



## **The Revolution Will be Brought to You by Text Messaging**

**by Garrett Jones**

During the 2007 protests in Myanmar, the media reported that the opposition was coordinating their protests by text messaging and getting video out of the country through wireless internet connections. These tactics were so successful that the government limited international internet access; it later shut down all wireless connections for a period. Eventually the government was forced to restore service, as the shutdown incapacitated government forces as much as the opposition. We have now seen similar such phenomena in Tibet, China, and Kenya.

In most of the third world before the coming of wireless connection--the internet and the cell phone--there were very few telephone lines, mostly to government officials and a few wealthy individuals. Service was poor, with frequent outages and poor line quality. Costs were exorbitant. Waits for installation of new telephone lines were typically measured in years, not days, even for the wealthy and well connected. The telephone company was usually a government ministry or parastatal noted for its corruption and inefficiency. This made even the overseas telephone call beyond the reach of the average citizen and a long-distance call within the country something of an event.

There was normally one television channel, state owned, which broadcast to the capital city and a few other urban areas. Every newscast, everyday began as follows: "Today the president of the republic, His Excellency (insert local dictator's name here) (show picture of dictator) reviewed/met with (cut to film of local dance group, tractor factory, etc.) to the sounds of the cheering citizens." The radio stations were of a similar ilk, but at least you could normally dance to the music. Anyone with any wealth or interest in the truth listened to the shortwave broadcasts of the BBC, Voice of America or Radio Netherlands (or, for French speakers, Radio France and the French versions of the BBC etc.). Newspapers were normally a little more informative about overseas news, but they were easily shut down if they began to annoy the local politicians.

This technological bottleneck led to a situation where the government could control to a substantial degree what the local population knew of events in the world at large and from relatively inaccessible parts of their own country. This control was never absolute, but with a largely poor and illiterate population, control of information was a powerful tool in a government's hands. The opposition viewpoint was largely confined to rumors and foreign shortwave news broadcasts, which might or might not be heard by the average citizen. Landline telephones were easy to disrupt or monitor, and newspapers, with their bulky infrastructure, were always operating on government sufferance. The "facts" were what the government said they were, more or less.

Today, cell phone providers in Kenya estimate that 10 million Kenyans either own their own cell phone or have easy access to one. This is in a country of about 31 to 34 million people. Kenyans like to talk, a lot. These are modern cell phones with state-of-the-art text messaging, Bluetooth, internet and video capability. There are services available to the average Kenyan that have not yet made their way into some regions of the United States. Access to the phones and airtime can be anonymous, and as with most things in Africa, where paperwork intrudes, money will make anything work. The new wireless networks have spread across the country and outside urban areas. A farmer can now have good quality internet access if he lives near a major highway or in one of the many cell footprints across the country. The cell towers and systems are state of the art and well maintained. Airtime is expensive, but not exceedingly so. The poor are somewhat shut out by the cost, but sharing someone's phone if you are buying the airtime is a common practice. Thus, one cell phone in a slum may have hundreds of different users in a month.

Wireless connectivity has become a necessary service for the Kenyan middle class. Unlike other places, many Kenyans rely on their cell phone as their primary internet access device and link to the World Wide Web. With regard to government control of services, as in the United States, Kenyan telecommunication regulation is organized to "encourage political giving" for politicians and revenue for the government, rather than promote technological advancement. The technical competence of most incumbent politicians is low, their primary concern being revenue and political funding. The result is a free-for-all for

providers on the services they offer, and the long-term impact of these services in the political arena is little understood, much less constrained by the government.

What this means to the average middle class Kenyan is that the truth is now what CNN in New York, or the BBC in London, says, or what comes from a chat with Uncle Achmed in Mombassa. This news comes with pictures, video and blogs that run the gamut from political to rap music. The government no longer controls the flow of information. Anyone with an airtime card and a camera phone can document anything, anywhere. Kenyans are receiving and reacting to events before the government is even aware something has happened. Embarrassing footage of a policeman killing an unarmed protester? Before it has made it to broadcast on the local television station, it has been shared on cell phone videos all across the country. Isolate an area of the country from foreign journalists so a potential problem can be minimized or denied? Not likely! "I-Reporters" are sending reports by text message to the capital and beyond as the event unfolds. Blogs of all types are reporting real-time developments and rumors, with the bloggers' own analysis. Government and opposition statements are mocked and dissected with a vigor that demonstrates that at least the computer-literate portion of the population trusts neither side. An equivalent development in the West may have been translating the Bible from Latin to the local language. Now the local population will decide what it believes, not a ruling priesthood of vested interests.

I will leave it to others to describe the socioeconomic impacts of the communication revolution and the many technical aspects thereof. It does, however, strike me that there are several unforeseen consequences on the political situations common to any society that is rapidly acquiring a freedom of communication its citizens have not until recently been allowed.

The first common aspect is that the political opposition is almost uniformly better at exploiting the advantages of the technological developments than the governments in power. This may be generational or the natural conservatism of those in power, but it does seem to be a common theme. In Kenya, the opposition has slick and attractive blogs and websites, and their use of text messages and phone trees is freely acknowledged. The Kenyan government's original media reaction after the riots was clumsy and relied on full-page ads in the traditional press. The opposition responded with timely blogs and text messages. The electronic version of events was soon seen to overwhelm government media efforts. Crude pro-government blog sites finally sprung up about a month into the current election crisis, as the incumbent government tacitly acknowledged that it was losing the media war.

The government, early on in the crisis, banned live radio and TV news broadcasts as a way to control when and what the population was told. This was an ineffective action, as the connected parts of the population simply switched to international news sources and live blogging to follow breaking developments in their own country. The political and tactical effect of this use of technology puts the general population, and the political opposition specifically, inside the government's decision loop. The wired population is reacting to an event before the government had learned of it or formulated a response. No government can win that battle. The best they can hope for is a talented spokesperson to spin the situation. The Kenyan government had no such luxury.

The second common theme to telecommunication advances is that the government is also as fully entwined in the wireless and internet infrastructure as the political opposition. As far as I am aware, no authoritarian government has tried to duplicate the wireless infrastructure with a government-only-system, nor have they placed any serious restraints on intra-country interoperability. This being the case, simply shutting down the general wireless or internet capacity cripples the government as thoroughly as it does any opposition group.

The third common thread is the exponential expansion of the problem of monitoring communications when wireless and internet systems are introduced. Rather than thousands of individuals who were well documented by their landline telephone accounts, an authoritarian government is now looking at millions of individuals with no fixed location or identifiable characteristics. One could argue that software and hardware advances make monitoring easier, but such a program is still very expensive and technically intensive. Monitoring modern wireless and internet networks is exponentially harder and more expensive than monitoring landline systems. Governments that face this expensive and technically challenging task are almost by definition new to modern telecommunications, cash strapped, and technically backward. Even if a government has the capability to mount wireless intercepts on a large scale, a very serious second part of these technological challenges is how to analyze the buckets of information intercepted into something meaningful and useful. The best first-world intelligence services are still wrestling with that particular dilemma. In a third-world situation, this means opposition communications are, with a little care, unfettered and largely unstoppable.

At first blush, the Chinese with their "Great Fire Wall" limiting international access to certain international internet sites seems an exception. The Chinese government seems on the surface to have devoted enormous resources and funds to establishing an effective censorship of external Worldwide Web sites. While the technical effectiveness of the "Great Fire Wall" can be argued, the Chinese may have missed the point. The threat of wireless and internet communication to an authoritarian government is not by their contaminating the local citizens to seditious foreign ideas; *it is that they establish an efficient means by which the local population can organize in opposition to the government.*

All the evidence available indicates that Chinese official communications intra-country are largely maintained through the civilian network. Thus turning off wireless, text messaging and internet access would paralyze both the civilian economy and the official government communications system. In China's example, by establishing an effective internal communication system that cannot easily be disabled, the Chinese Communist Party has doomed the itself in the long term. The "Great Fire

Wall” may well be viewed in the future as the 21st century’s electronic “Maginot Line.” It appears to be a common thread that the political implications of modern wireless internet telecommunications are wrongly perceived, if noticed at all by authoritarian governments.

While Kenya struggles through one crisis, and may have been changed forever by wireless and internet communications, China is facing a telecommunications crisis of its own making within the next six to eight months. The 2008 Beijing Summer Olympics should provide an opportunity to see the first signs of how an internal political organization uses communication technology and the effectiveness of the “Great Fire Wall” in moderating internal dissent. Tibetan opposition organizations have already begun activities to put forth their views, and are likely just the first of many to do so. All of these groups will enhance the effectiveness of their protest by using telecommunications methods beyond the effective control of authoritarian governments.

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