Tanzania High in Cyber Security Ranking

SPECIAL REPORT

Positioning East Africa for the Digital Economy

TCRA na Miradi ya Kitaifa

Akaunti pesa mtandao zafikia milioni 23

THE UNITED REPUBLIC OF TANZANIA

TANZANIA COMMUNICATIONS REGULATORY AUTHORITY

ISO 9001:2015 CERTIFIED

Congratulations

The Board of Directors, Management and Staff of the Tanzania Communications Regulatory Authority congratulate the President of the United Republic of Tanzania, His Excellency Dr. John Pombe Joseph Magufuli, for being elected Chairman of the Southern African Development Community (SADC) from August 2019

LETTER FROM THE EDITOR

Cyber security has improved substantially in Tanzania over the last four years apparently due to a conducive legal and regulatory framework. Tanzania now ranks sixth in Africa, third in East Africa and in the Southern African Development Community (SADC) region. We have a report on the country's improvement in this area.

Tanzania hosted events of the East African Communications Organization (EACO) in Mwanza in July 2019. They included themed workshops on ICT and postal issues, and meetings of the Organization's various organs.

We have a special report on the Congress, including excerpts of speeches and statements made. Adressing the Congress, TCRA Director General, Eng. James M. Kilaba announced the Authority's plan to award excelling service providers from this financial year.

Countries differ in their management of communications services being delivered over the internet; on top of telecommunications networks. We have an article on the debate on the pros and cons of regulating over the top services (OTTs).

The latest communications statistics, presented in the Kiswahili section show that mobile money accounts now level at 23 million; reflecting the way financial inclusion is taking root in the country.

TCRA has continued to identify itself with national strategic projects being implemented by the Fifth Phase Government. Visits by the Board, Content Committee and Management to the Rufiji Hydro electric Power Project, the ultra modern library at the University of Dar Es Salaam and the recently-opened new terminal at the Julius Nyerere International Airport are covered in this edition.

Call for Contributions

CONTENTS

Minister for Works, Transport and Communications, Hon. Eng. Isack Kamwelwe addressing the media after opening the 23rd congress of the East African Communicaitons Organization (EACO) in Mwanza in July 2019. Second right is TCRA Director General, Eng. James M. Kilaba. This edition has a special report on the congress, from page 11.

TCRA Board of Directors, the Authority's Content Committee and Management at the Rufiji hydroelectric project main camp during a recent visit. See details in the Kiswahili section on page 37.

Serving a customer at a mobile money services outlet in Kariakoo, Dar Es Salaam. Story on page 39.

Msimamizi

TCRA to award outstanding performance

The Tanzania Communications Regulatory Authority has introduced a system of recognizing the contribution to the development of the electronic and postal communications sub sectors through annual awards on outstanding performance. The innovation was announced by the Director General, Eng. James M. Kilaba at the congress of the East African Communications Organization (EACO, which TCRA hosted in Mwanza in July. These are excepts of the Director General's statement on the annual awards.

AS an appreciation to Service Providers in Tanzania, TCRA intends to identify, recognize and reward outstanding performance in the ICT sector in the country from this financial year.

We know that appreciation is fundamental in human life through the recognition of good work done, and it confirms that their deeds are worthy and valued; and as such, satisfaction and productivity will increase to levels never seen before. This will develop individuals' or institutions' constant desire to improve.

The key objectives of the Tanzania Annual ICT Awards are to:

(i) identify, recognize and reward outstanding players;

(ii) provide knowledge and information by sharing best practice, experiences and expertise;

(iii) foster innovation and creativity in improving service delivery channels;

(iv) build awareness and confidence in the public, NGO's, Donors and civil society, etc;

(v) further promote Government's role in ensuring that access to ICT is a right for all Tanzanians;

(vi) enhance greater regional collaboration in the development and promotion of local content;

(vii) accelerate effective use of information, education, communications and technology amongst stakeholders.

The awards will include these categories:

1. Best Tanzanian-owned ICT Company of the Year.
2. Most innovative ICT Company of the Year.
3. Telecommunications Company of the Year.
4. Broadcasting Company of the Year.
5. Postal Company of the Year.
6. Online and Digital Content Company of the Year.

The list of categories will continue to be reviewed and fine-tuned to the acceptance level of ICT stakeholders.

TCRA Director General, Eng. James M. Kilaba addresses the media in Mwanza during the 23rd Congress of the East African Communications Organization (EACO).
Right is Board Chairman, Dr. Jones Killimbe.

Tanzania high in cyber security ranking

CYBER security has improved dramatically in Tanzania over the last three years apparently due to a conducive legal and regulatory framework, according to the 2018 Global Cybersecurity Index.

Tanzania is now one of the 10 leading African countries; ranking 6th in the continent; up from being 12th in 2017. It has overtaken Zambia, Cameroon and Ghana.

Cote d' Ivoire, which was seventh in 2017 is now 9th and Botswana has dropped from 8th position in 2017 to 10th in 2018. Mauritius, Kenya, Rwanda, South Africa remain the continent's top five.

Globally, Tanzania is now 59th; out of 175 countries covered in the report.

Tanzania is now third in the Southern African Development Community (SADC) region, up two berths from being fifth in 2017; taking the place of Botswana, which was third in 2017 but is now fourth; and overtaking Zambia which was 4th in 2017 but is now fifth.

Mauritius and South Africa maintain their top positions.

In East Africa, Tanzania has jumped one rung and is now third; up from being fourth in 2017, overtaking Uganda which is now fourth. Kenya and Rwanda remain top in the region.

Tanzania's exemplary performance is attributed to responsive legal and regulatory measures and existence of the well functioning national cyber security body; the Computer Emergency Response Team (CERT). Other contributing factors were the enactment of the Cyber Crimes Act and the Electronic Transactions Act, respectively in 2015 and the introduction, in March 2018, of cyber security Regulations developed under the Electronic and Postal Communications Act (EPOCA). The country's cooperation with international and regional communications insrtitutions in cyber security also contributed to the improvement.

(*See performance indicators on page 6 - **Editor**).*

There were about 3.9 billion people, more than half of the world population using the internet in 2018.

Although there have been less ransomware attacks, there have been more personal data breaches and critical infrastructure breaches, and this included hundreds of universities.

The report reviews the cybersecurity commitment and situation in 175 countries covered.

The index is published as a way of strengthening the role of ITU in building confidence and security in the use of information and communication technologies.

The survey assessed cyber security in respondent countries on five areas; which the ITU calls pillars, namely legal, technical, organizational, capacity building and cooperation.

These five designated areas form the basis of the indicators for GCI because they shape the inherent building blocks of a national cybersecurity culture.

Tanzania cyber security ranking 2015 - 2018

Year	Regional/sub regional position		
	Africa	EAC	SADC
2015	11	4	3
2017	12	4	5
2018	6	3	3

Source: https://www.itu.int/en/ITU-D/Cybersecurity/Documents/draft-18-00706_Global-Cybersecurity-Index-EV5_print_2.pdf
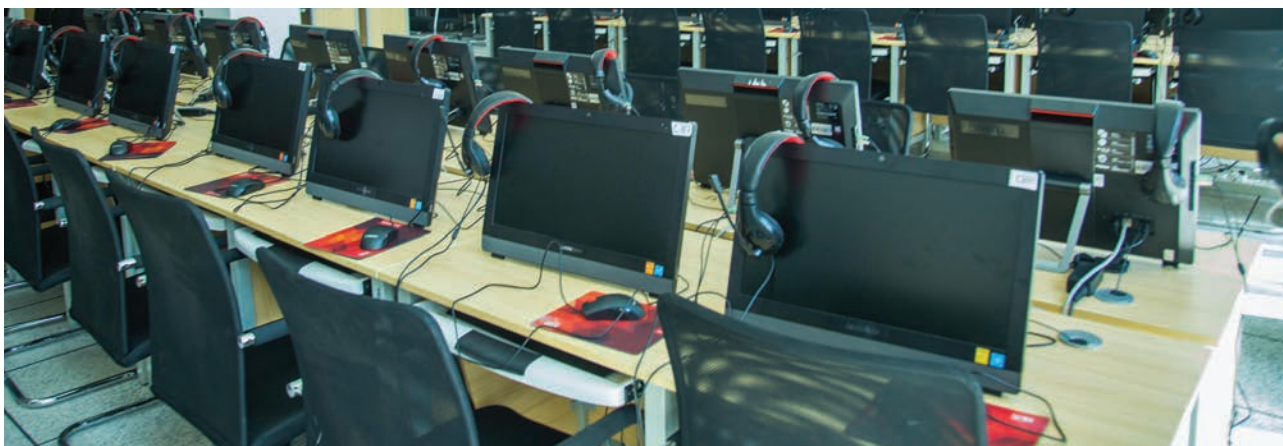
Some of the computers at the digital section of the University of Dar es Salaam ultra modern library. The new facility can accommodate 2,100 users and has 160 computers connected to the internet. Sound cyber security measures are essential to protect networked computers.

From 12th to sixth continental position in four years

2018 Africa ranking		Global
1	Mauritius	14
2	Kenya	44
3	Rwanda	49
4	South Africa	56
5	Nigeria	57
6	Tanzania	59
7	Uganda	65
8	Benin	80
9	Cote d' Ivoire	86
10	Botswana	88
11	Ghana	89
12	Zambia	90

2017	
1	Mauritius
2	Kenya
3	Rwanda
4	South Africa
5	Nigeria
6	Cameroon
7	Cote d' Ivoire
8	Botswana
9	Uganda
10	Ghana
11	Zambia
12	Tanzania

2015	
1	Mauritius
2	Uganda
3	Rwanda
4	Nigeria
5	Cameroon
6	Kenya
7	South Africa
8	Burkina Faso
9	Ghana
10	Togo
11	Cote d'Ivoire
12	Tanzania

SADC ranking

2018	SADC	Africa	Global
1	Mauritius	1	14
2	South Africa	4	56
3	Tanzania	6	59
4	Botswana	10	88
5	Zambia	12	90
6	Malawi	19	106
7	Seychelles	20	110
8	Madagascar	22	119
9	Zimbabwe	24	124
10	Comoro	25	130
11	Mozambique	26	132
12	Eswatini	28	137
13	Namibia	29	141
14	Angola	31	148
15	Lesotho	38	163
16	DRC	42	174

2017 SADC ranking	
1	Mauritius
2	South Africa
3	Botswana
4	Zambia
5	Tanzania
6	Mozambique
7	Madagascar
8	Zimbabwe
9	Seychelles
10	Lesotho
11	Malawi
12	Angola
13	Eswatini
14	Namibia
15	DRC
16	Comoro

2015 SADC ranking		Africa
1	Mauritius	1
2	South Africa	6
3	Tanzania	11
4	Botswana	12
5	Malawi	12
6	Zambia	13
7	Seychelles	14
8	Angola	15
9	Madagascar	15
10	Zimbabwe	15
11	Mozambique	16
12	Eswatini	16
13	DRC	17
14	Lesotho	18
15	Namibia	18
16	Comoro	18

EAC ranking

2018 East Africa		Africa	Global
1	Kenya	2	44
2	Rwanda	3	49
3	Tanzania	6	59
4	Uganda	7	65
5	Burundi	33	151
6	South Sudan	35	157

2017 East Africa	
1	Kenya
2	Rwanda
3	Uganda
4	Tanzania
5	Burundi
6	South Sudan

2015 East Africa		Africa
1	Uganda	2
2	Rwanda	3
3	Kenya	5
4	Tanzania	11
5	Burundi	14
6	South Sudan	15

Cyber security perfomance indicators

Countries were assessed in five criteria: legal, technical, organizational, capacity building and cooperation measures

Legal

Assessment was based on legal measures including the existence of legal institutions and frameworks on cybersecurity and anti cybercrime measures. Tanzania has a law on cyber crimes - the Cyber Crimes Act of 2015, and on electronic transactions - the Electronic Transactions Act, 2015. There are regulations on cyber security - the EPOCA Computer Emergency Response Team (CERT) Regulations; a reviewed version of which was published in 2018.

Technical

Measures based on the existence of technical institutions and framework dealing with cybersecurity. These are necessary to detect and respond to cyber attacks and incidents. Tanzania has a well functioning CERT, at TCRA.

Organizational

Measures in this pillar include the existence of national policy coordination institutions and strategies for cybersecurity development.

Capacity building

Continuous professional training in cybersecurity is key to keep institutions ahead of developments in cyber space. Awarensss campaigns are also part of capacity building. Tanzania, through TCRA has public been undertaking focussed public and consumer education campaigns on cyber security and safe use of the internet.

Countries were also evaluated based on their research and development programmes and on education and training programmes.

Cooperation

Countries are urged to develop global networks of partners engaged in cyber security. International cooperation is key to the success of national cyber security strategies since cybercrime is a global problem.

Tanzania has been cooperating with regional and international communications bodies on cyber security strategies. TCRA hosted a meeting of cyber security experts from African and Arab countries in 2017

The event included two days of practical drills simulating actual cyber threat scenarios incolving the most common types of cyber attacks.

The activities were organized by the International Telecommunication Union (ITU) in collaboration with the Forum of Incident Response and Security Teams (FIRST) and the the Applied learning for Emergency Response Teams (ALERT).

The 2018 index can be accessed on https://www.itu.int/en/ITU-D/Cybersecurity/Documents/draft-18-00706_Global-Cybersecurity-Index-EV5_print_2.pdf

FLASH BACK: The Deputy Minister for Works, Transport and Communications Hon. Eng. Atashasta Nditiye (seated, centre) and TCRA DG. Eng. James M. Kilaba (third left) with participants of a meeting and drill on cyber security hosted by TCRA in 2017. International cooperation contributed to Tanzania's improved ranking.

Tanzania for harmonized regional position at WRC-19

By Semu Mwakyanjala

TANZANIA has urged Eastern and Southern African countries to harmonize their positions on the agenda of the 2019 World Radiocommunication Conference (WRC-19), to held in Egypt from October 20 to November 22 this year.

World Radiocommunication Conferences are held every four years and countries meet ahead of the event to agree on common positions. Tanzania recently hosted a meeting of the Southern African Development Coordination Conference (SADC) and the East African Communications Organization (EACO) on preparations for WRC-19.

Opening the two-day meeting, TCRA Board Chairman Dr. Jones Killimbe said preliminary common positions on WRC-19 would greatly benefit the two regional blocs and Africa as a whole.

Dr. Killimbe said harmonized operations to regulate and develop a vital, but exponentially-fast growing communication sector were of paramount importance, to bring about sustainable development, and subsequently improve the living standards of the regions' people.

Great technological developments have made the information and communication technology sector one of the principal pillars of human development and prosperity, he said.

"Talk has shifted to Smart Cities, Artificial Intelligence, Big Data and the Internet of Things (ToT). Today, there is a pressing need for the world to be in constant communication and for everyone and everything on earth and in space to have the necessary infrastructure to communicate with the integrated system that humanity is designing for the future", he explained.

He said the preparatory meeting provided the best platform as it was held at the time when there is a growing demand for more spectrum due to the multiplication of mobile traffic as well as the development of new innovative services.

The quadrennial WRCs decide on the allocation of spectrum and also coordinate satellite orbits.

Dr. Killimbe described spectrum as a key enabler for Smart Cities, Artificial Intelligence, Big Data, the Internet of Things, 5G networks, Maritime, aeronautical and railways transportation.

The chairman of the EACO WRC-19 process Eng. Andrew Kisaka of TCRA, said the WRC-19 agenda items have been categorized in six chapters; namely Land Mobile and Fixed Services, Broadband application in the Mobile Services, Satellite Services, Science Services, Aeronautical, Maritime and Armature.

Analysts say WRC-19 will have an impact on rural broadband and the future of 5G.

Closing the meeting, TCRA Director General, Eng. James M. Kilaba appealed for concerted efforts to take communication services to the rural areas in SADC and EACO countries.

He explained that bridging the digital divide was of profound importance and would lead to upgrading people's living standards.

Sustainable development should focus on benefiting the masses of the population in their respective countries, he said, adding that these people have a key role to play.

WRC delegates from the EACO-SADC Regions should give special attention and consideration to WRC-19 agenda items which seek spectrum that will provide cost effective connectivity solutions in rural areas.

Eng. Kilaba described wireless communication as among cost effective means to connect dispersed populations in rural and underserved areas.

"Let us use this opportunity to come up with agenda that will address the African environment and will be worked upon during the WRC cycle of four years", he urged the delegates.

He said the satellite industry played a significant role in communication reachability especially in Africa where populations were dispersed.

"The Maritime and Aeronautical services are as well vital for transport industry and require high attention in terms of spectrum needs and security. Any new technologies to support development of the mentioned industries should be supported provided they operate in harmony without causing interferences to other services", he explained.

The meeting harmonized about 90 per cent of the

28 WRC-19 agenda items. The common position was presented at a WRC-19 preparatory meeting of the African Telecommunication Union (ATU) held from 20th to 30th August in East London, South Africa.

Addressing the ATU meeting, South Africa's Deputy Minister of Communications and Digital Technologies, Hon. Pinky Kekana called for strategies to deploy high speed communications networks to Africa's rural and remote areas; which lack broadband connectivity.

"Your approach should consider support for frequency allocations that ensure technologies complement each other and warrant that rural and remote broadband issues are addressed," she told delegates.

She said the recent cyclone Idai, which destroyed parts of Mozambique, Malawi and Zimbabwe, had shown that spectrum allocation and regulatory regimes require a different strategic approach.

Programmes which enhanced satellite earth observation, which would ensure future support for disaster preparedness, emergency response, rescue and relief efforts were needed, she added.

Kekana also called for measures to bridge the gender digital divide in Africa.

ABOVE: *TCRA Board Chairman, Dr. Jones Killimbe meets delegates to the SADC/EACO preparatory meeting on WRC-19 .*
RIGHT: *TCRA Director General, Eng. James M. Kilaba at the closing session of the preparatory meeting. Others, from left are: TCRA Director of ICT Applications and Services; Connie Francis; the Authority's Director of Legal Services, Adv. Johannes Karungura and Chairman of the SADC WRC-19 process, Thapelo Maruping.*

World groupings unite on WRC-19 agenda

Communications groupings all over the world have adopted common approaches to the agenda at this year's World Radiocommunication Conference (WRC-19) in Egypt.
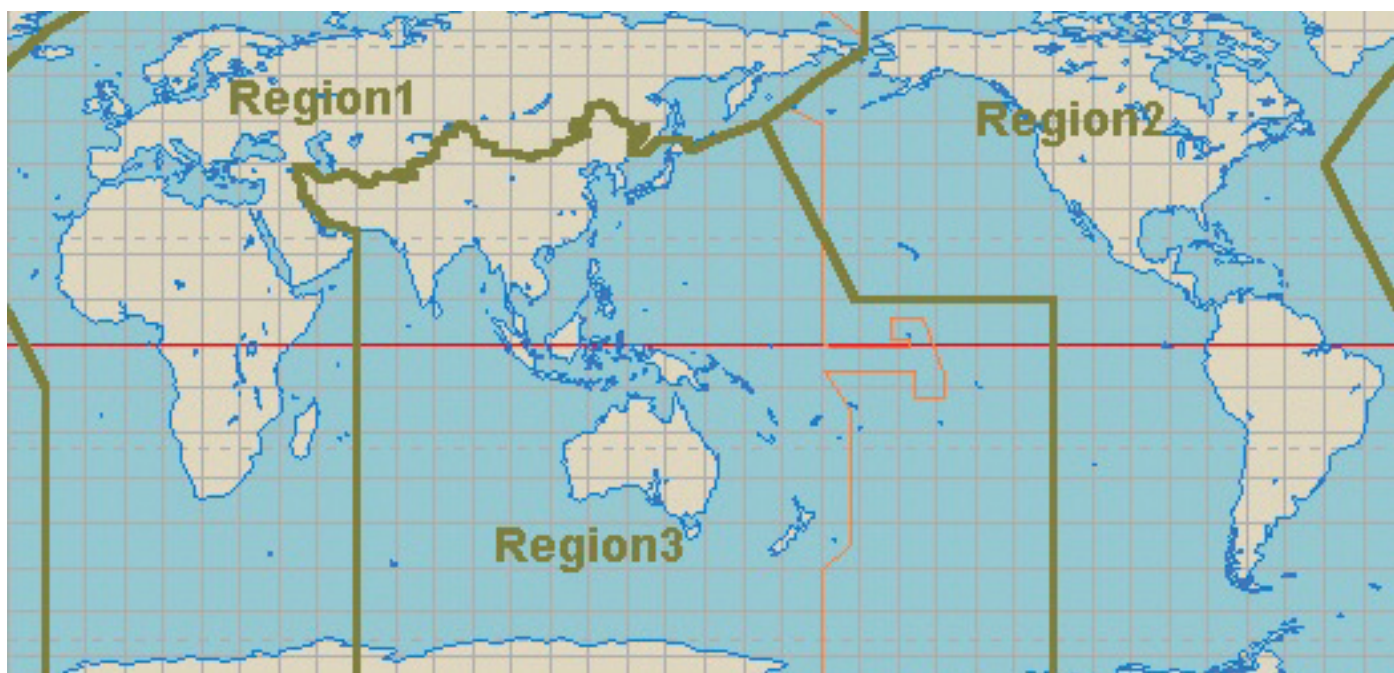
Recent consultations were made at the African Telecommunications Union (ATU) preparatory meeting in East London, South Africa in August.

The Asia Pacific Telecommunity (APT), Arab Spectrum Management Group (ASMG), European Conference of Postal and Telecommunications Administrators (CEPT), Inter American Telecommunications Commission (CITEL) and the Regional Commonwealth in the Field of Communications (RCC); representing the respective regions; met in different dates in July and August.

For the purposes of managing the global radio spectrum, the International Telecommunication Union (ITU) has divided the world into three ITU regions; each with its own set of frequency allocations.

Region 1 comprises Europe, Africa, the former Soviet Union, Mongolia, and the Middle East west of the Persian Gulf, including Iraq. Region 2 covers the Americas including Greenland, and some of the eastern Pacific Islands. Region 3 contains most of non-former Soviet Union Asia east of, and including Iran, and most of Oceania.

WRC-19 Agenda	
S/No.	**Description of agenda items**
1	Agenda item 1.1: Allocation of 50-54 MHz to the amateur service in Region 1.
2	Agenda item 1.2: In-band power limits for MSS, MetSat and EESS earth stations 401–403 MHz and 399.9–400.05 MHz.
3	Agenda item 1.3: Primary allocation MetSat (space-to-Earth) and possible primary allocation to the EESS (space-to-Earth) 460–470 MHz.
4	Agenda item 1.4: Review limitations of Annex 7 to Appendix 30 (Rev.WRC-12).
5	Agenda item 1.5: ESIMs use of 17.7–19.7 GHz (space-to-Earth) and 27.5–29.5 GHz (Earth-to-space).
6	Agenda item 1.6: Regulatory framework for non-GSO FSS satellite systems 37.5–39.5 GHz (space-to-Earth), 39.5–42.5 GHz (space-to-Earth), 47.2–50.2 GHz (Earth-to-space) and 50.4–51.4 GHz (Earth-to-space).
7	Agenda item 1.7: Regulation and possible allocations below 1 GHz for telemetry, tracking and command for non-GSO short duration mission satellite services in the space operation service.

8	Agenda item 1.8: Possible regulatory actions to support GMDSS modernisation and additional satellite systems for GMDSS in accordance with Resolution 359 (Rev.WRC-15).
9	Agenda item 1.9.1: Regulatory actions for autonomous maritime radio devices to protect the GMDSS and automatic identifications system (AIS) in the band 156–162.05 MHz.
10	Agenda item 1.9.2: Appendix 18 new VHF data exchange system (VDES) satellite issues including possible new allocations to the MMSS.
11	Agenda item 1.10: Spectrum and regulatory provisions Global Aeronautical Distress and Safety System (GADSS).
12	Agenda item 1.11: Regional spectrum harmonisation of railway radiocommunication systems in existing MS allocations.
13	Agenda item 1.12: Harmonisation of Intelligent Transport Systems in MS allocations.
14	Agenda item 1.13: IMT in various bands above 24.25 GHz.
15	Agenda item 1.14: Regulatory actions for HAPS in certain existing FS allocations above 5 GHz.
16	Agenda item 1.15: Land-mobile and FS applications 275–450 GHz.
17	Agenda item 1.16: WAS/RLAN between 5150 MHz and 5925 MHz.
18	Agenda item 2: Incorporation by reference .
19	Agenda item 4: Review of Resolutions and Recommendations.
20	Agenda item 7: Satellite regulatory and procedural issues.
21	Agenda item 8: Deletion of country footnotes.
22	Agenda item 9.1: Issue: 9.1.1—Compatibility between terrestrial and satellite IMT in the bands 1885–2025 MHz and 2110–2200 MHz. Issue: 9.1.2—Compatibility of IMT and BSS (sound) in the band 1452–1492 MHz in Regions 1 and 3. Issue: 9.1.3—Technical, operational and regulatory provisions for new non-GSO systems in the 3700–4200 MHz, 4500–4800 MHz, 5925–6425 MHz and 6725–7025 MHz FSS frequency bands. Issue: 9.1.4—Spectrum, operational and technical requirements for stations on board sub-orbital vehicles above 100 kilometres. Issue: 9.1.5—Referencing revised Recommendations ITU-R M.1638–1 and M.1849–1 in RR Nos. 5.447F and 5.450A. Issue: 9.1.6—Wireless Power Transmission (WPT) for electric vehicles. Issue: 9.1.7—Unauthorised operation of earth station terminals. Issue: 9.1.8—Implementation of narrowband and broadband machine-type communication infrastructures. Issue: 9.1.9—Regulatory and allocation issues FSS (Earth to space) 51.4–52.4 GHz.
23	Agenda item 9.2: Difficulties or inconsistencies encountered in the application of the Radio Regulations.
24	Agenda item 9.3: Action in response to Resolution 80 (Rev.WRC-07).
25	Agenda item 10; Future agenda items.

Source: ttps://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000C0027PDFE.pdf. Accessed on 5/9/2019.
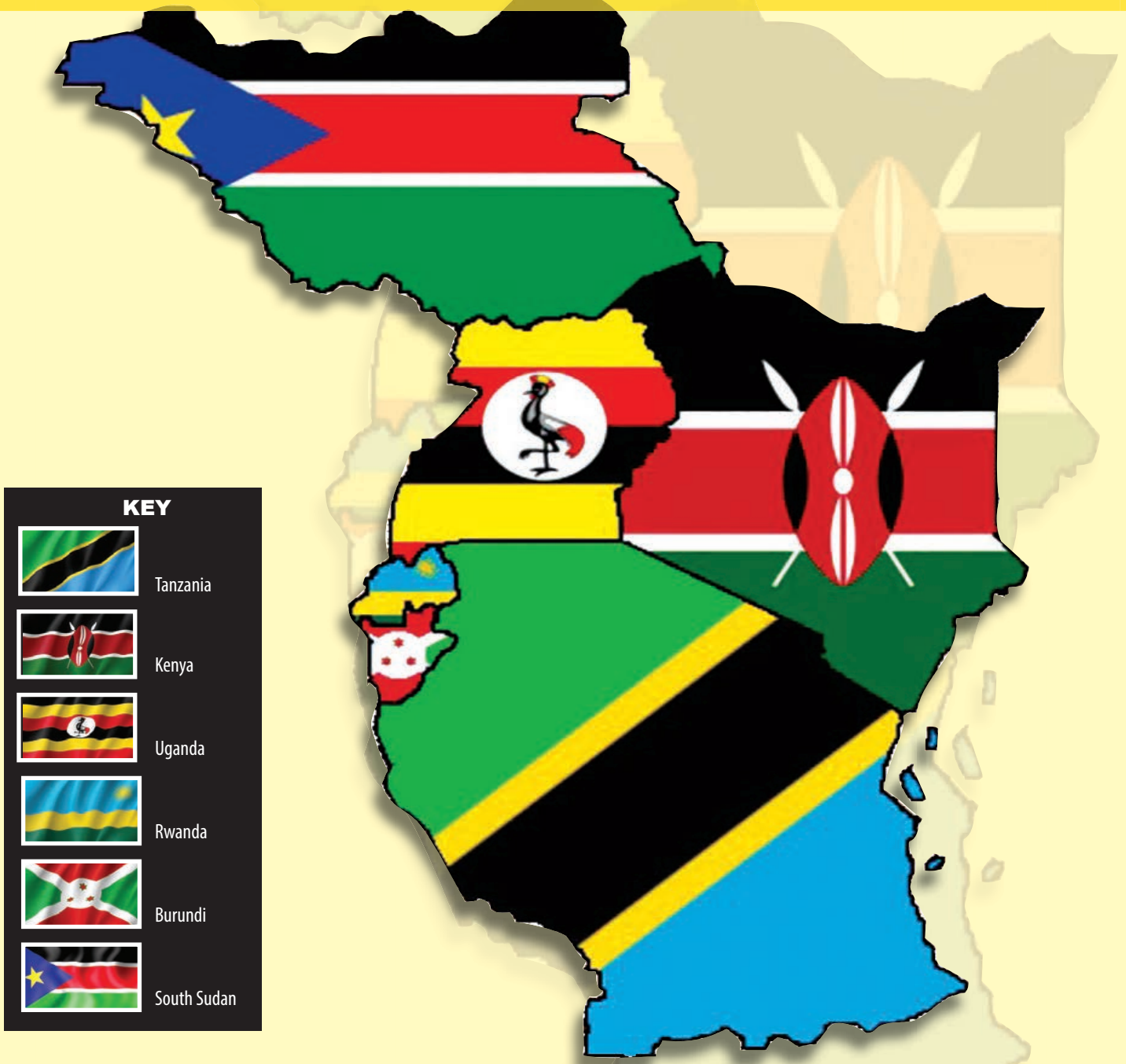
STUDY VISIT

ICT scholars and lecturers from the Kidatu Defence College, who were on a recent study visit to TCRA with the Authority's officers at Mawasiliano Towers.

23rd Congress of the East African Communications Organization (EACO), July 2019, Mwanza

Positioning East Africa for the Digital Economy

KEY

- Tanzania
- Kenya
- Uganda
- Rwanda
- Burundi
- South Sudan

Positioning East Africa

The Tanzania Communications Regulatory Authority hosted events of the East African Communications Organization (EACO) in Mwanza in July 2019. They included themed workshops on ICT and postal issues; and meetings of the Organization's various organs.

EACO brings together national ICT regulators, operators, services providers (in the telecommunication, broadcasting and postal subsectors), ICT training institutions and other stakeholders in the communication sector in Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda. The Kigali-based organization was established in 2012 to strengthen and promote cooperation among the six EAC countries in the development and provision of postal, telecommunication and broadcasting services.

The organization's organs are:
a. Joint Working Committee
b. Assembly of Regulators
c. Assembly of Telecom Operators
d. Assembly of Broadcasting Operators
e. Assembly of Postal Operators
f. Congress

This report carries summaries of some of the presentations, speeches of the Minister for Works, Transport and Communications; the Deputy Minister; the Minister for Information, Culture, Arts and Sports and statements of the TCRA Director General and EACO Executive Secretary respectively.

Partnering for new opportunities

Statement of the Executive Secretary of EACO, Dr. Ally Y. Simba at the opening of the Organization's 23rd Congress

As you are aware, EACO is a public private partnership organization which brings together national ICT regulators; operators and service providers, and other stakeholders in the telecommunications, postal and broadcasting sector and the academia.

Our broad objective has been to strengthen and promote regional integration among the six East African member countries and to develop the communications sector in the East Africa region. This objective is in line with those of the East African Community, specifically with regard to the development and delivery of communication services in the region.

To a large extent therefore, EACO complements the efforts and goals of the East African Community which, among other things, intends to create a common market and promote the flow of goods, services and free movement of people in the region.

It is because of this relationship that EACO was granted Observer status to EAC by the Council of Ministers in November 2013. Going forward, the EACO agenda to be considered as a Communication Organ of EAC is under consideration by the Transport Communication Meeting (TCM).

This is a welcome development as it will not only enhance EACO's visibility but will help the organization to put its proposals and recommenda- tions on the agenda of the East African Community, which will help to mainstream our decisions into the various organs of EAC.

This new development certainly calls for more hard work and concerted efforts by all the members and organs of EACO if our organization is to make a meaningful contribution to EAC and be relevant to the process of building a competitive knowledge society in East Africa.

The communication sector has in the last two decades not only undergone major changes but has changed the way we relate in society today. The landscape of the ICT industry has been heavily impacted not only by the constant change in technology or the digital revolution but also by the changing behavior and demands of consumers of ICT and postal services.

This situation has been complicated further by the changing needs of individual consumers, organizations, businesses and governments which now demand high speed broadband services and efficient postal services not only to efficiently and effectively deliver their products and services to the public but also to facilitate social cohesion.

This has led governments, in conjunction with other stakeholders, to put in place infrastructure for a Digital Economy and resources to support e-government, e com- merce, e-health, e-learning and other ICT-enabled services.

In the wake of this changed communication envi-

for a Digital Economy

ronment, EACO as a point of reference in the communications sector in the EAC region, has organized two parallel workshops for the postal; telecommunications and broadcasting sectors.

The themes for these workshops are in line with its Congress theme for this year, which is " Positioning the East African Region in the Digital Economy".

It is important for all stakeholders in the communication sector to collaborate and partner in order to take advantage of the opportunities created by the digital revolution throughout this whole week of knowledge and information sharing.

One of the challenges we face as Africa is the digital divide. This is caused by a number of reasons such as limited connectivity and coverage, digital illiterate communities and expensive internet connectivity.

> **One of the challenges we face as Africa is the digital divide. This is caused by a number of reasons such as limited connectivity and coverage, digital illiterate communities and expensive internet connectivity.**

The theme of the 23'" EACO Congress is therefore timely; coming at a time when we are seeing emerging new technologies such as 5G, Internet of Things - IOT, Big Data and Artificial Intelligence (AI); amidst the challenges we are facing as a region.

It is now time to review our policy directions and regulatory approaches, and rightly position our region for the digital economy.

The drop in prices of smart phones and other terminal devices together with the availability of new innovative services and applications have all contributed to the growth in data communication and in the demand for broadband; which operators and service providers need to diversity and improve their service delivery.

In addition to the above, the structure of the telecommunications market is continuing to change because of the mergers, acquisi- tions and consolida-

tions by operators; which we are currently witnessing in the market.

In the postal sector, the change in technology and competition from new ICT products and ICT enabled services are posing serious challenges to postal and courier opera- tors who must reconsider their current business models and come up with new strategies that will help to transform the postal services delivery system in the region.

In the broadcasting sector, the achievement of governments and broadcasters in migrating from analogue to digital terrestrial broadcasting requires the necessary policy and regulatory frameworks and infrastructure in order to manage new innovative services to the benefit of the consumers and public in the digital era.

Developments in the communication sector, as mentioned earlier similarly pose new issues and challenges to policy makers and national communication sector regulators who must come up with new approaches to obtain a digitalized East Africa.

These include to create a conducive environment that will attract investments in the communication sector and to develop the necessary ICT infrastructure and promote innovation.

Other approaches are to ensure the provision and access to fast, reliable, secure and affordable communication services to the consuming public and to stimulate the demand and increased uptake of communication enabled services, and to promote and support the development of a critical mass of e- skills which are required by the communication industry.

EACO has since been at the forefront in establishing harmonization and integration in the communication sector for the East African region.

I take this opportunity to thank everyone who makes up EACO for the great work done in building the ICT sector in East Africa. As we work together as an East African region, the development and progress we are making as a region are becoming evident to the rest of the world day by day .

Given our shared vision and responsibility, it is important for all stakeholders in the telecommunications, broadcasting and postal sectors to come together and think of new strategies that we shall use not only to reposition our sectors but to help consumers to take advantage of the opportunities towards a fully digitized economy in the East Africa region.

Experience sharing key for a vibrant EACO

Statement of the incoming EACO Chairman, TCRA
Director General, Eng. James M. Kilaba at the opening of the Congress

AS a testimony, the East African Communications Organisation (EACO); being the Private Public Partnership organization within the EAC region ICT ecosystem which we are proud of, is known globally for its systematic coordination and successful proposals it always puts forward during Plenipotentiary meetings of the International Telecommunication Union – ITU – and World Radiocommunication Conference – WRC meetings every four years.

Secondly, through EACO, cross-border frequency coordination has been effectively and efficiently handled, thus becoming a study case in other zones.

Thirdly, through its Working Group 7 (2017) which I chaired, EACO was the first to establish regional Study Group representation at ITU Study Group 2 levels and having regional representatives – an approach that has now been adopted by ITU for Continents' representation. Today, many applications of short codes are harmonized in the region.

Through EACO, our service providers also share experiences on how to overcome challenges during the course of lending their services to the people of East Africa.

Through such experience sharing our countries have made a series of remarkable achievements in the transformation of the communications sector in the region for the past 20 years.

(Eng. Kilaba also informed delegates that the Tanzania Communications Regulatory Authority had introduced a system of recognizing the contribution to the development of the electronic and postal communications sub sectors through annual awards on outstanding performance. Part of his statement, referring to the awards, is presented in page 3 - Editor).

Outgoing EACO Chairman, Francis Wangusi, of the Kenya Communications Authority hands over the gavel to his successor, Eng. James M. Kilaba. Left is EACO Executive Secretary, Dr. Ally Y. Simba.
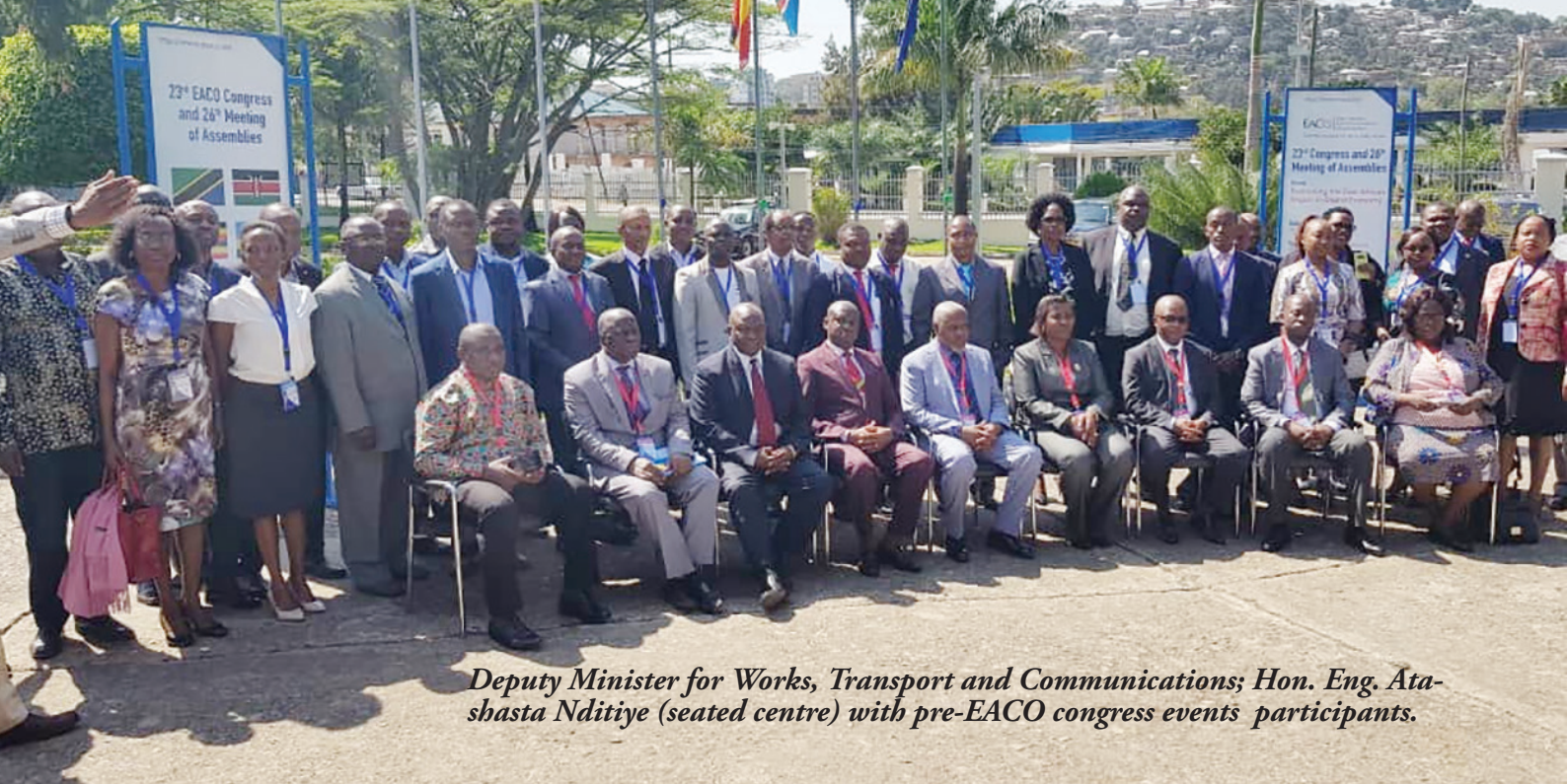
Deputy Minister for Works, Transport and Communications; Hon. Eng. Atashasta Nditiye (seated centre) with pre-EACO congress events participants.

Taking East Africa to the next level

Part of the speech by the Deputy Minister for Works, Transport and Communications; Hon. Eng. Atashasta Nditiye at the opening of- pre EACO congress events

MOST developing countries have, and continue to make headway in terms of, information communication technologies (lCTs). The development of broadband networks and services has become a necessity.

Harmonized and coordinated broadband and digital connectivity coupled with standardized interoperability are as necessary and urgent as socio-economic needs. They have the potential to enhance development across all other sectors. This includes, but is not limited to, e-governance, e-health, e-commerce and e-education; to mention but a few.

Almost all the governments of EAC partner states; working with the private sector in many places, have put in place infrastructure to support the building of an information society.

Available broadband capacities and emerging services are taking this region to the next level. However there is need for a consistent and innovative coordination and cooperation.

The goals of EACO are complementary to those of the EAC, especially with regard to harmonization of communication policies and the development of the communications sector as stipulated in Articles 98 and 99 of the EAC Treaty.

East African Community partner States are in different stages in implementing the Framework for Harmonized EAC Roaming Charges; which will provide for agreed roaming charges in the region.

Tanzania is on course to implement the same; and is in this regard analyzing various aspects of the Framework to enable smooth implementation. EACO member states are kindly requested to provide the United Republic of Tanzania with the necessary cooperation; including provision of the requested data to facilitate decision in this regard.

I urge you to work towards making the Organization a strong and efficient ICTs coordinator in our region; for it is only with a strong and efficient ICTs coordinator in East Africa that ICTs will be a catalyst for positioning the EAC region in the digital economy.

Let us work torwards making East Africa one smart community.

Smarter strategies for universal access

Speech by the Minister for Works, Transport and Communications; Hon. Isack Kamwelwe at the opening of the Congress

THIS Congress is key to the realization of ICT development objectives and the ICT eco-system in our Region.

Information-communication-technologies ICTs) are becoming increasingly acknowledged as the essential pillars in this converged bionetwork, given their inherent potentials, which have opportunities to develop and nurture gradual results across almost all social-economic sectors: e-government, e-schools, e-health and e-agriculture; to mention only a few.

ICTs have now taken the centre stage in the human socio-economic development processes.

The earlier the EACO region undertakes to exploit the emerging opportunities, the better.

The impressive growth and transformation in the communications sector is a clear testimony of existential opportunities and unexploited potentials that need to be utilized. Availability of the needed infrastructure (broadband) as a result of increased innovative services is a necessity. Efforts by all governments in the region to invest in broadband fibre installations are laudable efforts in the right direction.

The region has over 21,400 kilometres of optical fibre installed through funding by the respective governments in the region; besides private sector installations. In 2017 the region had 119.7 million mobile subscriptions; with an average mobile penetration of 75.9 oer cent.

The East Africa region has become a study case to many in the way it stands out in ICTs uptake, through national backbone investments and innovative services adoption. The four submarine cable landing points, extensive national terrestrial fibre cable installations by the member states, global mobile operators in the region are clear testimony of the above development.

Some of the achievements include cross border frequency coordination for mobile and broadcasting services; coordination of the World Radio Conference 2015 (WRC15) and the ongoing World Radio Conference 2019 (WRC19) harmonized positions for EAC, in collaboration with the SADC region.

Others are the development of policy, regulatory frameworks and guidelines for the region; coordination of regional ICT projects, for example the East Africa Peering and Interconnection project, and harmonized e-waste management.

I recognize the work of various working groups and committees constituted by professionals from all EAC partner states who have tirelessly developed various guidelines and regulations, and carried out important studies to provide solutions to the region's long-standing problems.

Let me take this opportunity to ask you also to use the working groups to solve the challenges directly facing our people, including unplanned roaming in our borders, high roaming charges within the region and cyber security threats.

The theme of this Congress has been well chosen. The emerging, and increased convergence, of technologies necessitate cooperation in the sector to promote the safe accessibility and availability of reliable, affordable and sustainable communications services in the region.

I am glad to note the inclusion, in the discussion, of among others, a strategy to revive and reposition Postal services in EAC and to interconnect the national backbone infrastructure among member States, to enhance socio economic development in the EAC region.

These are key factors which even we politicians are grappling with in order to effect "Universal Communications to all in East Africa". My plea to you all is that we should develop and strategize on possible solutions to regional problems in order to attain the goals of universal service; by ensuring that they we serve remotely unserved and underserved populations in our region.

Our President, H.E Dr. John Pombe Joseph Magufuli, as you now know him, is always and keenly following up outcomes of meetings like this one due to his commitment to see changes which improve the livelihood of our people; not only in Tanzania, but in the whole of East Africa. Allow me to assure him that solutions are being addressed through EACO ecosystems.

Let me emphasize one fact about EACO. The Organization was established by ICT regulators and sector stakeholders in East Africa, and has played a recommendable role in the development of ICTs in the region. We recognize and commend the work done by EACO.

I am aware of the move to incorporate EACO as an ICT technical institution of EAC. As deliberated in the last meeting on Infrastructure; namely the Transport Communication Meeting – the TCM

- held in Uganda from 24 to 28 June 2019, I urge you to support technical staff to participate in technical meetings to be convened by the EAC Secretariat for consideration and finalization of the concept paper to have an ICT technical institution for the Community.

I commend TCRA's plan to have an Annual ICT Awards and Stakeholders Engagement event this year. As pointed out by the TCRA Director General, appreciation is fundamental in human life and it confirms to individuals or institutions that their deeds are worthy and valued. This in turn leads to increased satisfaction and productivity. I urge all stakeholders in EAC to prepare for the Awards, through better services delivery.

I call upon the 23rd EACO Congress to come up with SMARTER Strategies which will ensure that none of our member states is left behind in implementing programmes for the Digital economy in our Region.

Postal networks vital development tools

Excerpts of speech by the Universal Postal Union (UPU) Regional Coordinator for Southern and Eastern Africa, Mrs. Gladys Mutyavaviri

The postal landscape is rapidly changing. As you are all aware the postal sector plays a key role in national socio–economic development and in facilitating regional integration. The EACO Congress offers a valuable opportunity to network and share experiences in the light of the rapidly changing environment.

In the face of increasing liberalisation of postal markets and the digitalisation of postal services, this forum offers a vital platform for member countries to explore how national policies and regulatory frameworks can be utilised to support the digital transformation of the postal sector in the region.

One of the most exciting opportunities in the digital landscape are issues pertaining to e-commerce. Technological innovations within the communication sector are driving digital transformation and re-shaping dynamics between service providers and consumers. The growth in online business has resulted in increased volume of parcels that need to be delivered.

To support the e-commerce ecosystem, in which the Post is a key player, the UPU is supporting the implementation of the Regional Project on Operational Readiness for E-commerce (ORE) in Africa and in other parts of the world. The aim of this global postal project, is to ensure that the entire postal network has capacity to actively and competitively participate in the e-commerce market.

The postal sector also plays a key and pivotal role in contributing to the attainment of national socio-economic development goals pertaining to financial inclusion. The extensive postal network in different parts of a country, provides an important infrastructure which can be used to ensure financial inclusion of people in different parts of a country, especially marginalised rural communities.

It is against this background that UPU launched the Regional Project on Electronic Postal Payment Services in Africa in 2018. Most African countries are participating in this project. Through financial inclusion among the unbanked population in the developing world, especially in Africa, the Posts play a key role in facilitating financial remittances especially for international migrants, at more affordable rates.

The postal sector also contributes to the attainment of the UN Sustainable Development Goals (SDGs). The three dimensional postal network, namely the physical, financial and electronic dimensions of the network, contribute to the attainment of the following SDGs, namely:

(i) Goal 1: End poverty in all its forms everywhere. Posts are the second biggest contributor to financial inclusion worldwide, after the banking sector. Posts offer financial services, including domestic and international money transfer services. Owing to their extensive physical network and unique presence in rural areas, Posts are vital players in financial inclusion.

(ii) Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation. Use of Post buses in rural areas, to carry passengers and mail, contribute to the attainment of this goal. Posts also play an important role by providing the last mile delivery for e-commerce orders. Postal financial inclusion serves not only individuals excluded from the traditional banking sector, but also businesses especially MSMEs. The postal network acts as a tool for bridging the digital divide to under-served population through the establishment of community information centres, which offer internet-based services.

(iii) Goal 17. Strengthen the means of implementation and revitalize the Global Partnerships for Sustainable Development. Posts act as enablers of trade. The role played by Posts in trade facilitation is growing, especially in the context of e-commerce.

Consolidating gains

Speech of the Minister for Information, Culture, Arts and Sports,
Hon. Dr Harrison G. Mwakyembe at the closing of the 23rd EACO Congress

ALLOW me to pay tribute to the EACO Executive Committee members for living up to the organization's goals and objectives; namely to promote and strengthen cooperation in the ICT sector among the six EAC countries. You have done that with flying colours: efficiently and dedicatedly.

When I received your invitation, your popular name EACO and its rich profile - 23 congresses and 26 annual assemblies - made me easily assume that your organization was much older than the Community itself, only to realize that it was a delusion. EACO as a regional autonomous body with a fully-fledged secretariat, hence with international legal personality and with a fixed abode, is hardly seven years old.

This is quite hard to believe compared to the big name you wield. This factor alone is testimony of the seriousness with which you discharge your organization's obligations to the extent that you have won such a kind of prodigious visibility within a short span of time.

I also compliment the Tanzania Communications Regulatory Authority for hosting this Congress and the Annual Assemblies meetings. This is no mean contribution to the growth of EACO.

In the course of the five days you have been here, you had two important workshops: one on *"Strategy for Positioning and Transforming the Postal Sector"* and the other on *"Infrastructure, Connectivity and Digital Economy in East Africa"*, two insightful subjects ideally suited to the region's finest brains in the telecommunication, broadcasting and postal sub-sectors, present here.

I believe you had intense deliberations, the outcome of which will definitely feature in the resolutions of the Congress. I always harbour no doubts that events of this kind, bringing together national ICT regulators, operators, services providers, ICT training institutions and other stakeholders in the ICT industry, play a major role in the development of the subsectors I have just alluded to. As Minister responsible for Information, I am a direct beneficiary of these regional interactions which greatly contribute to the development of information communication in our region.

In the EACO working structure, you have established Working Groups of technical experts in addressing, among other things, policies and challenges in the industry in order to come up with harmonized positions. I urge you to maintain and sustain this working structure which, I believe, is quite instrumental in EACO's role of enhancing and coordinating development of ICTs in the region.

This Congress should make full commitment, to oversee implementation of the outcome and resolutions of the 23rd Congress and let all parties remain engaged till the 24th Congress.

I commend TCRA's plan to have Annual ICT Awards and Stakeholders' Engagement this year. I do entirely agree with the reasoning that such awards are gestures of appreciation which always inspire institutions and individuals to strive harder to levels never seen before. I urge all stakeholders in East Africa to prepare for the Awards through better services delivery.

PRESENTATIONS HIGHLIGHTS

Transforming the Post, in

THE presentation on Strategy for positioning and transforming the Postal sector addressed current trends in the Postal sector, the digital transformation of Posts, emerging technologies, diversification opportunities and the role of various stakeholders, including governments, regulators and operators.

Postal operators should defend their core businesses, be customer-centric and provide new customer experiences. They need to develop new delivery channels and diversify selectively. They should foster partnerships, benchmark operations with other market participants and enhance their performance by improving their operations, capitalizing on the growth in e-commerce.

They should embrace new technologies such as Big Data, Internet of Things, Drones, Robotics, Artificial Intelligence, Cloud Computing and Autonomous Vehicles; which present new possibilities for repositioning postal businesses.

Governments should decrease gaps in postal development, through increased investments, focused policies and by promoting the utilisation of postal networks for socio-economic development.

Regulators should work towards the harmonisation of the regulatory frameworks, redefine universal

EACO for faster migration to efficient internet standard

THE 23rd Congress of the East African Communications Organization has urged regulators, operators, government agencies and other stakeholders to speed up the migration to the more recent internet standard - IPv 6.

A communiqué adopted at the end of the congress said all actors should develop strategies, action plans with timelines to have successful migration and report progress regularly.

IPv6 is the abbreviation of internet protocol version 6, which is an advanced standard from IPv4.

An internet protocol (IP) is the principal set of digital message formats and rules for exchanging messages between computers across a single network or a series of interconnected networks.

IPv6 can accommodate more internet addresses than IPv4. Tanzania has already migrated to IPv6.

The Congress recommended that EACO should collaborate with higher learning institutions in the region on new strategies of training such as introducing the continuous professional development (CPD) where points and certificates are awarded to participants at each completed training.

It stressed the need to have specialized packages to enable broadcasters to utilize existing telecom infrastructure in order to stream content because the future of broadcasting is internet based.

Telecoms and broadcasters are encouraged to collaborate in order to have affordable and efficient communications;

It called on Postal corporations to embrace innovation in their products and business processes in order for them to take advantage of the emerging technologies such as Big Data, Artificial Intelligence, Cloud Computing, Machine Learning amongst others, to grow revenues and revenue streams;

Members were required to invest in national addressing and postcodes to enable Postal operators and couriers to deliver last mile service efficiently and effectively;

After addressing network security, the Congress urged regulators and operators to enhance legal framework and technology to protect the communication industry from destructive and fraudulent innovations such as SIM boxing, spoofing and fraud.

Solid collaboration between regulators and operators was needed to effectively deal with fraud.

mproving internet access

service and increase the scope of investments in the postal sector.

A sesssion on digital transformation of Africa was unanimous that adoption of digital technologies can help build skills at all levels, boost productivity of all enterprises – including informal ones and create jobs across all sectors – agriculture, manufacturing and services.

East Africa is the ninth largest market globally by population. Since integration is critical for digital economies to reach their full potential,the region should promote a single digital market by:

- Ensuring e-commerce, digital services and the functions that support them all work across

borders; and that data protection and privacy laws allow for cross border data transfers.
- Removing trade and customs barriers for goods purchased online; and cross border barriers to infrastructure and connectivity.
- Sharing cyber security resources in the region.

It was observed that reaching the African Union's goal of universal and affordable internet coverage would raise the growth per capita by two percentage points per year and reduce the poverty head count by one percentage point per year.

Photo feature by by Semu Mwakyanjala, TCRA

ABOVE: *Minister for Works, Transport and Communications; Hon. Isack Kamwelwe (seated, centre) with congress delegates.*

RIGHT: *The Minister with TCRA Director General, Eng. James M. Kilaba (centre) and EACO Executive Secretary, Dr. Ally. Y. Simba (left).*

BELOW: *The South Sudan delegation*
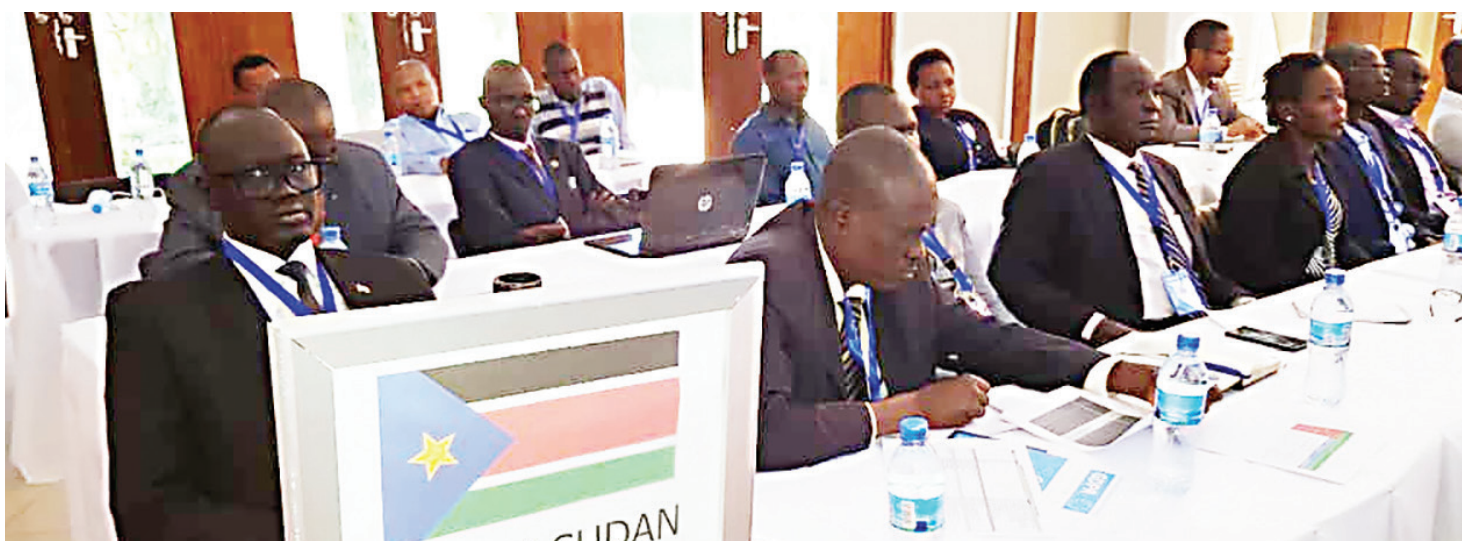
ress Pictorial

Minister for Information, Culture, Arts and Sports, Hon. Dr Harrison G. Mwakyembe (fourth left) closed the Congress

ABOVE: *Tanzania delegates. Front row from right: TCRA Head of Human Resources, Erasmo Mbilinyi; Head of Licencing; Eng. Andrew Kisaka and Head, Quality Management Unit, Haruni Lemanya.*

RIGHT: *Uganda and Burundi delegations*

SMZ Minister, Envoys visit T

Zanzibar Minister for Works, Communications and Transport, Hon. Dr. Sira Ubwa Mamboya and Tanzania's Ambasadors accredited abroad recently visited TCRA, where they described the Authority's perfomance as world class. The high profile visits were made on two different ocassions.

The Minister was on a familiarization visit and the envoys were back home to participate in the Southern African Development Community (SADC) summit in Dar Es Salaam.

Hon. Dr. Sira Ubwa Mamboya (right) being briefed on the frequency monitoring and direction finding equiment, by the Authority's Director of ICT Applications and Services, Ms. Connie Francis. Centre is TCRA Board member, Dr. Mzee Suleiman Mndewa.

ABOVE:*The envoys bein*
BELOW: *In a souvenir p*
Transport and Communic

...ng briefed by the TCRA Director General, Eng. James M. Kilaba.
...hotograph at Mawasiliano Towers. They were accompanied by the Permanent Secretary in the Ministry of Works,
...ations, Dr. Maria Sasabo (extreme right).

GUIDELINES ON NUMBERING RESOURCES FOR THE MANAGEMENT OF APPLICATIONS OF MACHINE TO MACHINE COMMUNICATION AND INTERNET OF THINGS

1.0   INTRODUCTION

Machine to Machine (M2M) communications refers to communication between entities which can be object, devices or things that exchange information and carry out actions with minimal or no human intervention using existing or evolving communication networks. They are technologies that allow both wireless and wired systems to communicate with other devices of similar ability. In M2M, sensors attached to a machine relay information of the events that the machine experiences to an application that analyses this data and takes decisions in real time or near to real time.

M2M is a key component of Internet of Things (IoT), which has potential applications in sectors such as transport, health, education, smart cities & smart communities, among others for automatic meter reading, fleet management, car tracking, vending, monitoring and control, security and alarms, telemedicine and other applications of similar nature.

The IoT is the network of physical devices embedded with electronics, software, sensors, actuators, and connectivity which enable them to connect and exchange data, resulting in efficiency improvements, economic benefits, and reduced human exertions

Tanzania Communications Regulatory Authority (TCRA) introduced the Converged Licensing Framework (CLF) designed to encompass technology and service neutrality and crafted to match with the dynamism of the communications sector.

In view of that all licensees with appropriate license from TCRA can provide M2M connectivity within the area of their existing authorizations in accordance with respective licensing conditions. In M2M communication the Subscriber Identity Module (SIM) can be used and can be physical or an electronic card (e- SIM).

2.0   OBJECTIVE OF THE GUIDELINES

The objective of these guidelines is to provide the procedures and requirements for providing the M2M communication services where the connectivity is through mobile communication network, and where Subscriber Identity Module (SIM) and numbering resources are required. The parties to M2M communications are the M2M Service Providers (M2M SP), Network Operators and the end users. As the M2M applications are typically assigned to M2M SP by Network Operators, it is the M2M SP that is actually assignee of the numbers by the Network Operators. The end users may not aware of the number but aware of the services produced by M2M SP and thus the M2M SP is the custodian of the numbering resource used.

3.0   ALLOCATION OF NUMBERING RESOURCES FOR M2M COMMUNICATION

Where the internet of things and M2M devices require the use of Mobile Station International Subscriber Directory Number (MSISDN), they shall be assigned number according to Electronic and Postal Communication (Numbering and Addressing) Regulations, 2018 or their amendments

a)   Numbers to be assigned shall be on a 15-digit numbering range (+255 300 ZZX XXX XXX). The 15-digit range will provide enough numbers to ensure availability to meet future needs of this technology and since there will be no need to call the device, user-friendliness and recognisability of the number is not a priority.

b)   The 15-digit number is in accordance with The International Public Telecommunication Numbering Plan (ITU-T E.164 Recommendation) and shall have provisions for all subscriber facilities including but not limited to number portability, Caller Line Identification (CLI) and access to emergency services especially when there will be human interaction.

c)   The numbers shall be assigned in a block of ten million numbers to eligible applicant.

4.0 ELIGIBILITY AND NUMBERING RESOURCES ASSIGNMENT

a) Registered company or institution in Tanzania shall be eligible to be assigned these numbers when providing the services. They shall be required to have Application Services License as guided by the Electronic and Postal Communication (Licensing) Regulations, 2018 or its amendments.

b) M2M SP may obtain electronic numbers for M2M applications from the mobile operators of connectivity provider or opt to acquire an Application Service Licence to be eligible for assignment.

c) Relationship between the M2M SP and mobile operator shall be of bulk SIM connections nature.

d) In order to avoid lock-in for all use case scenarios (assignees and customers to mobile operator or connectivity provider), mobile number portability shall be allowed for these services.

5.0 SIM USAGE REQUIREMENTS

a) The SIM provisioning and usage shall be subjected to Electronic and Postal Communications (SIM Card Registration) Regulations, 2018.

b) Devices with embedded SIM (e-SIM) shall be allowed upon approval from the Authority.

c) The ownership of these M2M communications SIMs shall be with the M2M SP. Details of all customers of respective M2M services or devices i.e. location of devices with SIM, detail of the devices e.g. IMEI, ESN, corresponding physical custodian name and address and other relevant information such as IP address shall be maintained by the assignee. This requirement shall be followed when relocating, selling and transferring the device with the SIM. The assignee shall make the database available to the Authority for verification and the mobile operator providing the connectivity to the assignee.

6.0 APPLICATION OF THE GUIDELINES

a) These guidelines shall apply to M2M/IoT services where corresponding devices use numbering resources as identifiers to connect to mobile networks.

b) M2M/IoT services considered include but not limited to Automotive & transport such as car tracking, utilities such smart metering and grids, healthcare (e-health, m-health, telemedicine and assisted living), smart agriculture, smart buildings (structural health, access control and security, lighting, water, lifts, fire and smoke alarms, power and cooling systems), smart manufacturing, Security & surveillance, Environmental monitoring homes, and all other services of same nature.

c) Services mentioned in 6(b) above that have already been deployed in Tanzania before issuance of these guidelines and utilizing same MSISDN used for current mobile communication (+255 7Y XXX XXXX or +255 6Y XXX XXXX) should be migrated to this numbering plan in eight (8) months after the date of issuing these guidelines.

7.0 NUMBERING FEES

Assignees of M2M/ IoT services numbers shall pay relevant numbering fees as determined by the Authority and reviewed from time to time.

Editor's background notes on M2M communication

Machine to machine communication will impact the way we live. The deployment of internet of things (IoT) technologies is expected to connect an estimated 50 billion devices to the network by next year, according to the International Telecommunication Union (ITU).

The Union has a study group - ITU-T Study Group 20 – working on standards for machine to machine (M2M) communications.

Examples of M2M devices are home appliances like washing machines and refrigerators. A washing machine could send a message to the owners' smart phone once it finishes washing or drying.

A smart refrigerator could automatically order groceries from a networked super market once its contents are depleted. The retail outlet would then process the order.

Health care can greatly be improved through M2M communication. It is possible to introduce and use devices that can react faster than human healthcare professionals in emergencies.

Patients can be monitored in their own homes through devices connected to health centres and hospitals.

The OTT Debate

To regulate or not to regulate is the question that emerges when considering communications services being delivered over the internet, on top of telecommunications networks

By Lokila Mosso

Fifty years after the founding of the modern internet, regulators and policy makers are pondering over the status of the applications and services delivered on this technology. From Colombia to India; Uganda to Germany, a regulatory question being addressed is how to manage what is known in the industry as 'over the top', or OTT services; which are available over the internet, with features similar to traditional telecommunications services.

The International Telecommunication Union (ITU), in a recent recommendation on OTT defines the term as an application accessed and delivered over the public internet that may be a direct technical or functional substitute for traditional international telecommunications services.

OTTs are online services which can substitute traditional telecommunications services such as voice telephony and SMS. They derive their name from the fact that they run 'on top' of telecommunications networks.

OTT platforms and services include WhatsApp, Skype, Viber, Instagram, Facebook and Skype; which enable subscribers with data packages to make and receive voice calls, messages and images through internet enabled devices such as smartphones and tablets.

Services delivered online; including calls made over the internet and messages transmitted on social media are cheaper than the voice or video calls and short messages (SMS) sent via traditional telecommunications networks. WhatsApp leads as the most popular social networking application of choice, with more than 700 million users worldwide. Skype and Viber have 300 million and 210 million users respectively.

In Tanzania, users access the internet through service providers authorized by TCRA under the Converged Licensing Framework introduced in 2005; under the category of Applications Services, which refer to the provision of electronic communications services through either licensees' own facilities and networks or the procurement and reselling of services from other licensed service providers.

All the mobile phone services providers in Tanzania have application service licences; enabling them to provide data services to their subscribers. There were 43,670,674 SIM cards in the market in June 2019. These are subscriptions and do not reflect the number of mobile phone subscribers; which is lower because of multiple SIM card ownership.

Out of the 23 million internet users in Tanzania; 96 per cent access the services on mobile devices. Proportionally, most of the users are members of chat groups such as WhatsApp, and to them, this social networking platform, and others such as Instagram and Viber, is the internet.

OTT services are practical and have both social and economic benefits to users. Besides being pocket-friendly, in terms of being available at lower rates, they bring people together; through groups. They can serve as instant communication channels. They also benefit service providers through the demand for data services; hence revenue for mobile operators.

In Tanzania, mobile service providers have introduced data tariffs to suit any pocket and use, from a daily 70 MB package for 500 shillings to monthly 30GB for 95,000 shillings. Some operators have tailored WhatApp and Facebook tariffs.

Social media have also raised the social status and esteem of users; who must upgrade from feature to smart phones 'to be online'.

A random survey carried out in Kariakoo, a popular shopping part of Dar Es Salaam, showed that the demand for smartphone and internet enabled devices has increased; leading to a drop in their prices. One can acquire a quality smartphone from as low as 50,000 shillings.

Studies show that mobile phone users are abandoning the traditional SMS for WhatsApp messaging. For example, in Britain, users' preferences to WhatsApp and other OTT applications instead of texts has led to a fall in the number of SMS sent

from 89 billion in 2016 to 64 billion in 2018. It is estimated that the figure will fall to 40 billion SMS in 2020.

Although a detailed study is required to assess the situation in Tanzania, recent figures on SMS sent over mobile phone networks show that the number fell between January and June, 2019. Some 8.36 billion SMS were sent in June, 2019 compared to 8.86 in January, 2019.

There has been concerns by some network operators that social media is eating a part of their cake; that they are losing minutes and SMS to OTT platforms; while these are not regulated. They ask: where is the level playing field?

These positions have been considered by some Governments and regulators and the response has varied.

Uganda and Zambia have introduced social media taxes. Germany is considering regulating mobile instant messaging and email services. Benin, which has one of the highest data tariffs in Africa, introduced taxes on OTT in 2018 but reversed the decision after online protests, with a twitter campaign reaching 2.2 million people. (*See 'benchmarking' on page 28*).

Tanzania does not regulate social media. However, the regulator has introduced a licence category for online content services providers; specifically online televisions, and radios; online blog, simulcast televisions and radios and online forums.

Whatever form it takes, the regulation of OTT has invariably drawn criticism, led by mostly human rights activists who argue that the move would stifle freedom of expression and association. However, most countries with direct oversight policies on OTT cite economic reasons for their moves.

It is also argued that OTT applications and services have grown in variety and usage because of the absence of regulatory interventions.

The other criticism against regulating OTTs is founded on the nature of the internet; which is a global network of computers. There is a school of thought critical of local interventions that may affect the smooth flow of communication over the internet. The argument is that any local intervention will have worldwide consequences and may fragment the internet. It will also bring difficulties in regulating OTT within a country's border.

Over the top services and applications rely on bandwidth to be able to deliver data. There is a view that since the global thrust is to promote access to broadband, regulating OTT may negatively affect data use as users will be burdened by the introduced taxes.

Proponents of this line argue that it is in the best interests of mobile phone services providers on whose networks users access the internet to promote OTT as it would promote data use and demand; hence more revenue to them.

So what should be done?

ITU has approved a new recommendation addressing the relationship between network operators and providers of OTT applications.

The resolution recognizes that the mutual cooperation of OTTs and network operators could foster considerable socioeconomic benefits, in addition recognizing the need to discuss the economic implications of OTTs and related policy issues.

Countries should consider the ITU recommendation on "Collaborative framework for OTTs" – when making decisions on whether or not to regulate OTTs.

The recommendation calls for an assessment of economic, policy and consumer welfare impacts of OTT. It is further recommended that the formulation of policies on OTT should involve all stakeholders in the ICT sector.

The ITU recommendation can be accessed on https://www.itu.int/itu-t/recommendations/rec.aspx?rec=13595.

Local SMS sent through Tanzania's mobile networks: January – June, 2019		
Month	Number of subscriptions (SIM cards)	SMS sent
January	43,703,674	8,855,346,419
February	43,821,921	7,443,583,681
March	43,918,502	8,227,412,248
April	43,796,186	8,425,149,386
May	43,474,947	8,418,287,381
June	43,670,675	8,364,128,745
Source: TCRA		

Internet users in Tanzania: 2013 - 2018		
Year	Number of users	Penetration rate (percent)
2013	9,312,272	21
2014	14,217,311	29
2015	14,217,311	34
2016	19,862,525	40
2017	22,995,109	45
2018	23,142,960	43
Source: TCRA- https://tcra.go.tz/images/Tel-Com_Statistics_June_2019.xlsx.pdf. Accessed on 5/9/2019.		

Benchmarking

Benin

Benin, which has one of the highest data tariffs in Africa, introduced taxes on OTT in 2018 but reversed the decision after online protests, with a twitter campaign reaching 2.2million people. (13)

Germany

Authorities want mobile instant messaging and email service providers to be regulated to the same degree as telecommunications companies. (14)

Ghana

Ghana has said it has no intention of regulating OTT services. According to the ministry of Communication, government wants new technologies to flourish in Ghana and so cannot implement policies to regulate its operations.(15)

India

The Telecommunications Regulatory Authority of India (TRAI) has issued a consultation paper on OTT services. The discussion paper titled 'Regulatory Framework for Over The Top Communications Services' aimed at analysing and discussing "changes that may be required in the current regulatory framework to govern these entities; and the manner in which such changes should be effected". (16)

Nigeria

The position of the country's regulator – the Nigerian Communications Commission (NCC) is that any regulatory approaches should address the peculiarities of the Nigerian 'OTT' context and also ensure positive outcomes for consumers, traditional service providers, OTTs, and the federal government. (17)

Morocco

Morocco telecommunications authority has banned voice over internet protocol (VoIP) services like WhatsApp and Skype because the providers did not have a telecommunications license. (18)

Some Latin American Countries

Uruguay, Costa Rica, Colombia, Argentina and Brazil are considering legislative changes on taxing OTT services. Argentina has issued a set of principles for telecommunications regulation that create obligations for registration of Internet intermediaries. (19)

Uganda

The Ugandan Parliament passed a law that imposes a tax on the use of social media platforms in March 2018 which, among others, provides that "a telecommunication service operator providing data used for accessing over the top services is liable to account and pay excise duty on the access to over the top services. OTT services will be subject to a tax duty of 200 Ugandan shillings (126 Tanzanian shillings) per user per day of access. The two main justifications for the legislative change are leveling the playing field among service providers and to raise revenue for development programmes.(20)

Zambia

Zambia introduced a daily tariff on internet phone calls in 2018. A Government spokesman said the fee would be collected by mobile phone operators and internet providers. The move was described as " purely economic". (21)
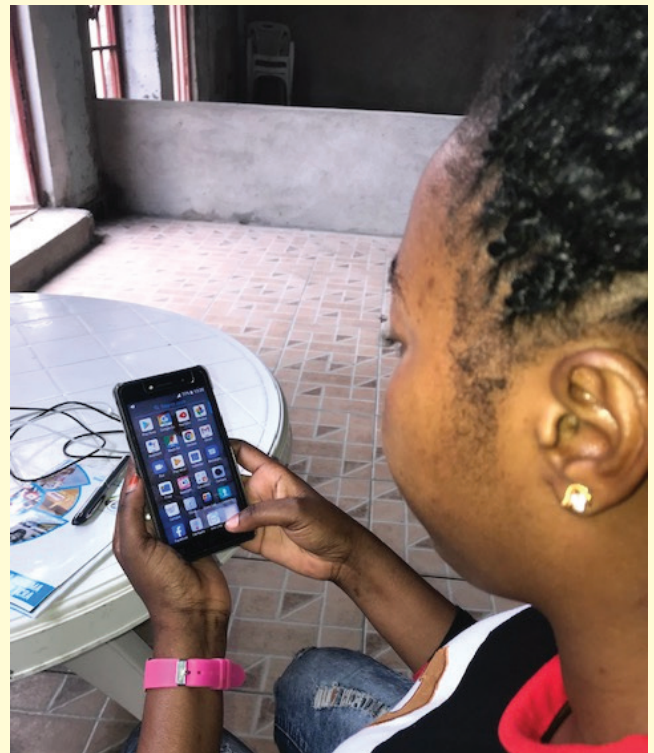
Aisha Muhunzi of Bagamoyo chats on her smart phone

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INTERNATIONAL POSTAL, ICT EVENTS CALENDAR

UNIVERSAL POSTAL UNION	9 October, 2019: World Post Day.
COMMONWEALTH TELECOMMUNICATIONS ORGANISATION	30 September - 2 October, 2019; Dhaka, Bangladesh: Commonwealth ICT and Telecommunications forum.
ITU	28 October - 22 November, 2019; Sharm El Sheikh, Egypt. World Radiocommunication Conference (WRC-19)

Guidelines and Procedures for Biometric SIM Card Registration

The Tanzania Communications Regulatory Authority has published guidelines on biometric SIM card registration; with specific procedures covering individual subscribers, companies and machines.

The guildelines cover all aspects of biometric SIM card registration and introduce uniform procedures and processes for biometric SIM Card registration. They also list the responsibilities of service providers and address fraud and consumer complaints mechanisms. Licensees are required to resolve complaints within 14 days.

SIM cards are being registered under nine (9) categories, namely for; individuals with the national identification card, machines or electronic communication equipment, company employees, companies, institutions, minors, foreigners/visitors, diplomats, and diplomatic institutions.

The guidelines are designed to ensure that all detachable SIM Cards, built-in SIM Card mobile phones or SIM enabled mobile communication equipment are properly registered and records are properly kept, and their owners are easily identified with proper identification.

Identification documents required for registration include an identification card or number issued by the National Identification Authority (NIDA); passports and letters of introduction; valid visas and company registration documents.

SIM cards for machines and other electronic communication devices are registered under the company category.

Users aged between 12 and 18 years – minors - can register SIM cards through their parents or guardians upon presentation of certified copies of adoption document or birth certificate and parents' finger prints and identity.

The registration of SIM cards is mandatory under the Electronic and Postal Communications Act (EPOCA) of 2010. The law spells out the obligations and duties of licensees and service providers on SIM card registration.

SIM card registration was introduced in Tanzania in 2009 as a TCRA Administrative Order. The current re-registration using biometrics and the national identity card is designed to enhance registration.

The Guildelines require service providers to ensure round the clock connectivity of their systems to NIDA and to the TCRA central SIM card registration database.

There were 43,670,675 SIM cards in the market in June, 2019, according to the June statistics published by TCRA; accessible on https://tcra.go.tz/images/TelCom_Statistics_June_2019.xlsx.pdf.

The guidelines are presented below.

PART I: PRELIMINARY

1. Citation and Commencement

These guidelines shall be cited as Guidelines and Procedures for Biometric SIM Card Registration.

2. Interpretation

In these Guidelines and Procedures, unless the context requires otherwise: -

"Active SIM Card" means a SIM Card that is functioning on a mobile network system.

"Authority" means the Tanzania Communications Regulatory Authority established under the Tanzania Communications Regulatory Authority Act no.12 of 2003.

"Batch of SIM Card" means a group of SIM Cards registered at the same time for electronic communications and requiring a single representative's NIDA ID with a single biometric verification excluding additional SIM Cards.

"Categories of Biometric SIM Card Registration" means Company, Diplomat, Individual, Institution, Foreigner, Minor, and Visitor categories.

"Consumer" means any person who uses electronic communications or postal product or services.

"Customer" means any person who obtains or seeks to obtain services of any kind from a person undertaking activities pursuant to the Electronic and Postal Communications (SIM Card Registration) Regulations and includes subscribers.

"Company biometric SIM Card Registration category" includes all SIM Cards registration to be used solely by a Company.

"Contract of Services" means an agreement entered into between a licensee and a customer for the provision of licensed services to the customer.

"Diplomat" means a foreigner who is in a diplomatic mission to the United Republic of Tanzania identi-

fied by valid diplomatic passport and diplomatic ID.

"Diplomatic Institution SIM Card Registration category" includes all SIM Card registration to be used solely by Diplomatic institutions.

"Diplomat SIM Card registration category" includes all SIM Card registration to be used solely by Diplomats.

"Diplomatic Institution" means a diplomatic accredited by an international organization to the United Republic of Tanzania.

"EPOCA" means Electronic and Postal Communications Act no. 3 of 2010.

"Foreigner" means a foreigner who is not a diplomat staying in the country for a period of more than six (6) months.

"Foreigner Biometric SIM Card registration category" includes all SIM Card registration to be used solely by foreigners.

"Institution" means a government or non-government institution which operates within the United Republic of Tanzania.

"Institution biometric SIM Card Registration category" includes all SIM Cards registration to be used solely by Institutions.

"Global System for Mobile Communications Association (GSMA) means an international association of GSM mobile service providers devoted to supporting, standardising, deployment and promotion of the GSM mobile telephone system.

"Guardian" means a person who has charge or control over a child or a person appointed by deed, will or order of the court vested with a duty of taking care and managing the property and rights of the child.

"Individual Biometric SIM Card registration category" includes all biometric SIM Card registration to be used solely by a customer for personal use.

"Integrated Circuit Card Identifier" means a unique serial number that is printed and stored in the SIM Card of a subscriber, and is an internationally standardised way of identifying a SIM.

"International Mobile Equipment Identity (IMEI)" means an international 15-digit identifier applied physically and logically within mobile devices, made up of unique 14 digit identifying sequence and a single 15th "check" digit.

"International Mobile Subscriber Identity (IMSI)" means a unique identification used by mobile service providers to identify a subscriber on their network.

"Licensee" means an entity licensed by the Authority to provide and facilitate provision of postal or electronic communication services, also known as an operator.

"Minor" means a person below the age of eighteen (18) years and above the age of twelve (12) years.

"Minor Biometric SIM Card Regration category" includes all biometric SIM Card registration to be used solely by minors.

"Mobile Device" means a device used for mobile service communications including devices that can only support data services in the mobile networks.

"Mobile Subscriber Integrated Services Digital Network (MSISDN)" means a number or telephone number that uniquely identifies a subscription on the service providers' network.

"RB number" means the report book number as applied to the procedures of the Tanzania Police Force which include the reference number for reported lost, stolen or damaged SIM Cards.

"Service Provider" means a licenced Telecommunications Service provider.

"Subscriber" means an individual/company/organization that has acquired/subscribes to mobile telecommunication services.

"SIM Card" means a Subscriber Identity Module, which is an independent electronically activated device designed for use in conjunction with a mobile telephone or communication device to enable the end user to communicate.

"Unresolved Dispute" means a dispute that cannot be resolved by the parties within the time provided in these rules.

"Visitor" means a foreigner who is not a diplomat and staying in the country for a period of less than six (6) months.

"Visitor biometric SIM Card Registration category" includes all SIM Cards registration to be used solely by Visitors.

3.Introduction

This document describes the guidelines and procedures governing the biometric SIM Card registration process. It covers the Consumers, Service Providers and Commercial aspects of the biometric SIM Card registration process.

4. Objectives of Biometric SIM Card Registration Guidelines

The following are the objectives of the biometric SIM Card registration guidelines: -

i. To ensure that all detachable SIM Cards, built-in SIM Card mobile phone/telephone or SIM enabled mobile communication equipment are properly registered and records are properly kept in a format specified by the Authority.

ii. To ensure that owners of all detachable SIM Cards, built-in SIM Card mobile phone/telephone or SIM enabled mobile communication equipment are easily identified with proper identifications.

iii. To enhance efforts of combatting fraud in electronic transactions and services.

iv. To ensure all service providers adopt uniform procedures and processes for biometric SIM Card registration.

PART II: RESPONSIBILITIES

5. Responsibilities

The responsibilities of the parties involved are described herein as follows: -

5.1 Responsibility of a subscriber

i. To ensure that his SIM Card is biometrically registered.

ii. To ensure that he possesses National Identification Card/National Identification Number or any other ID document/number as prescribed by the Authority before visiting the Mobile Network Operators for biometric SIM Card registration.

iii. To ensure that he verifies his status of registration by dialing *106#.

iv. To ensure that PIN number of his SIM Card is not shared with any other person.

v. To notify the service provider on change of company representative and assist the service provide to register the new representative in line with the law/regulations or this guideline.

vi. To notify the service provider on the change of user or usage for each SIM card under its possession.

vii. To report loss or theft of SIM card, built-in SIM card mobile telephone or SIM enabled mobile communication device to the Police or through the online loss report system and obtain a Loss Report within seven days of the loss or theft.

viii. To present the Loss Report to his service provider when requesting a replacement of the SIM card that has been reported lost or stolen.

ix. To surrender his damaged SIM card to service provider for replacement.

5.2 Responsibilities of the Service Providers

i. To ensure that connectivity to NIDA is working all the time.

ii. To ensure that connectivity to TCRA central SIM Card registration database is working all the time.

iii. To ensure that enough biometric SIM Card registration devices are available countrywide.

iv. To ensure that registration names and other details are kept as retrieved from the NIDA database.

v. To ensure that subscribers who are not biometrically registered are notified of the final date of registration.

vi. To deactivate all active SIM Cards that are not biometric registered after the final date of registration.

vii. To ensure customer centers, shops or agent's offices for biometric registration are available in all regions and districts.

viii. To ensure that SIM Cards are registered at the authorized customer centres, service providers' shops or agents' shops. The registration agent shall be required to accept valid national ID or valid passports with valid visa or valid passport for visa exempt visitors.

ix. To ensure that SIM Cards are deployed with default PINs and subscribers are able to change to New PINs of their choice as provided in the Electronic and Postal Communications (SIM Card Registration) Regulations 2018 and its amendments.

x. To ensure that the NIDA verified SIM Card registration details are submitted to the TCRA Central SIM Card registration database in real time.

xi. To replace a damaged SIM Card upon verification of original registration and ownership through biometric verification.

xii. To ensure surrendered damaged SIM cards are kept for a period of not less than twelve months.

PART III: GUIDELINES

6. Procedures for Registering SIM Cards used by Individuals

i. SIM Cards used by Individuals shall be registered under Individual Biometric SIM Card Registration category.

ii. The customer shall be required to present his NIDA ID and fingerprint verification for biometric SIM Card registration.

iii. The service provider shall keep records as per NIDA details.

iv. The SIM Card registered shall bear the name of the customer.

7. Procedures for Registering SIM Cards used by Machines or Electronic Communication Equipment

i. Machines and other Electronic Communication Equipment SIM Cards shall be registered under Company category.

ii. The company shall be required to present valid certified copies of Taxpayer Identification Number (TIN), Business License and Certificate of Incorporation/compliance/registration.

iii. The company representative shall present his NIDA ID and fingerprint verification once for a batch of SIM Cards for biometric registration.

iv. The service provider shall keep the details of the company and the details of company's representative.

v. The SIM Card registered shall bear the name of the company.

vi. Where machines or electronic communications equipment are owned by individuals, SIM Cards shall be registered under individual category using the individual NIDA ID and fingerprint verification once for all SIM Cards in a batch. The service provider shall keep the details of the individual and SIM Card registered names shall be the individual name.

8. Procedures for Registering SIM Cards used by Company employees

i. SIM Cards used by Company employees shall be registered under Company Biometric SIM Card Registration category.

ii. The company shall be required to present valid certified copies of Taxpayer Identification Number (TIN) Certificate, Business License and Incorporation/compliance/registration.

iii. Each employee who is entitled to use the SIM Cards shall be required to present his NIDA ID and fingerprint verification for biometric SIM Card registration.

iv. The service provider shall keep the details of the company and employees.

v. The SIM Card registered shall bear the name of the employee.

9. Procedures for registering SIM Cards used by Companies

i. SIM Cards used by Company shall be registered under Company category at customer centres, service providers' shops or agents' shops.

ii. The company shall be required to present valid certified copies of Taxpayer Identification Number (TIN) Certificate, Business License and Incorporation/compliance/registration.

iii. The company representative shall present his NIDA ID and fingerprint verification once for a batch of SIM Cards for biometric registration.

iv. The service provider shall keep the details of the company and details of company's representative

v. The SIM Card registered shall bear the name of the company.

10. Procedures for registering SIM Cards used by Institution

i. SIM Cards used by institution shall be registered under Institution category at customer centres, service providers' shops or agents' shops.

ii. The institution shall be required to present introduction letter.

iii. The representative shall be required to present his NIDA ID and fingerprint verification once for a batch of SIM Cards for biometric registration.

iv. The service provider shall keep details of the institution and of the representative.

v. The SIM Card registered names shall be the name of institution.

11. Procedures for registering SIM Cards used by minors

i. SIM Cards used by minors shall be registered under the Minor Biometric SIM Card Registration category.

ii. The parent/guardian shall be required to present minor's certified copies of adoption document or birth certificate and/or valid passport with valid visa, minor portrait photo and nationality.

iii. The parent/guardian shall be required to present his NIDA ID or valid passport with valid visa and fingerprint for verification.

iv. The service provider shall keep the details of the minor and parent/guardian.

v. The SIM Card registered shall bear the name of the minor.

vi. After attaining the majority age, the minor shall be required to re-register using his NIDA ID.

vii. Service providers shall notify the minor three (3) months before attaining the majority age and shall give a three (3) month grace period to allow the minor to reregister his SIM Card.

viii. In the event where the minor fails to appear for reregistration within the period of three months after attaining the majority age, the service provider shall deactivate the SIM card from its network.

12. Procedures for registering SIM Cards for foreigners/visitors

i. SIM Cards used by foreigners/visitors shall be registered under the foreigner/visitor Biometric SIM Card Registration category.

ii. Visitors shall be required to present copies of valid passports with valid visa and fingerprint verification for biometric SIM Card registration.

iii. Visa exempt visitors shall be required to present copies of valid passport and fingerprint verification for biometric SIM Card registration.

iv. Foreigners shall be required to present National IDs and fingerprint verification for biometric SIM Card registration.

v. The service provider shall keep the details of the visitors or foreigners as appropriate.

vi. The SIM Card registered shall bear the name of the foreigner/visitor.

13. Procedure for registering SIM Cards for diplomats

i. SIM Cards used by diplomats shall be registered under the Diplomat SIM Card Registration category.

ii. The Diplomat shall be required to present his copies of valid passport, valid diplomatic ID and the original letter of introduction from the Ministry of Foreign Affairs and EAC Cooperation.

iii. No fingerprint shall be taken during SIM Card registration.

iv. The service provider shall keep the details of the diplomat.

v. The SIM Card registered shall bear the name of the diplomat.

14. Procedure for registering SIM Cards for diplomatic Institutions

i. SIM Cards used by diplomats shall be registered under the Diplomatic Institution SIM Card Registration category.

ii. The diplomatic institution shall be required to present introduction letter and the original letter of introduction from the Ministry of Foreign Affairs and EAC Cooperation.

iii. The representative shall be required to present valid passport and valid diplomatic ID for a batch of SIM Cards for registration.

iv. No fingerprint shall be taken during SIM Card registration.

v. The service provider shall keep details of the diplomatic institution and the representative.

vi. The SIM Card registered shall bear the name of the diplomatic institution.

15. Procedure for cases with mismatch names

i. Where subscriber's names differ from NIDA ID names, the service provider shall use usage verifications on airtime recharge, voice services, data services and mobile money transactions to verify SIM Card ownership. This verification shall be done at customer centers, service providers' shops or agents' shops only.

ii. The service provider shall ask questions on usage verifications as follows:

a) Mention/Provide Five frequently dialed numbers for the past 30 days.

b) What was your last Airtime Recharge Amount?

c) What was the last Amount of data package purchased?

d) What was the last Mobile Money Transaction Amount?

e) Provide/Mention Five numbers you frequently transact on your Mobile Money Account.

iii. Upon providing correct answers for all questions, the customer shall present fingerprint for biometric verification.

iv. The service provider shall send notification on registrations detail changes through SMS within 24 hours for customer's approval.

v. Upon customer's approval, the service provider shall effect the change and keep both NIDA and previous records.

vi. After updating registration details, mobile money will be suspended for 48 hours.

16. Procedure for cases with defaced fingerprint or no fingers

i. Where the subscribers have defaced fingerprint or have no fingers, the service provider shall direct the subscriber to visit the nearest NIDA office for physical verification.

ii. NIDA shall verify if the subscriber has no fingers or has defaced fingerprint.

iii. Upon verification, NIDA shall enable multiple question verification option for that subscriber.

iv. The subscriber shall re-visit the service provider for SIM card registration.

v. The subscriber shall be required to present his NIDA ID.

vi. The service provider shall apply the multiple question option to verify the subscriber and shall ask three questions as prompted from NIDA database.

vii. Upon winning 2/3 (66%) of the questions, the verification shall be considered successful.

viii. The service provider shall be required to keep NIDA verified records.

ix. In the event where NIDA deploys other verification mechanisms, TCRA shall provide procedures for

Mobile communications services users in Kigoma. The guidelines are designed to ensure that all detachable SIM Cards, built-in SIM Card mobile phones or SIM enabled mobile communication equipment are properly registered and records are properly kept, and their owners are easily identified with proper identifications.
[Photograph by Semu Mwakyanjala]

such verification as appropriate.

17. Exceptional cases of biometric SIM card registration

i. Where a subscriber is identified to belong to a government institution or authorized agent of the government institution and requires exemptions of fingerprint verification, the service provider shall direct the subscriber to obtain approval from TCRA for the same.

ii. The subscriber shall write to TCRA to obtain approval for fingerprint exemption and shall provide details for such exception.

iii. Upon TCRA approval, the subscriber shall re-visit the service provider for SIM card registration.

iv. The service provider shall register SIM cards as per TCRA approval at customer centres, service providers' shops or agents' shops only.

PART IV: CHARGES

18. Costs and Charges

Mobile service providers shall not charge their customers during biometric SIM Card re-registration.

PART V: CUSTOMER COMPLAINTS

19. Customer Complaints

i. Complaints specifically related to the biometric SIM Card registration shall be directed to, and be dealt with, by the mobile service provider who is serving or has registered the complaining customers using their normal internal processes.

ii. If the complaint cannot be resolved between the subscriber and mobile service provider, then the complaint shall be escalated to the Authority within 14 working days from the date it could not be resolved by the parties for further determination.

iii. Complaints received by the Authority shall be passed to the relevant mobile service provider or NIDA where appropriate. Complaints that are not in relation to a particular mobile service provider or NIDA, but are made in relation to the biometric SIM Card registration, shall be dealt with by the Authority where this is possible and/or appropriate.

iv. In the case where a complaint cannot be resolved to the satisfaction of the Complainant, it is the responsibility of the mobile service provider to whom the complaint is addressed to inform the Complainant of their rights in relation to appeals and/or escalations.

PART VI: FRAUD PREVENTION

20. Fraud Prevention

i. All mobile service providers shall agree to cooperate in good faith to prevent, whenever possible, instances of fraudulent or unauthorised activities during biometric SIM Card registration.

ii. If instances of fraud are detected, then the mobile service providers will endeavour to cooperate to identify and pursue action against the perpetrators of the fraud.

iii. All cooperative activities will be conducted accepting the prevailing data protection and privacy laws applicable to the situation, and any other company or business laws which may be appropriate.

iv. In any fraudulent activity associated with biometric registration of which the service provider failed to identify the perpetrators of fraud, the service provider shall compensate the victim with any material loss suffered.

v. In the event where the National ID is identified involved in fraudulent activities, the National ID shall be flagged to NIDA for 90 days to prevent its further use on fraudulent activities.

TCRA's Annastella Mchomvu at a stakeholders' education event. The Authority has intensified its campaign to raise consumer awareness on their obligations relating to SIM card registration.

Hili ni toleo la Kiswahili la jarida la The Regulator, linalotolewa mara nne kwa mwaka na Mamlaka ya Mawasiliano Tanzania (TCRA), taasisi ya serikali inayosimamia mawasiliano ya kielektroniki na posta nchini. Sekta ya mawasiliano inajumuisha simu, intaneti, mtandao wa kompyuta na kadhalika, huduma za Posta na usafirishaji wa vipeto katika Jamhuri ya Muungano wa Tanzania na pamoja huduma za utangazaji (kama vile redio na televisheni) kwa Tanzania Bara tu. Zanzibar ina Tume inayosimamia utangazaji. Kazi za TCRA zimefafanuliwa kwenye Sheria ya 2003 iliyoiunda Mamlaka na pia kwenye Sheria ya Mawasiliano ya Kielektroniki na Posta EPOCA) ya 2010. Jarida hili ni sehemu ya Mamlaka ya kutekeleza majukumu yake. Huduma za shitariki zinapatikana kupitia kwa Mhariri, barua pepe: regulator.magazine@tcra.go.tz. Nakala za nyuma zinapatikana kwenye tovuti ya Mamlaka, ambayo ni: www.tcra.go.tz. Nenda ' Publications and Statistics; halafu shuka hadi 'The Regulator'.

BARUA YA MHARIRI

Sehemu ya Kiingereza ya toleo hili ina ripoti maalum kuhusu vikao na Mkutano Mkuu wa EACO; taasisi inayounganisha wadau wa mawasiliano Afrika Mashariki, vilivyofanyika Mwanza Julai, 2019.

EACO ilianzishwa 2012 kama chombo cha wadau cha kujadili namna ya kuharakisha maendeleo katika sekta ya mawasiliano Afrika Mashariki.

Vile vile kuna taarifa kuhusu namna ambavyo Tanzania inajizatiti kushughulikia masuala ya usalama wa mifumo ya mawasiliano iliyounganishwa kwenye mtandao wa kompyuta ulimwenguni; yaani intaneti.

Taarifa hiyo, iliyotolewa na Shirika la Mawasiliano Ulimwenguni (ITU) inasema Tanzania imepanda ngazi sita kutoka ya 12 mwaka 2017 hadi kuwa ya sita mwaka 2018 kwa bara la Afrika. Vilevile imekuwa ya tatu kwa nchi za Jumuia ya Afrika Mashariki (EAC) na Jumuia ya Maendeleo Kusini mwa Afrika (SADC).

Taarifa nyingine humu inahusu mjadala unaoendelea hivi sasa kuhusu huduma za mawasiliano zinazopitia mfumo wa intaneti, kama vile WhatsApp, na iwapo kuna haja ya kuzisimamia kama ilivyo kwa hudumaza kawaida zinazowezesha maongezi na kutuma meseji kwa simu za mkononi.

Kama ambavyo tunawaelimisha wananchi kwa ujumla na watumiaji wa huduma na bidhaa za mawasiliano, tekinolojia ya habari na mawasiliano (TEHAMA) imepiga hatua kubwa. Tekinolojia inawezesha vifaa tunavyotumia kila siku katika maisha yetu kuwasiliana vyenyewe kwa vyenyewe, bila kushirikisha mtu. Katika haki hii, inabidi vifaa viwe na 'namba' za mawasiliano, kama ilivyo kwa waatumiaji wa kawaida wa huduma za mawasiliano.

Mamlaka ya Mawasiliano Tanzania imetoa mwongozo kuhusu namba za mawasiliano baina ya vifaa.

Toleo hili pia lina takwimu za mawasiliano za robo ya mwaka ya Aprili/Juni 2019, ambazo zinaonyesha kuwa akaunti za pesa mtandaoni zimeongezeka hadi kufikia milioni 23 mwezi Juni..

Taarifa nyingine zinahusu namna TCRA inavyotoa huduma kwa miradi ya kitaifa ya kimkakati.

YALIYOMO

Raslimali za mawasiliano kwa miradi ya Taifa ya kimkakati

KATIKA kufanya kazi zake, TCRA inazingatia matakwa ya kifungu cha tano (5) cha Sheria ya Mamlaka ya Mawasiliano Tanzania ambacho kinaitaka Mamlaka kujitahidi kuendeleza ustawi wa jamii ya Watanzania.

Kupitia majukumu na kazi zake, TCRA inashirikiana na wadau na washiriki wengine ili kufanikisha utekelezaji wa miradi ya kimkakati ya taifa, yenye lengo la kuongeza kasi ya maendeleo Tanzania.

Robo hii ya mwaka, kipindi cha Julai hadi Septemba, kimeshuhudia hatua zikiendelea kupigwa katika utekelezaji wa miradi mbalimbali, ikiwa ni pamoja na kukamilika kwa upanuzi wa Uwanja wa Ndege wa Kimaiata wa Julius Nyerere Dar Es Salaam, kuanza mradi wa kuzalisha umeme wa Rufiji na hatua zaidi katika ujenzi wa reli ya viwango vya kisasa, yaani mradi wa SGR.

TCRA inasimamia masafa ya mawasiliano ambayo yatatumika katika miradi hii. Kwa upande wa SGR, Mamlaka itafanikisha upatikanaji wa masafa ya mawasiliano yanayotumika kwenye mitandao ya reli za kisasa, yaani GSM-R.

Ni jambo la kufurahisha kwamba mawasiliano ya simu yanapatikana katika sehemu nyingi nchini; ikiwemo kwenye eneo la ujenzi wa mradi wa kuzalisha umeme Rufiji. Mamlaka imeagiza watoa huduma kuweka miundombinu itakayowezesha upatikanaji wa mawasiliano ya kasi zaidi.

Uongozi wa Mamlaka, yaani Bodi ya Wakurugenzi na menejimenti, na Wajumbe wa Kamati ya Maudhui ya TCRA wamepata fursa ya kutembelea miradi hii, kama sehemu ya kuonyesha namna Mamlaka inavyofungamana nayo na pia kuona jinsi itakavyotekeleza majukumu yake katika kuifanikisha.

Kwa upande wa mchango wa TCRA na ule wa Tanzania kwa ujumla kimataifa, robo hii ya mwaka imeshuhudia kufanyika kwa mkutano wa Wakuu wa nchi na Serikali wa Jumuia ya Maendeleo Kusini mwa Afrika (SADC) Dar Es Salaam mwezi Agosti kwa mafanikio makubwa.

Tunampongeza Mheshimiwa Rais wa Jamhuri ya Muungano wa Tanzania, Mh. Dr. John Pombe Magufuli kwa kuchaguliwa kuwa Mwenyekiti wa SADC, Jumuia ambayo ina chombo cha kitaalamu kinachosimamia mawasiliano.

TCRA ni mwanachama, na pia mwenyekiti wa chombo hicho, kinachoitwa Umoja wa Taasisi za Usimamizi wa Mawasiliano Kusini mwa Afrika; yaani Communications Regulators Association of Southern Africa, kwa kifupi CRASA.

Pamoja na kuwa mwenyekiti wa CRASA, TCRA ilikabidhiwa pia uenyekiti wa Umoja wa Mawasiliano Afrika Mashariki (EACO) kwenye mkutano wake uliofanyika Mwanza Julai mwaka huu.

Wajumbe wa Bodi ya Wakurugenzi ya Mamlaka ya Mawasiliano Tanzania, na wa Kamati ya Maudhui ya TCRA walipotembelea mradi wa kuzalisha umeme, Rufiji. Akizungumza baada ya kupata maelezo ya mradi, Mwenyekiti wa Bodi ya TCRA, Dr. Jones Killimbe aliwataka Watanzania kujipongeza kwa namna ambavyo miradi ya kimkakati inatekelezwa nchini, na wajiandae kufaidi maendeleo yatakayotokana na miradi hiyo. Mkurugenzi Mkuu wa Mamlaka, Mhandisi James M. Kilaba alisema mawasiliano ya uhakika yatachangia katika kufanikisha shughuli za mradi huo mkubwa. **PICHA NDOGO:** *Mjumbe wa Bodi, Dr. Jabiri Kuwe Bakari akiwasiliana kwa simu kutoka eneo la mradi.*

Wajumbe wa Bodi ya Wakurugenzi ya Mamlaka ya Mawasiliano Tanzania, na wa Kamati ya Maudhui ya TCRA walipotembelea miradi ya kitaifa kimkakati hivi karibuni.

JUU: *Viongozi hao wakiwa mbele ya sehemu ya kuondokea wasafiri kwenye jengo la tatu la Uwanja wa Ndege wa Kimataifa wa Julius Nyerere, Dar Es Salaam.*

KULIA: *Wakiwa ndani ya jengo hilo.*

CHINI: *Wakipewa maelezo kwenye maktaba ya kisasa ya Chuo Kikuu cha Dar Es Salaam; ambapo Mkurugenzi Mkuu wa Mamlaka, Mhandisi James M. Kilaba alikabidhi baadhi ya machapisho ya TCRA kwa ajili ya matumizi kwenye maktaba hiyo.*

Akaunti pesa mtandaoni zafikia milioni 23

Akaunti za pesa mtandao sasa zimefikia milioni 23, hali inayoonyesha kuenea kwa huduma za kifedha miongoni mwa Watanzania.

Takwimu hizo zinaonyesha kwamba akaunti za pesa mtandao zimeongezeka na kufikia milioni 23 Juni mwaka huu kutoka milioni 22.75 Aprili. Huduma ya pesa mtandao zinatolewa na mitandao sita kati ya saba inayotoa huduma za simu za mkononi.

Takwimu za mawasiliano zinatolewa kila robo ya mwaka. Kwa mujibu wa takwimu za Aprili - Juni, idadi ya meseji fupi zilizotumwa kwa simu za mkononi zimepungua kutoka bilioni 8.42 Aprili hadi bilioni 8.36 mwezi Juni.

Matumizi ya mitandao ya kijamiii inayotumia intaneti, kama vile WhatsApp ni mojawapo ya sababu za kupungua huku.

Hata hivyo, takwimu zinaonyesha kwamba meseji zinazotumwa kwenye mitandao mingine na zinazokwenda nje ya nchi zimeongezeka katika kipindi hicho.

Laini za simu zilizo sokoni zimefikia 43,670,675. Simu zilizounganishwa mezani zimeongezeka kutoka 78,147 mpaka 78,411.

Takwimu zinaonyesha kwamba laini za simu zimeongezeka kwa asilimia 37 kati ya 2013 na 2018; kutoka 27,442,823 hadi 43,497,261 katika kipindi hicho.

Watumiaji wa intaneti wameongezeka zaidi ya maradufu, kwa asilimia 60: kutoka 9,312,272 mwaka 2013 hadi 23,142,960 mwaka 2018.

Wateja waliojisajili kutumia huduma za pesa mtandao (akaunti za pesa mtandao)

Mtoa huduma	Airtel Money	Halopesa	Smile	Tigo Pesa	TTCL	M - Pesa	Ezy Pesa	JUMLA
APRIL	4,075,194	1,411,575	0	7,333,609	412,867	9,116,235	406,879	22,756,359
MAY	4,118,718	1,497,971	0	7,237,538	437,793	9,153,881	397,736	22,843,637
JUNE	4,191,540	1,568,845	0	6,973,665	468,701	9,378,738	376,026	22,957,515

Huduma ya ujumbe mfupi kwa simu ya mkononi (SMS)

SMS za ndani na za kimataifa

Muelekeo	APRILI	MEI	JUNI	JUMLA
SMS za ndani kwenda mtandao wa mtumaji	4,407,394,103	4,384,190,731	4,287,046,513	13,078,631,347
SMS za ndani kwenda mtandao mwingine	4,017,390,512	4,033,624,914	4,076,493,780	12,127,509,206
SMS za kimataifa	364,771	471,736.0	588,452.0	1,424,959
JUMLA	**8,425,149,386**	**8,418,287,381**	**8,364,128,745**	**25,207,565,512**

Laini za simu za mkononi

Mwaka	2013	2014	2015	2016	2017	2018
	27,442,823	34,108,851	39,665,600	40,044,186	39,953,860	43,497,261

Watumiaji wa intaneti

Aina ya huduma	2013	2014	2015	2016	2017	2018
Kupitia simu za mezani bila waya	1,056,940	1,913,082	662,882	1,218,693	3,468,188	135,954
Kupitia simu na vifaa vya mkononi bila waya	7,493,823	11,320,031	16,280,943	18,014,358	19,006,223	22,281,727
Kupitia simu za mezani za waya	761,508	984,198	319,698	629,474	520,698	725,279
Jumla	9,312,272	14,217,311	17,263,523	19,862,525	22,995,109	23,142,960

TCRA yatuzwa maonyesho Nane Nane

MAMLAKA ya Mawasiliano Tanzania, ambayo inashiriki maonyesho ya Siku ya Wakulima inayoadhimishwa kila mwaka tarehe 8 Agosti imetwaa zawadi kadhaa kwa weledi kwenye maonyesho ya mwaka huu.

Wakati wa maonyesho, TCRA inatoa elimu kwa wadau kuhusu masuala mbalimbali yakiwemo kuhusu kazi, majukumu na shughuli za Mamlaka; haki na wajibu wa watumiaji na namna ya kuwasilisha malalamiko kuhusu huduma za mawasiliano mtumiaji alizolipia.

Elimu kwa watumiaji ni sehemu muhimu ya mfumo imara wa kulinda watumiaji wa huduma na bidhaa za mawasiliano. Njia nyingine ni kusimamia kanuni zinazotolewa chini ya sheria husika.

TCRA, ambayo makao makuu yake ni Dar Es Salaam ina ofisi Zanzibar na kwenye kanda ya Kati (Dodoma), Kaskazini (Arusha), Nyanda za Juu Kusini (Mbeya), Ziwa Victoria (Mwanza) na Mashariki (Dar Es Salaam).

Waziri Mkuu, Mh. Kassim Majaliwa akimkabidhi kombe la ushindi Meneja wa Kanda ya Ziwa, Mhandisi Francis Mihayo kwenye kilele cha maonyesho ya Nane Nane mwaka huu yaliyofanyika kitaifa Bariadi, mkoani Simiyu.

KULIA: *Mkuu wa Mkoa wa Singida, Mh. Dr. Rehema Nchimbi akikabidhi cheti cha ushindi kwa Meneja wa Kanda ya Kati, Antonio Manyanda mjini Dodoma. Wa pili kulia ni Mkuu wa Mkoa wa Dodoma, Dr. Binillith Mahenge.*

CHINI: *Watumishi wa kanda ya Kaskazini wakiwa na kombe la ushindi na cheti baada ya kuibuka kidedea kwenye maonyesho ya Nane Nane, Arusha.*

Mwongozo wa Postikodi Tanzania

TAMKO LA WAZIRI WA UJENZI, UCHUKUZI NA MAWASILIANO

SERIKALI inatekeleza Mpango wa Anwani za Makazi na Postikodi ikiwa ni utekelezaji wa Sera ya Taifa ya Posta ya mwaka 2003 inayoelekeza kuwepo kwa Anwani za Kitaifa zitakazowezesha ufikishaji wa barua, nyaraka, vifurushi na vipeto majumbani na katika ofisi mbalimbali. Aidha, nchi wanachama wa Umoja wa Posta Duniani (Universal Postal Union - UPU) katika Mkutano Mkuu uliofanyika Doha, Qatar mwaka 2012 walikubaliana kuanzisha mfumo bora utakaofikisha barua, nyaraka, vifurushi na vipeto kwa wahusika.

Azma, ama lengo la Serikali ni kuhakikisha kuwa kunakuwepo na anwani za kitaifa ambazo zitaainisha makazi na mahali pa kazi au biashara. Mfumo wa Anwani za Makazi na Postikodi utawezesha kufikiwa kwa lengo la Serikali la kuwa na anwani mahususi za Kitaifa kwa ajili ya kufikisha huduma mbalimbali za uchumi, jamii na biashara kwa walengwa. Matumizi ya Anwani za Makazi na Postikodi siyo tu kufikisha barua, nyaraka, vifurushi na vipeto majumbani pekee, bali pia yataboresha upatikanaji wa haraka wa huduma mbalimbali kwa jamii kama vile huduma za afya, ulinzi na usalama, elimu, sensa na uokoaji.

Anwani za Makazi ni mfumo unaojumuisha matumizi ya majina ya barabara, mitaa, majengo, namba za nyumba pamoja na postikodi ili kutoa kielelezo cha anwani kamili ya makazi. Aidha, postikodi ni utaalamu unaotumia namba za kiposta kugawa maeneo ya nchi na inapotumiwa katika anwani huonesha eneo sahihi anapoishi mwenye anwani ya makazi. Bila kuwepo Postikodi ufikishaji wa huduma majumbani hauwezi kufanyika kwa ufanisi.

Mwongozo huu wa postikodi una lengo la kuelekeza namna ambavyo Serikali na wadau wote wa sekta ya posta watatimiza wajibu wao katika ugawaji na utumiaji wa postikodi kwa kuzingatia sheria, kanuni na taratibu zilizopo. Aidha, Mwongozo unaelekeza namna ambavyo taarifa mbalimbali zitakavyotunzwa katika mfumo wa kompyuta. Lengo lingine la Mwongozo huu ni kuwa na mfumo sahili wa postikodi ulio katika muundo rahisi kutumika na ulio endelevu.

Serikali inasisitiza kuwa ni vyema taasisi zote za umma na zile za binafsi zianze kutumia postikodi ili kuchochea kasi ya maendeleo ya nchi.

Aidha, wadau wote wa mpango huu ikiwa ni pamoja na Wizara zinazohusika na utekelezaji, watoaji na watumiaji wa huduma za posta, waendelezaji wa makazi nchini na wananchi wanahimizwa kushirikiana kikamilifu katika utekelezaji wa Mpango wa Anwani za Makazi na Postikodi.

Ni rai yangu kuwa kila mdau atatimiza wajibu wake katika kugawa, kuendeleza, kulinda miundombinu na kutumia ipasavyo postikodi kwa lengo la kuimarisha na kuchochea maendeleo ya nchi yetu.

TAMKO LA KATIBU MKUU, WIZARA YA UJENZI, UCHUKUZI NA MAWASILIANO (MAWASILIANO)

NCHINI Tanzania anwani ya mtu yeyote inakuwa na jina lake, namba ya sanduku la barua au posta (S. L. P.) na jina la Mji, Wilaya au Mkoa ilipo Posta. Wale wasio na masanduku ya barua hulazimika kuwa na makubaliano na aliye na sanduku la barua ambapo anwani ya mpokeaji itaonesha jina lake, kupitia kwa (c/o - care of) ikiambatana na jina la mwenye sanduku, anwani ya mwenye sanduku la barua, Mji/Wilaya na Mkoa. Aidha, kwa kuwa nchini kuna masanduku takribani 173,000 ya barua watu wengi hutumia anwani za sehemu za kazi, kuabudu na taasisi za elimu. Katika kutekeleza Sera ya Taifa ya Posta ya mwaka 2003, Tanzania imeanzisha utaratibu mpya wa anwani ambao pia utaboresha mfumo wa sanduku la barua kwa kuonesha mahali anapoishi mwenye anwani.

Postikodi ni mfumo maalum wa alama, tarakimu au herufi inayotambulisha eneo mtu anapoishi. Postikodi ikitumika katika anwani ya barua au kifurushi

inawezesha barua au kifurushi kuchambuliwa kwa haraka na kufikishwa eneo ambapo mwenye anwani anaishi. Hii inaongeza tija ya matumizi ya rasilimali muda na fedha kwa mtumiaji ambaye kwa sasa hulazimika kusafiri kwenda posta hata wakati mwingine asikute chochote kwenye sanduku la barua.

Duniani kuna mifumo miwili maarufu ya postikodi; wa kwanza ni ule wa kutumia tarakimu (numeric) na wa pili ni wa kuchanganya herufi na tarakimu (alpha-numeric). Mfumo wa postikodi unaotumika nchini Tanzania ni wa tarakimu tano, ambapo kila tarakimu inaelezea eneo fulani la nchi kama inavyooneshwa katika Mwongozo huu. Kwa kutumia mfumo huu hata kama miji au vitongoji katika Jamhuri ya Muungano wa Tanzania vinafanana kwa majina itakuwa ni rahisi kuitofautisha kwa kutumia postikodi.

Mwongozo huu unaeleza kwa undani mfumo wa postikodi kwa matumizi ya posta, serikali, biashara na kwa watu binafsi. Faida za matumizi ya mfumo wa postikodi ni nyingi kulingana na mahitaji kama vile kuandika anwani katika barua, vipeto na vifurushi au katika shughuli za serikali, biashara, ulinzi na usalama na huduma nyingine za jamii.

Wizara ya Ujenzi, Uchukuzi na Mawasiliano kwa kushirikiana na wadau wengine ilifanya utafiti wa kitaalamu na kuunda mfumo wa Postikodi nchini. Ninatoa shukrani kwa taasisi zote zilizoshiriki katika kazi hii. Ninaomba kutoa wito wa dhati kwa wadau wote kutumia fursa inayotolewa na Mfumo wa Postikodi ili kuendeleza shughuli zao za kiuchumi na kijamii kwa ufanisi.

1. DHANA NA MADHUMUNI YA POSTIKODI

1.1 Dhana ya Postikodi

Postikodi ni utaalamu wa kiposta wa kutumia tarakimu au mchanganyiko wa tarakimu na herufi ili kutambulisha eneo kitu au mtu alipo. Kimsingi postikodi ni kitambulisho kwenye anwani ya makazi na kinapotumika humtambulisha mtu au kitu kwa usahihi zaidi. Aidha, inarahisisha kutambua eneo anapoishi mtu au kitu kilipo kwa usahihi. Kwa kazi za posta inarahisisha uchambuaji, usambazaji na ufikishaji wa barua, nyaraka, vipeto, vifurushi na mizigo kwa ufanisi. Mfumo huu unaweza kutumika kutoa huduma nyingine kwa madhumuni mbalimbali, kama vile huduma za uokozi, ulinzi na usalama, sensa, afya na ukusanyaji wa kodi. Postikodi inaweza kuwa ya tarakimu (numeric) au mchanganyiko wa tarakimu na herufi (alpha numeric). Tanzania imechagua kutumia mfumo wa postikodi wa tarakimu.

1.2 Madhumuni ya Mwongozo

Madhumuni ya Mwongozo huu ni kutoa maelekezo sahihi kuhusu namna ya kuunda, kutunza, kusimamia, kugawa na kutumia postikodi nchini. Pia kutoa tafsiri na dhana ya postikodi na umuhimu wake katika mawasiliano ya posta na huduma za kiuchumi na kijamii ili kupata manufaa makubwa kama Taifa.

Aidha, Mwongozo huu unabainisha na kuainisha majukumu ya wadau ikiwa ni pamoja na utunzaji wa taarifa za postikodi kwa kuzingatia sheria, kanuni na taratibu zilizopo.

Mwongozo huu utatumika sambamba na Mwongozo wa Anwani za Makazi ambao umetolewa na Wizara yenye dhamana na Tawala za Mikoa na Serikali za Mitaa.

1.3 Wadau wa Postikodi

Mwongozo huu utatumiwa na wadau wote ambao watakuwa na majukumu ya kufanya katika kuunda, kugawa, kutumia na kutunza postikodi. Aidha, wadau wafuatao watakuwa na majukumu mahususi ya kufanya kama ifuatavyo:-

i. Wizara zenye Dhamana na Mawasiliano katika Serikali ya Jamhuri ya Muungano wa Tanzania na Serikali ya Mapinduzi Zanzibar:

Wizara zenye dhamana na Mawasiliano zitakuwa wamiliki na wasimamizi wakuu wa utekelezaji wa Mwongozo huu. Aidha, Wizara hizi zitakuwa na wajibu wa kuratibu na kuainisha majukumu ya wadau wengine katika kuhakikisha kuwa Mwongozo huu unatekelezwa ipasavyo na mfumo wa Postikodi unafanya kazi kama ilivyopangwa.

ii. Wizara zenye Dhamana na Serikali za Mitaa katika Serikali ya Jamhuri ya Muungano wa Tanzania na Serikali ya Mapinduzi Zanzibar:

Wizara hizi zitasimamia Mamlaka za Serikali za Mitaa katika kuweka majina ya mitaa, kuweka namba za nyumba, kukusanya takwimu mbalimbali na kutoa ramani zinazoonesha maeneo na mipaka ya kiutawala kulingana na sheria, kanuni na taratibu zilizopo.

iii. Wizara zenye Dhamana na Ardhi, Nyumba na Maendeleo ya Makazi katika Serikali ya Jamhuri ya Muungano wa Tanzania na Serikali ya Mapinduzi Zanzibar

Wizara hizi zitawezesha upatikanaji wa ramani za mipaka ya kiutawala za Mikoa, Wilaya, Kata, wadi, kijiji na shehia. Vilevile zitaelimisha wataalamu wake kuhusu mfumo wa Anwani za Makazi na postikodi.

iv. Mamlaka ya Mawasiliano Tanzania:
Mamlaka ya Mawasiliano Tanzania itakusanya taarifa, itatunza na kusambaza orodha ya postikodi. Pia itaweka taratibu za uundaji wa postikodi ili kutumika sambamba na mwongozo huu. Aidha, itakuwa na jukumu la kutunza hifadhi-data ya postikodi katika mfumo wa kompyuta pamoja na kutekeleza majukumu mengine kulingana na Sheria, Kanuni na maelekezo ya Mwongozo huu.

v. Shirika la Posta Tanzania:
Shirika la Posta Tanzania litakuwa na wajibu wa kufikisha huduma za posta kwa haraka na usahihi kwa kutumia miundombinu ya postikodi. Shirika litahamasisha matumizi ya anwani zinazojumuisha postikodi. Pia litaboresha taratibu za Posta yaani 'Postal Rules' ili kuongeza ufanisi na kuendana na mabadiliko yanayotokana na matumizi ya Postikodi.

Shirika la Posta Tanzania lina wajibu wa kuunda na kugawa anwani kwa makazi na maeneo baada ya kukamilishwa kwa taratibu zinazohitajika. Kila mtu aliyekamilisha taratibu hizo atapeleka nyaraka zinazohitajika katika ofisi ya Posta ili apewe anwani. Ofisi ya Posta katika eneo husika itaunda Kitengo cha Usimamizi wa Anwani ambacho kitaunganishwa na Mamlaka za Serikali za Mitaa na hatimaye itaunganishwa na Sekretarieti ya Taifa ya Anwani za Makazi.

vi. Watumiaji wa Postikodi
Watumiaji wa Postikodi watatumia mfumo huu katika kutoa na kupokea huduma mbalimbali za kijamii, kiuchumi na kiposta. Pia watumiaji watawajibika kutunza miundombinu yote ya postikodi.

2. MSINGI WA POSTIKODI

2.1 Sera, Sheria na Kanuni
Sera ya Posta ya mwaka 2003 imeelekeza kuundwa kwa mfumo wa anwani za kitaifa unaohusisha majina ya barabara au mitaa na majina ya majengo kwa lengo la kufikisha majumbani vitu vinavyotumwa kwa njia ya posta. Postikodi ni mojawapo ya hitaji muhimu katika uundaji wa anwani za kitaifa kwani ikitumika hutambulisha eneo la usambazaji. Vilevile Sheria ya Mawasiliano ya Elektroniki na Posta (EPOCA) ya mwaka 2010 pamoja na Kanuni za Posta za mwaka 2011 zinaelekeza jinsi Anwani za Makazi na Postikodi zitakavyosimamiwa.

2.2 Mfumo wa Uundaji wa Postikodi
Zipo aina mbili za mifumo ya Postikodi duniani, ambazo ni; mfumo wa postikodi unaochanganya herufi na tarakimu; mfano, EK1P8QY na ule unaotumia tarakimu pekee mfano, 23116. Mfumo wa postikodi unaotumika nchini ni ule wa tarakimu pekee ambao ni rahisi kutumika. EK1P8QY ni mfumo unaochanganya herufi na tarakimu wakati 23116 ni mfumo wa tarakimu pekee

Katika nchi nyingine postikodi hujulikana kwa lugha ya Kiingereza kama Zip Code au Postal Index Number (PIN) Code au Postal Code. Kwa Tanzania inajulikana kama Postcode kwa Kiingereza au Postikodi kwa Kiswahili na mfumo wake ni wa tarakimu tano.

Ili kurahisisha utambuzi wa maeneo kwa kutumia postikodi, Tanzania imegawanywa katika maeneo au kanda sita kwa upande wa Tanzania bara ambayo kila kanda itatambuliwa kwa nambari 1 hadi 6. Kwa upande wa Zanzibar nambari 7 itatumika kutambulisha eneo lake. Nambari hizi hutumika kama tarakimu ya kwanza ya postikodi.

2.3 Taratibu za Uundaji wa Postikodi
Taratibu za uundaji wa postikodi (postcode allocation rules) nchini zitatolewa rasmi na Mamlaka ya Mawasiliano Tanzania ili kutumika sambamba na Mwongozo huu. Aidha, masuala yatakayozingatiwa ni aina na mgawanyo wa Postikodi. Aina za Postikodi zitakazowekwa ni za makundi yafuatayo: Postikodi ya maeneo (Kata na Wadi),

Ofisi za Posta, Vivutio Maalum (Landmarks), Postikodi ya Serikali na watumiaji wakubwa wa Posta (Big Mailers). Vilevile, mfumo wa postikodi utakuwa ni wa tarakimu tano ambapo: tarakimu ya kwanza inawakilisha eneo au kanda, tarakimu mbili za mwanzo zinawakilisha Mkoa katika eneo, tarakimu tatu za mwanzo zinawakilisha Wilaya katika Mkoa na tarakimu zote tano zinawakilisha Kata au Wadi.

2.4 Uendelezaji wa Postikodi
Wadau wote wana wajibu wa kuendeleza Postikodi nchini kwa kutenga kiasi cha fedha katika bajeti zao. Pia, wadau na watu binafsi yakiwemo maeneo ya biashara watakaohitaji postikodi kwa matumizi binafsi au biashara watachangia gharama za huduma watakayohitaji. Mfano, kampuni ikitaka kupewa postikodi kwa ajili ya kuboresha biashara yake itachangia gharama za postikodi itakayotolewa.

Watumiaji wa kawaida wa Mfumo wa Postikodi hawatatozwa gharama yoyote isipokuwa kwa mahitaji yafuatayo:-
i. Maombi maalumu ya postikodi kwa matumizi binafsi;
ii. Maombi ya orodha ya postikodi kwa ajili ya shughuli za utafiti, biashara na elimu; na
iii. Kuunganishwa katika hifadhi–data ya postikodi kwa ajili ya kupata orodha inayohakikiwa kila

wakati.

3. MANUFAA YA MATUMIZI YA POSTIKODI

Mfumo wa postikodi una manufaa mbalimbali kwa Serikali, watoa huduma za posta, wafanyabiashara, jamii na taasisi zisizo za kiserikali; manufaa haya ni ya kijamii, kiuchumi na kisiasa kwa maendeleo ya taifa.

3.1 Manufaa kwa Serikali

i. Ni msingi wa kutoa utambulisho wa eneo maalumu kama Kata au Wadi;

ii. Inaongeza ufanisi katika utoaji wa huduma katika makazi ya watu;

iii. Inaongeza tija kwenye huduma za uokoaji na maafa;

iv. Inawezesha ukusanyaji wa kodi mbalimbali kwa urahisi na kwa wakati;

v. Ni chanzo cha mapato yatokanayo na maombi ya orodha ya postikodi kwa ajili ya shughuli za utafiti na biashara;

vi. Inaongeza kasi ya kupambana na uhalifu, kuimarisha shughuli za uhamiaji, utalii, ulinzi na usalama.

3.2 Manufaa kwa watoa huduma za posta

i. Inarahisisha uchambuaji wa barua na vifurushi kuwa wa haraka na ufanisi zaidi;

ii. Inaongeza ufanisi katika usafirishaji na usambazaji wa barua na vifurushi;

iii. Inawezesha utambuzi wa anwani kuwa rahisi zaidi;

iv. Inaongeza ufanisi katika kushughulikia malalamiko ya wateja;

v. Inapunguza uwezekano wa barua na vifurushi kupotea; na

vi. Ni chanzo cha mapato yatokanayo na kuunganishwa na Hifadhi–Data ya Postikodi.

3.3 Manufaa kwa Jamii

i. Inawezesha biashara mtandao na upatikanaji wa huduma nyingine za kijamii kama vile za afya na usalama;

ii. Kutambua eneo kirahisi na kufahamu mahali alipo mtu au kitu hivyo kupunguza muda na gharama za usafiri; na

iii. Kurahisisha upatikanaji wa takwimu kwa ajili ya kufanya tafiti mbalimbali za maendeleo ya kijamii.

3.4 Manufaa kwa Biashara

i. Kuboresha utafiti wa maendeleo ya biashara;

ii. Kurahisisha upatikanaji wa takwimu kwa ajili ya kufanya tafiti mbalimbali za maendeleo ya kibiashara;

iii. Kupata anwani za kuaminika za wateja;

iv. Kuwezesha kutoa mikopo na kukusanya madeni kirahisi hasa kwa mabenki, taasisi na asasi nyingine za kifedha ;

v. Inawezesha uendeshaji biashara kwa njia ya mtandao;

vi. Inachochea na kupanua wigo wa masoko kwa wafanyabiashara pamoja na watumiaji.

i. Kanda za Postikodi Tanzania Bara		
Jina la Kanda	**Tarakimu ya kwanza ya Postikodi**	**Eneo husika**
Dar es salaam	1	Eneo Kuu la Kibiashara Ilala (Ilala CBD), Ilala, Kinondoni, Temeke, Ubungo na Kigamboni.
Kaskazini	2	Tanga, Arusha, Kilimanjaro na Manyara.
Ziwa	3	Geita, Mara, Mwanza, Kagera, Shinyanga na Simiyu.
Kati	4	Dodoma, Singida, Tabora na Kigoma
Nyanda za Juu Kusini	5	Katavi, Iringa, Mbeya, Songwe, Rukwa, Ruvuma na Njombe
Pwani	6	Pwani, Mtwara, Lindi, Morogoro
ii. Maeneo ya Postikodi Zanzibar		
Kisiwa	Postikodi	Jina la Mkoa
Unguja	7	Mjini Magharibi, Kusini Unguja na Kaskazini Unguja
Pemba		Pemba

TANZANIA COMMUNICATIONS REGULATORY AUTHORITY

ISO 9001:2015 CERTIFIED

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MAMLAKA YA MAWASILIANO TANZANIA

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Mamlaka ya Mawasiliano Tanzania(TCRA) ni taasisi ya Serikali inayosimamia sekta ya mawasiliano. TCRA ilianzishwa chini ya Sheria ya Mamlaka ya Mawasiliano Tanzania Na. 12 ya 2003. TCRA ina viwango vya ISO 9001:2015.

Maeneo yanayosimamiwa

Mitandao ya simu na intaneti, masafa ya mawasiliano,huduma za Posta na usafirishaji wa vipeto katika Jamhuri ya Muungano wa Tanzania na huduma za utangazaji (kama vile redio na televisheni) kwa Tanzania Bara tu. Zanzibar ina Tume inayosimamia utangazaji.

Kazi za TCRA

- Kutoa leseni, kuongeza muda wa leseni na kufuta leseni
- Kuweka viwango kwa bidhaa na huduma zinazosimamiwa
- Kuweka viwango vya kanuni na masharti ya kusambaza bidhaa na huduma zinazosimamiwa
  - Kudhibiti viwango na bei
  - Kufuatilia utendaji wa sekta ya mawasiliano kuhusiana na viwango vya uwekezaji; upatikanaji wa huduma, ubora na viwango vya huduma; gharama za huduma; ufanisi wa bidhaa na usambazaji wa huduma.
  - Kufanikisha utatuzi wa malalamiko na migogoro baina ya watoa huduma na kati ya mtoa huduma na mtumiaji wa huduma.
  - Kufanya kazi na kutekeleza majukumu mengine kwa mujibu wa sheria husika
  - Kusambaza taarifa kuhusu mambo ambayo ni muhimu kwa ajili ya shughuli za Mamlaka.

TCRA na ustawi wa Watanzania

Katika kufanya kazi zake, Mamlaka inajitahidi kuendeleza ustawi wa jamii ya Tanzania kwa:-

- Kukuza ushindani unaofaa na ufanisi wa uchumi
- Kuendeleza upatikanaji wa huduma zilizodhibitiwa kwa watumiaji wote ikiwa ni pamoja na wenye kipato kidogo waliopo vijijini na wateja walio katika mazingira magumu.
- Kulinda maslahi ya watumiaji
- Kuendeleza elimu kwa wananchi kuhusu utambuzi na uelewa wa sekta zilizodhibitiwa ikiwa ni pamoja na haki na wajibu wa watumiaji;namna ambavyo malalamiko yanaweza kuwasilishwa na kutatuliwa na kuhusu majukumu, kazi na shughuli za Mamlaka.