



No, Thank You

*How economics may
help slow the onslaught
of spam e-mail*

BY AARON STEELMAN

If you have an e-mail account, chances are your inbox has been inundated with unsolicited messages — otherwise known as “spam.” According to Brightmail Inc., which develops spam-filtering software, roughly 60 percent of all Internet e-mail is spam. Spammers advertise many different types of products, but among the most common are financial services, adult entertainment, and medical treatments.

Most people quickly identify such messages as spam and delete them, much as they throw away junk mail they receive through the postal service. So why do spammers keep at it, if such a small percentage of their messages actually make it through to their recipients? Because spam is cheap. It costs very little to send an unwanted solicitation, and the marginal expense of adding extra recipients — perhaps thousands of them, in some cases — is negligible. Spam may still “pay,” then, even if only a tiny fraction of people respond.

Given the economics of the spam business, what can be done to stop — or at least slow — its growth? Consider four proposals that have been discussed: one that relies on legislation, one that depends on technological innovation, and two that use economics to stop spammers at their own game.

“CAN-SPAM” Law

In the late 1980s, the fax machine was the hot new technology. It helped people send documents much more quickly and cheaply than ever before. It also led to a phenomenon similar to spam: “blast faxing.” Direct-mail companies compiled huge databases of fax numbers and sent out unsolicited advertisements that clogged fax trays like spam clogs inboxes today. By 1991 there was enough opposition to blast faxing that Congress passed a law designed to virtually ban the practice. Some blast faxes still get through, of course, but the number has dwindled. Given the perceived success of this measure, many have urged Congress to take a more active role in stopping spam.

On Jan. 1, 2004, the “CAN-SPAM” law took effect. The law has three major provisions: unsolicited e-mail has to be marked as such, spammers have to include a valid return address, and recipients must be allowed to opt out of receiving similar messages in the future. In March, four of the country’s biggest e-mail and Internet service providers — America Online, EarthLink Inc., Microsoft Corp., and Yahoo Inc. — filed lawsuits against spammers in federal courts in California, Georgia, Virginia, and Washington state.

Anti-spam activists were heartened to see the government take action to help stop the onslaught of spam, but many wanted a tougher law. For instance, some argued that consumers should be able to sign up for a “Do Not E-mail” list, similar to the national “Do Not Call” list recently aimed at telemarketers. Others were skeptical that any sort of legislation would put a serious dent in spam volume because the federal government can police only those spammers operating in the United States. If U.S. laws start to put a pinch on their business, they would have little problem moving overseas.

Better Filters

If some of the world’s best information technology minds can design e-mail pro-

grams that even technophobes feel comfortable using, shouldn’t they be able to design ways to stop spam from getting through? That has long been the hope of people who are opposed to both spam and government efforts to curtail its growth.

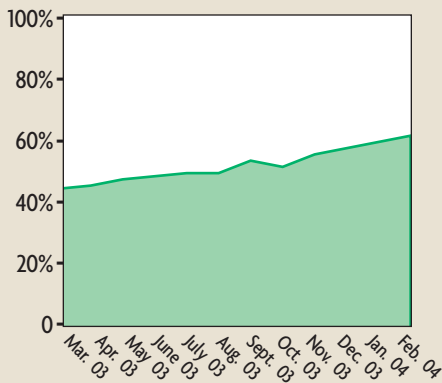
To some extent, e-mail filters have improved. For instance, many users of Hotmail, the free Internet e-mail service offered by Microsoft Corp., have noticed fewer junk e-mail messages making it to their inboxes recently. But the quest for the technological “silver bullet” to stop spam outright has proved elusive. This had led some to search for other methods to stop spam — methods that may involve some government intervention but are less blunt than much of the anti-spam legislation being proposed.

Spam Categories

Percentage	Category	Description
24%	Products	E-mail offering or advertising general goods and services. <i>Examples: Devices, Investigation Services, Clothing, Makeup.</i>
18%	Financial	E-mail that contains references or offers related to money, the stock market, or other financial “opportunities.” <i>Examples: Investments, Credit Reports, Real Estate, Loans.</i>
14%	Adult	E-mail containing or referring to products or services intended for persons above age 18. <i>Examples: Pornography, Personal Ads, Relationship Advice.</i>
11%	Scams	E-mail recognized as fraudulent, intentionally misleading, or known to result in fraudulent activity on the part of the sender. <i>Examples: Investment Proposals, Pyramid Schemes, Chain Letters.</i>
7%	Health	E-mail offering or advertising health-related products and services. <i>Examples: Pharmaceuticals, Medical Treatments, Herbal Remedies.</i>
6%	Internet	E-mail specifically offering or advertising Internet or computer related goods and services. <i>Examples: Web Hosting, Web Design, Spamware.</i>
6%	Leisure	E-mail offering or advertising prizes, awards, or discounted leisure activities. <i>Examples: Vacation Offers, Online Casinos, Games.</i>
4%	Fraud	E-mail appearing to be from a well-known company, but are not. Also known as “brand spoofing” or “phishing,” these messages are often used to trick users into revealing personal information such as e-mail addresses, financial information, and passwords. <i>Examples: Account Notification, Credit Card Verification, Billing Updates.</i>
2%	Political	E-mail advertising a political candidate’s campaign; offers to donate money to a political party or political cause; offers for products related to a political figure/campaign, etc. <i>Examples: Elections, Donations, Political Parties.</i>
1%	Spiritual	E-mail with information pertaining to religious or spiritual evangelization and/or services. <i>Examples: Psychics, Astrology, Organized Religion, Outreach.</i>
7%	Other	E-mail not pertaining to any other category

SOURCE: Brightmail Logistics and Operations Center

Percentage of Total Internet E-mail Identified as Spam



SOURCE: Brightmail Logistics and Operations Center

Make Spammers Pay

If spam is profitable because it is cheap to send, then why not increase the costs, many economists have asked. The most common proposal along these lines is simply to tax all e-mail a small amount, say a penny per message. For most e-mail users this wouldn't amount to much, because they may send only a few dozen messages a week. But for spammers, who send out thousands upon thousands of messages, the costs could quickly become prohibitive. If the idea of taxing non-spammers at even a nominal rate for the offenses of spammers sounds unfair, there is a twist on this idea: Everyone with an e-mail account would get to send, say, 500 or 1,000 messages per year for free and after that the sender is taxed on a per-message rate. This would exempt most individuals from taxation, but still ensnare spammers.

A similar proposal offered by Shyam Sunder, an economist at Yale University, would have spammers pay customers to receive their e-mail messages. "Just as postage on a letter provides a useful disincentive for junk mailers and signals recipients as to the material's importance, so the adoption of a voluntary 'postage' scheme for e-mail — with the recipient receiving the postage — would help the recipients screen out spam," Sunder argues. The system would work as follows. Senders would affix any amount of postage they liked to their message. If the price were

right, the recipient would open it and the value of the postage would be transferred to an account managed by their Internet Service Provider. If not, the recipient would simply delete the message and no postage would be deposited. E-mail from friends and business acquaintances would not require any postage, because presumably these are messages that the recipients usually wish to receive anyway. "This voluntary e-mail postage is a market-based solution for efficiently serving the legitimate interests of both the sender and the recipient," Sunder concludes.

The "Idiot Tax"

In discussions of spam, senders are always made out to be the bad guys. That's understandable. They are the ones causing the problem, it would seem. Presumably, however, they would stop spamming if nobody responded to their — often ridiculous — solicitations. But enough people do respond to make it profitable; the number is probably small, perhaps only one out of 1,000. Why not tax that person who in effect is creating a negative externality for everyone else? (See this issue's "Jargon Alert" column for a discussion of externalities.) Some have called this proposal an "Idiot Tax." This may seem a bit harsh. But, conceptually, the proposal makes a lot of sense. The problem with this scheme, as with others involving taxation, is enforcement. It's not at all clear how one could put this plan into practice.

What's the Big Deal, Anyway?

These proposals might sound interesting but one might ask: What's the big deal about spam, anyway? If most people can identify unsolicited e-mail and delete it in a matter of seconds, what's the problem? These are reasonable questions. It may be that efforts to stop spam amount to going after a fly with a hammer. For some people, however, spam is more than a pest — it keeps them from using the Internet and e-mail as much as they otherwise would.

In a recent survey conducted by the Pew Internet & American Life Project, 77 percent of e-mail users said spam was making their online experiences

unpleasant and annoying. Even more telling, 29 percent said they had cut their use of e-mail because of spam. Ferris Research Inc., based in San Francisco, estimates that spam costs businesses \$10 billion annually due to lowered productivity and the additional equipment and labor needed to filter spam. Whether the costs of spam are indeed that high is a matter of debate. But the point is they are not trivial, and this means that efforts to stop spam cannot simply be dismissed as meritless.

Whether those efforts are futile is another matter. It may be that we have no good solution to the problem of spam — that is, a solution that imposes fewer costs than spam itself. If so, we may have to simply wait and allow spam to die a natural death. This, arguably, is what happened with blast faxes. Sure, Congress passed a tough law to stop their proliferation, which, no doubt, helped to slow the practice. But what probably helped their demise even more was the advent of e-mail, which made the fax somewhat antiquated. In short, as technology changed, many would-be blast-faxers may have become spammers instead. The work didn't change, but the medium did.

What will replace e-mail? Who knows. But it may be that, in 10 years, we will look back nostalgically at how we conquered the problem of spam when, in fact, what really happened is that spammers found newer and cheaper ways to reach consumers. **RF**

READINGS

Kraut, Robert E., James Morris, Shyam Sunder, and Rahul Telang. "Pricing Electronic Mail to Solve the Problem of Spam." Working Paper, Social Science Research Network Electronic Library, July 2003.

Pew Internet & American Life Project. "The CAN-SPAM Act Has Not Helped Most Email Users So Far." March 2004.

Wastler, Allen. "Spam — Time for the Idiot Tax." www.CNNMoney.com, June 24, 2003.

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