

Bram Cohen
Inventor of 'BitTorrent'



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Early Life & Career

It was obvious from an early age that Bram would go on to succeed as he grew up in New York as the son of a Computer Scientist, he also claims he learned the BASIC programming language when he was only 5.

In the late 1990's Bram dropped out of college and started working at a company called MojoNation. This is where he came up with the idea for BitTorrent. He was working to break up confidential files into chunks and send them to computers running the same software and if someone wanted to download the confidential file, they would have to download it from many other computers simultaneously. Bram thought that this would be perfect for a file sharing program. The design of BitTorrent meant that it could download files from different sources which sped up download time. This meant that the more popular a file was, the quicker it was to download since the people who are downloading it would also be uploading it.

Cohen coded for the majority of the 90's for businesses that went bust without a product ever seeing daylight. He decided his next project would be something he wrote for himself in his own way. "You get so tired of having your work die," he says. "I just wanted to make something that people would actually use."

In 2001 Bram quit MojoNation so he could begin working on BitTorrent. From what appears to be Brams github it's clear that his favourite language is python, which is what he wrote the first implementation of BitTorrent. It gained its fame for being able to quickly share large files online and although there are a lot of copyright issues with the idea, Bram has claimed his software has never violated copyright law. He believed the media business was doomed anyway. In 2003 Bram worked at Valve to help work on *Steam* and *Half-Life 2*. A year later he left Valve and founded BitTorrent Inc. with his brother Ross and business partner Ashwin Navin.

Bram has won some personal awards for his software, including the *WIRED* rave award in 2004 and was mentioned in *Time's* 100 most influential people in 2005

How BitTorrent Works

Bram's approach is faster and more efficient than traditional P2P networking.

1. A single source file within a group of BitTorrent users, called a swarm, spreads around pieces of a film or video game or TV show so that everyone has a chunk to share.
2. After the initial downloading, those pieces are then uploaded to other needy users in the swarm. The rules require every downloader to also do some uploading. Thus the more people trying to download, the faster everything is uploaded.
3. Before long, the swarm has shared all the pieces, and everyone has their own complete source.

How Traditional Peer-to-Peer works

Sites like Kazaa and Morpheus are slow because they suffer from supply bottlenecks. Even if many users on the network have the same file, swapping is restricted to one uploader and downloader at a time. And since uploading goes much slower than downloading, even highly compressed media can take many hours to transfer.

Impact

For movie industry insiders, file-sharing seems like all downside. Unlike TV networks, movie studios get no revenue from advertising – getting massive online circulation won't put a penny in their box offices. For them, it seems like an open-and-shut case. They ran advertisements urging users not to download movies illegally; when that didn't work, they started suing.

"We consider it a regrettable but necessary step," says John Malcolm of the MPAA. "We saw the devastating effect that peer-to-peer piracy had on the record industry."

It is clear that Bram's software has caused quite a stir with the movie and music business, but BitTorrent is a powerful tool and despite its legal issues, it's not going away anytime soon