

The Glass Fortress: Zimbabwe's Cyber-Guerrilla Warfare

Clapperton Mavhunga (Massachusetts Institute of Technology)

Contrary to the gun battles we are accustomed to, we now have cyber-warfares fought from one's comfort zone, be it bedroom, office, swimming pool, etc but with deadly effects.¹

—Dr. Olivia Muchena, Zanu (PF) Secretary for Science and Technology

e-Introduction

By the time Russia 'e-nvaded' Georgia and paralyzed its security with cyber-weaponry in August-September 2008, Zimbabwe was in its fifth year of cyber-guerrilla warfare. Using interception gadgets, the Zanu (PF) government of Robert Mugabe jammed radio signal and web traffic that sympathized with the opposition. Online newspapers and internet radios had been using the internet to attack the Mugabe dictatorship for the past four years. Government and anti-Mugabe hackers had been trading long-range artillery fire for three decades.

This is a story of the way internet has brought together print and audio into a diverse bouquet of weapons, giving birth to the cyber-guerrilla. It is a story that must start with Strive Masiyiwa, the man who brought the internet to Zimbabwe. A former engineer with the state-owned Posts and Telecommunications Corporation (PTC), in 1994 Masiyiwa established Econet Wireless (Pvt) Ltd. amid red-faced resistance from the regime. The state refused to grant him a license, but in 1997 the Supreme Court declared the state's telecommunications monopoly unconstitutional. Only the intervention of Vice President and Zapu

supremo Joshua Nkomo prevented Mugabe from further emasculating Masiyiwa's project.²

In July 1998, Econet opened for business. In just three months, it had eclipsed the PTC's own cellular network, Net One. The licensing of Econet was a direct threat to Zanu (PF) in three ways. First, it enabled customers to bypass wire tapping by the state. Second, it led to the creation of wireless and dial-up internet connectivity. And third, Strive Masiyiwa would become the publisher of the country's only daily independent, *The Daily News*, which pricked Zanu (PF)'s corrupt feet to no end.

Snooping

Inevitably, the government started using presidential powers to crack down on internet, mobile and fixed phone users "circulating subversive e-mail inciting the public to oust President Mugabe from office". In late 2003, fourteen people were arrested for this 'offense'.³

But in March 2004, the Supreme Court declared the presidential powers unconstitutional. The full bench upheld the Law Society of Zimbabwe's argument that the presidential powers violated section 20 of the Constitution regarding freedom of expression and rendered it redundant. Mugabe could not be above the constitution.⁴

The Supreme Court ruling did not stop the government from drafting new regulations requiring all Internet Service Providers (ISPs) to censor and report all anti-Mugabe communications.⁵ Some ISPs like MWeb agreed to comply. But others

1. Lance Guma, "Mugabe regime draws up list of blacklisted websites", *SW Radio*, 10 August 2007.

2. "Joyce Mujuru Runaida Mugari, AfroAmerica Network Black Woman of the Year 2004", <http://www.afroamerica.net/pages/2/MujuruZimbabwe12242004.html>

3. Cris Chinaka, "Now e-mails are banned", *New Zimbabwe.com*, 21 November 2003.

4. "Supreme Court bars Mugabe e-mail snooping", *New Zimbabwe*, 16 March 2004.

5. "MWeb 'will obey' Zim e-mail snooping laws", *Newzimbabwe.com*, 2 June 2004

refused to accept a requirement the Supreme Court had tossed out as unconstitutional.⁶

The state could yet illegally compel ISPs to open locally registered domains (ending with '.zw') that the national internet registry, the Zimbabwe Internet Service Providers Association (ZISPA), administered under Zimbabwean law. However the state could not snoop into non-local domains like '.net', '.com', 'co.za', and 'co.uk' whose e-mail servers were located in foreign cities and owned by giants like yahoo, google, or hotmail.⁷

In October 2004, Mugabe used the Tel One and Zimpost industrial strike as an excuse to deploy army and police spooks at the telecommunication and postal companies respectively. Despite the Supreme Court decision, civic groups were worried the government was snooping anyway. In one instance, Movement of Democratic Change President Morgan Tsvangirai conceded shock when Mugabe repeated "almost word for word a conversation he had had with British Prime Minister Tony Blair".⁸

At the World Summit on Information Society (WSIS) in Tunis in November 2005, Mugabe tore into the US monopoly of the internet addressing system.⁹ He was much more worried about the role of internet in loosening his grip on power. The monopoly he was condemning internationally, Mugabe was consolidating internally. In February 2006, the Interception of Communications Bill, first introduced in 2000 as an amendment to the PTC Act, was modified and re-tabled to legalize the

presidential powers the Supreme Court had already overruled.¹⁰

The Interception Bill would empower government to establish a monitoring center to peep into phones and e-mails on the pretext of "protecting national security". A cosmetic provision was inserted allowing citizens to challenge the "monitoring warrants" in court.¹¹

Meanwhile, people were already complaining that some ISPs like Telconet, Mango, Mweb and Zimbabwe Online were blocking e-mails with political content. The central bank installed a "mail content manager" to block its employees from receiving any e-mails with words like "Morgan Tsvangirai" or "MDC". The e-mail bounced back to the sender with the message:

MailMarshal has not delivered the following message: From.... To.... Subject: Morgan Tsvangirai.... This is due to automatic rules that have determined that the intended recipient is not authorized to receive messages that have political content.¹²

The central bank routed mail through the internet hub of the state-owned Tel One.

Meanwhile, the state also jammed the medium wave signal of the US-based Voice of America station Studio 7 and the UK-based SW Radio Africa. The jamming signal was quite strong and located within or near Harare. Sources told reporters that the government had acquired equipment and training from China to jam the stations in 2005.¹³

6. Tendai Maphosa, "Some Internet Service Providers Opt Out of Zimbabwe Government Effort to Spy on Citizens", *VOANews*, 2 June 2004.

7. Robert Ndllovu, "What Mugabe can and cannot do with your e-mails", *New Zimbabwe.com*, 2 June 2004.

8. "Mugabe's spies monitoring your calls, mail", *New Zimbabwe.com*, 13 October 2004.

9. "Mugabe wants US to shed internet control", *New Zimbabwe.com*, 16 November 2005.

10. Tererai Karimakwenda, "Government to legalise interception of private communications", *SW Radio*, 20 March 2006.

11. Lance Guma, "Government unveils phone and e-mail snooping laws", *SW Radio*, 29 May 2006.

12. Lance Guma, "Internet Service Providers block e-mails with political content", *SW Radio*, 22 June 2006.

13. Violet Gonda, "Zimbabwe government jams radio stations", *SW Radio*, 27 June 2006.

In August 2006, Transport and Communication Minister Christopher Mushowe justified the Interception Bill as legislation to curb cyber crime. The state painted internet as a dangerous conveyor-belt for money laundering, terrorism, extortion, and hacking. The draft designated the Minister as the first and last point of appeal.¹⁴

The state called in soldiers, intelligence operatives, and police officers to sing hymns in praise of the bill. Army Colonel Livingstone Chineka criticized the licenses of all three mobile phone providers for compromising state security and the Postal and Telecommunications Regulatory Authority (POTRAZ) for using the wrong statute to grant the licenses. The permits had been issued under section 34 of the PTC Act that only had provisions for fixed telephones, not section 31 which required mobile service providers to use the state-owned Tel One as a gateway for international calls. Chineka recommended that Telecel and Econet be given just 30 days to switch to Net One's gateway.¹⁵ The High Court had already dismissed that argument in November as tantamount to subsidizing Tel One.¹⁶

In June 2007, Zanu (PF) used its parliamentary majority to pass the bill into law, leaving only the small issue of Mugabe's signature. A year later Colonel Chineka, a serving member of the army, was chosen Zanu (PF)'s parliamentary candidate in Zaka East.¹⁷

Even before the ink had dried on Mugabe's signature on the Interception of Communications Act in August 2007, Chinese-trained internet spooks had deployed at Mazoe Earth Satellite station, the country's gateway to Intelsat, the

world's largest commercial satellite communications services provider. It seemed the best place to set up the envisaged interception center. But experts doubted the ten spies could track "everyone's" communication short of summoning the entire state security apparatus. The real intention was to rule with fear—to make the technology work through fear, not materiality—and make an example of one or two people.¹⁸

The Interception Act compelled ISPs to install the equipment themselves at their own expense. Failure to comply would be "an offence and liable to a fine or to imprisonment for a period not exceeding three years or to both".¹⁹

By September 2007 ISPs and mobile phone providers had started installing surveillance equipment to comply with the snooping law. SW Radio reported that DHL's Harare offices were delisting from e-mail listservs that purveyed political content. ISPs like Econet's Ecoweb, Tel One's Com One, and Telecontract's Telconet were reportedly installing surveillance equipment routing via the state's interception center at Mazoe. So too were the country's three mobile phone companies Econet, Telecel, and Net One.²⁰

Technological Convergence: internet (and) radio

After being fired for taking phone-calls from an irate public protesting the violent crushing of the 1997 food riots, ZBC freelancer Gerry Jackson set up an independent station named Capital Radio. It was promptly shut down despite securing a broadcasting license. In 2001, Jackson established SW Radio Africa in London with fellow former ZBC journalists. USAID's Office of Transition Initiatives (OTI) was allegedly funding this 'peace and democracy' initiative, but the US embassy in

14. Violet Gonda, "Zimbabwe bugging bill heavily criticised at public hearing", *SW Radio*, 31 August 2006.

15. Lance Guma, "Army says mobile phone companies compromising state security", *SW Radio*, 28 November 2006.

16. Lance Guma, "Army says mobile phone companies compromising state security", *SW Radio*, 28 November 2006.

17. Lance Guma, "Opposition poll boycott rattles Zanu PF", *SW Radio*, 15 May 2007.

18. Lance Guma, "Too much to monitor for snooping squads", *SW Radio*, 7 August 2007.

19. Lance Guma, "Too much to monitor for snooping squads", *SW Radio*, 7 August 2007.

20. Lance Guma, "Experts say 'don't panic' as snooping equipment is installed", *SW Radio*, 6 September 2007.

Harare refused to deny or confirm this. The BBC refuted claims by Information Minister Jonathan Moyo that SW Radio was using its studios, transmitters and frequencies.²¹

The US Government could not deny its funding of Studio 7, a VOA radio program broadcasting and streaming to Zimbabweans at home and abroad. The program started airing in 2003, growing rapidly to reach nearly one million radio and internet listeners in 2006. Its staff includes experienced print journalist and novelist Raymond Choto, former popular ZBC Radio 2 disc jockey Brenda Moyo, and *Zimbabwe Independent* reporter Blessing Zulu. USAID funds Studio 7 under its Zimbabwe Project, while VOA manages and operates the programming.²²

Because SW Radio and VOA broadcast only for a few hours on shortwave and medium wave, and considering that they can only stream podcasts, some former journalists came up with the idea of internet radio which often combines with news websites. In August 2004, a group of DJs calling themselves Africa Media Association (AMA) started a 24-hour independent internet radio station, streaming from 'somewhere in London'. Afro-Sounds FM's mission was to "entertain and inform", to fill the void the closure of the independent print and electronic media had left in Zimbabwe.²³ The group was composed of former ZBC-TV journalists.²⁴

Also in 2004, another internet radio called Zimnetradio began live streaming from 'studios' in North America, UK, Egypt and South Africa to audiences in different time zones. Listeners 'tuned in' via www.zimdaily.com, clicked the Zimnetradio link, and upon reaching it logged into the chat room and discussion forums to meet 'cyber-family'. Over

time Zimnetradio has become perhaps the most popular live phone-in, music, and news 'combo' online.²⁵

The internet has enabled exiled musicians critical of Mugabe to become journalists, activists, and disc jockeys. For example, on 18 April 2008 Canadian-based "musical critic" Viomak created Voto (Voices of the Oppressed), a radio station dedicated to protest music, message, and news. The musician says she is following in the footsteps of the Voice of Zimbabwe radio, Zanu (PF)'s popular guerrilla war broadcast courtesy of Radio Maputo, as well as Zapu's People's Voice radio from Dar es Salaam, Lusaka, Cairo, and Moscow in the 1970s.²⁶

The shortwave and internet radios from the diaspora have put the state on both technological defensive and offensive. As suburbanites turned to satellite television signals to outflank the toxic ZBC-TV propaganda, the state mooted "Operation *Dzikisai Madhishi*" (Take Down Dishes). Meanwhile the rural folk had turned to shortwave radios to receive SW Radio and Studio 7, whereupon state militias moved in demanding owners of these sets to surrender them or be killed.²⁷ Neither action achieved its ends.

Realizing the futility of physically stopping signals, the state joined in to send its own. In May 2007, it tried to launch a new shortwave radio to "provide factual information about the reality... in Zimbabwe" as a corrective to the SW Radio and Studio 7 "anti-Zimbabwean propaganda". The plan failed to take off for financial reasons.²⁸ Mugabe's regime also struck a deal with a Dubai-based IT firm JumpTV to stream its ZBC-TV mouthpiece

25. <http://www.zimnetradio.com/>

26. Harriet Chigege, "Protest musician launched internet radio on Zimbabwe Independence Day", www.kubatana.net/html/archive/artcul/080507hc.asp?sector=ARTCUL 7 May 2008.

27. "Is Zimbabwe on the verge of cyber war?" <http://www.thezimbabwetimes.com/?p=924>, 18 June 2008.

28. "Launch of Zimbabwean radio station "postponed indefinitely", www.blogs.rnw.nl/medianetwork/?p=8066 Saturday, May 26, 2007

21. Chris McGreal, "US Funds Penetrate Zimbabwe Airwaves", *The Guardian*, 24 January 2002.

22. <http://www.nehandaradio.com/voazimbabwe220807.html>

23. http://www.afrosoundsfm.com/test/about_us.htm

24. "Zimbabwe radio station goes live on internet", *New Zimbabwe.Com*, 1 October 2004.

live on the internet beginning 22 June 2007. Initially, the station offered the service free to registered users, but began charging a monthly fee of US\$9.95 starting 15 July. ZBC radio stations National FM, Power FM, Radio Zimbabwe, and SFM would be added to the project in due course.²⁹

e-Newspaper

Strive Masiyiwa went into publishing at just the time world-acclaimed journalist Geoffrey Nyarota had become fed up with teaching journalism at the Nordic SADC Journalism Center in Maputo. In 1997, Nyarota packed his bags for Harare—at just the time that Econet started transmitting its signal. The result was *The Daily News* two years later and eclipsed the state-owned *Herald*. After efforts to force the paper to tone down, the state became more aggressive. On 28 January 2001, a bomb ripped *The Daily News* press into smithereens, days after Moyo had promised to “silence” it. In 2003, the paper was officially banned as Nyarota was hounded out of Zimbabwe.³⁰

From 2004 the concept of ‘online newspapers’ began to inspire a number of vibrant projects. New Zimbabwe.com was Zimbabwe’s first news website and discussion forum. The editorial staff steered the newspaper away from its initial pro-opposition outlook to a rather ambiguous middle ground often bordering on an anti-Tsvangirai and pro-Ndebele tone supportive of the MDC-Mutambara faction.

ZimOnline.co.za began publishing the same year with the objective of filling the vacuum the banning of *The Daily News* had left. It styled itself as a news agency where articles about Zimbabwe could be

channeled to other publications for reproduction in different countries.³¹

Also in 2004, a group of Zimbabweans in the US, UK, and Canadian diaspora formed an independent political website, Zimdaily.com, which published daily. The paper styles itself as “a force that President Robert Mugabe... cannot stop”.³² Zimdaily is best known for Fair Deal, an online project started in April 2007 to flush out children (and spouses) of Zanu (PF) officials and get them deported from western countries. After all, Zanu (PF) ‘hates the West’ and castigates those who leave land redistribution and go West.³³ The project has been a huge success.³⁴

In October 2006, Nyarota established the TheZimbabweTimes.com targeting the diaspora and people at home with internet access. The materiality might have changed, but *The Daily News* principle of “telling it like it is” has remained a major selling point. In time, the ‘paper’ has attracted serious public intellectuals not necessarily aligned to the MDC, but committed to freedom and a more plural society.

Wilf Mbanga was a founding managing editor of *The Daily News*. With the constriction of a free press he relocated to the United Kingdom. In 2005 he founded *The Zimbabwean*—an online weekly critical of Mugabe’s regime that aspired to have a print circulation in the UK, South Africa—and Zimbabwe. Starting with an initial print run of 20,000, Mbanga hoped to raise the bar to 120,000

31. <http://www.zimonline.co.za/AboutUs.aspx>

32. Gift Phiri, “Independent news websites mushroom”, *The Zimbabwe Independent*, <http://www.theindependent.co.zw/news/2004/October/Friday29/911.html>, October 29, 2004.

33. “Online highlights – The fair deal campaign”, Media Monitoring Project Zimbabwe (MMPZ), Extracted from Weekly Media Update 2007-33: Monday August 20th 2007 – Sunday August 26th 2007. www.kubatana.net

34. “Australia finally deports Zanu-PF officials Children”, <http://dniinoi.wordpress.com/2007/09/07/>, September 7, 2007; Tamuka Ngwenya, “FAIR DEAL: The Re-Launch”, *Zimdaily*, 15 July 2008.

29. Lebo Nkatanzo, “ZBC TV goes live on the internet”, *New Zimbabwe.com*, 17 July 2007.

30. Winston W. Wiley, “A defiant voice: African journalist delivers news from afar”, *Telegram & Gazette*, Dec 24, 2006; Alvin Powell, “Zimbabwean journalist Nyarota finds sanctuary at Harvard: Years of uncovering corruption brought threats, arrest”, *Harvard Gazette*, 17 April 2003 <http://www.hno.harvard.edu/gazette/2003/04.17/03-nyarota.html>

copies. The paper has thrived despite state harassment.³⁵

In all their various shades, online newspapers have distinguished themselves as a virtual reconfiguration of what Jürgen Habermas called “the public sphere”.³⁶

Hactivism

Having failed with cyber-infiltration, the state resorted to blocking access to these websites using the filters it had forced ISPs to install. More ominously it has resorted to hacking, but the fight has been anything but one-sided.³⁷

In 2005, hackers had burgled into the government website www.gta.gov.zw. A person claiming to be one of the hackers later contacted *New Zimbabwe.com* from Leicester, England, to tell them about the breach:

The idea was to hack into the website and replace everything there with slogans like ‘Robert Mugabe is a tyrant’.... We were about to achieve our goal when the whole thing crashed.... We will keep trying—the security is clearly lax.³⁸

The hacker found it ironic that the regime had coughed up public funds to install cyber-offensive weaponry, yet its databases were virtually defenseless against counter-attack.

Subsequent targets were not so lucky. On Saturday, 10 May 2008, a hacker using the user name r4b00f ‘got into’ the state-owned Zanu (PF) website for three days. Only the next Monday did staffers formally admit the intrusion. The hacker

had replaced all headlines with the word ‘*Gukurahundi*—Mugabe’s bloody campaign which left 20,000 supporters of Joshua Nkomo dead.’³⁹

Five days after the *Herald* hacking, ‘r4b00f’ attacked the *Financial Gazette* website using the same tactics, this time posting the words “Mugabe Must Go! Free Zim” and redirecting visitors to the website of the civic action group Sokwanele. *IT Business Edge* magazine summed up r4b00f’s *modus operandi* as “just another example of *hactivism*”. The *Financial Gazette* was initially Zimbabwe’s premier independent weekly before it succumbed to what media sources concluded to be a state-intelligence buyout.⁴⁰

Here is the interesting point: the idea of attacking without being seen, to the point where the hacker knew where the government could be found, even as the government could not find the hacker. So the state unleashed its fury on a visible figment of what it perceived as the enemy. On 9 June, malicious software was found on the MDC web site www.mdc.co.zw. A google-search of the words “Movement for Democratic Change” returned a warning that the website was a suspicious site and could harm one’s computer. Search engines usually do this to sites they have analyzed and found to contain viruses installed by third parties to discredit the site. Two Trojans and a scripting exploit had been installed to infect the visitor’s computer and trigger it into running 15 new processes simultaneously, thereby disabling the machine. These viruses and script had only been tagged onto one of the website’s 63 pages and was being hosted on two China-based domains, killpp.cn and nihao112.com. Google certified www.mdc.co.zw as not an intermediary—a site that is used as a warehouse for onward dissemination of viruses online. Therefore, the site had been cyber-hijacked

35. Wilf Mbanga, “Newspaper Truck Set on Fire”, *The Zimbabwean*, 26 May 2008.

36. Jürgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a category of Bourgeois Society*. Trans. Thomas Burger with Frederick Lawrence (Cambridge, MA: MIT Press, 1991).

37. Lance Guma, “Mugabe regime draws up list of blacklisted websites”, *SW Radio*, 10 August 2007.

38. “Hackers break into Zimbabwe government website”, *New Zimbabwe.Com*, 2 February 2005.

39. “Hackers Take Down Zimbabwe’s Herald”, *Technology News*, 13 May 2008.

40. “Hackers Target the Financial Gazette Website”, *The Zimbabwe Guardian* (London), 15 May 2008.

by hackers. It was vulnerable because it was using a local domain name (.co.zw).⁴¹

TheZimbabweTimes.com was next. On Tuesday 15 July 2008 it came under severe Denial of Service (DOS) attacks. After yet another cyber-attack, the news website took extra measures to fortify its security. The website assured readers it did not think their security or identity had been compromised, and that the hackers' aim had been merely to disrupt news and information distribution and comments from readers. The paper had taken "the most stringent security measures available... to screen and distinguish between authentic comments and malicious scripts". Henceforth the editors would deny access to users suspected of malicious intent.⁴²

Conclusion: those who live in glass houses

The cyber-guerrilla has proved elusive, communicating via secure e-mail and free platforms like Hushmail, S-Mail.com and KeptPrivate.com. The monitoring equipment has affected public internet cafés that used unsecured e-mail, but the guerrilla has taken cover by clothing the computer with 'anonymizing software' to shield his or her identity from snooping.⁴³ Users have switched to platforms like Yahoo, Hotmail and G-mail since they use remote servers in UK or the US.⁴⁴ They have bypassed the filters using proxies capable of hiding their actual IP address. They visit websites that are not blocked, and from there leapfrog into the blocked ones. Or they 'instant message' with Skype, MSN or Yahoo Messenger which the state's filters cannot not read without the user's password.⁴⁵

With internet, the state now lives in a glass fortress with the tainted side inside, behind a firewall impervious to hackers. The cyber-guerrillas can see the state clearly; the state cannot see them. Those who live in glass fortresses cannot throw stones, not just because they have no armor, but because they cannot find their enemies.

41. "Is Zimbabwe on the verge of cyber war?"

<http://www.thezimbabwetimes.com/?p=924>, 18 June 2008.

42. "The Zimbabwe Times under attack",

<http://www.thezimbabwetimes.com/?p=1637>, 16 July 2008.

43. Lance Guma, "Mugabe snooping law exposes increased repression", *SW Radio*, 6 August 2007.

44. Lance Guma, "Experts says 'don't panic' as snooping equipment is installed", *SW Radio*, 6 September 2007.

45. Lance Guma, "Mugabe regime draws up list of blacklisted websites", *SW Radio*, 10 August 2007.