

## Speech / Talking Points

Event: African Education Summit  
Date: 12 July 2011  
Location: Rabat, Morocco  
Speaker: Dr. Cheick Modibo Diarra, Chairman for Africa, Microsoft  
Title: **'Understanding Africa's ICT Infrastructure and embracing the potential that lies ahead'**

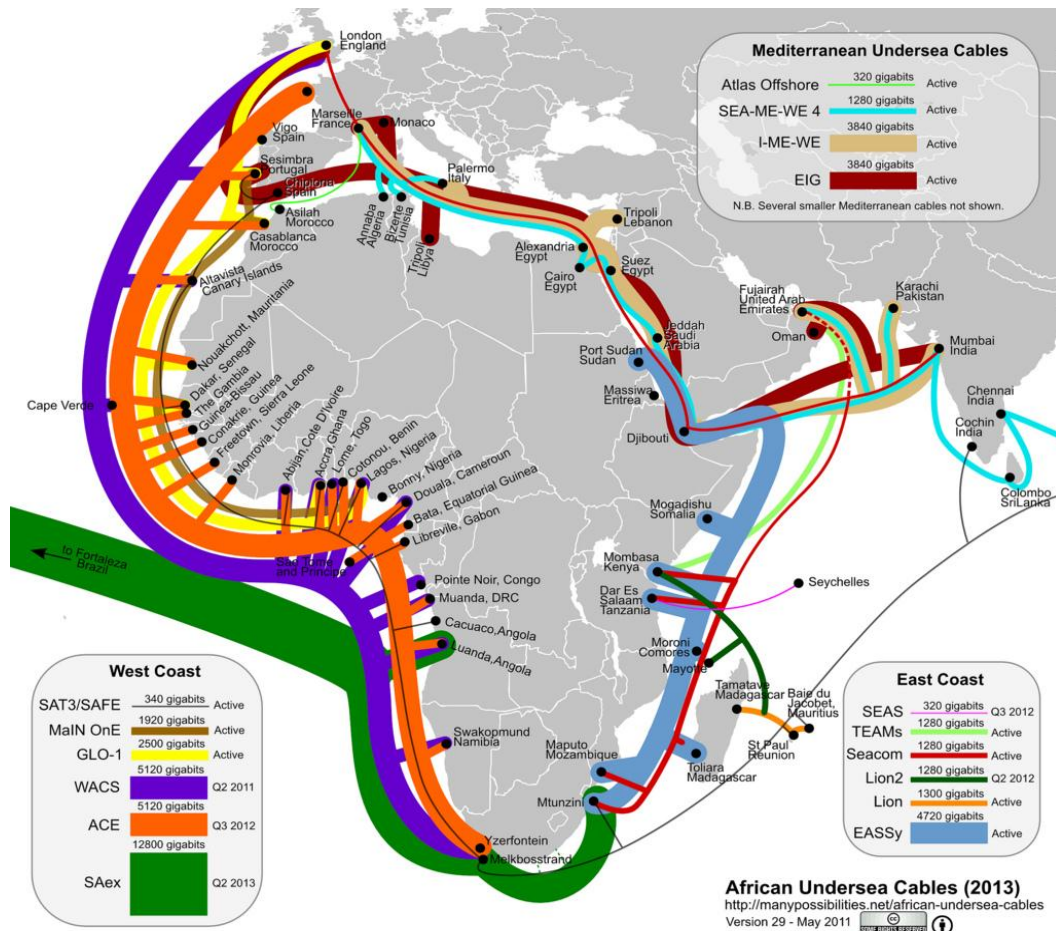
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Distinguished guests, my esteemed co-panelists, ladies and gentlemen,

Africa has made vast strides over the last decade in terms of technical innovation.

Examples of this include Africa's estimated 310 million mobile users, impressive when you consider that the mobile penetration rate in 2004 was less than 10 percent. With a population growth rate that has just surpassed one billion, Africa has been transformed into a competitive global force in the mobile space where the interests of its people are being met with mobile applications being developed by Africans, for Africans.

Undersea cables are also connecting Africa to the rest of the world, with the potential to literally transform the lives of millions of Africans. Virtually every major port in Africa has some kind of undersea cable link, which when correctly deployed will allow us to compete on equal footing with our American and European counterparts – due to similar speeds and feeds.



In these particular instances, I don't believe that Africa should be viewed on the wrong side of the digital divide – but rather viewed as a digital addition.

But despite this irrefutable progress, the bulk of the population remains largely untapped, and untouched, when it comes to the true impact of technology.

### Barriers to infrastructure

The two primary issues hampering Africa's ICT growth are lack of connectivity and lack of electricity.

In terms of connectivity, Africa is a vast continent and bringing undersea cables to a port doesn't mean a thing unless these

cables can be taken across countries and serve as a robust network. This is often referred to as the 'last mile' of connectivity. But without this last mile, the majority of Africans will be unable to realise the benefits. Compounding the situation, once you've passed the connectivity issue - the issue of building data centres remains.

In most African countries, as soon as you leave big and medium sized cities and move towards rural areas, electricity becomes increasingly scarce. And without electricity - or reliable power sources- technology, and its benefits are largely null and void. Undersea cables bring improved bandwidth, but without reliable power, become obsolete.

## **Solutions**

No one could have predicted the rapid uptake of cellular technology in Africa, but it DID happen - and mobile penetration continues at a rapid rate. Cynics claimed the digital divide would increase - and the mobile revolution would bypass the African continent. This could not have been proven less true.

In the same way, I believe there are viable solutions in place to address the issues of lack of electricity and connectivity. If one looks not just at mobile growth- but at mobile habits - the bulk of Africans access the Internet via their handsets, and this bypasses the need for a conventional desktop or laptop and the associated power required. True, the user experience is

diminished, but the technology and the services are still accessible, such as cell phone or Internet banking, and that is what matters. There are also moves towards solar powered cell phone chargers – and if these were to become universal – a major obstacle to cell phone usage and convenience would be eliminated.

Moving to a far bigger picture and solving electricity access for millions across sub-Saharan Desert, think of the impenetrable Sahara desert, measuring just over 9,000,000 square kilometres with billions of tonnes of sand, and the unrelenting sun beating down on this land mass every day. Sun, plus sand plus innovation, gives us solar panels and energy.

Then – how do we embrace connectivity moving forward? I am of the firm belief that Africa should start building its own data centres – because if the content and information sits in foreign data centres - the amount of bandwidth required to access information and services will be prohibitive.

One could suggest that we put in place regional and robust datacentres, in northern Africa, central Africa and so forth - so that the vast population could access technology regionally. In this regard – we need to federate Africa and work together to leap frog technologies. This would have serious cost saving benefits to both the multinationals that develop and build these datacentres and to the consumers that use the services.

The challenges are clear when it comes to Africa's ICT infrastructure – as are the opportunities.

A final point that comes to mind today is the clear associations we can draw between the challenges and opportunities we have in Africa in infrastructure and those we have in education. There is growing global consensus among education leaders, school leaders, and educators that educational systems must evolve and traditional teaching practices must change to better prepare individuals to succeed in life and work today. To prepare them to build and maintain the infrastructures we have talked about.

We are a partner in Transforming Education to deliver relevant, effective, and scalable technologies, services and programs that focus the contributions of many on improved learning outcomes for all. And that prepare our youth and professionals to take on Africa's ICT infrastructure challenges and opportunities.

We believe that:

- A quality education is a basic right and a socioeconomic and workforce imperative
- Technology can economically accelerate development impact at scale
- Effective, immersive learning experiences inspire improved outcomes
- Communities of committed, collaborative participants are essential to advance education and the upskilling of our youth and workforce.

As a great African Leader, Nelson Mandela said, "Education is the great engine of personal development. It is through education that the daughter of a peasant can become a doctor... that the child of farm workers can become the president of a great nation."

Africa is lagging when it comes to ICT and ICT education and it is therefore critical that we attract the attention of the decision maker, which is why I believe conferences of this nature are so important.

I thank you for your time – and look forward to the question and answer session we will be having a little later on.