

Appendix 1

Comcast Timeline

April 8, 2007

Comcast is Reported as a Customer of Sandvine

Sandvine already counts top U.S. cable provider Comcast Corp. among its customers, Barron's said.¹

May 12, 2007

Robb Topolski, Former Software Quality Engineer at Intel Corp. Reports Comcast Is Blocking BitTorrent Using Equipment from Sandvine²

August 17, 2007

TorrentFreak Reports Wide-scale BitTorrent Blocking by Comcast

Over the past weeks more and more Comcast users started to notice that their BitTorrent transfers were cut off. Most users report a significant decrease in download speeds, and even worse, they are unable to seed their downloads. A nightmare for people who want to keep up a positive ratio at private trackers and for the speed of BitTorrent transfers in general.³

August 20-22, 2007

Comcast Denies Throttling or Blocking BitTorrent, Claims that it Individually Contacts Subscribers That Are Violating Policy

But when I spoke to Comcast spokesman Charlie Douglas earlier today, he flat-out denied that the company was filtering or "shaping" any traffic on its network. He said the company doesn't actively look at the applications or content that its customers download over the network.⁴

In the rare instances the company has to enforce its policy, Douglas said that Comcast contacts subscribers to work out the issue. But he firmly reiterated that the company doesn't filter or throttle back traffic.⁵

¹ "Easing Network Debate May Aid Allot/Sandvine Paper," Reuters, April 8, 2007, Available at <http://www.reuters.com/article/companyNewsAndPR/idUSN0826692320070408>

² Robb Topolski, "Comcast is Using Sandvine to Manage P2P Connections," DSLReports.com, May 12, 2007, Available at <http://www.dslreports.com/forum/r18323368-Comcast-is-using-Sandvine-to-manage-P2P-Connections>

³ Ernesto, "Comcast Throttles BitTorrent Traffic, Seeding Impossible," TorrentFreak, August 17, 2007, Available at <http://torrentfreak.com/comcast-throttles-bittorrent-traffic-seeding-impossible/>

⁴ Marguerite Reardon, "Comcast Denies Monkeying with BitTorrent Traffic," CNETNews.com News Blog, August 21, 2007, Available at http://www.news.com/8301-10784_3-9763901-7.html

⁵ Id.

Comcast assured us that it was *not* doing what Ernesto claims it's doing. Under its current network policy, according to a company spokesman, the company would never block BitTorrent traffic - or traffic related to any other application.⁶

"Customers who are notified of excessive use typically and repeatedly consume exponentially more bandwidth than an average residential user, which would include, for example, the equivalent of sending 256,000 photos a month, or sending 13 million emails every month (or 18,000 emails every hour, every day, all month)," the company said. "In these rare instances, Comcast's policy is to pro-actively contact the customer via phone to work with them and address the issue or help them select a more appropriate commercial-grade Comcast product."⁷

"We're not blocking access to any application, and we don't throttle any traffic," says Charlie Douglas, a Comcast spokesman.^{8 9 10}

August 30, 2007

Comcast Reaffirms That It Is Not Blocking Applications.

Comcast uses the latest technologies to manage our network to provide a fast, reliable broadband experience for all of our customers. We do not block access to any applications, including BitTorrent and do not alter Internet speed. Comcast currently works with a number of industry groups to share knowledge and information that will help us provide the best service, and will continue to do so.¹¹

September 13, 2007

Comcast Confirms That It Is Not Blocking, Degrading, Interfering With, or Discriminating Against Particular Protocols or Traffic

On Wednesday, we spoke with Comcast to try to find out what was going on in this case. Comcast assured us that, while it does do some kinds of network management on its residential network, it isn't deliberately blocking, degrading, interfering with, or discriminating against particular

⁶ Cade Metz, "Comcast Throttles BitTorrent Users," The Register, August 22, 2007, Available at http://www.theregister.co.uk/2007/08/22/comcast_throttles_bittorrent_users/

⁷ Ryan Lawler, "Comcast Takes on TorrentFreak," Light Reading, August 21, 2007, Available at http://www.lightreading.com/document.asp?doc_id=132115

⁸ Id.

⁹ Jonathan Berr, "Comcast vs. BitTorrent?" Philadelphia Inquirer Blog, September 7, 2007, Available at http://blogs.phillynews.com/inquirer/phillyinc/2007/09/comcast_vs_bittorrent_bloggers_1.html

¹⁰ Dan Frommer, "Comcast (CMCSA): We Don't Throttle BitTorrent," Silicon Alley Insider, August 20, 2007, Available at <http://www.alleyinsider.com/2007/08/comcast-cmcsa-w.html>

¹¹ Michael Calore, "Comcast Responds: 'We Don't Block BitTorrent,'" Wired Blog Network Compiler, August 30, 2007, Available at <http://blog.wired.com/monkeybites/2007/08/comcast-respond.html>

protocols or kinds of traffic. (This is consistent with what Comcast [told the press](#) in August when these allegations were widely raised.) The company said that it isn't using network management techniques that are designed to disrupt anyone's use of BitTorrent (or any other application).¹²

October 19, 2007

Associated Press Confirms That Comcast Is Blocking BitTorrent; Comcast Denies Any Blocking and Reaffirms Policy of Contacting Individuals

“Comcast does not block access to any applications, including BitTorrent.” – Comcast spokesperson Charlie Douglas¹³¹⁴¹⁵¹⁶¹⁷

At the Web 2.0 Summit in San Francisco on Friday, Comcast Interactive Media President Amy Banse responded to questions about P2P throttling by pointing to the company's need to "manage" heavy Internet use. "99.9 percent of our customers happily say they use e-mail and are uploading and downloading video and photos every day at speeds they enjoy," she said. "There are .01 percent that are engaging in what we call 'excessive use.' We're talking about things like sending 18,000 e-mails every hour of every month. We need to manage that, and to the extent we identify this excessive use, we call those customers and offer them additional services like commercial services."¹⁸

October 22, 2007

Comcast Claims It Is Delaying, Not Blocking BitTorrent

Speaking on background in a phone interview earlier today, a Comcast Internet executive admitted that reality was a little more complex. The company uses data management technologies to conserve bandwidth and allow customers to experience the Internet without delays. As part of that management process, he said, the company occasionally – but not always

¹² Seth Schoen, “Comcast and BitTorrent,” Electronic Frontier Foundation, September 13, 2007, Available at <http://www.eff.org/deeplinks/2007/09/comcast-and-bittorrent>

¹³ Chris Albrecht, “Comcast Does Indeed Block BitTorrent,” NewTeeVee, October 19, 2007, Available at <http://newteevee.com/2007/10/19/comcast-does-indeed-block-bittorrent/>

¹⁴ Jacqui Cheng, “Evidence Mounts that Comcast is Targeting BitTorrent Traffic,” Ars Technica, October 19, 2007, Available at <http://arstechnica.com/news.ars/post/20071019-evidence-mounts-that-comcast-is-targeting-bittorrent-traffic.html>

¹⁵ Peter Svensson, “Comcast Blocks Some Internet Traffic,” Associated Press, October 19, 2007, Available at <http://www.msnbc.msn.com/id/21376597/>

¹⁶ “Associated Press Confirms That Comcast Blocks Some BitTorrent Traffic; Despite Comcast Denials,” TechDirt, October 19, 2007, Available at <http://www.techdirt.com/articles/20071019/115242.shtml>

¹⁷ “Comcast Caught Throttling BitTorrent Traffic,” Electronista, October 19, 2007, Available at <http://www.electronista.com/articles/07/10/19/comcast.bittorrent.shaping/>

¹⁸ Andy Patrizio, “Comcast Suspected of Limiting BitTorrent Use,” InternetNews.com, October 19, 2007, Available at <http://www.internetnews.com/infra/article.php/3706376>

– delays some peer-to-peer file transfers that eat into Internet speeds for other users on the network.¹⁹

Comcast denied that it was forging packets. Since P2P traffic uses "disproportionately large amounts of bandwidth," Comcast occasionally delays P2P traffic, including packet uploads, during heavy congestion, according to a spokeswoman. This does not prevent them from reaching their destination, she said.²⁰

The company still claims that it is isn't blocking BitTorrent and other P2P traffic, just "delaying it."

Another Comcast executive told the *New York Times* that the company "occasionally" delays P2P traffic, "postponing" it in some cases. His rather clumsy analogy was that of getting a busy signal when making a phone call and eventually getting through after several attempts. "It will get there eventually," is the takeaway message.²¹

Comcast Corp. on Tuesday acknowledged "delaying" some subscriber Internet traffic, but said any roadblocks it puts up are temporary and intended to improve surfing for other users.²²

November 1, 2007

Comcast Issues Statement to FCC Denying Any Blocking

"Comcast does not, has not, and will not block any Web sites or online applications, including peer-to-peer services, and no one has demonstrated otherwise. We engage in reasonable network management to provide all of our customers with a good Internet experience, and we do so consistently with FCC policy.

As the FCC noted in its policy statement in 2005, all of the principles to encourage broadband deployment and preserve the nature of the Internet are 'subject to reasonable network management.' The Commission clearly

¹⁹ Brad Stone, "Comcast: We're Delaying, Not Blocking, BitTorrent Traffic," Bits, an NY Times blog, October 22, 2007, Available at <http://bits.blogs.nytimes.com/2007/10/22/comcast-were-delaying-not-blocking-bittorrent-traffic/>

²⁰ Chloe Albanesius, "Comcast Admits Delaying, Not Blocking, P2P Traffic," PC Magazine, October 22, 2007, Available at <http://www.pcmag.com/article2/0,1759,2204751,00.asp>

²¹ Eric Bangeman, "Comcast Shooting Itself in the Foot with Traffic Shaping 'Explanations,'" Ars Technica, October 23, 2007, Available at <http://arstechnica.com/news.ars/post/20071023-comcast-shooting-itself-in-the-foot-with-traffic-shaping-explanations.html>

²² Peter Svensson, "Comcast Admits Delaying Some Traffic," Associated Press, October 23, 2007, Available at <http://www.msnbc.msn.com/id/21444566/>

recognized that network management is necessary by ISPs for the good of all customers."²³²⁴

November 30, 2007

Comcast's Reaffirms Statement to FCC

"Comcast does not, has not, and will not block any Web sites or online applications, including peer-to-peer services, and no one has demonstrated otherwise," spokeswoman Sena Fitzmaurice told CNET News.com. "We engage in reasonable network management to provide all of our customers with a good Internet experience, and we do so consistently with FCC policy."²⁵

²³ Comcast Statement Regarding Petitions Filed With The FCC on Broadband Network Management, PR Newswire, November 1, 2007, Available at <http://mobile.prnewstoday.com/release.htm?cat=telecommunications&dat=20071101&rl=NETH15101112007-1>

²⁴ Andy Patrizio, "Comcast Again Denies P2P Throttling," InternetNews.com, Nov. 2, 2007, Available at <http://www.internetnews.com/bus-news/article.php/3708751>.

²⁵ Anne Broache, "Net Neutrality May Not Resolve Comcast vs. BitTorrent," CNETNews.com, November 30, 2007, Available at http://www.news.com/Net-neutrality-may-not-resolve-Comcast-vs.-BitTorrent/2100-1028_3-6220802.html