

IPv6 – AROUND THE WORLD

Africa Perspective

WELCOME TO THIS PRESENTATION ON:

Africa Perspective

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to

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at

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IPv6 – Africa Perspective

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OVERVIEW (OPENING STATEMENT):

Focus: *"Africa's future and challenges of IPv6 of Things" (Av6oT)* within the context of *Internet of Things" (IoT)*.

I will explore and address **Key Challenges** such as:

- **Africa/Youth Population**, the leadership vision (Political Will),
- **Africa Development Framework, Economy & IT/IPv6 Readiness.**
- Requirements, mechanisms and Dynamic approaches for developing the continent's inter-connected knowledge architecture as fundamental Framework for sustainable development and global competitiveness.
- Finally and above all, it advocates a creative and proactive response for the emerging impacts of **IPv6/Internet of Things & Everything. It will make Recommendations.**

Does IPv6 Need AFRICA ?

NO AFRICA NEEDS IPv6 !

- “Globally - the next battlefield for sustainable development and wealth creation resides in IPv6 and IoT strategic knowledge configuration.
- Africa stands at the dawn of technology opportunity and will benefit immensely, if government and industry lead the advocacy to passionately promote innovation - through IPv6 adoption and IoT transmission as combined accelerator to ***create something and change everything.***”

IPv6 – Africa Perspective

- **A**ssumptions: It is impossible for the human mind to think about **NOTHING!**
- **T**oday the Internet is second to our collective Environment. *(Oxygen of life) and Africa must recognize and embrace IPv6 for sustainable development.*
- **IPv6** will one day become the absolute default Prefixes for the Internet.
- **P**ersuading African Governments not to be a late comers to IPv6 adoption – with Africa's **1.3billion** population estimated to double in 25 years is imperative.
- **Can** the **super slow speed** of IPv6 Awareness & Adoption in Africa slow down the inclusiveness strategy of World IPv6-IoT development?

AFRICA POPULATION (OVERVIEW)

CURRENT POPULATION: 1,242,104,953 as of May 13, 2017 **

(Source: Latest United Nations estimates 2017).

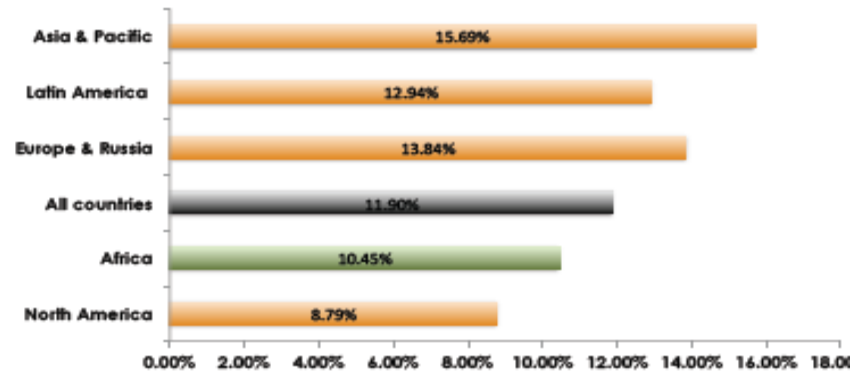
- Africa population is equivalent to **16.36%** of the [total world population](#) of **7.52 billion**
- **40.5 %** of the population is **urban** (505,429,407)
- The **median age** in Africa is **19.5 years**. Youth population is about **70%** of total population. (Ubiquity of Mobile)
- Population density in Africa is 42 per Km² (106 people per mi²).
- The total land area is 29,661,703 Km² (11,452,443 sq. miles)

****Estimated to Double in mid-century – 2050 !)**

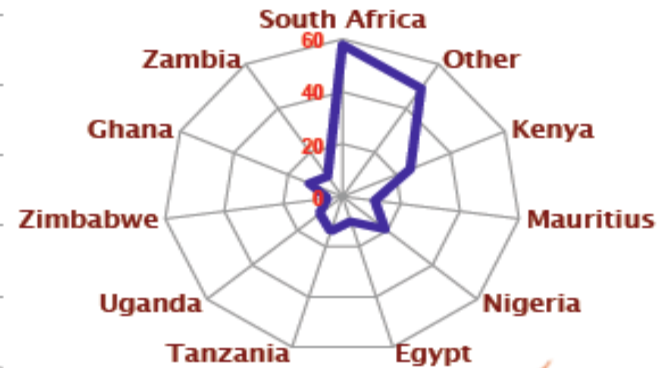
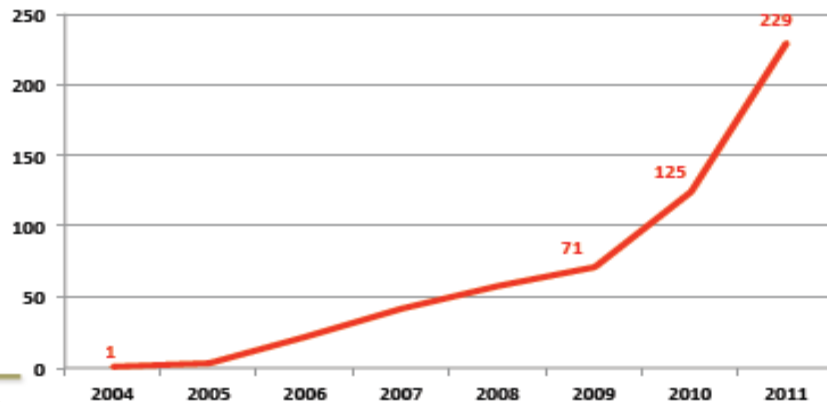
Some data about IPv6 in Africa

We still have a lot to do to catch-up in terms of deployment of IPv6. Currently 4th regionally. 33 countries has at least 1 IPv6 allocation.

IPv6 Networks Readiness



IPv6 Allocations growth in Africa



IPv6 Forum And Task Forces in Africa

Algeria: The Algerian government has set up a local IPv6 taskforce

Egypt: The Ministry of ICT and the national regulator set up a lab to conduct IPv6 research

Kenya: The Ministry of Information and Communication Technology in Kenya formed a national IPv6 Task Force involving the government, academic and civil society.

Mauritius: The Mauritian regulator -Ministry of Communications has formulated its Policy on Mauritius IPv6 readiness.

Nigeria: The Nigerian government created a special committee (EFCC and NCC) to increase IPv6 awareness and study policy Framework

South Africa: The Department of Communications in South Africa has also launched a call for a formation of a national IPv6 task force.

Senegal: The Senegalese government established a national committee for IPv6 transition.

Tunisia: The Tunisian government has set up a local IPv6 taskforce with significant government and civil society involvement.

Ghana, Rwanda, Morocco and others have established IPv6 Awareness platform.

GOVERNMENTS AND NATIONAL IPv6 POLICY IN AFRICA

CRITICAL ISSUES

- Africa Population (**Youth Population Surge**)
- **Critical National Information Infrastructure**
- IPv6 Awareness Level in Industry Private Sector
- IPv6 Awareness Level in Government/Public Sector
- National ICT Policy , IPv6 Strategy & Broadband Plan
- Digital Transformation, Security & Sustainability

IPv6 POLITICAL COMMITMENT - RWANDA EXAMPLE

Leadership role of Government for IPv6 migration

It is proposed that Government sets the example to the operational deployment and use of IPv6 through the designation of an IPv6 Transition Taskforce with a time lined Action Plan.

Upgrade public/external facing servers and services (e.g. web, email, DNS, ISP services, etc) to operationally use native IPv6;

Upgrade internal client applications that communicate with public Internet servers and supporting enterprise networks to operationally use native IPv6

;

Usage of IPv6 in the platforms/applications pertaining to government could be mandated. The Government could also mandate IPv6 compatibility in its own procurement of ICT systems and networks;

Hold workshops and seminars, to bring awareness about IPv6 among service providers and end-users community to be conducted through governmental agencies.

Source: Outcomes of the consultation held on the transition from IPv4 to IPv6 in Rwanda and the recommendations thereon © RURA-SEPTEMBER, 2012

KEY CHALLENGES

- **INFRASTRUCTURE : POWER diffusion**
- **POLICY AND STRATEGY (Awareness/Diffusion)**
- **EDUCATION AND RESEARCH GRANTS**
- **INTERNATIONAL COLLABORATION**
- **INCLUSIVENESS AND INNOVATION/SECURITY**

Key Recommendations

Moving forward, and recognizing the fact that knowledge development strategies and content in Africa faces a monumental challenge by the emerging knowledge Olympiad, Africa needs strategic collaboration in Research, Innovation, IoTs, Embedded Systems, IPv6, Cloud, Big Data, Nano of Things, etc. Therefore, this contribution solicits the endorsement of the organisers of GloT Geneva 2017 and her esteemed participants, Policy Makers and Stakeholders from all over the world to consider and adopt the following recommendations:

1. Declare the current status of Africa-wide IPv6 Development Agenda as a "**Critical State of Emergency**" and call on Africa Union (**AU**) to lead the advocacy for the establishment of ***Africa IPv6/IoT Marshal Plan***.
2. Advocate the need to establish the ***Africa IPv6/IoT*** Development Framework (**AIIDF**) as a platform for clustering and sharing critical digital knowledge systems for accelerated Information Society Competitiveness at all levels.
3. Encourage Africa Policy Makers and Leadership in each country to establish ***IPv6/IoT Task Forces to develop country IPv6/IoT Strategic Plans*** - and by extension, to ensure that adequate funding is provided in their National Budget for the adoption, diffusion and advancement ***IPv6/IoT in Africa***.
4. Promote the establishment of Africa-wide IoT Innovation Hackathon on Africa Development of Things (**ADoT**).
5. Partner with African Professionals on strategies to ***Retool the Africa Knowledge Workforce*** and infrastructure, as strategic imperatives for the emergence of the "***Africa's New Creative and Innovative Class***" (**ANCIC**).