



CYBERNOTES

A Cybersecurity Wake-Up Call?

Whatever its ultimate outcome, the conflict between Georgia and Russia over the autonomous regions of Abkhazia and South Ossetia may be remembered, among other things, as one of the first in which cyberwarfare played a significant role. As such, it could qualify as a “Web security wake-up call,” in the words of Berlin-based technology consultant Evgeny Morozov.

“In terms of the scope and international dimension of this attack, it’s a landmark,” Ronald J. Deibert, director of the University of Toronto’s Citizen Lab, told the *Washington Post* on Aug. 14. “International laws are very poorly developed,” he added. “Is an information blockade an act of war?”

The assault against Georgia’s Internet infrastructure began almost two months before the first shots were fired in South Ossetia, according to researchers who monitor Internet traffic into and out of countries. It consisted of “denial of service” attacks, where a particular site is bombarded with millions of requests that overload the server and cause it to shut down. Cheap and easy to mount, such attacks are not uncommon; it was, however, the first time one coincided with actual fighting.

Though Georgia is not as dependent on the Internet as other nations, the attack obstructed the government’s communications with its citizens and others. For example, the Georgian Foreign Ministry’s Web site was disabled except for a collage com-

Georgia’s emergence as a young democracy has been part of an inspiring and hopeful new chapter in Europe’s history. For the first time in memory, Europe is becoming a continent that is whole, free and at peace.

Unfortunately, Russia has tended to view the expansion of freedom and democracy as a threat to its interests. The opposite is true: Free and prosperous societies on Russia’s borders will advance Russia’s interests by serving as sources of stability and economic opportunity.

— President George W. Bush, speaking in the Rose Garden on Aug. 15 about Russia’s invasion of Georgia, www.whitehouse.gov

paring President Mikheil Saakashvili to Adolf Hitler. To get around the blockade, Georgian officials relocated national Web sites to addresses hosted by Google’s Blogspot, whose U.S. servers are less vulnerable to attack.

Details of the attacks were compiled by researchers at the *Citizen Lab* (www.citizenlab.org/), opened seven years ago by Deibert with grant money from the Ford Foundation at the university’s Munk Center for International Studies. The organization serves as the technological backbone for the operation of nearly 100 researchers — who call themselves “hacktivists” — in 70 countries who are mapping Web traffic around the world, monitoring how it is routed through countries and identifying where Web sites are blocked.

With colleague Rafal Rohozinski, Deibert also launched the *Information Warfare Monitor* (www.info-war-monitor.net/) to investigate how the Internet is used by state military and political operations. The two also helped begin the *OpenNet Initiative* (<http://opennet.net/>), a

collaboration with Harvard Law School and Cambridge and Oxford universities that tracks patterns of Internet censorship in countries, such as China, that use filters.

As Deibert explained in an Aug. 26 *Washington Post* article, there are a number of private companies that specialize in cybersecurity, as well as nonprofit organizations that have formed cybersurveillance projects. One of the latter, *shadowserver* (www.shadowserver.org/wiki/), a group of 10 volunteers who post their findings about cyberattacks online, spotted the first denial of service attack against the president of Georgia’s Web site on July 20.

In Washington, the Bush administration’s Comprehensive National Cybersecurity Initiative — a highly classified, multiyear, multibillion-dollar project to secure government computer systems and prepare for future threats (www.securityfocus.com/brief/733) — has taken pride of place in the proposed Fiscal Year 2009 intelligence budget, with the single largest request for funds.



But lawmakers like Rep. Jim Lankford, D-R.I., a member of the House Intelligence Committee and chairman of the Homeland Security Subcommittee on Emerging Threats, who sees cybersecurity as “a real and growing threat that the federal government has been slow in addressing,” expect debate over the initiative to extend into the next administration.

— Susan Brady Maitra,
Senior Editor

Unsafe Airlines: Check Out the E.U. Blacklist

In 2006, after a series of fatal air crashes, the European Union established a “blacklist” of airlines whose safety records do not meet the stan-

dards necessary for operation in European skies. The list, which is updated regularly, most recently on July 24, can be found online at http://ec.europa.eu/transport/air-ban/list_en.htm.

The E.U. list is based on the bans

imposed by individual E.U. member states. These national lists are then vetted by the E.U. Commission, with the help of experts on its Aviation Safety Committee and in consultation with the European Aviation Safety Agency, to determine whether a Europe-wide ban is justified. The evaluation is done airline-by-airline, and is thus more specific than the U.S.-compiled list of states with inadequate aviation safety records.

For more information on this extremely useful reference for international travelers, see http://ec.europa.eu/transport/air-ban/further_info_en.htm#2.

— Susan Brady Maitra,
Senior Editor

The Next Internet: What's It All About?

Just when you thought you were ahead of the technology curve (no such thing!) the Internet is changing, upgrading and overhauling its current system. Maybe the news isn't quite *that* dramatic, but in 2005 the Office of Management and Budget mandated that all federal agencies make their systems ready for Internet Protocol Version 6 by June 30, 2008 (www.whitehouse.gov/omb/memoranda/fy2005/m05-22.pdf).

Why? The short answer: to relieve congestion and improve the efficiency of electronic communications. For the long answer, including the move's problems and implications, see the May issue of *Government Executive*

50 Years Ago...

Everywhere the State Department's first African Seminar traveled in Ghana during the first three weeks of June, [the country's] new spirit was abundantly evident. ... The seminar, composed of 21 Foreign Service and departmental officers concerned with African affairs, studied at first hand this newest African nation, the first British colonial territory south of the Sahara to achieve complete independence.

— “A Letter from Ghana” by Edward W. Holmes, October 1958 *FSJ*.



Site of the Month: www.globalvoicesonline.org

Conceptualized at an international bloggers' meeting held at Harvard University in December 2004, *Global Voices* “seeks to aggregate, curate and amplify the global conversation online — shining light on places and people other media often ignore.” It is a nonprofit project based at Harvard Law School's Berkman Center for Internet and Society, a research think-tank focused on the Internet's impact on society.

International volunteer authors, regional blogger/editors and translators collaborate via the site to provide a venue for the many voices around the world and act as “your guides to the global blogosphere.” Each regional editor selects the most influential or credible bloggers in their region (and, when necessary, has their work translated into English).

According to the site's comprehensive FAQ, *Global Voices* “collects, summarizes and gives context to some of the best self-published content found on blogs, podcasts, photo sharing sites and videoblogs from around the world, with a particular emphasis on countries outside of Europe and North America.”

Users can search by region, subject or blogger. Readers can delve into 20-something Egyptian Marwa Rakha's questioning of traditional Muslim tenets, Roy Rojas's musings on the political situation in Costa Rica or Malawian Steve Sharra's exploration of Pan-Africanism and social justice issues. Or they can subscribe to a daily “digest” containing an overview of the latest features, an e-mail notification of updates or RSS feeds.

As part of its advocacy and outreach efforts, *Global Voices* offers training and online tutorials on how to use open-source and free tools to express oneself and campaigns against censorship.

With authors spanning the globe, discussing everything from agriculture to humor and translated from 15 languages, the site highlights those many, often unheard, global voices. As the site asks, “The world is talking. Are you listening?”

— Ariana Austin, Editorial Intern



magazine (www.govexec.com/features/0508-01/0508-01s2.htm).

Currently, the federal government (like just about everyone else) uses IPv4, developed 25 years ago when software engineers could not have estimated the popularity of the Internet or explosion of electronic media. Today people around the world are not only plugged into the Internet in rapidly increasing numbers, they are wedded to cell phones, iPods and other communication gadgets.

Under IPv4, users send information across the Internet and via every one of those devices with a 32-bit number, which means that there are a maximum of about four billion different addresses. The limit is expected to be reached in several years. IPv6, by contrast, uses 128-bit sequences, thus exponentially increasing the number of possible addresses (www.ipv6.org), and offering the opportunity to achieve fully networked functionality among all electronic devices.

The new protocol also allows a better, more systematic hierarchical allocation of addresses and efficient route aggregation (<http://en.wikipedia.org/wiki/IPv6>). Other benefits are improved security, network-management enhancements and advanced application and services. For example, as Chief Information Officer in the Office of the Secretary of Defense Kris Stance explained to *GovExec*: "In Iraq, when we initially went in, it took weeks or sometimes months to get networks up and running. With IPv6, it would take hours, or at most days, to do the same task."

OMB issued its mandate so the U.S. government would be in a position to lead in the crucial transition. Asian and other countries that were allocated relatively few IPv4 addresses at the outset of the Internet Age already feel the shortage keenly, and their governments have been quick to adopt the new protocol, investing millions of dollars in making the switch.

For example, the Chinese used IPv6 when they created a new Internet structure to support the Olympic Games.

Domestic critics claim that the address crunch is exaggerated, especially for American agencies that were given large blocks of IPv4 space in the early 1990s. Because the address problem is not as severe in the U.S., many have been reluctant to make the move. The biggest incentive has been the OMB mandate, which requires federal agencies to acquire IPv6-capable network gear and have their core networks IPv6-enabled — ready to be transitioned to the new protocol — by June 30.

Most federal agencies have met that deadline, but it is the minimum goal. In the words of Pete Tseronis, a member of the IPv6 working group: "IPv6 is a marathon, and June 30 is mile marker 1." There are significant hurdles in the transition, including security.

In August, the General Services Administration became the first U.S. civilian agency to fully implement the new protocol. For federal IT managers, the next steps are reserving address space and meeting with other key IT people in their respective agencies to assure a successful changeover to IPv6.

— Ariana Austin, *Editorial Intern*

Doha Collapse: What Lies Ahead?

On July 29, the World Trade Organization's Doha Development Round — which opened in November 2001 and was originally scheduled to conclude on Dec. 31, 2004 — broke down for the fourth, and perhaps final, time with the collapse of a 30-nation ministerial meeting in Geneva (www.wto.org). WTO officials and delegates blame differences between the U.S., on the one hand, and India and China, on the other, over a special safeguard mechanism

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that would allow developing countries to protect sensitive products under certain conditions.

But economist Carlos Perez del Castillo, Uruguay's former permanent representative to the WTO and chairman of its General Council from 2003 to 2004, insists in a Sept. 1 interview with *InterPress Service* (www.ipsnews.net/print.asp?idnews=43751) that that analysis is "oversimplified." Other issues would have come up to derail the meeting if the mechanism had not — such as the levels of reductions in cotton subsidies and the number of special products tariff lines that would be eligible for zero cuts.

Instead, he points to political considerations. India dug in its heels on food security and the SSM in a bid to strengthen the government's political base, which now has only weak support from the farm sector and faces elections within the year. China, already under pressure from liberalization measures taken to gain WTO accession in 2001, was happy to back up India to avoid further measures that might threaten rural stability. The Bush administration was interested in concluding the package, but only if it could be sold to Congress.

All major parties have called for a resumption of talks, however, and WTO Director General Pascal Lamy declared on Aug. 22 that he is considering getting senior officials to a table as early as mid-September to begin the effort to reach a compromise (www.freshplaza.com/news_detail.asp?id=27632). But meaningful negotiations are unlikely to resume until the second half of 2009, Perez del Castillo says, when a new U.S. administration is in place, and elections in India and Europe are over.

Meanwhile, what are the implications of the breakdown? C. Fred Bergsten, director of the Peterson Institute for International Economics in Washington, D.C., writes in *For-*

eign Affairs that the consequences are "grave" (www.foreignaffairs.org/e_newsletter/current.html). With the Bush administration's key multilateral trade initiative blocked, the next administration and Congress will face a dangerous policy vacuum.

Further, he says, the India-China alliance bodes ill for other international negotiations, in particular on climate change, and there will be a surge of bilateral and regional agreements, further weakening the global trading system and discrediting the WTO.

In an Aug. 3 feature in the *New York Times* (www.nytimes.com), "The World Beyond the Trade Pact Collapse," correspondent David E. Sanger reports that the event signals more fundamental changes in the world, where countries like China and India will have much more clout at the bargaining table. "The era in which free trade is organized around rules set in the West — with developing nations following along — definitely appears over," he says.

Still, Sanger quotes Council on Foreign Relations Senior Fellow Adam Segal: "This doesn't mean the breakdown of globalization, the end of trade, or [a descent] back into some pre-World War II kind of protectionism. The Chinese just feel that they don't have to put up with people lecturing them anymore about how to manage their economy."

Sanger also cites Charlene Barshefsky, the U.S. trade representative in the Clinton administration, who has a different view: "The model of this kind of 'global round' is simply no longer viable. ... You have trade surging around the world — in financial services, information technology, telecommunications — and everything gets held up for years because you are arguing about farm products."

Barshefsky favors a divergent approach: the signing up of a limited

number of big players in deals that are specific to the most important industries.

— Susan Brady Maitra,
Senior Editor

Grassroots Campaign for a Bigger, Bolder Peace Corps

On Sept. 6, an unprecedented international conference call linked more than 2,000 former Peace Corps Volunteers gathered at 110 house parties in 44 American states and 16 foreign countries. The event launched a campaign to reinvigorate the Corps and double its size and budget by 2011, the 50th anniversary of its founding (www.MorePeaceCorps.org).

The grassroots campaign, designed as a response to Senators Obama and McCain's calls to expand the Peace Corps and national service, is sponsored by the National Peace Corps Association (www.rpcv.org), a 90,000-member nonprofit organization made up of returned volunteers, former staff and supporters of the program.

National Peace Corps Association President Kevin Quigley hosted the call, which featured a keynote talk by Harris Wofford, a former U.S. senator and one of the founders of the Peace Corps.

The campaign aims to move the Peace Corps closer to the original vision of deploying 100,000 volunteers to work alongside host-country nationals to create change and build good will, and simultaneously enrich the U.S. by returning a significant constituency of men and women familiar with foreign cultures and dedicated to service.

Today the Peace Corps — a symbol of America at its best around the world — operates on a budget of \$331 million, less than a tenth of a percent of the military budget. ■

— Susan Brady Maitra,
Senior Editor