

AFRICA ONLINE—FOR GOOD AND ILL

By George F. Ward

The African information and communications technology (ICT) revolution that began little more than a decade ago with the introduction of cell phones is accelerating as smartphones proliferate. One authoritative [forecast](#) predicts that there will be over 635 million mobile subscriptions in sub-Saharan Africa by the end of this year and 930 million by the end of 2019. In part due to the unavailability of fixed broadband connections, Africans use smartphones instead of laptop or desktop computers for communications and web-based activities. Mobile data traffic is projected to grow 20 times from 2013 to 2019, while mobile voice traffic will only double. This rapid expansion of mobile data has implications for many sectors of African societies and economies. Both law enforcement agencies and their opponents are seeking to turn technology to their advantage while limiting access to it by their adversaries. [more...](#)

Ambassador (ret.) George F. Ward is editor of IDA's Africa Watch and a Research Staff Member at the Institute for Defense Analyses. He is a former U.S. ambassador to the Republic of Namibia.



Chief Francis Kariuki reads a tweet on his mobile phone at his office in the village of Lanet Umoja, near Nakuru, in the Rift Valley of Kenya. Kariuki's latest attempt to improve village life is by using the micro-blogging site Twitter to send and receive information about crime and other local matters. (Source: AP Photo/Khalil Senosi.)

ZIMBABWE: NEW INFIGHTING IN MUGABE SUCCESSION BATTLE

By Alexander Noyes

On June 19, 2014, police in Zimbabwe [arrested](#) Edmund Kudzayi, editor of the state-owned newspaper the *Sunday Mail*. His arrest follows recent [reports](#) of suspicious break-ins and police investigations of two other newspapers, the *Chronicle* and the *Zimbabwe Independent*. Kudzayi is [reportedly](#) being charged with subversion and setting up, under the name of Baba Jukwa, a fake Facebook account that gained a mass following in the run-up to the July 2013 elections by claiming to reveal government and party secrets. The recent media crackdown has been [linked](#) to the long-running contentious battle within the Zimbabwe African National Union–Patriotic Front (ZANU-PF) over who will eventually succeed 90-year-old President Robert Mugabe, with Mugabe [accusing](#) some within his party of using the state media to sow divisions within ZANU-PF. [more...](#)



Residents of Mbare are seen outside President Robert Mugabe's Zanu-PF offices in Mbare Harare. (Source: AP Photo/Tsvangirayi Mukwazhi)

Alexander Noyes is an Adjunct Research Associate in the Africa Program at the Institute for Defense Analyses.

About IDA

The Institute for Defense Analyses is a non-profit corporation operating in the public interest.

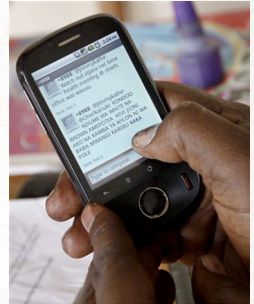
IDA's three federally-funded research and development centers provide objective analyses of national security issues and related national challenges, particularly those requiring scientific and technical expertise.

IDA's Africa team focuses on issues related to political, economic, and social stability and security on the continent.

AFRICA ONLINE—FOR GOOD AND ILL

By George F. Ward

The African information and communications technology (ICT) revolution that began little more than a decade ago with the introduction of cell phones is accelerating as smartphones proliferate. One authoritative [forecast](#) predicts that there will be over 635 million mobile subscriptions in sub-Saharan Africa by the end of this year and 930 million by the end of 2019. In part due to the unavailability of fixed broadband connections, Africans use smartphones instead of laptop or desktop computers for communications and web-based activities. Mobile data traffic is projected to grow 20 times from 2013 to 2019, while mobile voice traffic will only double. This rapid expansion of mobile data has implications for many sectors of African societies and economies. Both law enforcement agencies and their opponents are seeking to turn technology to their advantage while limiting access to it by their adversaries.



Chief Francis Kariuki reads a tweet on his mobile phone at his office in the village of Lanet Umoja, near Nakuru, in the Rift Valley of Kenya. Kariuki's latest attempt to improve village life is by using the micro-blogging site Twitter to send and receive information about crime and other local matters. (Source: AP Photo/Khalil Senosi.)

The Continuing African ICT Revolution

With sub-Saharan Africa's population at approximately 1.1 billion and over 600 million mobile subscriptions, the vast majority of Africans now have access to basic telecommunications either directly or through family members and communities. Far more Africans have access to mobile services than to electricity or clean water. The imaginative use of basic cellphone technology through applications such as [M-Pesa](#), a mobile money transfer system, and [medAfrica](#), a medical services platform, has already provided significant benefits to African societies and economies.

The next stage in Africa's ICT revolution is the proliferation of mobile broadband. According to the [International Telecommunications Union](#), mobile broadband penetration in Africa will climb to 20 percent by the end of 2014 from just 2 percent in 2010. The growth rate of broadband subscriptions in Africa is twice as high as the global average. This rapid growth, of course, is taking off from a narrow base. Broadband penetration in Africa compares well with that in other regions of the developing world, but is still far below the level of 84 subscriptions per 100 inhabitants in the developed world. One of the key drivers of mobile broadband growth is the availability of [low-cost smartphones and tablets](#). Devices that cost less than \$100 are widely available, and ones priced below \$50 are expected to follow in the near-term future.

The Mobile Economy

The mobile ICT ecosystem has grown to become a major component of sub-Saharan African economies. Starting from a base of zero, the mobile ecosystem currently represents an estimated [7.1 percent](#) of the sub-Saharan African GDP. The sector employs 3.3 million workers and pays \$21 billion in taxes. Mobile operators invested over \$44 billion in their systems between 2006 and 2013. The number of [mobile-enabled product launches](#) in sub-Saharan Africa (typically, apps, web portals, video, music) grew from fewer than five annually before 2005 to around 120 in 2012. The cumulative number of mobile-enabled products launched is over 400. Financial services and health-related applications are particular focal areas for these applications. "M2M," or machine-to-machine, applications are also growing. An [M2M service](#) in South Africa that monitors railroad track conditions has eliminated train derailments in areas in which it is used.

Although the mobile revolution doubtless will continue, it does face challenges that could slow it down:

- Possible changes in government policy—With few exceptions, such as [Ethiopia](#), African governments have

The opinions expressed in these commentaries are those of the authors and should not be viewed as representing the official position of the Institute for Defense Analyses or its sponsors. Links to web sites are for informational purposes only and not an endorsement.

generally fostered an open environment for the spread of ICTs. To the extent that governments feel threatened by openness and free expression of opinion, these policies could change.

- Limitations on bandwidth—The growth rate of broadband in sub-Saharan Africa challenges the capacity of mobile providers to build out and constantly upgrade their networks.
- Unaffordability of services—Although prices for mobile services have fallen substantially, they are still a challenge for the poor, who comprise [almost half](#) the African population.
- Lack of rural coverage—Although Africa is undergoing rapid urbanization, the majority of the population continues to live in rural areas. Mobile penetration rates are lower in rural areas, and growth there will be more expensive to achieve for several reasons, including low road density and lack of electrical power.

Tools for Police and Terrorists

Mobile technologies are being exploited by both law enforcement authorities and terrorist groups in sub-Saharan Africa. Kenya, which is emerging as East Africa's ICT hub, is a good example. In May 2014, the trade press [reported](#) that Safaricom, a leading Kenyan mobile provider, had been awarded a government contract worth \$172 million to provide a mobile communications system that will link all law enforcement agencies in the country. The system will reportedly be based on a 4G network and closed-circuit television cameras with facial-recognition capabilities. The system will be installed first in Nairobi and Mombasa, both of which have seen multiple attacks by the Islamist terrorist group al-Shabaab. ICT is also being exploited at a more basic and perhaps more sustainable level. For example, a village chief in Kenya [utilizes a Twitter account](#) for tasks as diverse as mobilizing the populace to scare away robbers and locating lost farm animals. In Nigeria, authorities have on occasion [interrupted mobile communications service](#) in the country's Northeast to limit the capacity of Boko Haram terrorists and their supporters to communicate.

Criminals and terrorists also understand the power of ICTs, and they have utilized mobile communications both offensively and defensively. The al-Shabaab terrorists who attacked Nairobi's [Westgate Mall](#) in September 2013 communicated among themselves and to the group's leadership by cellphone. Their attack was publicized by al-Shabaab via Twitter. The terrorists who attacked the Kenyan coastal resort of Mpeketoni on June 16, 2014, were initially reported to have [destroyed communication equipment](#) to hinder the police response. Authorities later denied that had been the case. In Nigeria, Boko Haram has been reported as conducting "[unrelenting](#)" attacks on mobile phone networks. One [academic study](#) has found that "the availability of cellphone coverage significantly and substantially increases the probability of violent conflict" in Africa.

Terrorist groups, including al-Shabaab and Boko Haram, have used social media to publicize their causes and their exploits. But a study published by the Center for the Study of Terrorism and Political Violence [concluded tentatively](#) that the "target audience for the majority of terrorist groups in Africa is predominantly Western Anglophones as opposed to groups indigenous to Africa." The same study also found no substantial evidence of offensive cyber attacks perpetrated by African terrorist groups. This conclusion is consonant with Akamai's [State of the Internet report](#), which pegs attacks originating in Africa at only 0.4 percent of the global total.

Conclusion

The rapid expansion of the African mobile ICT universe will continue to deliver benefits to the peoples of that continent. For example, as broadband coverage increases, it will become possible for many thousands of Africans to participate in Massive Open Online Courses (MOOCs) and thereby to learn through some of the world's leading universities. At the same time, mobile communications can be exploited by governments intent on repression and by criminal and terrorist groups. It is no exaggeration to say that the future of Africa depends on maintaining open access to the Internet and thereby to the world.

Ambassador (ret.) George F. Ward is editor of IDA's Africa Watch and a Research Staff Member at the Institute for Defense Analyses. He is a former U.S. ambassador to the Republic of Namibia.

The opinions expressed in these commentaries are those of the authors and should not be viewed as representing the official position of the Institute for Defense Analyses or its sponsors.
Links to web sites are for informational purposes only and not an endorsement.

ZIMBABWE: NEW INFIGHTING IN MUGABE SUCCESSION BATTLE

By Alexander Noyes

On June 19, 2014, police in Zimbabwe [arrested](#) Edmund Kudzayi, editor of the state-owned newspaper the *Sunday Mail*. His arrest follows recent [reports](#) of suspicious break-ins and police investigations of two other newspapers, the *Chronicle* and the *Zimbabwe Independent*. Kudzayi is [reportedly](#) being charged with subversion and setting up, under the name of Baba Jukwa, a fake Facebook account that gained a mass following in the run-up to the July 2013 elections by claiming to reveal government and party secrets. The recent media crackdown has been [linked](#) to the long-running contentious battle within the Zimbabwe African National Union—Patriotic Front (ZANU-PF) over who will eventually succeed 90-year-old President Robert Mugabe, with Mugabe [accusing](#) some within his party of using the state media to sow divisions within ZANU-PF.



Residents of Mbare are seen outside President Robert Mugabe's Zanu-PF offices in Mbare Harare. (Source: AP Photo/Tsvangirayi Mukwazhi)

The succession issue is expected to be resolved at the ZANU-PF party congress in December, where Mugabe is likely to step aside or anoint his successor. As highlighted in the November 7, 2013, edition of [Africa Watch](#), the two main candidates to replace Mugabe are Vice President Joice Mujuru and Justice, Legal, and Parliamentary Affairs Minister Emmerson Mnangagwa. Mnangagwa, a former Defense Minister who is reported to enjoy the support of the security chiefs, has been implicated in several episodes of political violence. Mujuru is the widow of Solomon Mujuru, a former high-ranking military chief and ZANU-PF official. She garners more grass-roots political support than Mnangagwa and is considered a moderate.

After [winning](#) nine out of 10 provinces in provincial executive party elections held last fall, Mujuru was considered to be in the driver's seat on the succession issue because the winner of the party elections will nominate and elect members of the powerful [presidium](#) at the 2014 congress. But just as Mujuru was thought to be consolidating control of the party, Mugabe—who has adeptly played the two factions off each other in the past—reasserted his authority. Mugabe [said](#) in April that neither contender was guaranteed to replace him and that it was “terrible even to have your name mentioned as leader of a faction. It is shameful.” [He added](#): “But why should it [succession] be discussed when it's not due? Is it due? I'm still there.”

Mugabe's pronouncements did little to stop the infighting and positioning between the Mujuru and Mnangagwa factions, with tensions rising to new heights over the past month and drawing in the state-owned media. In early June, Mujuru's camp [charged](#) Media and Broadcasting Services Minister Jonathan Moyo, who is aligned with Mnangagwa, with using the state-owned media for factional politics. The Mujuru faction alleged that Moyo sought to sabotage her leading position by appointing editors who were critical of the government and linked to the opposition to state-owned newspapers; these newspapers then published a number of negative stories about the government, including [allegations](#) of high-level corruption by ministers in Mujuru's faction. After hearing details of these allegations, Mugabe unleashed a [tirade](#) against Moyo on June 6, calling him a “devil incarnate” set on destroying the party from within. “When you have our minister of information wanting to pit people one against another, you don't do things like that,” Mugabe [said](#).

It appears that Kudzayi's arrest and the media crackdown are further fallout from this most recent battle in the succession struggle between Mujuru and Mnangagwa. Despite Mugabe's verbal attack, he has not sacked Moyo, indicating that Mugabe intends to keep both factions guessing regarding which candidate he favors. That said, because Mujuru had Mugabe's ear during the Moyo episode, it appears at this point that she continues to have the upper hand. As [argued](#) recently by Adrienne LeBas, if Mujuru wins the succession battle she would be likely to push the party in a more moderate, reformist direction, possibly leading to international acceptance. On the other hand, a Mnangagwa win—given his close personal ties to Mugabe

and the security sector and his implication in past political violence—would mean a continuation of the status quo and further entrenchment of the military in politics.

The entry of a third, compromise candidate is also a possibility, albeit a slim one. Current Defense Minister Sydney Sekeramayi's name has been [floated](#) as such a candidate in several recent reports. Leaving the door open to another contender, Mugabe [argued](#) in April, "It is said Mai Mujuru and Minister Mnangagwa are aspiring for the presidency. . . It's not only these two who can succeed me." Mugabe is keeping his cards close, and as demonstrated above, as long as he is still alive, he remains in firm control of the succession issue.

Alexander Noyes is an Adjunct Research Associate in the Africa Program at the Institute for Defense Analyses.
