



## JAGUAR NETWORK AFRICA

# THE FUTURE OF CONTENT HOSTING IN AFRICA

80% local internet traffic in  
Africa by 2020

# IS THERE CONTENT FOR AFRICA?



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Service Client : 16 77



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[www.tigo.sn](http://www.tigo.sn)



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## IS THERE CONTENT FOR AFRICA?


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# AFRICAN BLOGGER AWARDS

# IS THERE CONTENT FOR AFRICA?

iROKOTV.com NEED HELP? CALL US ON SKYPE LOG IN

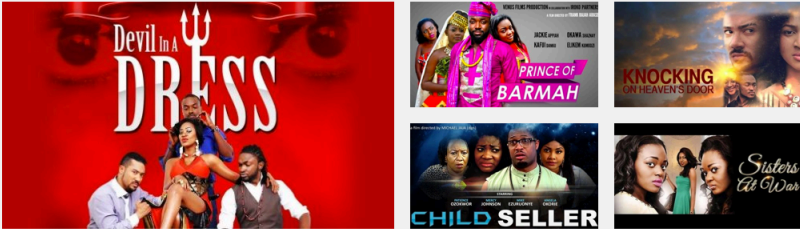


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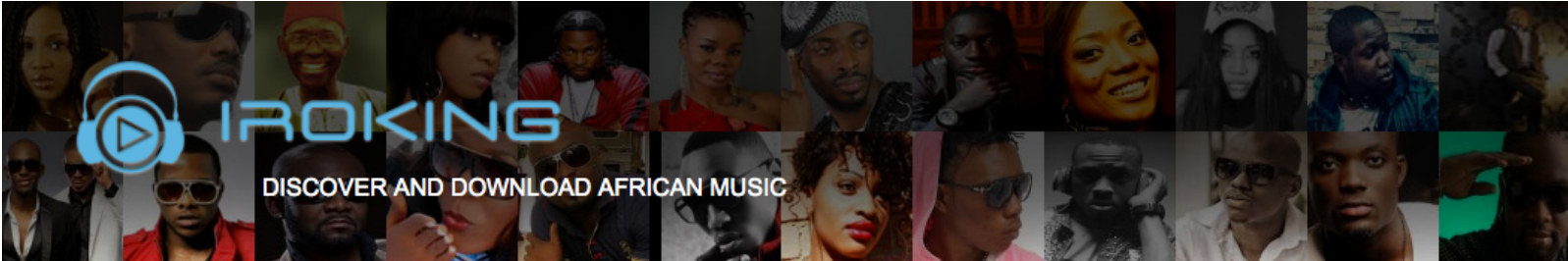
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# IS THERE CONTENT FOR AFRICA?



LES DÉPÊCHES DE BRAZZAVILLE
Fili d'info  
23/08/2014 - 15h20  
**Route de l'esclave : vers la mise en...  
C'est l'un des résultats le plus attendu de...**

Dimanche 24 août 2014 - Saint Barthélemy
Le kiosque | Site Adiac
Lire vos quotidiens en ligne

Lire l'Éditorial
Archives

Édition du 6<sup>e</sup> jour

Édition Brazzaville

AGENCE D'INFORMATION D'AFRIQUE CENTRALE
Toute l'Info du Bassin

## MWANANCHI

Jumapili Fikiri Tofauti

Mwananchi Breaking News  
Send HABARI to 15569  
Vodacom and Airtel Only

Jumapili Agosti 24, 2014
Mwanzo Habari Biashara Michezo Burudani Makala Maoni-Uchambuzi Picha Katiba Ajira Tufuta

### Quality Cars from \$99

BROWSE STOCK

### Chaguo Letu Leo

Sawa mnajua kuongea, kutenda je?

BEN POL: Kumba haina mpingo wa kutengenea video

Juma Nature: Nyota aliyejisomesha kwa kuuza

Likizo ya malipo ni haki ya mwaifirwa

Umuhimu wa elimu ya ujuzi/mali katika shule na

Pinda abadili upepo urais CCM

0 Comments

Waziri Mkuu, Mizengo Pinda ameingia rasmi katika mbio za kuwania urais kupita Chama Cha Mapinduzi (CCM), hatua ambayo imebadili mwelekeo wa kinyang'anyiro cha nafasi hiyo kubwa ya uongozi nchini kuelekea Uchaguzi Mkuu 2015...

- Habari Mpya**

  - Maeneo ya viwanja vya ndege yalindwe- Pinda
  - 'Hukumu ya kifo ikifutwa mauaji yataongezeka'
  - CRDB yajivunia dawati la China
  - Asilimia 70 ya wakazi Jiji la Mwanza wanaishi milimani
  - Jaji Feleshi: Nafasi ya DPP ilinipa wakati mgumu
  - Mutungi kuwakanisha tena CCM, Ukawa
  - Ofisi ya Msajili yakwama ripoti gharama za uchaguzi wa 2010
  - Pinda abadili upepo urais CCM
  - Wakongo walichagiza waimbaji, wapigaji kucheza jukwani
  - Juma Nature: Nyota aliyejisomesha kwa kuuza vitumbua, vyuma chakavu(4)

**Mwananchi BREAKING NEWS**

Je unaiishi Tanzania? ... YES! HII NI ZAWADI YAKO

Kujua ma bura yote HABARI kuwaga 15569

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Jaguar Network

# IS THERE CONTENT FOR AFRICA?



Welcome to the new Communications Authority Of Kenya website, formerly CCK



Search...



- Home
- Digital Migration
- Universal Access
- Statutes & Regulations
- Publications
- Research & Statistics
- Talk to us



## The Authority

- What we do
- Vision & Mission
- Organization & Structure
- Board of Directors
- Strategic Plan
- Our Service Charter

## Industry

- Broadcasting
- Telecommunication
- Information Security
- Frequency Spectrum
- Postal and Courier
- Type Approval

## Consumers

- Overview
- Consumer Education Outreach Program
- Mobile and Fixed Line Services
- Quality of Service
- How to make a Complaint
- Internet Services

## WHERE IS THAT CONTENT HOSTED?

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TYPE OF SITE	HOSTING LOCATION
Facebook / Twitter / Youtube	Mainly Europe/US with some content cached
Blogs	Mainly Europe / US
Iroking / Iroko TV	Amazon AWS (Europe / US)
Local news	Mostly France for french speaking news UK / Germany for english speaking news
Legal / regulatory informations	Sometimes in Europe / US



Who works for a company in Africa?

## CONTENT IS NOT ONLY WWW

Now who uses a Hotmail / gmail / Yahoo mailbox instead of their corporate mailbox?

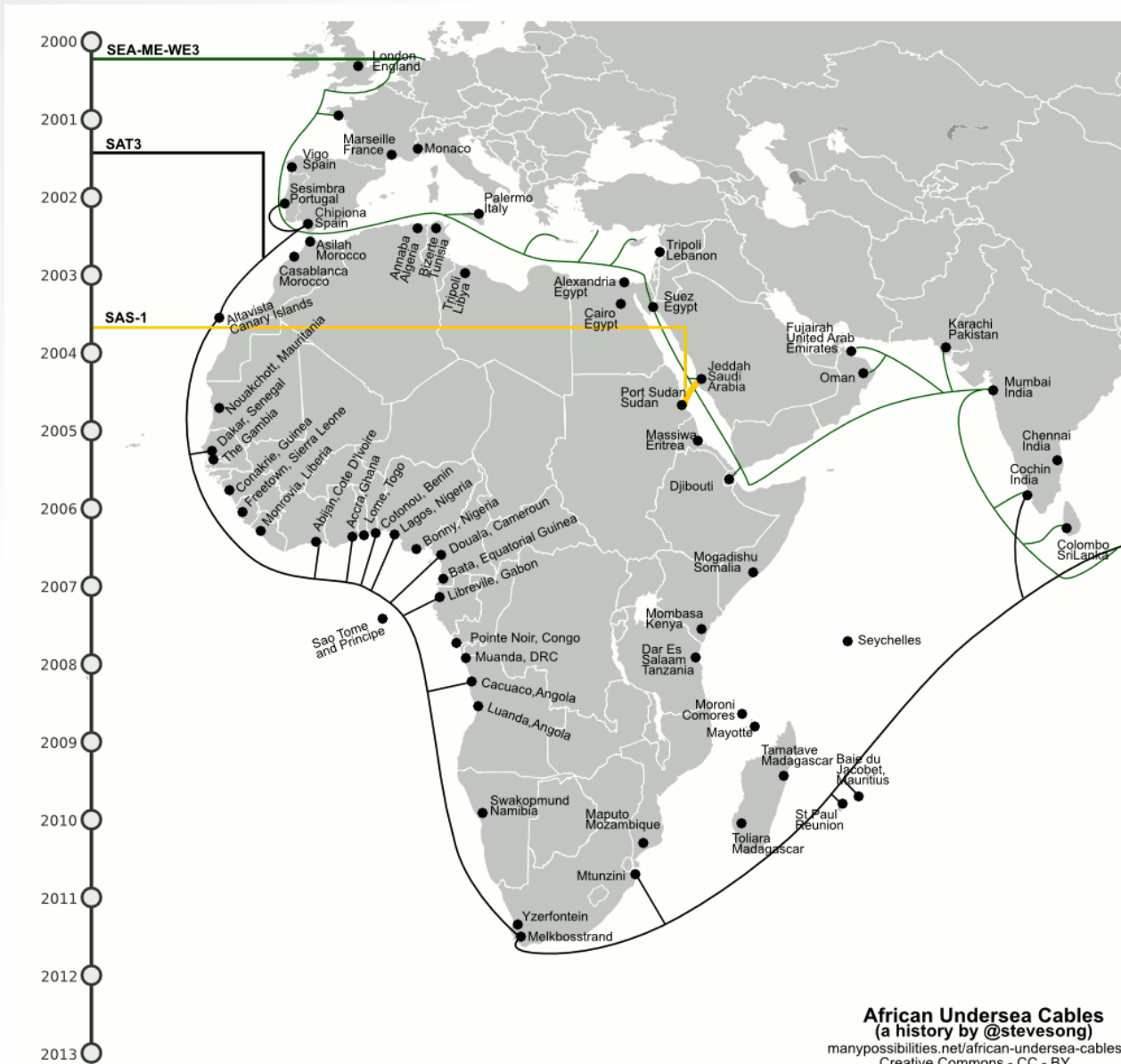


## BARELY NO CONTENT HOSTED LOCALLY

Why is content targeting African audience not hosted in Africa?

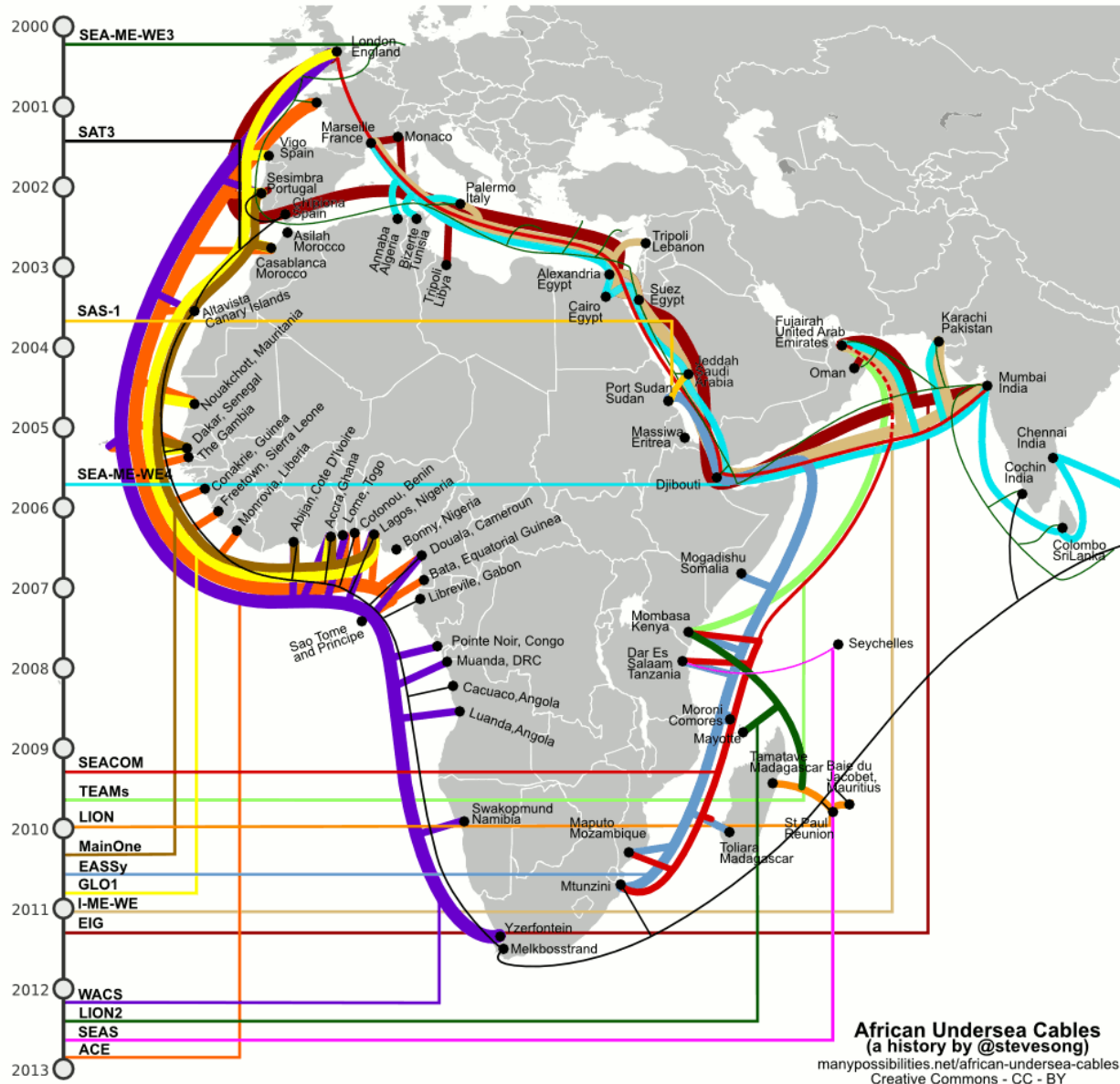


# IS CONNECTIVITY OF THE CONTINENT POOR?



**African Undersea Cables**  
 (a history by @stevesong)  
[manypossibilities.net/african-undersea-cables](http://manypossibilities.net/african-undersea-cables)  
 Creative Commons - CC - BY

# IS CONNECTIVITY OF THE CONTINENT POOR?



## IS CONNECTIVITY OF THE CONTINENT POOR?

- Huge efforts have been made since 2009.
- Most countries that have access to the sea have at least one submarine cable landing on their coast.
- There is submarine capacity available to link Africa to the rest of the world at affordable costs (compared to VSAT and previous solutions).
- What about countries that are landlocked then?

# IS CONNECTIVITY OF THE CONTINENT POOR?



## IS CONNECTIVITY OF THE CONTINENT POOR?

- Local and regional regulations seems to be the biggest problem here.
- Crossing borders with fibers is very hard and complex.
- Doing cross border interconnection is very regulated and strict even if you're using wireless technologies (Hello KINIX and CGIX!).
- Most countries requires you to have a local company and license to host servers in their countries.



## HOW IS REGULATION WORKING ELSEWHERE?

The example of Europe:

- License is declarative for ISP / hosting company.
- Competition is allowed and very well encouraged.
- Crossing border is very easy.
- No need to have a local company or a specific license to host servers / network equipment in another country of the EU.

## WHAT ABOUT THE LOCAL TAIL & USER ACCESS?

- Most of the access in the 90's / early 2000 was done with copper lines.
- EU made regulation to force copper unbundling.
- New ISP entered the market and created innovative products (ie: Triple play offers with Internet + TV + fixed phone line).
- Market concentration happened. Mobile operators and ISP started to merge together. They started to offer Quadruple play services (Triple play + mobile phone).
- Internet access which was mainly done through computers few years ago is now shifting to mobile devices (Smartphone / tablets).



## WHAT ABOUT THE LOCAL TAIL & USER ACCESS?

Sounds familiar?

Most of the internet access today in Africa is done through a mobile device.

User behaviour in Europe and Africa are getting closer on their ways of « consuming » internet access.

Next step will probably be FTTH access for very high speed connectivity at home (HD TV) and your mobile device connected with Wifi.

# WHAT ABOUT THE LOCAL TAIL & USER ACCESS?



Contactez-Nous | Mentions légales

Français English Share 1

**CREOLINK COMMUNICATIONS**

CREOLINK supPort

Accueil Produits Solutions & Services Services Client A propos MyCreolink Recherche...

Accueil Produits Grand Public NumeriLink

Dimanche, 24 Août 2014

Clip  
**Richard Bona**

70 Chaînes

NumeriLink HIGH

100 Chaînes

NumeriLink Premium

150 Chaînes

NumeriLink VIP

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Plus de 100 communautés s'y retrouvent  
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Sélectionnez le bouquet et visualisez les chaînes qui le composent!

**NUMERILINK BASIC** **NUMERILINK VIP** **NUMERILINK PREMIUM**

## WHAT ABOUT IXPs?

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- Better understanding of the need for local IXPs, and great increase of the number of IXPs accross the continent (thanks to AfIX, AfriNIC and ISOC helping on the AXIS project).
- ISP starts to peer together but if there is no content locally, the traffic exchanged is fairly small.
- If a network needs to reach a large number of peers, they will want to go to an IXP that has a large number of network availables.
- These « large » regional IXP don't exist yet in Africa. They are a key element to attract networks and keep traffic local.



## WHAT IS THE REASON FOR NOT HOSTING LOCALLY?

- International connectivity has improved a lot over the last few years and is still improving.
- In most countries, competition is here on the mobile market with prices going down.
- In a pure « telecom » way, everything is in place to host content locally.

# WHERE IS THIS CONTENT HOSTED?



## DATACENTERS IN AFRICA

- Big lack of real datacenters accross the continent.
- Carrier neutral facilities only availables in a very small number of countries.
- For the countries that have facilities, they are mostly telco datacenter designed for network equipments and not to host servers / cloud services.
- Some countries don't even have datacenter but what we could call a « server rooms ».



## DATA CENTERS IN AFRICA

- Like submarine cables, datacenter are long term investments.
- They generate local jobs that can't be outsourced to a foreign country (Security guard at the entrance, remote hands service, maintainer of the AC system).
- They are key to internet hosting but also to non-internet services (E-Government, Corporate hosting, Disaster recovery...).

## A WHOLE ECOSYSTEM IN PLACE

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- International connectivity at high speed and affordable cost using submarine cables.
- Cross border interconnections and regional transit networks once regulation are made to ease this.
- Terrestrial fiber within the countries for a national backbone linking together the main cities.
- Wireless / landline user internet access with a competitive market to lower access costs and extend the user base.
- Datacenters to host servers / cloud services to distribute content locally (either made locally or served by caches systems / CDNs)

## A WHOLE ECOSYSTEM IN PLACE

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- Unlike the ISP / telco market that requires big investment, you need more limited investment for hosting companies.
- That's why even if there is huge players on the hosting business (Amazon, Microsoft & co..), you still have a lot of smaller shops that do tailor made hosting.
- Those people are very unlikely to be merged or disappear like it is the case for smaller ISPs.