

12 February 2006

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Torrents Storm Through the File-sharing Community

File-sharing heaven

The idea behind file sharing isn't new, it didn't start and most definitely it won't end with the Torrent system, but Bram Cohen's invention has clearly reached a popularity peak in a very short time since it was presented to the public. And the fact that the system is used mostly to obtain copyright protected content has a lot to do with the sudden burst of success, but leaving that aside, Torrents have obviously gained a loyal group of users and they're growing in numbers. Peer to peer applications such as BitTorrent don't rely on a centralized file distribution point to share music files, video content or software applications, whichever the case may be. Instead, they use "tracker" Web sites to store "torrent" files which contain the file-sharing peers for a particular file distribution. When a user connects to a tracker Web site to download a file set, the site adds the user to the list of available peers from which to download. Let's just say you're trying to download the latest episode from Lost. Rather than downloading the entire file BitTorrent is looking for all the available peers sharing portions of the file and links them together. By exchanging only portions of files, BitTorrent users work together as a "swarm" to distribute files in a quicker, more efficient manner, which is also a great way to dodge a centralized system which stores the wanted content and which is highly exposed to be blocked. This spider web-like system works a lot faster and is more efficient than having user A send a specific file to user B. Not even facing the threat of being heavily fined by copyright advocates such as the Recording Industry Association of America (RIAA) and the Motion Picture Association of America (MPAA) is scaring torrent users away in spite of the already issued thousands of fines which are individually worth several thousand dollars. And fining users left and right is the second strategy put into action by the two organizations after shutting down tracker websites didn't have exactly the effect they were looking for. From the user's standpoint, the only weak point in the BitTorrent scheme is the tracker locations and that's exactly where the advocates hit, only they weren't successful as users just moved on to the next tracker site and the download saga continued. Even if the system works on such a simple schematic so many websites don't even require registration in order for users to participate to the torrent sharing phenomenon, there are still a few terms that one must get used to before entering the torrent arena. A "torrent" can either refer to a .torrent metadata file or to all files described by it, depending on context. The torrent file contains metadata about all the files it makes downloadable, which once they are all acquired and the puzzle is complete, will make up the initial file. If the torrent is made up by several archives, then the user will also find the names and sizes and checksums of all pieces in the torrent. It also contains the address of a tracker that coordinates communication between the peers in the swarm. By "swarm" you define the group of users sharing the same torrent, no matter if they are peers or seeds. Four peers and three seeds make a swarm of seven. "Peer" is the user which others must connect to and download pieces of the torrent. As soon as that user has already downloaded the entire torrent, he becomes a seed. "Superseed" is a special mode, supported by several torrent clients such as ABC and BitTornado, which try to only send out pieces which have never been sent out before, making the initial spread of the file much faster. This is of course useful only when much time can be wasted because the seeding client might send the same file piece to many different peers, while other pieces have not yet been downloaded at all. "Leech" refers to one specific peer who has a negative effect on the swarm because of a poor ratio, which means that he/she is downloading the files and is disconnecting immediately after completing the download. Most leeches use asymmetric internet connections and have trouble leaving their BitTorrent client open to seed the file

after their download has completed since that will affect the average speed of their internet connection. The "tracker" is the server that keeps track of which seeds and peers are in the swarm. Clients report information to the tracker periodically and in exchange receive information about other clients that they can connect to. The tracker is not directly involved in the data transfer and does not have a copy of the file. BitTorrent users still play the game and apparently software companies share their interest and offer support for the Torrent system and the latest to do so is Opera Software, one of the background participants to the browser battle, where background only refers to the little impact Opera is having compared to Internet Explorer and FireFox. The Norwegian software maker has recently announced that it will offer support for the Torrent file sharing system, which doesn't automatically imply that "Opera is pro piracy", far from it. It's the users' responsibility what they download and if they comply with copyright laws. Opera will only offer the possibility to search for torrents using the embedded search field and the download manager will take over the download as soon as it is triggered by the user, acting much like a dedicated torrent client and displaying information about ratio, number of seeds and peers and so on. And since torrents have such an easy life lately, others are trying to copy the system and make it their own, well, with a little adjusting. None other than Microsoft is working on its very own torrent alternative, for which Bill Gates and company have been working for several years now. Codenamed Avalanche, the program makes it easy to share content by dividing files such as software, audio or video, into chunks, much like BitTorrent. Using "network coding", it can re-create missing blocks of data that can be used in place of missing chunks. What Microsoft should add to this system compared to the torrent one is an encrypted tag which should ensure the integrity of the file and it should also block all piracy attempts as a part of the tagging process, the files will also be watermarked by the producer. Without this special signature, the file sharing can't be completed. Recently, BitTorrent Inc. signed a deal with Cable firm NTL in order to test a new service that will let users purchase movies and music video downloads. Of course, these files are available now through the torrent file-sharing system and they can be obtained with little effort but through means which do not comply with copyright laws. One of the latest trends for torrent users is to download episodes from popular series which are being broadcast in the US and should be arriving in Europe or other regions in several months time. However, downloading the episodes only hours after they have been initially broadcast is a much easier task than waiting to watch them on TV. BitTorrent is here to stay, there's no doubt about it, no matter if it will remain the rebel application that connects users with copyright protected content or if they will pay for that same content and