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### 'Netheads' gather in Chicago to improve Internet

#### A loose-knit group of 'netheads' gathers in Chicago to tackle some of the problems vexing the Web

By Jon Van

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The guys who decide how the Internet should work (a few are women) want you to know they don't run the Internet. Nobody does.

Despite its tremendous influence on Web technology, the Internet Engineering Task Force goes to great lengths to be loosey-goosey, almost hippylike. It is a purely voluntary group with no dues, no board of directors and no headquarters.

"Our mission is to make the Internet work better," said Russell Housley of Herndon, Va., one of some 1,200 engineers from the U.S. and 40 other countries who gathered in Chicago this week to swap ideas. Earlier this year they met in Prague, Czech Republic, and later they will meet in Vancouver.

The engineers make suggestions in the form of technical language protocols with arcane acronyms like TCP and DKIM, and they have developed a system for reviewing, approving and publishing standards. But they have no power to enforce anything.

Ordinary people who use the Web would have no idea what these engineers talk about -- or that they even exist.

But it was not difficult to spot the "netheads" as they gathered in meeting rooms at Chicago's Palmer House Hilton or sat in the hotel's coffee shops and eateries. Nearly every one is tapping away on a laptop computer as he talks, eats or listens to others.

"Nothing beats two guys sitting in a bar drawing on a cocktail napkin over a beer," said Housley.

One project the engineers have worked on is aimed at decreasing phony e-mail messages asking you to provide your bank, PayPal or some other legitimate-sounding outfit with personal financial information. This form of spam, known as phishing, seeks to trick unsuspecting people by appearing to come from their bank or other place where they do business.

A new task force standard attaches a signature to real communications from an actual business, enabling computer servers to identify and discard the phonies.

"If a server gets 70 e-mails from PayPal and only five have the real signature, then only five go through and the other 65 don't," said Barry Leiba, who has worked with other engineers for about 30 months on the new standard.



"Some companies are starting to adopt the standard, and we hope that within a year people will see fewer phishing spams," said Leiba. "The consumer doesn't have to do anything. Users don't understand the details and don't have answers. We don't want to involve them in this."

Leiba's day job is working as a senior technical staff member for Internet messaging with IBM Research. Like most of the engineers who work on Internet standards he does so with his company's blessing.

"I'm not here representing IBM," he said. "We are looking for what will improve the Internet, not what promotes our company's interest. Our companies all have a general interest in seeing the Internet work better."

While most of the volunteers are engineers, anyone can attend a meeting of the task force, listen to what is said and make suggestions, and while they need not be professional engineers, they do have to have a deep understanding of technical issues and language.

"No one is going to ask to see your diploma," said Olaf Kolkman, chief of NLnet Labs in Amsterdam. "Anyone can participate."

Kolkman said some people he has never met have made comments and suggestions online that have been incorporated into standards. Some engineers who attend the meetings have no affiliation with any company. A few made big bucks during the dot-com boom, retired early and participate in the task force as a hobby, said Housley.

The engineers discuss suggestions and reach what they call a "rough consensus and running code," meaning that most go along with a solution that works. All the work is published online as engineers make comments and revisions.

Tasks on their plate include revising standards so that equipment exploring Mars can send photos back to the Internet for researchers to see immediately. Problem is, computers are used to things happening in seconds or milliseconds and it takes about four minutes for a bit to travel from here to Mars, so adjustments are in order.

There's also a push to improve Internet telephony so that calls aren't dropped because computers lose track of the identity of the machines they are communicating with.

The group, started with a meeting of 21 people in 1986, strives for a type of anarchy that mirrors the Internet itself but does rely on a certain amount of organized support.

The Internet Society, a not-for-profit organization based in Reston, Va., provides logistical support for task force gatherings and recruits sponsors. Cell phone-maker Motorola Inc. picked up much of the tab for the Chicago meeting, and AT&T Inc. donated high-speed lines to bolster the Palmer House Hilton's communications systems.

Bringing 1,200 Internet-obsessed engineers into a hotel for a week creates a communications demand that would cause an ordinary system to crash in an hour or two, said Steven Schroedl, founder of Verilan Networks in Portland, Ore., who brought a crew of five and literally a ton of equipment to beef up the hotel's wireless Internet.

They added switches to a dozen electrical closets in the hotel and installed 30 access points for wireless Internet.

"If you brought this group into a hotel without doing this," said Schroedl, "it would be a disaster. At this meeting, it doesn't matter how nice the venue or whether the food is good. It could be Paris or Prague, but if they can't get on the network, all they'll ever remember is how bad it was."

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Five Internet priorities

\*Stop phishing spam

\*Improve communication with Mars probes

\*Improve telephony

\*Optimize video transmission

\*Adjust technology to allow basic functions (like e-mail) in Africa, South America

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