

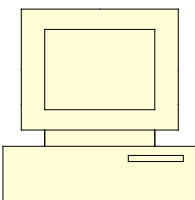
P 2 P, The Insider's Guide

An inside look into Peer-to-Peer Networks

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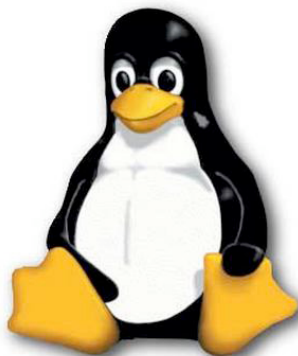
Peer-to-Peer Used for Good?
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Peer-to-Peer used for Good?¹

²Lindows has started to offer distribution for Lindows Live, a free online version of the Linux operating system. However, Lindows Live is not distributed via traditional methods. Lindows Live is distributed through peer to peer networks, or networks where users share data, and online content with each other. Lindows Live is a free online version of the Linux operating system, aimed at consumers.

Using peer to peer networks is not about copyright infringement, but rather all about saving money. To distribute



¹ Source:

Gilmore, Dan. "Lindows uses P2P for Good". The Beacon Journal. Online 16 Feb 2004 <<http://www.ohio.com/mld/beaconjournal/business/7953739.htm>>.

² Image Source:

<<http://www.gslis.mcgill.ca/marginal/mar10-2/linux-penguin.jpg>>

content online, companies need bandwidth. Bandwidth is the capacity of the data pipes that carry information around the Internet. When data consists of large data files, and demand is high, bandwidth charges can soar. Most companies now spread download sites through providers, such as Akamai, which have many servers that are close to where the demand is. Even with these services, the costs can be extremely high.

This is where Lindows is using a peer to peer network. In a peer to peer network, users themselves store the material and make it available to others. The more popular it is, the more likely it is to be on a computer near you. For the company, this means that it only needs to provided a few people with the content. Once a few people have the content, then as more people want to download it, there are more computers that have what you want. Thus, the strain the company's server goes down.

Several companies have started to commercialize peer to peer networks, and create a proprietary system. The problem with this, is that the most popular networks, such as Bit Torrent, and Gnutella, the networks with the most users, are completely free, and it is hard to compete with a free service.

A New File Sharing Program³

Bram Cohen is the new face of peer to peer file sharing systems. He worked in several doomed dot-com startups, and was fed up with not getting anywhere. So he decided to design something that people would actually use. He's program, Bit Torrent, is now at the front of the file-sharing wave. If Napster started the file-sharing revolution, and can be consider the first generation, and programs such as Kazaa represent the second generation, then Cohen's Bit Torrent represents the start of the third generation. At last estimates, the original Bit Torrent program had been download over 10 million times.



Bit Torrent makes sharing large files easier than ever. One site, www.suprnova.org, lists hundreds of movies, television shows, games, and numerous applications, and get thousands of hits each day. Obviously the movie industry has taken notice of such sites and is not sitting around.

Cohen did not design his program to be used for widespread copyright infringement. Rather he designed it to help solve a problem many people face when legally downloading files, waiting for your turn. The problem was not enough bandwidth to meet demand.

The essential idea behind Bit Torrent is tapping into "upload capacity that people aren't using." With most other file sharing programs only a small group of people share files. Most people only download, or leech off other people. Bit Torrent, on the other hand, uses the Golden Rule; the faster you upload, the faster you download. Bit Torrent breaks down files into many small pieces, and as soon as someone downloads a

piece, they immediately start to share it.

Practically, the Bit Torrent system makes it very easy to download large files, without straining the bandwidth of the original "seeder." This is possible because people are downloading the file from many sources, rather than from one central server. Furthermore, the Bit Torrent program is open-source. This means that anyone that wants to can take the program and incorporate it into their own program.

Although usage is hard to monitor, Steven C. Corbato, director of the backbone network infrastructure for Internet2, the high-speed network consortium, said that Bit Torrent consisted of 9.3 percent of the data transferred during the week of January 26th, across the Abilene backbone, which connects 200 universities. In comparison, other peer-to-peer programs registered no more than one percent.

The movie and recording industries have taken notice of Bit Torrent and say that they have

³ Source:

Schiesel, Seth. "File Sharing's New Face". New York Times. Online 12 Feb 1004. <
<http://www.nytimes.com/2004/02/12/technology/circuits/12shar.html>>

investigations open into various sites. According to Cohen, Bit Torrent users are not anonymous and that their numeric Internet addresses are easily viewable by anyone who cares. So, using Bit Torrent for illegal trading is stupid because it is not anonymous, and can not be made anonymous.

A Windows Source Code Feast Online⁴

By: Sean Michael Kerner

On Friday, there were more than 1,000 active IRC discussion channels in operation with ongoing conversations about the Windows leak. At the same time, the leaked code remained widely available over peer-to-peer networks such as Kazaa and the open-source eMule network.



In discussions monitored by internetnews.com ,

⁴ Source:

Kerner, Sean M. "A Windows Source Code Feast Online". [InternetNews.com](http://www.internetnews.com/ent-news/article.php/3312951). Online 13 Feb 2004. <
<http://www.internetnews.com/ent-news/article.php/3312951>>

IRC chatters boasted about being the first in their group to get the leaked Microsoft property. Many mentioned that the code is not complete and therefore will be unintelligible to many.

A number of chatters talked about why they downloaded the source code and what they hope to gain from it. "I wanted to see how Microsoft puts it together and their comments," wrote one participant on the Dalnet IRC channel. Another wrote, "I just wanted to look at it 'cause it's there; I'm not evil." Other were not as sincere. One "undernet" IRC chatter wrote: "We've got to spread it as fast as humanly possible." He opined that the availability of the source code damages Microsoft by allowing people to understand how to attack a Windows system. Proliferating the code, he wrote, allows downloaders to make a name for themselves. It may also help open-source developers "work stuff out."

First Law Suite in Canada⁵

⁵ Source:

The Canadian Recording Industry Association (CRIA) has launched its first legal attack against individual file swappers who make copyrighted music. The CRIA said on Friday that it was following in the footsteps of its American counterpart, the RIAA, and had filed court orders requiring five Canadian ISPs to disclose the identities of the 29 individuals.

Last year the RIAA took action, targeting first the companies that supply the file-sharing services, and then the individuals who use them. These law suites were filled in an attempt to reverse the downward trend in music sales. This downward trend has become apparent since the advent of peer-to-peer networks such as Kazaa. Now the Canadian industry is following suit. The CRIA is confident that the court will grant the orders. The hearing is on March 12th.

"File-Sharing Suites Filled in Canada". [Out-Law.com](http://www.out-law.com). Online 17 Feb 2004. <
http://www.out-law.com/php/page.php?page_id=filesharingsuitsf1077029793&area=news>

The Dangers of File Sharing

Much change has taken place with file sharing programs since the days of Napster. Now, all sorts of files are shared, movies, music, applications, games, and even operating systems. All this sharing takes place through a variety of programs, such as LimeWire, KaZaA, Morpheus, and Grokster. Using such program is dangerous, not only do you run the risk of legal action, but you also open up your system to a host of security and privacy threats, including viruses, worms, Trojan horses, snooping, data theft, spyware, and more.

The problem with file sharing programs is that every computer acts like a server, so there is almost no way to control the content that is available on a network. This makes it very easy to distribute a virus, worm or Trojan horse. Once a file is in your shared folder, anyone can download it.



Even if you are not downloading anything, most programs run in the background, and allow people to access your computer. There are several things that you can do to protect yourself.

First you should completely turn off your file-sharing program. You may be able to right-click on an icon in the taskbar and try to shut your app down again, but this may not do the trick either. If your file-sharing app offers the option to disable sharing altogether, take advantage of this.

Next, watch what you share. Make sure that you know exactly what directories you are sharing. Unless you know what you are doing, you should chose the default directory and copy all the files that you want to share into that folder. Do not enable sharing for any other folder, because you might forget that you did.

Finally, and perhaps most importantly, raise your shields. Use an anti-virus scanner, either McAfee or Symantec, and don't forget to use the updater, which downloads new virus definations. Furthermore, you should run a personal firewall. A firewall tells you what programs are trying to access the internet, and let you decide if they should be allowed or not. Next, use spyware removal tools, such as SpyBot Search & Destroy. This program searches your computer for anything that could potentially be dangerous. Finally, and most importantly, make backups of your data. If something happens to your computer, you should have a backup to go back to.

Through some common sense you should be fine and be safe when using file-sharing programs.



Thank you for reading P 2 P, The Insider's Guide. Be sure to look for our future issues coming soon. All articles were written by Ankur Mathur, unless otherwise stated. Feel free to check out Ankur's website at: <http://Anks329.no-ip.com>, this newsletter will be available online, soon in PDF format for easy viewing.
