



NATIONAL NUMBERING PLAN OF LIBERIA

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Liberia Telecommunications Authority
Republic of Liberia

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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:

- 2.2 To promote growth and development of the telecommunications sector.
- 2.3 To promote efficiency in the allocation of scarce national resources.
- 2.4 To promote efficient utilization of number resources.
- 2.5 To promote fair competition.
- 2.6 To provide for the administration of numbering resources to ensure transparency and efficient management.
- 2.7 To ensure future developments are provided for through reservation of numbers.
- 2.8 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:

- 3.1 Identification of subscribers or devices connected to telecommunications networks
- 3.2 Differentiation of services and service providers/operators.
- 3.3 Routing of calls and messages.
- 3.4 Retail billing and costing of services.
- 3.5 Brand identity for commercial ventures.
- 3.6 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 existing 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:

Country Code	National Destination Code		Subscriber Number
	Service Code	Destination Code	
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 -99999

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:

Dailing 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	Mobile / Toll-Free	9
9	Protected	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	114
4	Emergency SOS	
5	Medical Emergency Hotline	
6	Ebola Hotline	
7	Covid Response Hotline	
8	Liberia National Red Cross	1959/1155

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

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	Emergency, Safety, Security, Public Health
3	3	120 - 199	Mobile Services
4	3	200 - 299	Mobile Services
5	3	300 - 399	Mobile Services
6	3	400 - 599	Mobile Services
7	3	600 - 699	Mobile Services
8	3	700 - 799	Mobile Services
9	3	800 - 899	Mobile Services
10	3	900 - 999	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		8000 - 8999	Toll-Free
17	4	9000 - 9999	Mobile Number Portability
18	5	00000 – 01000	Protected
19	5	01001 - 99999	Mobile Services
20	6	000000 - 001000	Protected
21	6	001001 - 999999	Mobile Services

Table 12 Short Code Allocations