UNITED REPUBLIC OF TANZANIA

TANZANIA COMMUNICATIONS REGULATORY AUTHORITY

ISO 9001:2015 CERTIFIED

NATIONAL SIGNALLING POINT CODES PLANS AND ASSIGNMENTS

June, 2018

SIGNALING POINT CODES PLAN

1.1 Introduction

The Signaling Point Codes (SPC) is used in the CCITT (International Telegraph and Telephone Consultative Committee) Signaling System No.7 (SS7) to identify the exchanges between which speech path connections are to be established. The SPC code of a Signaling Point in a SS7 Network is an unambiguous identification code for an exchange (Signaling Point) in a network.

The SPC codes are processed in the SS7 network by the Message Transfer Part (MTP) of each Signaling Point (SP) or Signaling Transfer Point (STP) to enable establishment of speech path connections.

In SS7, Signaling traffic the SPC code allocated for the originating exchange is defined as Originating Point Code (OPC) and the SPC code allocated for the addressed exchange is defined as the Destination Point Code (DPC).

The SPC codes are divided into the international and the national SPC codes. The national SPC codes have been left by the ITU-T Secretariat to be defined in the national level.

As the national telecommunication networks in the United Republic of Tanzania consist of several operator networks, it is the responsibility of the Regulatory Body, the Tanzania Communications Regulatory Authority (TCRA), to allocate and administer the national SPC codes to enable interworking between the networks in the country.

This document specifies the confirmed international SPC code formats and as well as the national SPC code formats and later, SPC codes allocated to various operators in the United Republic of Tanzania.

1.2 The main format of the International Signaling Point Codes (ISPCs)

ITU-T has specified in the Recommendation Q.708 the following 14-bit binary format for the identification of the International Signaling Point Codes to be used in the international SS7 Signaling links:

N M L	K J I H G F E D	C B A
Zone Identification	Area/Network Identification	Signaling Point Identification
3 bits	8 bits	3 bits
Signaling Area/Network Code (SANC)		

International Signaling Point Code (3-8-3)

Figure 1: ITU-T format for the International Signaling Point Codes (ISPCs)

First bit transmitted
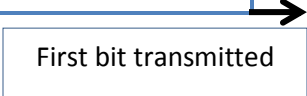
The **3-bit** sub-field 'NML' defines the world geographical zone where the network is located in. The **8-bit** sub-field 'KJIHGFED' identifies the geographical area or network within a specific world zone. The **3-bit** sub-field 'CBA' identifies the Signaling point (international exchange) within a specific geographical area or network.

The combination of sub-fields 'NML-KJIHGFED' is defined as a Signaling Area /Network Code (SANC). Each country shall be assigned at least one SANC code.

The allocation of the codes in the first sub-field 'CBA' in this 3-8-3 bit structure is left for the national authorities with the responsibility to notify the ITU-T Secretariat on the codes used. The 3-bit structure of the 'CBA' sub-field allows 8 International Signaling Point Codes to be used for each SANC code. Should more than 8 International Signaling Points be required, one or more additional SANC code(s) would then be assigned by ITU-T for the country.

1.3   The general Format of the National Signaling Point Codes

The following below structure is recommended for the use the 14-bits in the Signaling Point Code for the exchanges in the national networks:

N M L K	J I	H G F	E D C B A
Network /Operator Identification	Exchange Type (hierarchical layer) Identification	Geographical Area Identification	Signaling Point (exchange) Identification
4 bits	2 bits	3 bits	5 bits

National Signaling Point Code (4-2-3-5)

Figure 2: Recommended general format for the national Signaling Point   Codes

First bit transmitted
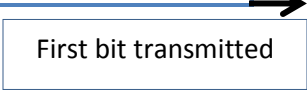
Sub-field 'NMLK'

The 4-bit sub-field 'NMLK 'shall define the network (operator) in which the exchange is located in.

Sub-field 'JI'

The 2-bit sub-field 'JI' shall define the hierarchical layer of the exchange in the operator's network as follows:

Hierarchical Layer	Bit Pattern 'JI' [binary]	Bit Pattern 'JI' [decimal]
International layer	00	0
National transit layer	01	1
Local tandem layer	10	2
Local layer	11	3

In case an exchange is a combined exchange operating on two or more layers, it shall be specified on its highest operating layer in the sub-field 'JI'.

Sub-field 'HGF'

The 3-bit sub-field 'HGF' is used to identify the geographical area where the exchange is located in.

The SPC area boundaries follow basically the local dialling numbering area boundaries in the new National Numbering Scheme. Exception is made in the Dar es Salaam numbering area that is divided into DSM North and DSM South Areas to provide enough capacity for the densely populated capital area.

The geographical areas to be used in the SPC numbering are shown in the Table below.

Code	Area Allocated
0	Dar es Salaam North
1	Dar es Salaam South
2	Coast, Morogoro, Mtwara and Lindi Regions
3	Zanzibar (including Unguja and Pemba) Regions
4	Mbeya, Ruvuma, Katavi, Songwe and Rukwa Regions
5	Dodoma, Iringa, Njombe, Tabora and Singida Regions
6	Arusha, Manyara, Kilimanjaro and Tanga Regions
7	Mwanza, Mara, Shinyanga, Simiyu, Geita, Kagera and Kigoma Regions

Table 1: Geographic Signaling Area Codes

Sub-field 'EDCBA'

The first sub-field to be transmitted ('EDCBA') shall define the exchange, i.e. the Signaling Point within a geographical area defined in the sub-field 'HGF'.

2.0   CURRENT ASSIGNMENTS

The following is the current ISPC and National SPCs assignment based on services as per descriptions provided above.

2.1   International Signaling Point Codes

S/N	EXCHANGE OPERATOR	ASSIGNED ISPC (3-8-3)
1.	TANZANIA TELECOMMUNICATIONS CORPORATION	6 – 080 – 0
2.	TANZANIA TELECOMMUNICATIONS CORPORATION	6 – 081 - 0
3.	BENSON INFORMATICS LIMITED	6 – 080 – 1
4.	MIC TANZANIA LIMITED	6 – 080 – 2
5.	ZANZIBAR TELECOM PLC	6 – 080 – 3
6.	ZANZIBAR TELECOM PLC	6 – 080 – 7
7.	VODACOM TANZANIA PLC	6 – 080 – 4
8.	VODACOM TANZANIA PLC	6 – 081 – 3
9.	AIRTEL TANZANIA PLC	6 – 080 – 5
10.	AIRTEL TANZANIA PLC	6 - 081 - 5
11.	AIRTEL TANZANIA PLC	6 - 081 - 6
12.	AIRTEL TANZANIA PLC	6 – 081 - 7
13.	SIX TELECOMS COMPANY LTD	6 – 080 – 6
14.	VIETTEL TANZANIA PLC	6 – 081 – 1
15.	VIETTEL TANZANIA PLC	6 – 081 – 4
16.	SMILE COMMUNICATIONS TANZANIA LIMITED	6 – 123 – 0
17.	WIAFRICA TANZANIA LIMITED	6 – 123 – 1

Table 2: International Signaling Point Codes (ISPCs) in Tanzania

2.2 National Signaling Point Codes

SERVICE	S/N	EXCHANGE OPERATOR	ASSIGNMENT SPC PLAN (4-2-3-5)
Call Centers for Life and Safety Numbers	General Range		1-0-0-21 to 1-0-0-31
	1.	Police Call Centre (111/112)	1-0-0-31
PSTN	1.	TANZANIA TELECOMMUNICATIONS CORPORATION	1-Y-X-ZZ EXCEPT 1-0-0-21 to 1-0-0-31
	2.	ZANZIBAR TELECOM TANZANIA PLC	2-Y-X-ZZ
Voice over IP	General Range		4-Y-X-ZZ
	1.	SIMBANET TANZANIA LIMITED	4-1-1-00 & 4-1-1-01
	2.	STARTEL TANZANIA LIMITED	4-1-1-31
Mobile Networks	3.	SMILE COMMUNICATION TANZANIA LIMITED	6-Y-X-ZZ
	4.	SHARED NETWORKS TANZANIA LIMITED	7-Y-X-ZZ
	5.	MIC TANZANIA LIMITED	8-Y-X-ZZ
	6.	TTCL	9-Y-X-ZZ
	7.	ZANZIBAR TELECOM PLC	10-Y-X-ZZ
	8.	VODACOM TANZANIA PLC	11-Y-X-ZZ
	9.	AIRTEL TANZANIA PLC	12-Y-X-ZZ
	10.	BENSON INFORMATICS LIMITED	13-Y-X-ZZ
	11.	VIETTEL TANZANIA PLC	14-Y-X-ZZ
	12.	WIAFRICA TANZANIA LIMITED	15-Y-X-ZZ
RESERVED			0-Y-X-ZZ
RESERVED			3-Y-X-ZZ

Table 3: National Signaling Point Codes (ISPCs) in Tanzania

3.0 FUTURE ASSIGNMENTS

The SPCs will be assigned on a continuous basis depending on the applications received and emerging new or operators in accordance with the published APPLICATION GUIDELINES AND FEES FOR NUMBERING RESOURCES.