

# Peer to Peer: An Overview

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2007-03-29

“P2P” or “peer-to-peer networking” is maybe one of the most controversial and interesting trends in the dawn of the new century; its complete decentralization challenges all definitions of private intellectual property and creates new technological, commercial and juridic challenges.

In this article I will enumerate some companies that provide P2P file-sharing services, after providing a short overview of the concept and implementation of P2P.

## Technology

In a few words, the term peer-to-peer

refers to the concept that in a network of equals (peers) using appropriate information and communication systems, two or more individuals are able to spontaneously collaborate without necessarily needing central coordination.

(Schoder & Fischbach, 2006).

In this broad category not only enter the well-known (and hated, see “The Register” reference below) file sharing networks, some of which will be enumerated later; but also applications old as the Internet itself, such as the Usenet or FidoNet, which can also be called P2P networks (Wikipedia, 2006).

As mentioned, file-sharing is not the only application of P2P networks; another interesting use of P2P technology is, for example, SubEthaEdit. It is a collaborative text editor targeted to software developers, working in teams applying Agile methodologies such as XP (Extreme Programming).

SubEthaEdit allows developers to work on the same document simultaneously, editing it and changing it as they see fit, and allowing to do peer programming when both developers are not located in the same physical place. It works only on Mac OS X 10.3.9 and above, since it depends on the Bonjour networking technology created by Apple, but recently released as open-source.

## Companies

Not being a user of P2P file-sharing networks myself, thanks to an article in P2P Blog I've been able to quickly find a good number of companies offering such services. From that list, I've selected the following 5 companies (I want to point out that I haven't personally tested any of these programs, and the summaries I provide are just extracted from the referenced websites):

- BitTorrent is one of the most well-known systems for P2P file sharing. The home company is located in San Francisco, and it claims that its P2P software has been downloaded over 70 million times already. The software itself is available for Linux, Mac and Windows computers. Several third party clients are able to connect to BitTorrent networks, such as iSwipe or Azureus. An extensive list of BitTorrent clients is available here.
- LimeWire LLC is a New York-based company offering a client for sharing files through the Gnutella network. The client is available for Windows, Mac OS X, Mac OS 9, Linux, OS/2 and Solaris. There are no restrictions on the type of files that can be shared, but the website prompts the user to agree that the software will not be used for copyright infringement prior to download.
- Zapr is company founded in 2002 in Singapore, providing a file-sharing software available for the Windows operating system, since it's based on the .NET Framework (version 2.0). Users are able to share any kind of file, without restrictions of any kind, for free.
- Red Swoosh offers a particularly interesting approach to file-sharing; users that own a website and post files on it, but do not want to have to pay extra website bandwidth, can "swoosh" their links (that is, publish them on the Red Swoosh network), and people are asked to use the Red Swoosh client to download the files. The home company is located in San Francisco, and does not limit the type of files that can be shared. This approach, web-based, is typical of new "Web 2.0" companies (O'Reilly, 2005) that have appeared lately on the startup landscape.
- Pando is aimed to people that have to share large files in different ways than using e-mail or instant messaging. The Pando client runs under Windows and the Mac OS X, and also works using plugins for Skype or Yahoo! Messenger, and the only current limit is the maximum size of the shared file (1 GB); apparently there are not restrictions on file types. The home company was created in 2005 in the city of New York, and it also features a typical "Web 2.0" style.

## Conclusion

It has been really interesting to make this review, because I have never used file-sharing programs. Moreover, I had not given a good look to the concept of P2P, and as it turned out, it happens to have different and interesting uses, many of them going beyond the much press-hyped copyright infringement issues.

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