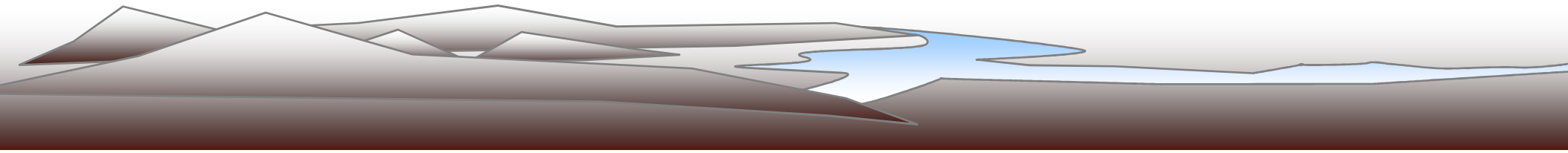
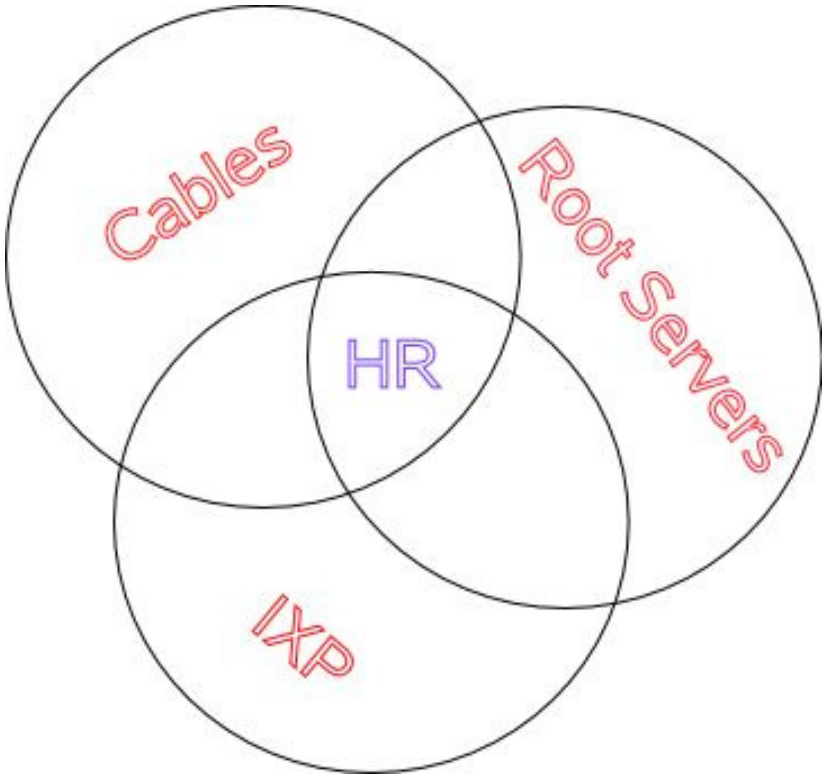
West African Internet Governance Forum

Highlight of Access Initiatives in West Africa

- Sunday A. Folayan



Access Initiatives



Without Internet Infrastructure, there can be no Internet Access. Access Infrastructure, include:

- Internet eXchange Points
- Root Servers
- Submarine Cables
- Human Resource/Capacity

Internet Exchange Points

There are only 3 Internet Exchange Points in West Africa. These are:

- GIXP – Accra, Ghana. May 2005
- IXPN – Lagos, Nigeria. 2006
- CI-IXP – Abidjan Cote D'Ivoire. June 2007

Internet Exchange Points

Root Servers

Without Name to address resolution, access to the Internet is impossible. The Root Servers are critical infrastructures that ensure access.

Attacks on the root servers can bring down the entire network, hence survival techniques such as Anycast to mitigate this.

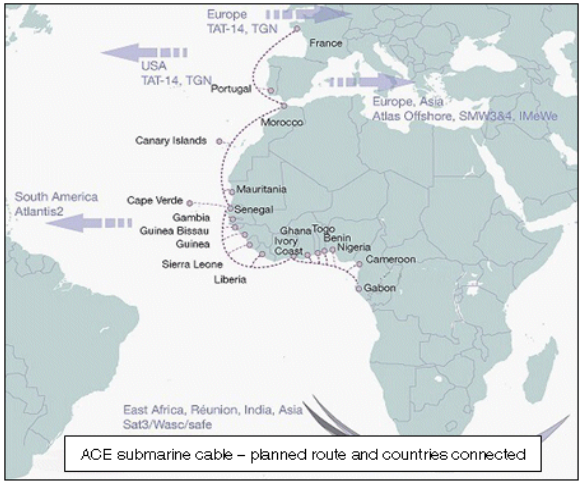
Root Servers

Submarine cables - Africa

- Infraco South Africa-Europe-South America
- Glo-1 (UK-Nigeria)
- Project West Africa (Infinity)
- Maroc Telecom West Africa Cable
- MAIN One
- SAT-4
- NEPAD Broadband Infrastructure Network / Uhurunet / 5-P Networks **(Pan-Africa)**

Submarine Cables - West Africa

- SAT3 (since 2001)
- Glo-1 (Lagos – Accra – London) Due ??
- MaIN One - 1.2Tb (Due 2010)
- ACE (france Telecom Initiative) Due 2011
- WACS. RFS in 2011



ACE submarine cable – planned route and countries connected

Submarine Cable - SAT3

The Successor to SAT2 (1993) which is the successor to SAT1 (1968). SAT3 came into existence in 2001. It runs from Portugal to Cape Town and lands in

The cable 15,000km submarine cable will run from

Glo-1

- Globacom was awarded Nigeria's second national operator (SNO) license in 2002
- Glo-1 cable: network connecting Nigeria and the UK with possible branches
- Supply contract awarded to Alcatel-Lucent as part of $650 million package contract for Globacom network
- Alcatel's CS Ile de Batz undertook route clearance and grapnel runs, and installation began in spring, 2007
- As of October, 2007, installation extended "from the United Kingdom to Senegal"
- Not yet in use: "wet storage"?

Submarine Cable - MainOne

MainOne says its submarine cable will land the shores of Nigeria in May 2010 and that it will be commercially launched in June 2010. The Main One cable project which totals USD 240 million will involve the laying of 7,000 Kilometres of submarine fibre optic cable between Seixal (a suburb of Lisbon) in Portugal, Accra in Ghana, and Lagos in Nigeria, respectively. The system will be based on a trunk-and-branch topology and include branching units to the Canary Islands, Morocco, Senegal, and Cote d'Ivoire.

Submarine Cable - WACS

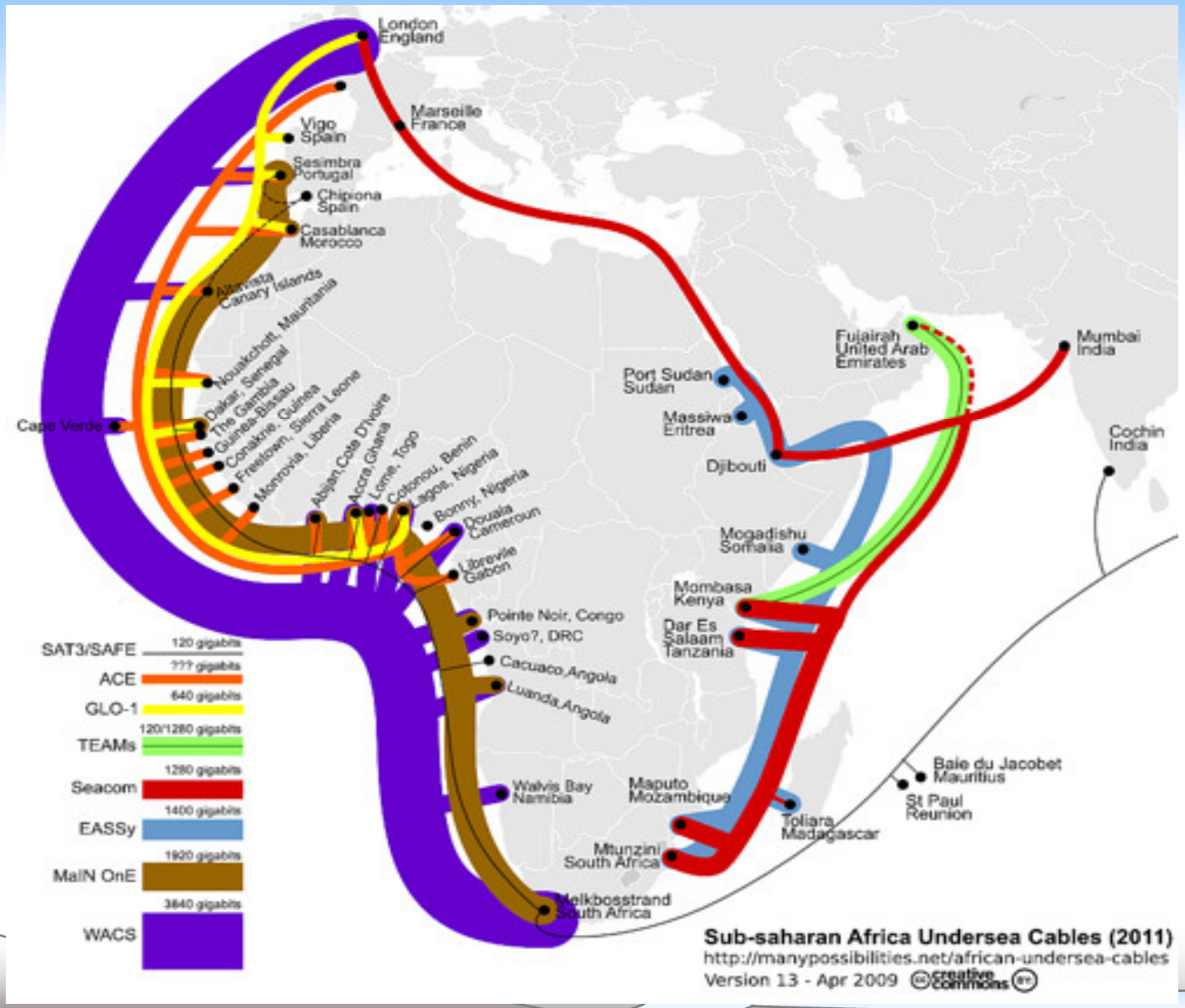
The 14,000km submarine cable will run from Cape Town to the UK with landings in Namibia, Angola, the Democratic Republic of Congo, the Republic of Congo, Cameroon, Nigeria, Togo, Ghana, Cote d'Ivoire, Cape Verde, the Canary Islands and Portugal.

The WACS consortium comprises eleven companies that signed the WACS Construction and Maintenance Agreement: Angola Telecom, UK-based Cable & Wireless, Portugal Telecom, SOTELCO (Congo), Telecom Namibia, Togo Telecom, India's Tata Communications and four South African firms - Broadband Infraco, Telkom SA, MTN and Vodacom.

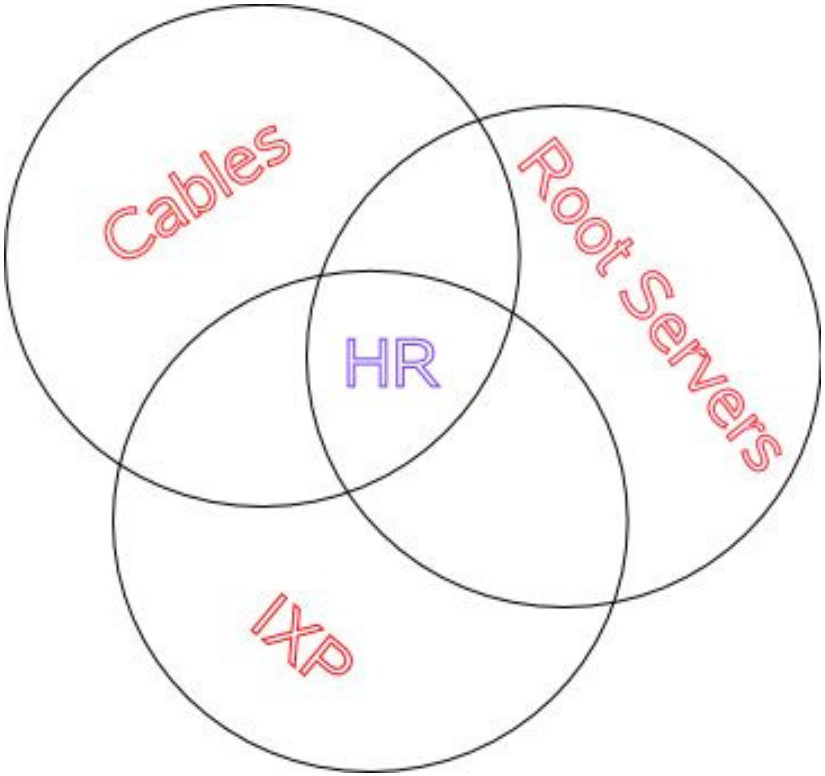
3.84Tb design capacity, RFS 2011 US$600 million investment

April 2009: contract awarded to Alcatel

Submarine Cables – Africa 2011



Human Resource/Capacity Development

- African Network Operators Group
  - ngNOG
  - ghNOG
  - Other ccNOGs in formation
- Africa Research and Education Network
  - Various RENs in formation across Africa
- African Internet Service Providers Association
  - ISPAs in various countries

Thank You!