**Handouts of Lecture 15 Professional Practices (IT)**

**Lecture Title: Intellectual Property Rights (Cont.)**

**Peer-to-Peer Networks and Cyber lockers**

On the Internet, the adjective peer-to-peer refers to a transient network allowing computers running the same networking program to connect with each other and access files stored on each other’s hard drives. Peer-to-peer networks stimulate the exchange of data in three ways. First, they give each user access to data stored in many other computers. Second, they support simultaneous file transfers among arbitrary pairs of computers. Third, they allow users to identify those systems that will be able to deliver the desired data more rapidly, perhaps because they have a faster Internet connection or are fewer routing hops away.

Cyberlockers (also called file-hosting services or cloud storage services) are Internet-based file-sharing services that allow users to upload password-protected files. Users can give other people access to the files they have uploaded by sharing passwords. People who wish to collaborate on a project often find sharing large files through cyberlockers more convenient than sending them back and forth as attachments to email messages. However, cyberlockers also make it easy for people to share copyrighted material, such as songs and movies. In addition, cyberlocker use is much more difficult for government officials to track than peer-to-peer file sharing

**Napster**

Napster, which began operation in 1999, was a peer-to-peer network that facilitated the exchange of music files. In December 1999, the RIAA sued Napster for copyright infringement, asking for damages of $100,000 each time a Napster user copied a copyrighted song.

In June 2000, the RIAA asked for a preliminary injunction to block Napster from trading any copyrighted content from major record labels.

In February 2001, a federal appeals court ruled that Napster must stop its users from trading copyrighted material. Napster put in place file-filtering software that was 99 percent effective in blocking the transfer of copyrighted material.

In June 2001, a district court judge ruled that unless Napster could block 100 percent of attempted transfers of copyrighted material, it must disable file transfers. This court order effectively killed Napster, which went offline in July 2001 and officially shut down in September 2002. (The following year Napster reemerged as an online subscription music service and music store.)

**FastTrack**

FastTrack is a second-generation peer-to-peer network technology developed by Scandinavians Niklas Zennistrom and Janus Friis. Because of its decentralized design, a Fast-Track network may be more difficult to shut down than Napster.

Napster relied upon a central computer to maintain a global index of all files available for sharing. The existence of this central index made it easy to eliminate the distribution of copyrighted files via Napster. In contrast, FastTrack distributes the index of available files among a large number of “supernodes.” Any computer with a high-speed Internet connection running FastTrack has the potential to become a supernode. The use of multiple supernodes makes searching for content slower, but it also makes it much more difficult for legal authorities to shut down the file-sharing network. Former peer-to-peer networks Kazaa and Grokster used the FastTrack technology.

**BitTorrent**

For a computer with a broadband connection to the Internet, downloading a file from the network is about ten times faster than uploading a file to the network. A problem with FastTrack and other peer-to-peer networking protocols is that when one peer computer shares a file with another peer computer, the file is transferred at the slower, upload speed rather than the faster, download speed. To solve this problem, Bram Cohen developed BitTorrent.

BitTorrent divides a file into pieces about a quarter megabyte in length. Different pieces of a file can be downloaded simultaneously from different computers, avoiding the uploading bottleneck As soon as a user has a piece of a file, the user can share this piece with other users. Since BitTorrent gives a priority for downloads to those users who allow uploading from their machines, users tend to be generous. As a result, downloading speeds increase as more peers get a copy of the file. Put another way, downloading speeds increase with the popularity of a title. With its markedly higher downloading rates, BitTorrent has made practical the exchange of files hundreds of megabytes long. People are using BitTorrent to download copies of computer programs, television shows, and movies.

**RIAA Lawsuits**

In April 2003, the RIAA warned Grokster and Kazaa users that they could face legal penalties for swapping files containing copyrighted music.

The RIAA identified the IP addresses of the most active Kazaa supernodes, leading it to the ISPs of users who have stored large numbers of copyrighted files on their computers. Under the terms of the Digital Millennium Copyright Act, the RIAA subpoenaed Verizon, asking it to identify the names of customers suspected of running these Kazaa supernodes. Verizon resisted responding to the subpoenas, claiming that responding to the subpoenas would violate the privacy of its customers. In June 2003, a judge in Washington, DC, ruled that Verizon had to release the names of these customers. In September 2003, the RIAA sued 261 individuals for distributing copyrighted music over the Internet. A month later the RIAA sent letters to 204 people who had downloaded at least 1,000 music files, giving them an opportunity to settle before being sued by the RIAA. In December 2003, the RIAA suffered a setback when the US Court of Appeals for the District of Columbia Circuit ruled that Verizon did not have to respond to the subpoenas of the RIAA and identify its customers. Still, there is some evidence the RIAA lawsuits reduced illegal file swapping across the Internet.

Another verdict went the RIAA’s way in July 2009. The RIAA had accused Joel Tenenbaum of copyright infringement for using Kazaa to share 31 music files. The jury awarded the music companies $675,000, or $22,500 per song. In July 2010, Judge Nancy Gertner reduced the jury’s award to $67,500.

***MGM v. Grokster***

A group of movie studios, recording companies, music publishers, and songwriters sued Grokster and StreamCast for the copyright infringements of their users. The plaintiffs (henceforth referred to as MGM) sought damages and an injunction against the defendants. During the discovery phase of the litigation, the following facts were revealed:

The defendants’ networks were used to transfer billions of files every month.

About 90 percent of the files available on Grokster’s FastTrack network were copyrighted. . Grokster and StreamCast promoted their networks to investors and potential customers as replacements for Napster.

An internal StreamCast document revealed that StreamCast’s executives wanted to have more copyrighted songs available on their network than on competing networks.

Grokster sent its users a newsletter touting its ability to deliver popular copyrighted songs.

Grokster and StreamCast provided technical support to users who were having difficulty locating or playing copyrighted content.

**Legal action against the pirate bay**

The Pirate Bay, based in Stockholm, Sweden, is one of the biggest file-sharing Web sites in the world, with an estimated 25 million users. People use the Pirate Bay to search for songs, movies, TV shows, or computer programs they can download for free. These items of intellectual property are broken into BitTorrent fragments stored in thousands of different computers scattered across the globe. Established in 2003, the Pirate Bay has been called “the most visible member of a burgeoning international anti-copyright—or pro-piracy—movement. The movie industry pressured the Swedish government to do something about the Pirate Bay, and in 2006 Swedish police raided its offices and confiscated 186 servers, but the site was offline for only three days. After the site was reactivated, the number of people accessing it increased significantly, perhaps because of the international publicity the Pirate Bay received as a result of the raid.

In 2008 the International Federation of the Phonographic Industry sued four individuals connected with the Pirate Bay for making available 33 copyrighted works: twenty songs, nine films, and four computer games. The defendants argued that the Pirate Bay is simply a search engine and does not host any copyrighted content. In April 2009, a District Court in Stockholm found Carl Lundstrom, Fredrik Neij, Peter Sunde, and Gottfrid Svartholm Warg guilty of aiding and abetting copyright infringement. All four were sentenced to one year in prison, and altogether were fined 30 million Swedish kronor (about $3.6 million).

 In November 2010, an appeals court in Sweden upheld the convictions but shortened the sentences and increased the fine to 46 million kronor ($6.5 million). Meanwhile, the Pirate Bay Web site is still operational and enormously popular. Originally it had the domain name thepiratebay.org. Fearing that their .org domain would be seized by American officials, the site moved to the Swedish domain .se in 2012. When Sweden sought the seizure of the domain name thepiratebay.se in 2013, the Pirate Bay moved to thepiratebay.sx, registered in the tiny Caribbean country of Sint Maarten. In many countries the Pirate Bay’s official URL is blocked by Internet service providers. People in these countries are still able to access the Pirate Bay by connecting to one of more than 150 proxy sites hosted in countries that do not block access to the Pirate Bay.

***Reference***

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***Gao, Y. (2012). Ethics for the Information Age by Michael J. Quinn. World Libraries, 20(1).***