

Glasnost on the Internet

Greater transparency on the Internet forces service providers to refrain from blocking data streams



Internet service providers are restricting data exchange visibly less often since the Glasnost Project uncovered the practice. The red dots show where there were restrictions in the US in 2008 (left) and 2009 (right).

SCIENTISTS at the Max Planck Institute for Software Systems have succeeded in establishing greater freedom of movement on the Internet. Through their work, they ensure that users can detect when Internet service providers systematically block data streams – that is, if these streams are generated using BitTorrent software. Many Internet users around the world use this software to exchange large volumes of data, such as music and film files.

The Max Planck scientists developed a software program that Internet users can use to test whether their service providers allow BitTorrent packets to flow unhindered. The service providers themselves did not disclose how they regulate Internet traffic. More than 250,000 users have since used the software. As a result, it came to light that two service providers from the US and another from Singapore repeatedly blocked BitTorrent packets. Once these interventions became known, however, the providers removed the blockades.

The researchers see the result of their study as the first step in a project they call “Glasnost.” The aim of the project is to make the activities of the service providers more transparent using specially designed software.

Spurred on by their insights into BitTorrent traffic, a number of renowned researchers from all over the world created a platform at www.measurementlab.net, where they provide tools for creating transparency on the

Internet. Google sponsors the platform, but does not influence its content in any way. Information about data traffic is also of interest to regulatory authorities in the telecommunications industry. PH

The Search Engine That Thinks

A program that recognizes search terms in context

ONE OF THE IMPRESSIVE THINGS about Internet search engines is their speed. In just fractions of a second, they can hunt through billions of documents to find the terms being searched for. No less – but also no more. With their CompleteSearch engine, scientists at the Max Planck Institute for Informatics in Saarbrücken have shown that it's possible to do a lot more in the same time.

Even while still typing, the engine suggests additional search terms – items that will lead to good search results. The engine actually suggests words that occur in documents in conjunction with the term entered. At the heart of the process is a new type of index that, besides linking words with documents, also knows what the words mean.

“This function saves typing and time spent trying to guess the best search terms,” says Hannah Bast. She headed the development of CompleteSearch in Saarbrücken before moving on to work as a researcher for Google in Zurich. CompleteSearch also offers suitable refinements if the original search terms produce too many hits. Entering “beatles musician,” for example, garners the suggestions “John Lennon” and “Paul McCartney.”

CompleteSearch can be put to the test at <http://search.mpi-inf.mpg.de/> with the three million English-language pages of Wikipedia. As Hannah Bast points out, the search engine is also ideal for e-mails, literature databases or even medical and legal case files.

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