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A World Map to Outwit Web Censors

By JOAN OLECK

In recent years, Internet censorship has been an increasing focus of scholarly research. At Harvard, the Berkman Center for Internet and Society has identified Web sites - some surprisingly tame - blocked by the governments of Saudi Arabia and China. At the University of Toronto, the Citizen Lab has developed a tool that will enable users to determine whether a Web address is blocked in any of 15 countries.

Now those centers have joined with the Program for Security in International Society at the University of Cambridge in England for what could become the biggest such project yet.

Last month the researchers agreed to collaborate on "mapping" the Internet for such blockages, whether they are imposed by governments, Internet service providers, corporations or even public libraries. The project will involve the enlistment of thousands of volunteers around the world, organizers say.

"The general idea is that when we talk about the World Wide Web, 'world' and 'wide' are no longer to be taken for granted," said Jonathan Zittrain, a Harvard law professor and co-director of the Berkman Center. "Our worry is that barriers are coming up left and right, and they are more likely to come up if they can come up stealthily."

The volunteers will be recruited to lend their personal computers to an effort called distributed computing, allowing the processing of millions of bytes of data while the computers are turned on but not in active use. This approach is already being used by 600,000 volunteers in the four-year-old SETI@home project (setiathome.ssl.berkeley.edu) to analyze radio signals from space for patterns that might indicate extraterrestrial life. Other groups use distributed computing for genetics research and to evaluate drug combinations that might help defeat AIDS, anthrax and cancer.

Mr. Zittrain said the Web censorship project would check millions of Web pages worldwide, asking, "Can I get there from here?" If the blocking of the Web page is related to the Internet service provider's network (as opposed to a computer glitch), that intelligence will be sent "upstream to the mother ship," the home base of the computer program distributed to the volunteers, he said.

The application will also test results from participating computers "next door" (in network terms) to each other. Search engines like Google and Alexa will suggest controversial phrases and popular sites to test.

To assure privacy, volunteers will be able to choose whether to reveal data about the sites they normally frequent, with assurances that their traceable Internet addresses won't be revealed. "We're interested in the neighborhood, not the house," Mr. Zittrain said.

He envisions using the data to create a Web site and world map that would immediately identify new Web barriers, which can arise quickly during times of war and other political stress. "If China decides to block www.uscourts.gov," the Web site of the American federal court system, "the entire world will know it automatically within an hour of the block happening," he said.

After an initial testing phase that is expected to cost about $50,000, the censorship mapping project is to begin operation late this year. (Volunteers can sign up at cyber.law.harvard.edu/filtering/app.) David Anderson, director of the SETI@home project, said the censorship project sounded feasible because it would require less computing time to check Web page access than it does to analyze signals from space.
Mr. Zittrain and his Toronto partner, Ronald J. Deibert, an associate professor of political science who directs the Citizen Lab (www.citizenlab.org), expressed optimism about recruiting volunteers in countries practicing Internet censorship.

"News of this sort of thing gets around by word of digital mouth," Mr. Zittrain said, for example, through mailing lists, chats with friends and e-mail exchanges. "Our worry is having too much demand for the application, not too little."

Identifying barriers in the United States will be part of the project, too. Pennsylvania, for example, allows its attorney general, with a judge's approval, to order Internet service providers to block child pornography sites, a move that Mr. Zittrain described as honorable in intent but an alarming precedent. He said he foresaw efforts to enact laws blocking access to sites that might be engaged in copyright violations or serve as tools for spammers - and expressed concern that in their zeal, lawmakers might block many other sites.

Such moves may gain momentum with the Supreme Court ruling this week upholding the Children's Internet Protection Act, a federal law requiring schools and libraries to install Internet filters on computers used by children or forgo federal financing for Internet access.

With the increasing complexity of global technologies, Dr. Deibert said, "it's up to researchers to interrogate what's going on, and with sophisticated, credible methodologies say exactly what's being blocked, how it's being blocked, why it's being blocked."