



# U.S. Underwrites Internet Detour Around Censors



Kath Bertland/Abi Fot

Volunteers have built a wireless internet around Jalalabad, Afghanistan, from off-the-shelf electronics and ordinary materials. More Photos >

By JAMES GLANZ and JOHN MARKOFF  
Published: June 12, 2011

The Obama administration is leading a global effort to deploy "shadow" Internet and mobile phone systems that dissidents can use to undermine repressive governments that seek to silence them by censoring or shutting down telecommunications networks.

The effort includes secretive projects to create independent cellphone networks inside foreign countries, as well as one operation out of a spy novel in a fifth-floor shop on L Street in Washington, where a group of young entrepreneurs who look as if they could be in a garage band are fitting deceptively innocent-looking hardware into a prototype "Internet in a suitcase."

Financed with a \$2 million State Department grant, the suitcase could be secreted across a border and quickly set up to allow wireless communication over a wide area with a link to the global Internet.

The American effort, revealed in dozens of interviews, planning documents and classified diplomatic cables obtained by The New York Times, ranges in scale, cost and sophistication.

Some projects involve technology that the United States is developing; others pull together tools that have already

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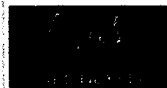
Technology for "Shadow" Internet Networks



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Creating a Stealth Internet

been created by hackers in a so-called liberation-technology movement sweeping the globe.

The State Department, for example, is financing the creation of stealth wireless networks that would enable activists to communicate outside the reach of governments in countries like Iran, Syria and Libya, according to participants in the projects.

In one of the most ambitious efforts, United States officials say, the State Department and Pentagon have spent at least \$50 million to create an independent cellphone network in Afghanistan using towers on protected military bases inside the country. It is intended to offset the Taliban's ability to shut down the official Afghan services, seemingly at will.

The effort has picked up momentum since the government of President Hosni Mubarak shut down the Egyptian Internet in the last days of his rule. In recent days, the Syrian government also temporarily disabled much of that country's Internet, which had helped protesters mobilize.

The Obama administration's initiative is in one sense a new front in a longstanding diplomatic push to defend free speech and nurture democracy. For decades, the United States has sent radio broadcasts into autocratic countries through Voice of America and other means. More recently, Washington has supported the development of software that preserves the anonymity of users in places like China, and training for citizens who want to pass information along the government-owned Internet without getting caught.

But the latest initiative depends on creating entirely separate pathways for communication. It has brought together an improbable alliance of diplomats and military engineers, young programmers and dissidents from at least a dozen countries, many of whom variously describe the new approach as more audacious and clever and, yes, cooler.

Sometimes the State Department is simply taking advantage of enterprising dissidents who have found ways to get around government censorship. American diplomats are meeting with operatives who have been burying Chinese cellphones in the hills near the border with North Korea, where they can be dug up and used to make furtive calls, according to interviews and the diplomatic cables.

The new initiatives have found a champion in Secretary of State Hillary Rodham Clinton, whose department is spearheading the American effort. "We see more and more people around the globe using the Internet, mobile phones and other technologies to make their voices heard as they protest against injustice and seek to realize their aspirations," Mrs. Clinton said in an e-mail response to a query on the topic. "There is a historic opportunity to effect positive change, change America supports," she said. "So we're focused on helping them do that, on helping them talk to each other, to their communities, to their governments and to the world."

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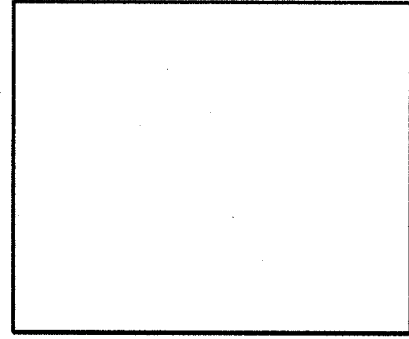
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Developers caution that independent networks come with downsides: repressive governments could use surveillance to pinpoint and arrest activists who use the technology or simply catch them bringing hardware across the border. But others believe that the risks are outweighed by the potential impact. "We're going to build a separate infrastructure where the technology is nearly impossible to shut down, to control, to surveil," said Sascha Meinrath, who is leading the "Internet in a suitcase" project as director of the Open Technology Initiative at the New America Foundation, a nonpartisan research group.

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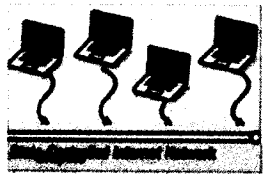
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"The implication is that this disempowers central authorities from infringing on people's fundamental human right to communicate," Mr. Meinrath added.

### The Invisible Web

In an anonymous office building on L Street in Washington, four unlikely State Department contractors sat around a table. Josh King, sporting multiple ear piercings and a studded leather wristband, taught himself programming while working as a barista. Thomas Gideon was an accomplished hacker. Dan Meredith, a bicycle polo enthusiast, helped companies protect their digital secrets.

Then there was Mr. Meinrath, wearing a tie as the dean of the group at age 37. He has a master's degree in psychology and helped set up wireless networks in underserved communities in Detroit and Philadelphia.

The group's suitcase project will rely on a version of "mesh network" technology, which can transform devices like cellphones or personal computers to create an invisible wireless web without a centralized hub. In other words, a voice, picture or e-mail message could hop directly between the modified wireless devices — each one acting as a mini cell "tower" and phone — and bypass the official network.

Mr. Meinrath said that the suitcase would include small wireless antennas, which could increase the area of coverage; a laptop to administer the system; thumb drives and CDs to spread the software to more devices and encrypt the communications; and other components like Ethernet cables.

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The project will also rely on the innovations of independent Internet and telecommunications developers.

"The cool thing in this political context is that you cannot easily control it," said Aaron Kaplan, an Austrian cybersecurity expert whose work will be used in the suitcase project. Mr. Kaplan has set up a functioning mesh network in Vienna and says related systems have operated in Venezuela, Indonesia and elsewhere.

Mr. Meinrath said his team was focused on fitting the system into the bland-looking suitcase and making it simple to implement — by, say, using "pictograms" in the how-to manual.

In addition to the Obama administration's initiatives, there are almost a dozen independent ventures that also aim to make it possible for unskilled users to employ existing devices like laptops or smartphones to build a wireless network. One mesh network was created around Jalalabad, Afghanistan, as early as five years ago, using technology developed at the Massachusetts Institute of Technology.

Creating simple lines of communication outside official ones is crucial, said Collin Anderson, a 26-year-old liberation-technology researcher from North Dakota who specializes in Iran, where the government all but shut down the Internet during protests in 2009. The slowdown made most "circumvention" technologies — the software legerdemain that helps dissidents sneak data along the state-controlled networks — nearly useless, he said.

"No matter how much circumvention the protesters use, if the government slows the network down to a crawl, you can't upload YouTube videos or Facebook postings," Mr. Anderson said. "They need alternative ways of sharing information or alternative ways of getting it out of the country."

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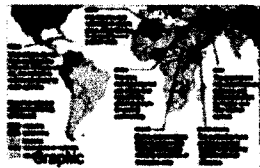
That need is so urgent, citizens are finding their own ways to set up rudimentary networks. Mehdi Yahyanejad, an Iranian expatriate and technology developer who co-founded a popular Persian-language Web site, estimates that nearly half the people who visit the site from inside Iran share files using Bluetooth — which is best known in the West for running wireless headsets and the like. In more closed societies, however, Bluetooth is used to discreetly beam information — a video, an electronic business card — directly from one cellphone to another.

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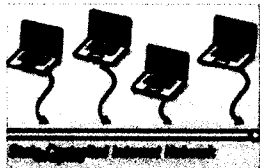
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Technology for 'Shadow Internet Networks'



Limiting Freedom on the Internet



State-Sponsored Internet Detour

Creating a Stealth Internet

### Shadow Cellphone System

In February 2009, Richard C. Holbrooke and Lt. Gen. John R. Allen were taking a helicopter tour over southern Afghanistan and getting a panoramic view of the cellphone

Mr. Yahyanejad said he and his research colleagues were also slated to receive State Department financing for a project that would modify Bluetooth so that a file containing, say, a video of a protester being beaten, could automatically jump from phone to phone within a "trusted network" of citizens. The system would be more limited than the suitcase but would only require the software modification on ordinary phones.

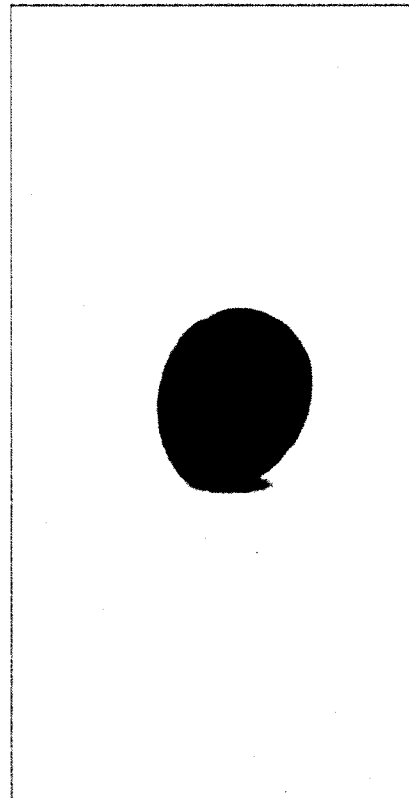
By the end of 2011, the State Department will have spent some \$70 million on circumvention efforts and related technologies, according to department figures.

Mrs. Clinton has made Internet freedom into a signature cause. But the State Department has carefully framed its support as promoting free speech and human rights for their own sake, not as a policy aimed at destabilizing autocratic governments.

That distinction is difficult to maintain, said Clay Shirky, an assistant professor at New York University who studies the Internet and social media. "You can't say, 'All we want is for people to speak their minds, not bring down autocratic regimes' — they're the same thing," Mr. Shirky said.

He added that the United States could expose itself to charges of hypocrisy if the State Department maintained its support, tacit or otherwise, for autocratic governments running countries like Saudi Arabia or Bahrain while

deploying technology that was likely to undermine them.



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towers dotting the remote countryside, according to two officials on the flight. By then, millions of Afghans were using cellphones, compared with a few thousand after the 2001 invasion. Towers built by private companies had sprung up across the country. The United States had promoted the network as a way to cultivate good will and encourage local businesses in a country that in other ways looked as if it had not changed much in centuries.

There was just one problem, General Allen told Mr. Holbrooke, who only weeks before had been appointed special envoy to the region. With a combination of threats to phone company officials and attacks on the towers, the Taliban was able to shut down the main network in the countryside virtually at will. Local residents report that the networks are often out from 6 p.m. until 6 a.m., presumably to enable the Taliban to carry out operations without being reported to security forces.

The Pentagon and State Department were soon collaborating on the project to build a "shadow" cellphone system in a country where repressive forces exert control over the official network.

Details of the network, which the military named the Palisades project, are scarce, but current and former military and civilian officials said it relied in part on cell towers placed on protected American bases. A large tower on the Kandahar air base serves as a base station or data collection point for the network, officials said.

A senior United States official said the towers were close to being up and running in the south and described the effort as a kind of 911 system that would be available to anyone with a cellphone.

By shutting down cellphone service, the Taliban had found a potent strategic tool in its asymmetric battle with American and Afghan security forces.

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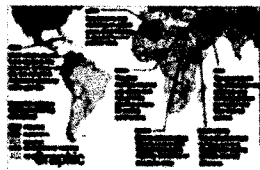
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The United States is widely understood to use cellphone networks in Afghanistan, Iraq and other countries for intelligence gathering. And the ability to silence the network was also a powerful reminder to the local populace that the Taliban retained control over some of the most vital organs of the nation.

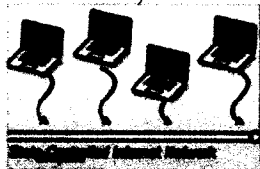
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When asked about the system, Lt. Col. John Dorrian, a spokesman for the American-led International Security Assistance Force, or ISAF, would only confirm the existence of a project to create what he called an "expeditionary cellular communication service" in Afghanistan. He said the project was being carried out in collaboration with the Afghan government in order to "restore 24/7 cellular access."

"As of yet the program is not fully operational, so it would be premature to go into details," Colonel Dorrian said.

Colonel Dorrian declined to release cost figures. Estimates by United States military and civilian officials ranged widely, from \$50 million to \$250 million. A senior official said that Afghan officials, who anticipate taking over American bases when troops pull out, have insisted on an elaborate system. "The Afghans wanted the Cadillac plan, which is pretty expensive," the official said.

### Broad Subversive Effort

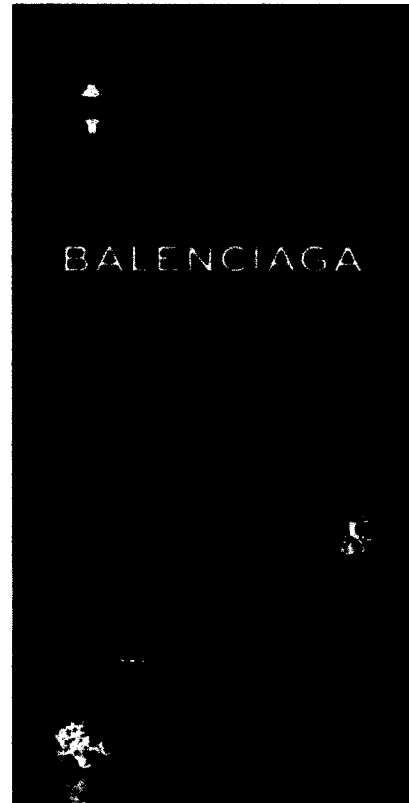
In May 2009, a North Korean defector named Kim met with officials at the American Consulate in Shenyang, a Chinese city about 120 miles from North Korea, according to a diplomatic cable. Officials wanted to know how Mr. Kim, who was active in smuggling others out of the country, communicated across the border. "Kim would not go into

much detail," the cable says, but did mention the burying of Chinese cellphones "on hillsides for people to dig up at night." Mr. Kim said Dandong, China, and the surrounding Jilin Province "were natural gathering points for cross-border cellphone communication and for meeting sources." The cellphones are able to pick up signals from towers in China, said Libby Liu, head of Radio Free Asia, the United States-financed broadcaster, who confirmed their existence and said her organization uses the calls to collect information for broadcasts as well.

The effort, in what is perhaps the world's most closed nation, suggests just how many independent actors are involved in the subversive efforts. From the activist geeks on L Street in Washington to the military engineers in Afghanistan, the global appeal of the technology hints at the craving for open communication.

In a chat with a Times reporter via Facebook, Malik Ibrahim Sahad, the son of Libyan dissidents who largely grew up in suburban Virginia, said he was tapping into the Internet

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using a commercial satellite connection in Benghazi. "Internet is in dire need here. The people are cut off in that respect," wrote Mr. Sahad, who had never been to Libya before the uprising and is now working in support of rebel authorities. Even so, he said, "I don't think this revolution could have taken place without the existence of the World Wide Web."

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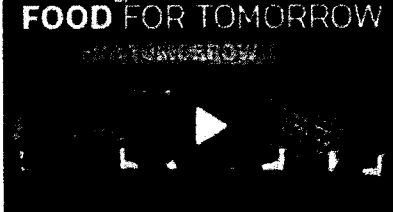
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