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Will 'Waste' Push File-Sharing Further Underground?

Justin Frankel, the programming ace who created WinAmp and Gnutella, has done it again—coding a piece of software that delights some and threatens others.

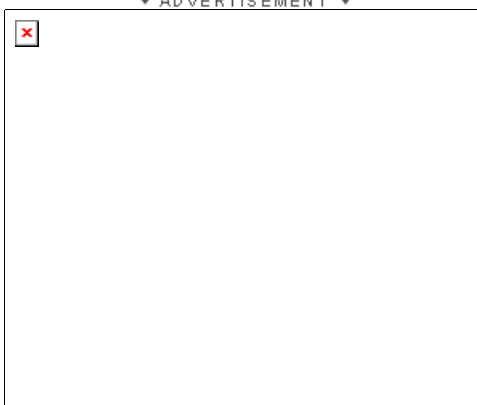


Staff Illustration.

By Eric Hellweg
June 11, 2003

Late last month, almost four years to the day after his company, Nullsoft, was acquired by America Online, star programmer Justin Frankel quietly posted the code to a program called Waste on Nullsoft's Web site. It seemed innocuous enough: a program for setting up small, encrypted networks. But within hours, higher ups at AOL pulled the code from the site and replaced it with a terse notice, scripted in legalese, that warned anyone who downloaded the program that they had "no lawful rights" to the software and that "any and all" copies of it must be destroyed.

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It wasn't the first time this happened. In 2000, during the height of the Napster craze, Frankel posted the program to Gnutella on Nullsoft.com, only to find the code yanked a few hours later. Those few hours were enough for the code—a decentralized peer-to-peer (P2P) program—to be downloaded by enough key people to turn Gnutella into a major force in the P2P world. Today, Gnutella-based programs have been downloaded more than 35 million times.

Does the same future await Waste? Perhaps. The program has already been downloaded more than 1,600 times, according to several people who put up "mirror sites" featuring the code. Though 1,600 downloads might not sound impressive compared to the Gnutella's 35 million, it shows strong interest in the program—especially since it was only available on the official site for a couple of hours. Despite AOL's warning, more than 20 mirror sites are still running. AOL apparently has thus far chosen not to crack down too strongly on the mirrors, though it's difficult to say how long that will last. A Yahoo! discussion group about Waste has already formed. But before analyzing Waste's future, it's important to understand what is it—and isn't—today.

Whenever Frankel releases code, legitimately or not, it's news. He's a programmer of remarkable pedigree, having created WinAmp (the most popular MP3 software player) and Shoutcast (streaming radio), as well as Gnutella. But perhaps hoping to stoke another Gnutella-sized frenzy, the first news stories erroneously pegged Waste as a file-trading application. File-trading is certainly a component of Waste, but it doesn't appear to be its primary function.

Since the code is in a "1.0 beta" stage, it's hard to tell exactly what it wants to be; Frankel didn't respond to repeated requests for information and AOL had no comment on Waste. But after spending some time with Waste and speaking with coders who are already at work improving it, a clearer picture emerges. "Given the amount of effort Justin put in, which clearly wasn't huge, it's off to a great start," says Ray Ozzie, CEO of Groove Networks and creator of Lotus Notes, who has played around with the software.

Waste is basically a program for setting up relatively small, private, encrypted networks, where chatting is the main method of communication. Although Waste's interface and initial applications are straightforward, the program's promise has many coders excited. Currently, all major chat programs, such as Yahoo Messenger, AOL's AIM, and Microsoft's MSN Messenger, are centralized.

What does

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Using these companies' products means you understand and accept that all your instant messaging is running through a central server and can be monitored if need be. Waste, on the other hand, is completely decentralized. This architecture, coupled with its use of encryption, means users can feel completely confident that what they're chatting about won't be monitored by the likes of AOL or Microsoft. "That freedom is addictive," says Lucas Gonze, a programmer who runs a Waste mirror site. "You wouldn't accept someone in your living room checking out your conversation with your wife, and there's no reason you should have to accept that with IM."



According to the sparse documentation that accompanies the program, the suggested maximum number of users is 50. Downloading and installing the 169-kilobyte program allows you to connect with other Waste users, but only after obtaining those users' public encryption keys. Since people don't typically make their encryption keys readily available to anyone on the Internet, Waste is primarily for people who already know each other or share common interests. As such, unless major modifications are made to the Waste source code, it's doubtful that the program will facilitate large-scale encrypted chat. However, the software was released under the open source Gnu General Public License, which allows people to freely distribute a program, making modifications along the way. This is still very much a program in flux.

Once you've exchanged keys and IP addresses with other users, you're connected as a Waste network. Users can set up separate Waste networks for different groups of friends or colleagues. Like various file-sharing programs, users delegate a folder on their hard drives for sharing. Other users can search the folder for files and swap anything in that folder. Users can also search for a particular file in an individual's folder or on the entire Waste network. If, for example, you were looking for a file called "recipes.doc", you could search the user whose folder you think contains the file—say, your friend who is known for his cooking—or if you weren't sure who had it, the entire network.

Given the program's open source foundation and the respect Frankel commands in the coding community, it's hard to tell what shape Waste will eventually take. Could it morph into a program that allows for larger networks than 50? Yes, according to two programmers I spoke with. Could the file-trading feature become stronger and usurp chat as Waste's primary purpose? Yes, again. The possibility exists for Waste to take file-sharing even further into the underground, and make it even harder to detect. And anyone wanting a glimpse into the future of the Internet could do worse than to follow Justin Frankel's code prints.

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