

United Article on Bittorrent*

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As celebrants continue to laud the web as a medium where everyone can be a publisher, the fine print reads something like: “unless you’ve got money, you’d better hope you don’t get popular.” Hosting companies charge by the megabyte and, in the case of many non-commercial video and audio distributors, this often boils down to a choice between handouts, debt, or silence. Peer to peer (P2P) technology has succeeded by sidestepping the traditional server-client paradigm altogether. However, the emphasis in most major P2P systems to date has been on aggregating smaller media collections into massive distributed libraries. These systems are simply not optimized for those who need to get a single chunk of data to thousands quickly and cheaply.

BitTorrent is a P2P protocol that, while more than two years old, has been gaining steady visibility in the P2P world and filling this niche. From an interface perspective, downloading a file with BitTorrent is similar to downloading the same file over the web or through FTP. However, rather than pulling the file directly from a server, BT connects users to a “tracker” that puts them in contact with peers with the file in question. As each client downloads, it simultaneously uploads

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downloaded data to others. As more people download a file, the upload capacity for that file increases. In simple economic terms: as demand increases, supply rises to meet it. The BitTorrent system handles the dynamic “source” of the data elegantly by organizing distribution so that network bandwidth is always used as efficiently as possible.

Perhaps BitTorrent’s first major breakthrough was in a widely read Slashdot.org article in March 2003 announcing the availability of RedHat 9.0 CD Images. RedHat, who had suffered under the costs of giving away bandwidth, had begun charging 60 USD per year for access to FTP servers hosting the 2 gigabyte images. BitTorrent, which featured prominently in the Slashdot article, harnessed the help of over 3000 RedHat users to create an alternate, and free, distribution system that served nearly 2500 CDs worth of data in the first four hours alone. Beyond allowing the community to move more data than any single member could afford, it allowed for the distribution of more data than the network infrastructure could have supported.

In less high profile cases, this success is mirrored thousands of times a day. Movies, videos, music, software and more is “torrented” and transferred by ad-hoc file sharing communities forming around particular pieces of data at particular moments. Unsurprisingly, companies, music fans, and independent media activists have noticed the usefulness of BT and have put it into service. As a result, BitTorrent seems poised for continued success in helping media distributors realize the promise of P2P.