

Making cyber governance real in Africa

(cyber governance in the Commonwealth.)

Ladies and gentlemen, I am pleased to share a viewpoint on the opportunities for a better cyber governance in the Africa region. Am from technical community so know little about governance but have had to live with it for some time

Been fortunate to have initiated most of Cybersecurity structures in Ghana, CERTs, Budapest etc as former cyber security adviser. Also been founder of many regional technical institutions Afrinic AfNOG AfREN Africacert etc

Challenges are all opportunities

We are not going to leapfrog but will go through phases more rapidly

The Internet is the driving force in cyberspace and did not come easily to Africa even though we take it for granted today. We anticipated it's potential impact on overall life and fought very hard for Africa to be quickly included; we were conscious of the looming digital divide and tried to engage with the technology and the global Internet community

Unfortunately engagement was only the beginning and we have not as yet figured how to go beyond. We are instead embroiled in celebratory mood of the success of being a part of an Internet revolution. This is perhaps the single most important distraction to better cyber governance in Africa. The euphoria is

clouding the reality of going beyond access to affordable access and to supply of services, adopting a new style of governance to improve local policy and regulation to enable a private sector, build a workforce, prepare the future with research and education, establish peace and safety in cyberspace and managing emerging technologies.

The issues surrounding these topics and how our countries can step up efforts to approach cyber governance in a determined way will be discussed. If we knew we were in a serious digital divide perhaps we might act more decisively

The euphoria is characterized by working on low hanging fruits, procuring instead of developing, being loud about tiniest progress and patting each other in the

back with a fanfare of award functions. The misleading lure of get rich quickly is ever present. This euphoria is clear when we hear policy pronouncements to teach “coding”, whatever that means, in primary schools in Ghana when one is aware don't have sufficient lecturers for programming at universities

The state of innovation may be an indicator of cyber development in countries. In the recent world intellectual property organization (wipo.int), global innovation 2019 index rankings, the first African country on list, South Africa, ranked 63 with Ghana and Nigeria at 106 and 114 respectively out of 129 economies assessed. These 129 economies covered 91.8% of world population and 96.8% of worlds GDP. Switzerland ranked 1st. The report stated

that the “Progress remains slower in regions, such as Africa, ...”

Internet penetration in Africa is 39.8% and for Nigeria, a large economy, is 59% which confirms that Africa has successfully engaged with Internet as a user

Examining network domain names encountered frequently by users yields a different picture emerges. Recent data for country code TLD shows that Switzerland (.ch), the first country in the innovation index, has 1,923,296 names while South Africa (.za) has 1,152,912 names; Nigeria (.ng) has 98,166 names and Ghana (.gh) has 2,645 names

On the use of critical network identifiers of core networks, the number of identifiers

called IPv4 of size /32 per user and per GDP we see that the highest ranked innovation economy, Switzerland, uses 2.345 and 2.376 of /32 per user and /32 per GDP respectively. The corresponding figures for the highest ranked African economy, South Africa, are 0.840/user and 0.510/GDP. The figures for Nigeria are 0.050/user and 0.016/GDP while that of Ghana are 0.167/user and 0.075/GDP.

Thus, while usage is significantly better compared to the '90s, when we started, the internet service delivery is still very weak.

The reality is that we have not been able to go beyond access, to affordable access nor to supply of services. The little services we used to provide locally, such

as email and web hosting, have also been consumed by rapid global consolidation

The craze for broadband fiber everywhere has given way to mobile on land. The race for access made us ignore content. One wonders if the ongoing investments in data centers are over designed and too costly to operate. We seem to consistently misunderstand local trends and needs.

One internet has helped innovation with open standards, open source, multi stakeholder approach to policy development, permission less value addition and shared global ownership. However, we have to admit that we lack technical and managerial capacities needed which is impeding our progress. While many fields are relevant we cannot

succeed without science and technology
in this case

The multi stakeholder bottom up
approach to policy and standards
development by consensus is practiced in
the internet technical community. Adopting
this practice in local governance benefits
the overall policy environment by reaching
out to larger and more diverse
contributors.

The days when all the needed expertise
could be found in one organization or
company or team is no more; the complex
issues with internet technology,
cyberspace and public policy, requires
more opinions. We should embrace all
stakeholders to exchange ideas and softly
evolve positions though we must learn to
stick to our roles

A consensus policy process where issues are addressed is more effective than when votes are cast. Meritocracy would be preferred in addressing cyberspace governance issues over democracy or autocracy. Cyberspace thrives in open sharing, caring environment.

The style of governance was dictated by the Internet itself as a shared infrastructure. Africa might have misunderstood this. Without sufficient quality participation the process it is easily captured making local policy miss opportunities. The spate of Shutdowns and higher taxes in the region and the manipulation of who gets to create are examples weakening cyber governance

Inter networks, a network of networks, expects that we have a local network that we bring to join to the global but Africa seems to depend on the global almost exclusively forgetting to build the local capacities, assets and competencies. The permanent state of “assisted people” does not force local innovation. Africans in the diaspora have a unique role in contributing with capacities and should join to create home grown solutions

We need to improve the policy environment for innovation and adoption. We recognize that governments have a special role to nurture innovation; innovators, the innovation framework as well as provide core funding for fundamental research. Government’s role is to bring out our creative juices and not to direct creativity.

Policy needs to enable the local private sector to develop its capacities. It is doubtful if any of African service providers would survive if they were barred from procuring from the USA as happened recently to Huawei. Africa is not China but this will have impact on users of Huawei in Africa. In a related question would Africa survive if the potential fragmentation of the Internet would occur? Thus, not having sufficient domestic digital service capacities could become national security concern in future. Did globalization turn to nationalism on us after we bought into it?

In general, developing countries should not follow the developed economies but should learn from their mistakes and solve our own problems. We should

address local issues while building digital economies

When we import technology, which are knowledge intensive we get usage benefits immediately. However we'll continue to import for long time and adapting our problems to imported solution

On the other hand, while it takes longtime to develop technology locally and requires capacities it is likely to be a fit for problems and are able to continue adapting solutions to new needs

Africa is yet to figure the balance between “acquire” or “develop”

The quality of workforce is a determinant of cyberspace presence of a country. Our

educational systems are taxed while investments are dwindling. Some also argue one does not need education questioning investments. The emerging new technologies of AI are thought to have impact on jobs in Africa. One would therefore need more knowledge and expertise to survive meaning more education. Additionally, these technologies can be used to build a better workforce by tailoring training to individual needs

The future for a continent with an average age of 20 years is through research and education

How are African economies preparing for future with R&D expenditure less 1% per GDP while leading countries at 3.37% of GDP?

We must build the foundation, the institutions, the mentors for organized innovation development. The African research and education networks community including Wacren, Ubuntunet alliance and Asren, are catalysts to global research collaborations to improve research institutional capacities of the continent

We should be attentive to creations and promote publications, patents, copyrights and other intellectual property management including open source and Creative Commons to build a culture of African creativity

There are enough laws on statutes for economic and social development in peace and safety in cyberspace. We are

behind in the implementation of the laws and enforcement of provisions. Hence, though new laws are needed we recommend focus on implementation. Law enforcement and judiciary need to be abreast and acquire new digital skills

The opportunity is in accepting that the benefits of good cyber governance are indirect unlike other endeavors and building capacity towards that. Afrinic, AfNOG and other Af* May contribute in this effort

In conclusion cyber governance has proven elusive to Africa which has had to manage many variables with weak institutions. We didn't get somethings right and we did not succeed in creating champions

We should move from engagement to owning a piece of cyberspace, improve the supply side metrics of the Internet while we address user penetration, provide more services locally, pay attention to local trends even if have to factor in global trends, go beyond mere consultations and include multi stakeholder decision processes, invest in R&D, stop shutting down institutions and promote creativity, be less dependent on global services as they can go away, and implement the laws on the statutes

Thank you