IXP Partnership: Developing the Peering Ecosystem in Africa

By Michuki Mwangi (ISOC)
Af-IX Meeting, Dar-es-Salaam
29 August 2016

Internet Society

What is the Internet Society?

The Internet Society (ISOC) is a cause-based organization that works with governments, industries, and others to ensure the technologies and policies that helped develop and evolve the Internet will continue into the future.

Our programs cultivate an Internet that is open to everyone, everywhere and aim to ensure that it will continue to be a tool for creativity, innovation, and economic growth.

MISSION: To promote the open development, evolution, and use of the Internet for the benefit of all people throughout the world.

VISION: The Internet is for everyone

Internet Society ™

Global Presence

Internet Society

EUROPE

NORTH AMERICA

THE MIDDLE EAST

AFRICA

ASIA

● Chapters | OCTOBER 2013

LATIN AMERICA & CARIBBEAN

100+
Chapters Worldwide

65,000+
Members and Supporters

145+
Organization Members

6
Regional Bureaus

18
Countries with ISOC Offices

Agenda

❑ **Interconnection and Traffic Exchange Vision**

❑ **Activities**
  ❑ Capacity Building
  ❑ Community Engagement
  ❑ Equipment Assistance
  ❑ Internet Measurement

An Africa that's not just an "Internet Consumer" but an "Internet Creator," on par with the rest of the world. Thereby attaining a 80% local and 20% international traffic balance by 2020.

Activities

Capacity Building

- **IXP Best Practice Workshops**
    - For policy and decision makers

- **IXP Members Routing Training**
    - BGP Routing Training for IXP staff and members

Legend

- 🟡 Technical/Best Practice Workshops
- 🟢 New IXP Assistance
- 🔵 Technical Assistance/IXP Equipment
- 🟠 IXP Meetings
- 🔴 AfPIF Events
- 🟣 ITE: AXIS Technical Aspects
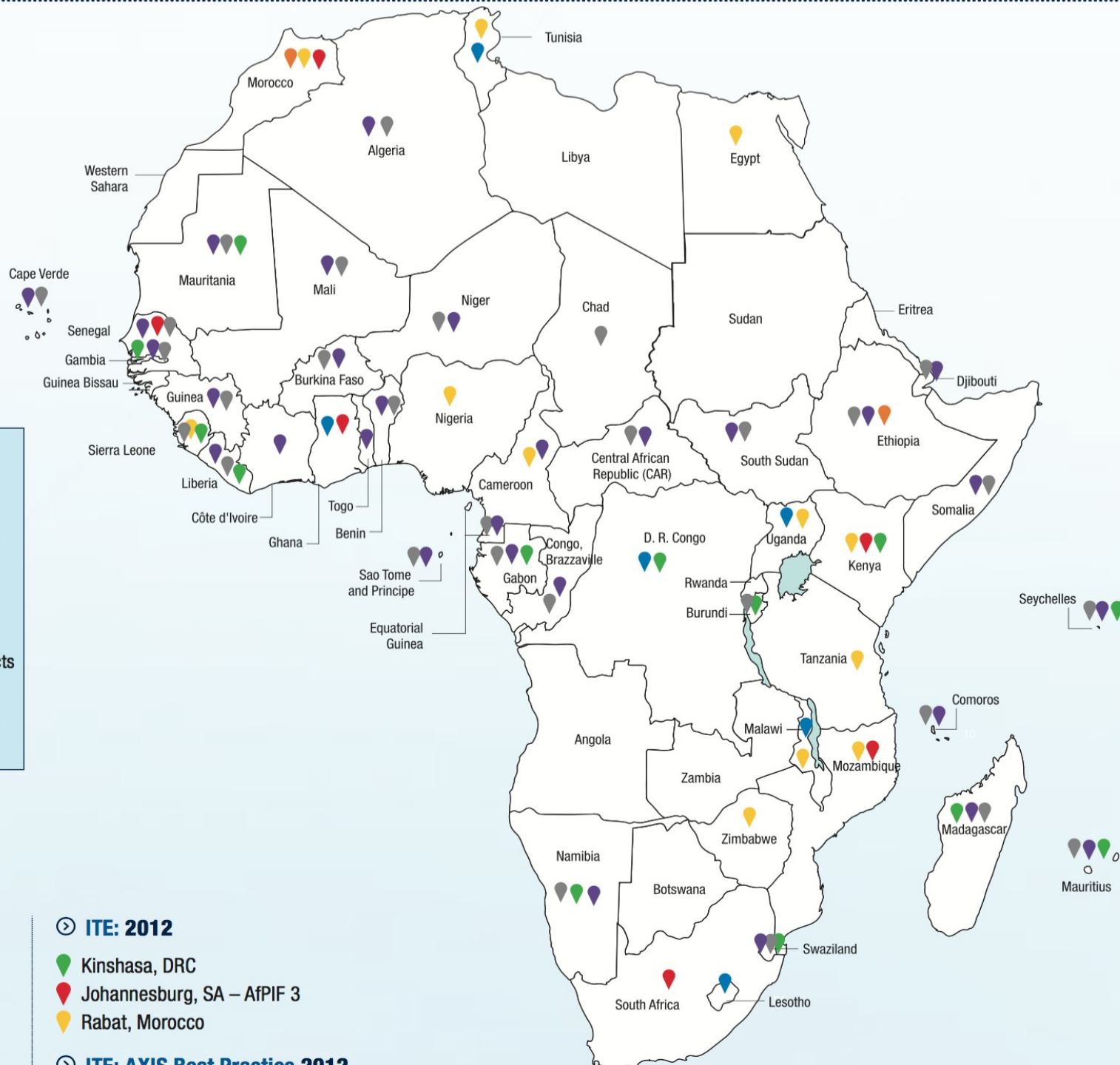- ⚫ ITE: AXIS Best Practice
- 🌸 ITE: Axis Axis-RIXPs/RICs

Map labels

Tunisia, Morocco, Western Sahara, Algeria, Libya, Egypt, Cape Verde, Mauritania, Mali, Niger, Chad, Sudan, Eritrea, Senegal, Gambia, Guinea Bissau, Burkina Faso, Nigeria, Djibouti, Guinea, Sierra Leone, Liberia, Côte d'Ivoire, Togo, Benin, Ghana, Cameroon, Central African Republic (CAR), South Sudan, Ethiopia, Somalia, Sao Tome and Principe, Gabon, Equatorial Guinea, Congo, Brazzaville, D. R. Congo, Uganda, Kenya, Seychelles, Rwanda, Burundi, Tanzania, Comoros, Malawi, Mozambique, Madagascar, Mauritius, Angola, Zambia, Zimbabwe, Namibia, Botswana, Swaziland, South Africa, Lesotho

ITE: 2008-2009

- 🟡 Blantyre, Malawi
- 🟡 Kampala, Uganda
- 🟡 Freetown, Sierra Leone
- 🟡 Sharm el-Sheikh, Egypt

ITE: 2012

- 🟢 Kinshasa, DRC
- 🔴 Johannesburg, SA – AfPIF 3
- 🟡 Rabat, Morocco

> ITE: AXIS Best Practice 2012

ITE: 2008-2009
- Blantyre, Malawi
- Kampala, Uganda
- Freetown, Sierra Leone
- Sharm el-Sheikh, Egypt
- Nairobi, Kenya
- Rabat, Morocco

ITE: 2010
- Nairobi, Kenya – AfPIF 1
- Dar-es-Salaam, Tanzania
- Mombasa, Kenya
- Freetown, Sierra Leone
- Maputo, Mozambique (P)

ITE: 2011
- Maseru, Lesotho
- Kampala, Uganda
- Blantyre, Malawi
- Accra, Ghana – AfPIF 2
- Accra, Ghana
- Addis Ababa, Ethiopia
- Douala, Cameroon

ITE: 2012
- Kinshasa, DRC
- Johannesburg, SA – AfPIF 3
- Rabat, Morocco

ITE: AXIS Best Practice 2012
- Ouagadougou, BF: AXIS-BP
- Dakar, Senrgal: AXIS-BP
- Bujumbura, Burundi: AXIS-BP
- Banjul, Gambia: AXIS-BP
- Conackry, Guinea: AXIS-BP
- Windhoek, Namibia: AXIS-BP
- Niamey, Niger: AXIS-BP
- Cotonou, Benin: AXIS-BP

ITE: AXIS Best Practice 2013
- Swaziland: AXIS-BP
- Mauritania: AXIS-BP
- Mali: AXIS-BP
- Algeia: AXIS-BP
- Seychelles: AXIS-BP
- Brazzaville, Congo: AXIS-BP
- Gabon: AXIS-BP
- Chad: AXIS-BP
- Liberia: AXIS-BP
- Sao Tome and Principe: AXIS-BP
- Sierra Leone: AXIS-BP

ITE: AXIS Technical Assistance 2013-2016
- Gambia: AXIS-TA
- Burkina Faso: AXIS-TA
- Namibia: AXIS-TA
- Burundi: AXIS-TA
- Togo: Axis-AXIS-TA
- Guinea: AXIS-TA
- Cote d'Ivoire: AXIS-TA
- Niger: AXIS-TA
- Senegal: AXIS-TA
- Benin: AXIS-TA
- Swaziland: AXIS-TA
- Mauritania: AXIS-TA
- Mali: AXIS-TA
- Equitorial Guinea: AXIS-TA
- CAR: AXIS-TA

ITE: 2013-2016
- Malawi
- Ghana
- Lesotho
- DRC
- Tunisia
- Namibia – AXIS-New IXP
- Burundi – AXIS-New IXP
- Gambia – AXIS-New IXP
- Swaziland – AXIS-New IXP
- Gabon – AXIS-New IXP
- Seychelles – AXIS-New IXP
- Mauritius – AXIS-New IXP
- Liberia – AXIS-New IXP
- Mauritania – AXIS-New IXP
- Madagascar – AXIS-New IXP
- Tunisia
- Morocco – AfPIF 4
- Senegal – AfPIF 5
- Mozambique – AfPIF 6
- Nigeria
- Zimbabwe

ITE: Axis Best Practice 2014-2016
- Comoros: AXIS-BP
- Madagascar: AXIS-BP
- Mauritius: AXIS-BP
- Cape Verde: AXIS-BP
- Ethiopia: AXIS-BP
- Somalia: AXIS-BP
- South Sudan: AXIS-BP
- Djibouti: AXIS-BP
- CAR: AXIS-BP
- Equitorial Guinea: AXIS-BP
- SADC: AXIS-RIXPs/RICs
- East Africa: AXIS-RIXPs/RICs
- North Africa: AXIS-RIXPs/RICs
- West Africa: AXIS-RIXPs/RICs
- Central Africa: AXIS-RIXPs/RICs

Swaziland

South Africa

Lesotho

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Community Engagement

ROADSHOWS

- **Peering Roadshows**
  - 1 day peering workshop
  - 2 days bilateral meetings

- **Members events**
  - Member meetings
  - Social events alongside other activities

Equipment Assistance

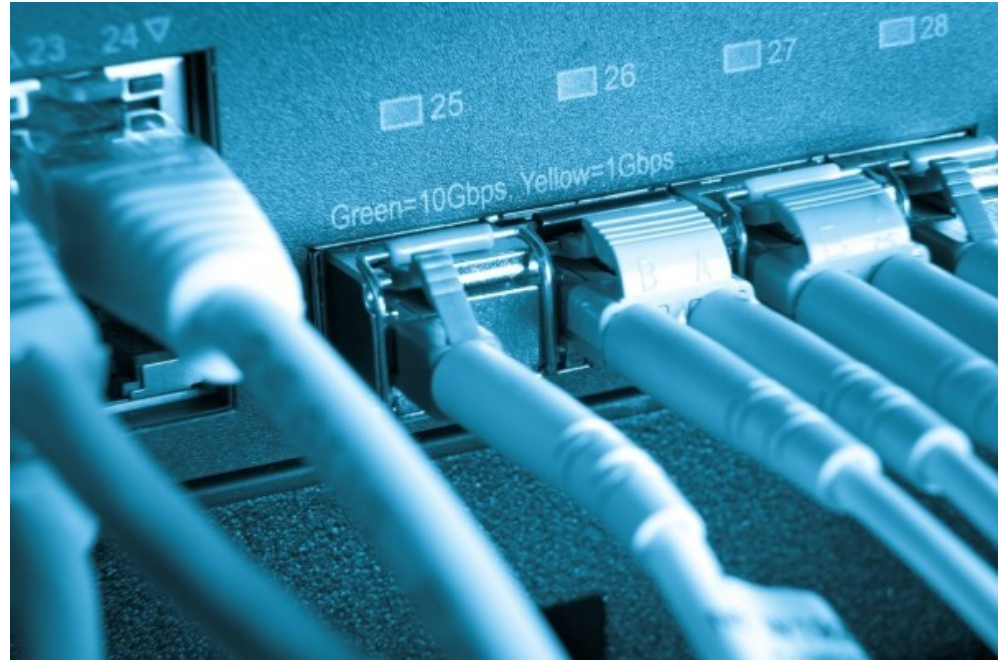- **Routers and Switches**
  - Peering LAN
  - Management LAN

- **Servers**
  - For value added services
  - Route-servers
  - Monitoring & Stats
  - etc

- **Optics**
  - Scaling port growth and demand

Interconnection Measurements

- **Africa Route and Prefix Analysis System (ARPAN)**
  - View of Africa interconnection traffic growth from IXP vantage point
  - Requires Route Collector (PCH, Routeviews or others)

- **Atlas Anchors Deployment**
  - 10 x Atlas Anchors in partnership with AfriNIC
  - IPv6 requirement*

Thank You!
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