ensure that the modifications are implemented at no cost to

consumers, and in a manner such that there would be no major disruption in the provision of services to consumers and the general public.

8.0 Annual Number Utilization Report

8.1. Every Telecommunications Service Provider or other entities that have LTA Allocated Numbers shall annually submit to the LTA information on the use of those Numbers. The information to be provided shall include:

- A. The quantity of the Authorized Numbers that have been assigned to subscribers or customers;
- B. The quantity of the Authorized Numbers that have been assigned to other Telecommunications Service Providers or other parties;
- C. The quantity of the Authorized Numbers that have been Ported to other Telecommunications Service Providers;
- D. The quantity of Authorized Numbers that remain un-assigned; and
- E. Any other information that the LTA, Telecommunications Service Provider or Number User considers relevant.

8.2. Upon the submission of the information described in Section 8.1 of these Regulations, the LTA and the supplier of the information shall collaborate to rectify any inconsistencies identified between the submitted information and the National Numbering Database.

PART III: ALLOCATING, APPLYING FOR, RESERVING, RETURNING, AND WITHDRAWING NUMBERS

9.0 Allocating and Reserving Numbers

9.1. The LTA shall Allocate Numbers to Telecommunications Service Providers, and other users of National Numbering Resources, in accordance with the National Numbering Plan.

9.2 Numbers may be allocated in Blocks, i.e., a range of sequential numbers. The quantity of numbers allocated to a Block is at the discretion of Licensed Providers applying for allocation.

9.3 A Licensee may apply to the LTA to reserve numbers for the Licensee's future use. The LTA may accept or reject the application in consideration of the following:

- A. The LTA's short and long-term planning.
- B. To ensure that service delivery would not be negatively impacted.
- C. That at least 75% of a previous allocation has been assigned for use.

- D. To prevent anti-competitive warehousing of numbers.
- E. The demand modeling and forecasts provided by the Licensee.
- F. Compliance with other terms and conditions, as may be determined by the LTA.

9.4 The Reservation of numbers shall be subject to terms and conditions which the LTA may impose at the time of reservation, including:

- A. A time limitation in which the numbers will be held in reserve before the applicant must complete the process leading to authorization.
- B. A reservation fee to be determined by the LTA.

10.0. Procedure for Applying for Numbers

10.1. A Telecommunications Service Provider, or any other entity needing Numbers shall make a written application to the LTA. The application shall contain the following information:

- A. The name, address and contact information of the applicant;
- B. The service for which the Allocation is being requested;
- C. The quantity of Numbers being requested;
- D. Any particular Number being requested;
- E. The current utilization data for Numbers already Allocated and Authorized to the applicant.
- F. Any other information that the applicant considers necessary or appropriate to justify the application; and
- G. Any other information that the LTA may from time to time require to assess the application.
- H. In applying for additional numbers, an applicant must demonstrate that at least 75% of the previous allocation has been assigned and present a demand study/forecast for the additional numbers being requested.

10.2. The LTA may grant or refuse to grant an application for Numbers based on any of the following reasons:

- A. The quantity of numbers to be included in the Allocation being requested;
- B. The particular Number(s) to be included in the requested Allocation;

- C. Decisions by the LTA about the Allocation of particular Numbers;
- D. License terms and conditions regarding the applicant's eligibility or ability to provide services or assign Numbers;
- E. Whether the request is consistent with the National Numbering Plan;
- F. The likely utilization of the Numbers in the short term;
- G. The current utilization level of Numbers previously assigned to the applicant;
- H. Charges or fees to be paid before the application is granted; and
- I. Contravention of any law of Liberia including the Telecommunications Act, Regulations, Orders, or Rules of the LTA.

10.3. The LTA shall consider and treat all applications for Numbers on a first-come first-served basis.

10.4. The LTA shall communicate in writing to the applicant its decision on the Allocation of Numbers, stating the reason (s) for such decision not later than ten (10) working days following receipt of completed application.

11.0. Usage of Numbers

11.1. All Telecommunications Service Providers, and other entities that are Authorized to use Numbers shall use the Authorized Numbers in accordance with the National Numbering Plan, these Regulations, and the purpose for which the Authorization was given.

11.2. Users of Numbers shall work with the LTA to resolve any potential problems identified by the LTA in the usage of Authorized Numbers.

11.2. Any usage of Numbers that is inconsistent with the National Numbering Plan, these Regulations and the purpose for which the Allocation was authorized shall attract appropriate penalties stipulated in Section 21 of these Regulations or otherwise stated in the Authorization granting the Allocation.

12.0. Returning Numbers

12.1. A Telecommunications Service Provider or any other entity that has been allocated or assigned Numbers may choose to return the Numbers to the LTA.

12.2. When returning Numbers, the entity returning the Numbers should do so in writing, stating the reason(s) for returning the Numbers and affirming that the Numbers being returned, or a Number in a Number Block being returned, are not being used to provide any service.

12.3. The LTA may, in consideration of the following reasons, refuse to approve the return of Numbers:

- A. The quantity of Numbers to be returned to the LTA;
- B. The Particular Number Block(s) to be returned to the LTA;
- C. Other reasons as may be determined by the LTA.

12.4. The LTA shall communicate its written decision, and the reason(s) for its decision on returning Numbers, to the entity returning the Numbers not more than ten (10) working days following receipt of the notice of return.

13.0 Withdrawing Numbers

13.1. The LTA may withdraw a Number or Number Block if:

- A. The status of the Number is Authorized but the Number or a Number in a Number Block has not been put into service/assigned within three (3) years of applying for the Allocation;
- B. The Number is needed for advancing a clearly identified national interest;
- C. The time limit for which the Number was Authorized has been reached;
- D. The LTA has established that the use of the Number is inconsistent with the National Numbering Plan; or
- E. The Number is not used for the purpose for which it was authorized.
- F. A number may also be withdrawn if The Allocation-holder fails to remedy a breach of Section 13.1 by taking corrective measures proposed by the LTA.

13.2. When withdrawing a Number, the LTA shall, at least three (3) months before effectiveness of the withdrawal, give notice to the Authorized User of the reason(s) for, and the date of, the withdrawal.

13.3. Once the LTA gives notice about a withdrawal, said authorized user shall:

- A. Not assign the Number to customers;
- B. Inform any affected end users about the reason(s) for and the date of the withdrawal and any possible replacement of the Number. Replacement shall be done at least one (1) month before the effective withdrawal date.
- C. Stop the provision of service to the Number at least one (1) month before the effective date of the withdrawal.

PART IV: ASSIGNING AND TRANSFERRING NUMBERS

14.0. Assigning Numbers

14.1. Numbers Authorized to a Telecommunications Service Provider or any other entity by the LTA may be Assigned by the Authorization-holder to an end user or purpose.

14.2. Assigned Numbers shall be used only in ways that satisfy their terms and conditions of use. No Telecommunications Service Provider or other entity shall have exclusive or perpetual rights over Numbers assigned to them.

14.3. In the event that the LTA is not satisfied with the Assignment of Numbers, the LTA shall reserve the right to withdraw such Numbers, stating the reason(s) for doing so.

14.4. For the avoidance of doubt, Numbers assigned by a Telecommunications Service Provider, or any other entity, remain under the control of the Service Provider or other entity to whom the numbers were authorized, and shall form part of that Service Provider's relevant utilization report.

15.0. Bringing Numbers into Service

15.1. A Telecommunications Service Provider should notify other Telecommunications Service Providers that traffic is to be routed to and from a Number only if:

- A. The LTA has Authorized the Number for use by the Telecommunications Service Provider; or
- B. Another Telecommunications Service Provider has assigned the Number to the Telecommunications Service Provider.

15.2. A Telecommunications Service Provider shall continue to route traffic to or from a Number until:

- A. The LTA has notified the Telecommunications Service Provider to the contrary; or
- B. The Number is barred or withdrawn by the LTA.

16.0. Barring Numbers

16.1. The LTA may require the barring of a number only if:

- A. The Number is used in a way that does not satisfy the condition(s) of use; or
- B. The status of the Block containing the Number is not Authorized.

17.0. Assigning Numbers to Consumers

17.1. A Telecommunications Service Provider should assign a Number to a consumer only if:

- A. The Telecommunications Service Provider notifies other Licensees that traffic is to be routed to and from the Number; and
- B. The Number is to be used in a way that satisfies its condition(s) of use.

18.0. Changing a Consumer's Number

18.1. A Telecommunications Service Provider shall not change the Number assigned to a consumer unless:

- A. The Consumer has requested the change; or
- B. The LTA has withdrawn the Number.

19.0. Public Disclosure of Consumer Information

19.1. Pursuant to Section 49 (1) of the Act, a Telecommunications Service Provider shall publicly disclose information about a consumer assigned a Number only if:

- A. The LTA has requested it;
- B. The Licensee has stated in the terms and conditions for the service that the information may be made available; or
- C. The consumer has not requested that the information be withheld.

19.2. A Telecommunications Service Provider shall change the information made public about a consumer assigned with a Number if the consumer has requested the change after noticing errors in the information.

19.3. Without the required legal authorization, a Telecommunications Service Provider shall not supply a Calling Line Identity if the Calling Consumer has requested its suppression.

20.0. Termination of Service to a Number

20.1. A Telecommunications Service Provider may stop providing a service to a consumer through a Number only if:

- A. The consumer has requested that service no longer be provided;
- B. The consumer has breached the contract with the Telecommunications Service Provider; or
- C. The LTA has required the Telecommunications Service Provider to bar the number in keeping with Section 15 of these Regulations.
- D. A Telecommunications Service Provider shall only deactivate or reassign a Number that has been inactive for at least six (6) months.

PART V: SPECIAL NUMBERING RESOURCES

21.1 MNOs have previously been permitted to control short codes and other Special Numbering Resources (SNRs) to provision their own services and the services of non-licensees. This decentralized control of scarce national resources has raised concerns of unequal access, preferential assignment of these SNRs, unfair competition, and inadequate consumer protection.

To address these concerns, these Regulations intend to:

- a. Provide for the efficient allocation, administration and use of SNRs;
- b. Ensure that SNR allocations are transparent, non-discriminatory and provide for equal access to network infrastructure;
- c. Provide a framework for effective competition and dispute resolution;
- d. Provide guidance on the processes and standards to be followed in applying for and using SNRs;
- e. Ensure protection for the consumer.

21.2 These regulations on Special Numbering Resources shall apply to the following:

- a. All licensed MNOs
- b. Other licensees using or intending to use SNRs
- c. Governmental or other entities providing security, emergency, and public health services.

21.3 The LTA is authorized by the Act to be the custodian of all national numbering resources, including Special Numbering Resources, on behalf of the Republic of Liberia. The LTA has the overall responsibility for allocation, authorization, reservation, and reclamation of SNRs.

21.4 SNRs shall be used in accordance with the specific conditions that may be established by the LTA at the time of allocating the numbers or at any time thereafter, where the LTA determines that it is in the interest of the National Numbering Plan, relevant Regulations, or market circumstances to impose such conditions.

21.5 A licensee or other entity shall not make use of SNRs that have not been allocated to them or which the LTA has not authorized them to use.

21.6 SNRs allocated for security and emergency services, such as police, fire, ambulance, disaster response, and public health, shall be national in nature and common to all operators. These numbers shall be accessed free of charge by the public. The LTA may exempt fees for SNRs used in the provision of these services.

21.7 The LTA may allocate SNRs to MNOs for use as helplines and other subscriber support services. These SNRs are to be free of charge for subscribers and will be common to all networks.

21.8 The LTA may require, as applicable, written confirmation of authorization where services to be provided using SNRs require authorization from another government agency or regulatory body. Such confirmation shall be a prerequisite for receiving an SNR allocation.

21.9 MNOs and other licensed service providers shall provide non-discriminatory, cost-based access on a first-come, first-served basis to Authorized SNR holders who request access.

21.10 The application procedure for SNRs shall be the same as specified in these Regulations for other numbers. The fee schedule for SNRs is annexed to these Regulations.

21.11 All allocated short codes are considered common network resources and therefore capable of being connected to and accessed from all networks, subject only to commercial and other business agreements.

21.12 The authorization period for SNRs is twelve (12) calendar months.

21.13 An SNR that has expired must be re-applied for. This shall attract the appropriate Fees.

21.14 The following entities are eligible for allocation of SNRs:

- a. MNOs requiring SNRs for functioning of their core network and provisioning of their own core services. MNOs shall not use SNRs for the provision of VAS services.
- b. Value Added Service Providers
- c. Government Agencies
- d. Other entities requiring SNRs may obtain numbers through a licensed Value-Added Service Provider.

21.15 The Value-Added Service Provider, or MNO, applying for SNRs on behalf of an entity, or for its own use, shall not use the same SNR for more than one entity in the provision of services; nor use the same SNR for the provision of more than one function/service, i.e. an SNR authorized for voice service shall not be used for USSD or other services

21.16 Short codes shall be between 3 and 6 digits, or as otherwise determined by the LTA in the National Numbering Plan.

21.17 Premium, Toll Free and Machine to Machine numbers shall be ten (10) digits in length, or as otherwise determined by the LTA in the National Numbering Plan.

21.18 Other SNRs shall be formatted as indicated in the National Numbering Plan.

21.19 In compliance with relevant LTA Regulations, National Laws or regulations of Government agencies, Special Numbering Resources shall not be used for the dissemination of unauthorized content.

PART VI: NUMBERING FEES, VIOLATIONS AND PENALTIES

22.0. Numbering Usage Fees

22.1. Telecommunications Service Providers, and other entities allocated Numbers by the LTA shall pay applicable Numbering Fees as per the LTA's fee schedule, which shall be periodically determined and published.

22.2. In determining Numbering Authorization Fees, the LTA shall consider some or all of the following factors:

- A. The administrative and operational costs incurred in managing the National Numbering Plan;
- B. The Numbering Usage conditions;
- C. To encourage the efficient use of numbering resources;
- D. To encourage the use of Blocks that are no larger than necessary;
- E. To encourage the use of Number Blocks that adjoin other Number Blocks that have 'Assigned' as their Allocation Status; and
- F. To encourage the return of Number Blocks from existing Allocations.

23.0. Violations and Penalties

23.1. The breach of any of the provisions of these Regulations by a Telecommunications Service Provider, any entity or a user of an assigned Number shall constitute a violation of these Regulations.

23.2 Failure to remedy a breach in accordance with the Act, the Regulations for the Treatment of Confidentiality, Dispute Resolution, Compliance and Enforcement 2009 (LTA-REG-0002), and any other applicable Regulation or Order, may result in:

- a) Recall of the offending Service Provider's Numbers Authorization
- b) Barring of a number(s)
- c) Withdrawal of a number(s)
- d) A fine not exceeding US\$5,000.00

24.0 Transitional Arrangements

- A. All Special Numbering Resources in use or in reserve prior to the effectiveness of these Regulations shall revert to the LTA within a minimum of three (3) calendar months of the issuance of these Regulations, or as otherwise determined by the LTA.
- B. SNRs reclaimed shall be immediately available for application, allocation and/or reservation in keeping with these Regulations.
- C. To mitigate any disruption to services, the LTA shall endeavor, where all application processes have been satisfied, to allocate specific SNRs to entities previously utilizing those specific resources. Entities are therefore encouraged to use the transitional period between issuance and effectiveness of these Regulations to initiate the application process.

PART VII: AMENDMENT, CITATION AND ENTRY INTO FORCE

25.0. Amendment

- 25.1. The LTA may review and amend these Regulations or any part thereof at any time the LTA deems necessary.
- 25.2. In conducting a review or amendment of these Regulations, the LTA may request and receive advice or comments from external advisory groups or consultants. However, the advice or comments are not binding on the LTA.
- 25.3. The LTA may issue additional rules, orders, or notices on any aspect of these Regulations. Such Rules, Orders or Notices shall be of general application or specific to a service category.

25.0. Citation and Entry into Force

- 25.1. These Regulations may be cited as the Numbering Regulations, 2024. The Effective Date of these Regulations shall be October 20, 2024.

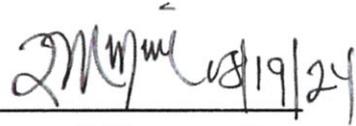
THESE REGULATIONS ARE ADOPTED BY THE LIBERIA TELECOMMUNICATIONS AUTHORITY ON THIS 19TH DAY OF AUGUST 2024, IN THE CITY OF PAYNESVILLE, REPUBLIC OF LIBERIA.

Signed:



19/08/24

Hon. Ben A. Fofana
Acting Commissioner



08/19/24

Hon. Clarence K. Massaquoi
Acting Commissioner



08/19/24

Hon. Patrick Honnah
Acting Commissioner



8/19/2024

Hon. Angela Cassell Bush
Acting Commissioner



Hon. Abdullah L. Kamara
Acting Chairman

ANNEX 1: THE NATIONAL NUMBERING PLAN

ANNEX 2: SCHEDULE OF FEES

SPECIAL NUMBERING RESOURCES (SNR)

R/F	SNRs	Application Fee (USD)	Authorization Fee (USD)
1	3 Digit Short Codes	25.00	1,500
2	4 Digit Short Codes		150
3	5 Digit Short Codes		150
4	6 Digit Short Codes		150
5	M2M Numbers		100
6	Toll-Free Numbers		150
7	Premium Rate Numbers		150

Application and Authorization Fees are charged per number/code.

Please see Schedule D of the Telecommunications Licensing & Authorization Regulations (LTA-REG-001) for Annual Numbering Resource Fees for E.164 Numbers.



Liberia Telecommunications Authority

**NATIONAL NUMBERING PLAN OF
LIBERIA**

August 19, 2024

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Definitions & Interpretations

The Act – means the Telecommunications Act 2007

Allocation – means: i) the designation of a number(s) by the LTA for a particular purpose within the National Numbering Plan; or ii) the designation of a number(s) by the LTA for use by a licensee upon authorization.

E.164 Numbers - means a string of decimal digits that satisfies the three characteristics of structure, number length and uniqueness specified in ITU Recommendation ITU-T E.164. The number contains the information necessary to route a call to the end user or to a point where a service is provided. E.164 numbers are composed of a maximum of fifteen (15) digits.

E.212 Numbers - means a string of decimal digits that satisfies the three characteristics of structure, number length and uniqueness specified in ITU Recommendation ITU-T E.212. These numbers define the structure of the International Mobile Subscriber Identity.

IMSI – means the International Mobile Subscriber Identity and is a number that uniquely identifies every user of a mobile network. The IMSI is used in *any* mobile network that interconnects with other networks.

ITU – means International Telecommunications Union

Machine-to-Machine Numbers (M2M) – means numbers that are used in the automated exchange of information between devices without human intervention. These numbers enable devices to communicate and share data.

Numbers – means a string of decimal digits that unambiguously identifies an end user, a service, or a device, in a given context. In this document, reference to numbers includes numbers and or number blocks.

Number Blocks – means a range of sequentially ordered numbers.

Numbering Plan - means the method put in place for administering numbering resources. The Plan is structured in a standard format to provide unique telephone addresses and to specify the format and structure of the numbers used in identifying devices, services or subscribers connected to a network.

Premium Numbers - means numbers used to offer services that generally cost higher than the normal call rate, and it is the caller who pays. The bill may be divided between the MNO and the premium service provider.

Short Codes – means non-geographic and non-network specific numbers of fewer digits than the E.164 format.

Special Numbering Resources - in these Regulations refers to Short Codes, Premium Numbers, Machine to Machine Numbers and Toll-Free Numbers.

Toll Free Numbers - means a single unique number used to call an organization with no charge to the caller.

USSD – means Unstructured Supplementary Service Data. This is a communications protocol used for real time, menu-based, two-way messaging between a subscriber device and the network. USSD is not dependent on a data connection and may be accessed by any GSM device.

Part I. Preliminary

1. Introduction

The National Numbering Plan has been developed by the Liberia Telecommunications Authority pursuant to Part III Section 11 (1) k and r; Part IV (14), and Part XII of the Telecommunications Act 2007, and in conformity with the International Telecommunications Union's (ITU) numbering standards.

The National Numbering Plan shall be consistent with the requirements of international agreements, commitments, conventions, regulations and recommendations to which Liberia has subscribed.

2. Objectives

The Plan has been developed to achieve the following objectives:

- a. To promote growth and development of the telecommunications sector.
- b. To promote efficiency in the allocation of scarce national resources.
- c. To promote efficient utilization of number resources.
- d. To promote fair competition.
- e. To provide for the administration of numbering resources to ensure transparency and efficient management.
- f. To ensure future developments are provided for through reservation of numbers.
- g. To facilitate the introduction and development of new and innovative services.

3. Utilization of Numbers

The Plan considers and makes provision for the following utilization of numbers:

- a. Identification of subscribers or devices connected to telecommunications networks
- b. Differentiation of services and service providers/operators.
- c. Routing of calls and messages.
- d. Retail billing and costing of services.
- e. Brand identity for commercial ventures.
- f. Providing access to special operator services and value-added services.

4. Number Blocks

4.1 Numbers shall be allocated in Blocks of a maximum of one million numbers (1,000,000). Number Block sizes of less than one million numbers are at the discretion of the Licensed applicant.

4.2 Additional blocks of numbers to any applicant shall be allocated only upon demonstration of 75 percent usage of previously allocated numbers by the respective applicant.

Part II. Number Formats

The format of numbers in this National Numbering Plan shall conform to the ITU-T E.164, ITU-T E.212 recommendations.

1. ITU-T E.164 Numbers

- 1.1 Telephone numbers in the National Numbering Plan that conform to the ITU-T E.164 recommendation shall include a three-digit country code, a National Destination Code (NDC) and a Subscriber Number (SN) collectively not exceeding a maximum of fifteen (15) digits as formatted in Table 1 below:

Country Code (CC)	National Destination Code (NDC)	Subscribers Number (SN)
231	AYZ	XXXXXX
National Significant Number (9 digits)		

Table 1: E.164 Number Format

- 1.2 Digits of the National Destination Code shall be interpreted as formatted in Table 2 below:

National Destination Code			
Country Code	Service Code	Destination Code	Subscriber Number
231	A (0-9)	YZ	XXXXXX
National Significant Number (9 Digits)			

Table 2: Interpretation of NDC digits

- 1.3 The Service Code is the first digit of the National Destination Code and represents the service the numbering resource is used for as allocated by the LTA.
- 1.4 The Destination Code comprises the last two digits of the National Destination Code and represents the network or destination of the numbering resource as allocated by the LTA.

2. ITU-T E.212

2.1 ITU-T E 212 is a unique and unambiguous international identification plan for networks and subscriptions with a maximum of 15 digits comprising a 3-digit Mobile Country Code (MCC), a Mobile Network Code (2 to 3 digits) and a Mobile Subscriber Identification Number (MSIN) of a maximum of 10 digits as formatted in Table 3 below:

Mobile Country Code (MCC)	Mobile Network Code (MNC)	Mobile Subscription Identity Number (MSIN)
3 Digits	2 Digits	Max (10 Digits) Issued by MNOs

Table 3: IMSI Format

2.2 The MCC is assigned by the ITU while the MNC is assigned by the LTA.

2.3 The Mobile Country Code (MCC) constitutes the first three digits in the International Mobile Subscriber Identity (IMSI) that identifies the country of a mobile telecommunications service network and is issued by the Telecommunications Standards Bureau (TSB) of the ITU.

2.4 The Mobile Network Code (MNC) is the two-digit number immediately following the MCC that identifies a mobile telecommunications service network.

2.5 The maximum of 10 digits following the MNC constitute the Mobile Subscription Identity Number (MSIN) and uniquely identifies the mobile subscriber.

3. Special Numbering Resources (SNRs)

Special Numbering Resources (SNR) refer to Short Codes, Premium Rate Numbers, Toll Free Numbers, and Machine to Machine Numbers. These numbers can be geographic or non-geographic, and network or non-network dependent.

3.1 **Machine to Machine numbers** shall conform to the ITU-T E.164 recommended format.

3.2 **A Short Code** is a string of digits that is shorter than an E.164 number and shall be three (3) to six (6) digits in length as formatted in Table 4 below:

Short Code Format	
Digits	Range
3	000 -999
4	0000 - 9999
5	00000 - 99999
6	000000 -999999

Table 4: Short Code Format

3.3 **Premium Numbers** are E.164 numbers or Short Codes that when called, are charged at a higher rate than a standard call.

3.4 **Toll-Free Numbers** are E.164 numbers or Short Codes that allow callers to call businesses or organizations without being charged for the call.

Part III. Dialing Plan, Service & Destination Allocation

1. Dialing Plan for Liberia

1.1 The Dialing Plan for Liberia is specified in Table 5 below:

Dialing Categories	Prefixes	Country Code	Service Code	Destination Code	Subscriber Number
International Calls	00 or “+”	231	A (1-9)	YZ	XXXXXX
National Calls	0	Not Used	A (1-9)	YZ	XXXXXX

Table 5: Liberia’s Dialing Plan

1.2 The International Prefix “00” or “+” is added to the National Significant Number when dialing a national number from outside Liberia.

1.3 The National Prefix “0” along with all nine (9) digits of the National Significant Number must be dialed when dialing a national number from within Liberia.

2. Service Code Allocations

Service Code	Service	Number Length
0	Protected	9
1	Machine to Machine (M2M)	9
2	Non-geographic number for mobile services	9
3	Premium Rate Services	9
4	Non-geographic number for mobile services	9
5	Non-geographic number for mobile services	9
6	Non-geographic number for mobile services	9
7	Non-geographic number for mobile services	9
8	Non-geographic number for mobile services	9
9	Toll-Free	9

Table 6: Service Code Allocations

3. Destination Code Allocations

National Destination Code		Number Length	Service Provider
Service Code	Destination Code (DC)		
8	80	9	Lonestar
8	81	9	Lonestar
8	86	9	Lonestar
8	87	9	Lonestar
8	88	9	Lonestar
7	70	9	Orange
7	72	9	Orange
7	75	9	Orange
7	76	9	Orange
7	77	9	Orange
7	78	9	Orange
7	79	9	Orange
5	55	9	Lonestar
2	20	9	Liberia Telecommunications Corporation
3	32	9	Atlantic Reality & Investment Corporation

Table 7 National Destination Code Allocation Table

Part IV. Mobile Country & Network Codes

1. Mobile Country & Network Codes (MCC & MNC)

Assignee	MCC	MNC	Service	Status
Lonestar Cell MTN	618	01	Voice /Data	Operational
Orange LBR	618	07	Voice /Data	Operational
LTC Mobile	618	20	Voice /Data	Operational

Table 8 Mobile Country & Network Codes

2. International Signaling Point Codes

Assignee	Assigned Codes

Table 9 International Signaling Point Codes

Part V. Special Numbering Resources

1. Harmonized SNRs for Network-Based Services

No.	Service	SNR
1	CALL CENTER	111
2	CREDIT RECHARGE	125
3	CHECK BALANCE	124
4	VOICE MAIL	
5	SIM REGISTRATION	TBD
6	NUMBER PORTABILITY	TBD

Table 10: Harmonized SNRs for Network-Base Services

2. Harmonized SNRs for Emergency, Security & Other Public Services

No.	Service	SNR
1	National Security	
2	Liberia National Police	911
3	Liberia National Fire Service	
4	National Disaster Agency	
5	Public Health	
6	Liberia National Red Cross	1959/1155

Table 11 Harmonized SNRs Codes for Emergency, Security and other Public Services

3. Short Code Allocations

3. Short Code Allocations

The following three (3) to six (6) digit short codes have been allocated for the services indicated in Table 12 below:

Series	Digits	Number Range	Allocation
1	3	000 - 099	Protected
2	3	100 - 119	Mobile/VAS Services
3	3	120 - 199	Mobile/VAS Services
4	3	200 - 299	Mobile/VAS Services
5	3	300 - 399	Mobile/VAS Services
6	3	400 - 599	Mobile/VAS Services
7	3	600 - 699	Mobile/VAS Services
8	3	700 - 799	Mobile/VAS Services
9	3	800 - 899	Mobile/VAS Services
10	3	900 - 999	Emergency, Safety, Security, Public Health, Public Services
11	4	0000 - 0999	Protected
12	4	1000 - 1999	Premium Numbers
13	4	2000 - 4999	Mobile Services
14	4	5000 - 5999	Mobile Services
15	4	6000 - 7999	Mobile Services
16	4	8000 - 8999	Toll-Free
17	4	9000 - 9999	Mobile/VAS Services
18	5	00000 - 01000	Protected
19	5	01001 - 99999	Mobile/VAS Services
20	6	000000 - 001000	Protected
21	6	001001 - 999999	Mobile/VAS Services

Table 12 Short Code Allocations