



Interconnecting Africa

MTN contribution

AFRINIC 2011 – Yaoundé, Cameroon



- **Background**
- **Opportunities**
- **Challenges**
- **MTN Initiatives**
 - Submarine cable: WACS
 - MPLS Backbone
 - Data Center to host contents
 - IXP & Local Peering
 - Google Global Cache hosting

- Among the top10 countries in terms of the number of internet users , only 1 country from Africa, Nigeria at the last position
- In Africa: 118,609,620 internet users(11.4% of the population in the region and about 5.7% of the total online population)
- In term of World Internet penetration rate by geographical regions 2011, Africa is under world average (30.2) and Asia (23.8) with (11.4)
- Globally, 94 domains registered per 10 000 users. However, in Africa, one domain per 10 000 users.
- ...

• Opportunities



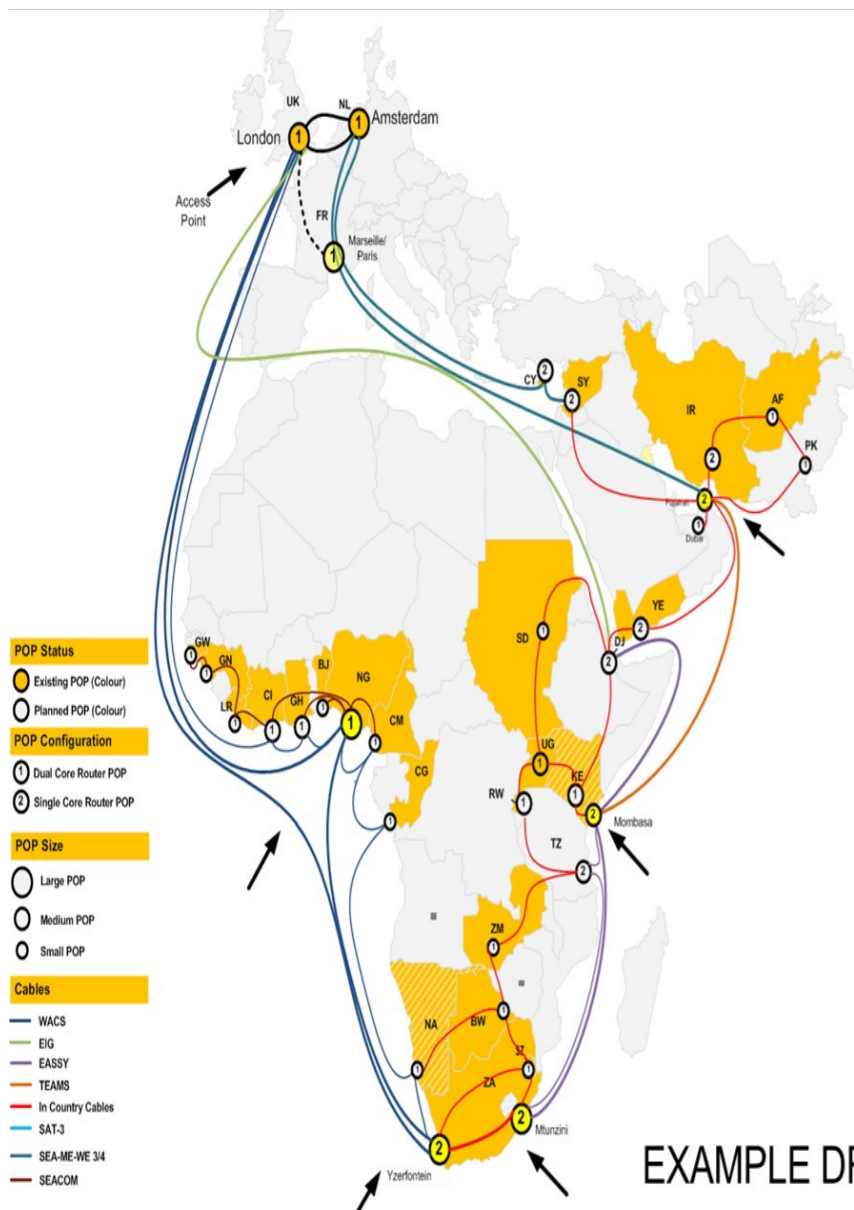
- **Sub-marine cables**
- **IXP**
- **Caching solution**
- **Hosting Infrastructure**
- **Local content initiative**
- **E-commerce / M-Commerce**
- **Content management (Cloud Computing)**
- **E-Government**

- **Internet infrastructure**
- **Lack of Local content**
- **National backbone TCO**
- **Regulation (Cross border and in country)**
- **Standardization and normalization of connectivity**
- **Legal aspect**

MTN key initiatives – WACS & EASSY



Target International Infrastructure Evolution



Target Infrastructure Evolution

- Transport Layer based upon high capacity, low-cost Submarine Cable Infrastructure
- Terrestrial fibre backhaul connected to selected regional and global POPs to serve the primary connectivity requirements for all MTN Opcos
- Underlying transmission infrastructure for MTN.net (MPLS network)
- Ring architecture provides resiliency under network failure conditions and supports SLAs
- Centralized management and support
- Support IP based networks and s

EXAMPLE DRAWING

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West Africa Cable System

- **From** Yzerfontein, South Africa **to** London, United Kingdom
- MTN Group has invested \$90 million in the cable making it the largest investor
- Designed Capacity is 5.12 Tb/s
- 14,400 km in length
- 15 terminal stations along the western coast of Africa

Eastern Africa Submarine System

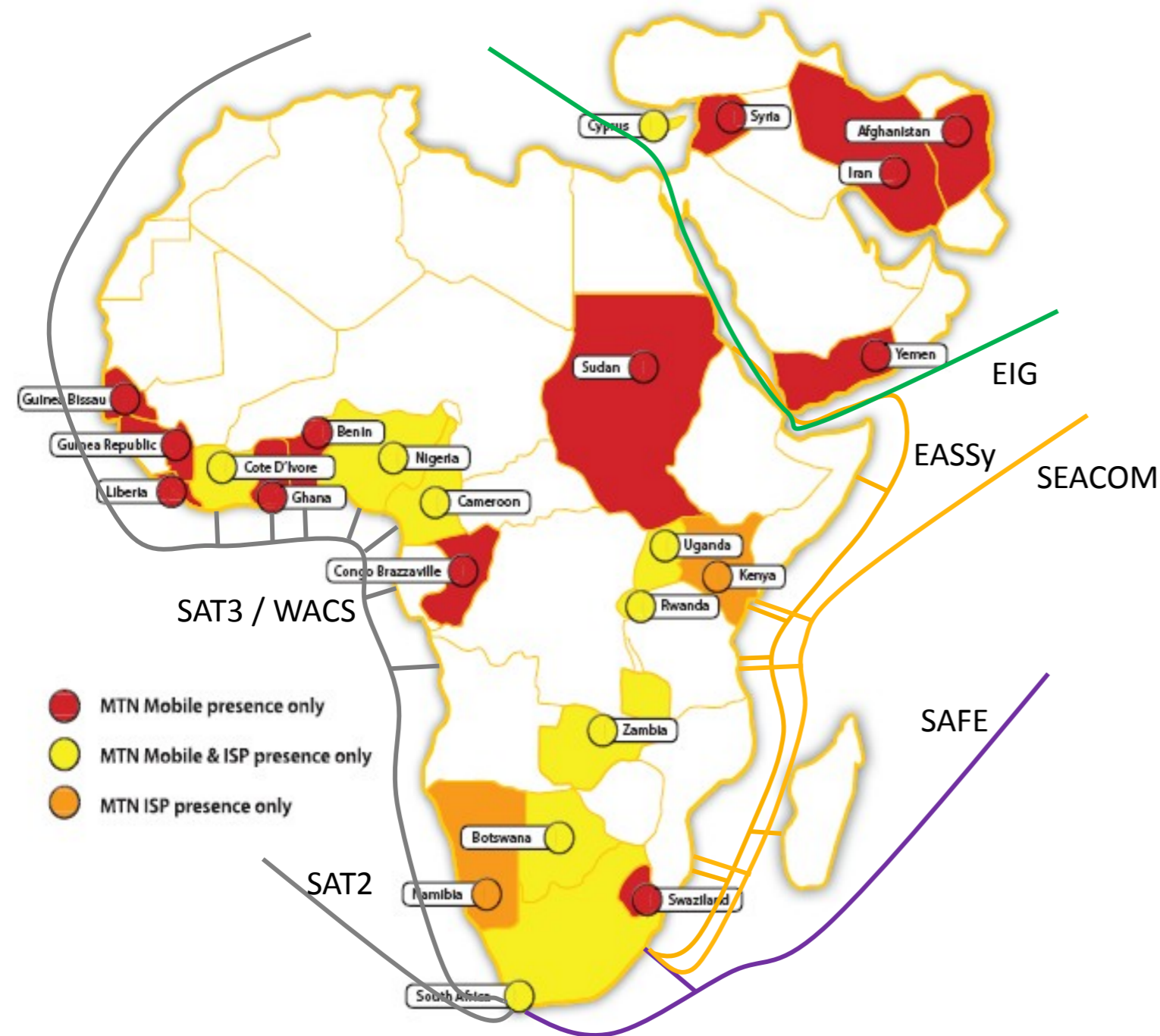
- 320 – 640 Gbps

MTN key initiatives – Mobile and ISP



21 Operations among which the following in Africa:

- South Africa
- Congo
- Uganda
- Rwanda
- Cameroon
- Nigeria
- Ghana
- Sudan
- Benin
- Zambia ...



MTN key initiatives – MTN MPLS backbone



- MPLS = Multi-Protocol Label Switching
- Presence in Africa:
 - South Africa
 - Cameroon
 - Nigeria
 - Kenya
 - Namibia
 - Zambia
 - Botswana
 - Ivory Coast ...
- Secure and reliable VPN Services:
 - L2 VPNs
 - L3 VPNs
- Many services are carried on with Good QoS: VoIP, Data, Video, ...

MTN key initiatives – Datacenters



- MTN presence in the following countries and in many towns:
 - South Africa
 - Nigeria
 - Ghana
 - Cameroon
 - Kenya
 - Uganda...

MTN key initiatives – Datacenters



- Rental of floor space for IT racks inside the Data Center
- Rental of rack space for servers (Towers or rack-mountable)
- Rental of dedicated servers for data processing needs
- Hosting of business applications on shared or dedicated servers
- Hosting and management of specific IT services (Internet web sites, Domain name, Email, ...)



• MTN Key initiatives – IXP & Local Peering

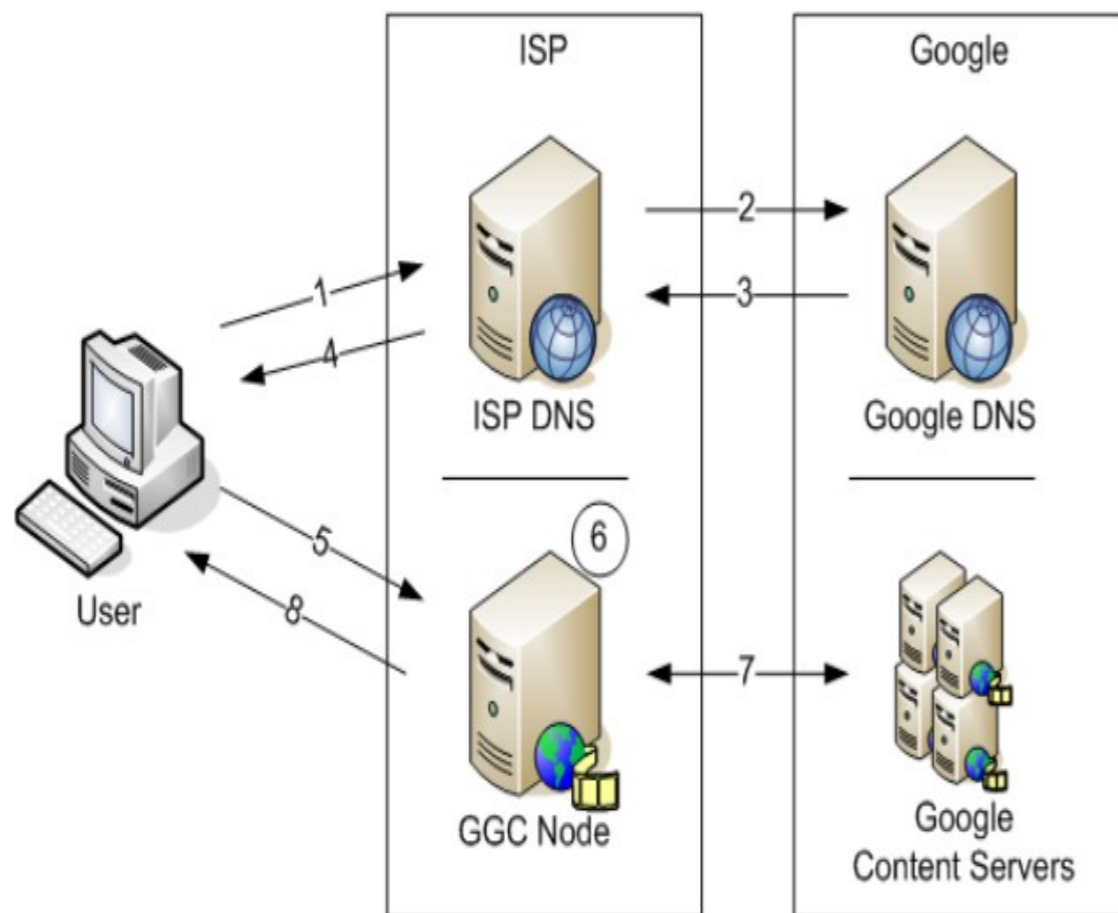
IXP = Internet Exchange point

- MTN contributor in many IXP in Africa:
 - South Africa
 - Nigeria
 - Ghana
 - Uganda
 - Kenya
 - Cameroon ...
- Local Peering completed with ISPs in Cameroon as an initiative to keep traffic locally in the absence of IXP

• MTN key initiatives –

Google Global Cache

by MTN



- **Google strategy** : get users online by developing an accessible, relevant, and sustainable Internet ecosystem
- In Africa, MTN have contributed in Google Initiative (Ghana, Nigeria, SA, Cameroon, ...)

- **Sixth Annual Meeting of the Internet Governance Forum
27 -30 September 2011**
- **United Nations Office in Nairobi, Nairobi,
Kenya**
- **<http://www.internetworldstats.com/stats.htm>**
- **Google Global Cache Project**
- **<http://thenextweb.com/africa/2011/07/17/g>**



Thank You!



everywhere you go