

MASSACHUSETTS  
40 main st, suite 301  
florence, ma 01062  
tel 413.585.1533  
fax 413.585.8904

WASHINGTON  
501 third street nw, suite 875  
washington, dc 20001  
tel 202.265.1490  
fax 202.265.1489



Marvin Ammori, General Counsel  
Free Press, Washington Office  
mammori@freepress.net

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20554

**July 16, 2008**

**Re: Notice of *Ex Parte* Presentation  
Free Press et al. Petition for Declaratory Ruling that Degrading an Internet  
Application Violates the FCC's Internet Policy Statement and Does Not Meet an  
Exception for "Reasonable Network Management" (RM- \_\_\_\_\_)  
and  
CC Docket No. 02-33, CC Docket No. 01-337, CC Docket Nos. 95-20, 98-10, GN  
Docket No. 00-185, CS Docket No. 02-52, WC Docket No. 07-52**

Dear Ms. Dortch,

On the same day as Comcast's filings were released in the docket, the trade group for the cable industry filed ex partes following meetings with Commissioner Copps, Commissioner Adelstein and the Legal Advisor to Commissioner McDowell.<sup>1</sup> The filing contains factual inaccuracies we believe necessitate a correction in the record. We have attached an article by DSLReports.com, which includes a detailed response from Robb Topolski, network engineer who discovered Comcast was blocking peer-to-peer protocols, panelist at the Stanford En Banc Hearing, and subsequently a consulting technologist for Free Press and Public Knowledge.

Thank you.

Sincerely,

Marvin Ammori  
Free Press

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<sup>1</sup> Ex Parte of National Cable and Telecommunications Association, July 11, 2008, Available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6520033982](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520033982); [http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6520033981](http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520033981); [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6520033983](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6520033983).

## **Attachment A:**

### **Don't Fear the Bandwidth Apocalypse**

**Cable industry lobbies the FCC with some epic distortions...**

**DSLReports.com**

**July 15, 2008**

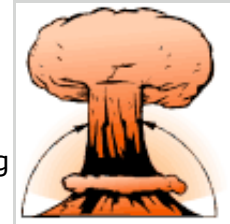
## Don't Fear The Bandwidth Apocalypse

Cable industry lobbies the FCC with some epic distortions...

12:31PM Tuesday Jul 15 2008 by [Karl](#)

tags: [legal](#) · [fcc](#) · [business](#) · [bandwidth](#) · [cable](#) · [networking](#)

A good rule of thumb: when someone claims the Internet is facing bandwidth armageddon, it's usually because they're in the business of designing and selling [traffic shaping hardware](#), trying to justify [new and frequently unjustifiable pricing models](#), or trying to sell some idea to federal regulators (usually [less regulation and legal oversight](#)). The guys [actually working in the network operation centers](#) will generally tell you that congestion can almost always be handled with smart design and capacity upgrades.



Last week the National Cable and Telecom Association (NCTA) was busy trying to lobby the FCC, which has been investigating exactly what sort of network management should be allowed, and how it should be disclosed to consumers. The NCTA argued that the use of deep packet inspection hardware was absolutely necessary on cable networks. Without such technology (the likes of which is being used to throttle Comcast P2P users), the NCTA claims that the Internet would all but collapse. From a [series of letters](#) sent to the FCC last Friday:

In particular, (Insight CEO Mike) Willner described how, in the absence of network management, the usage of P2P services by a very small number of a cable system's high-speed Internet customers can cause substantial (**and sometimes complete**) **congestion** of the system's upload capacity. As a result, service for the system's high-speed Internet customers using the Internet for other purposes (such as e-mail, web browsing, e-shopping, streaming music and video, etc.) would be degraded.

The problem is, any claim of "complete congestion" is lobbyist hyperbole, again highlighting the chasm between lobbyists and real technicians. Networking and protocol specialist Robb Topolski should know -- he first discovered Comcast's use of Sandvine to throttle upstream capacity [in May of 2007](#). It was his findings in our forums that led to the FCC's investigation of the cable company.

**“ network upgrades that are intended to enhance the speed and quality of Internet access would, in the absence of network management, only exacerbate this problem. ”**

”

-NCTA

"Complete congestion is a technical fantasy which only exists in the minds of people who do not understand TCP congestion control and how Additive Increase/Multiplicative Decrease (AIMD) works in TCP Congestion avoidance works, he says. "AIMD allows a linear growth of bandwidth utilization until loss occurs, at which time an exponential reduction takes place. This slow-start, fast-fallback ensures congestion cannot cause gridlock."

In other words, total gridlock does not happen because it **cannot** happen, yet there's no shortage of people suggesting it's inevitable unless party X (ISPs, lobbyists, hardware salesmen) get what they want (less regulation, per-byte billing, a new Audi). In the letter to the FCC, the NCTA goes on to suggest that capacity upgrades wouldn't help -- and in fact would hurt:

As Mr. Willner pointed out, network upgrades that are intended to enhance the speed and quality of Internet access would, in the absence of network management, only exacerbate this problem because P2P users around the world seek to retrieve files from computers on systems with the fastest upload speeds.

Topolski says the NCTA lobbyists are intentionally confusing providing network upgrades with providing faster upload speeds. "In an ISP, such as Insight's network, a network upgrade ought to be performed if the network is routinely experiencing congestion," he notes. "This does not mean that individual cable modems ought to be provisioned with higher speeds, but that the shared pool of uplink bandwidth that they share ought to be increased to reduce the occurrence of congestion."

So the NCTA is both falsely inflating the threat of "complete" congestion, while lying about whether increasing capacity would actually help. Why? The group is protecting the cable industry's right to provide less product for more money using dubious practices (Comcast and Cox's throttling of upstream bandwidth using forged TCP packets), while protecting possible DPI revenue streams like [behavioral advertising](#).

Topolski tells me it's also important to understand that the NCTA is intentionally conflating network management with deep packet inspection. The two are not synonymous. Topolski recently authored [an interesting report](#) on how behavioral advertising and deep packet inspection technology from NebuAD has a number of nasty habits.



"Deep Packet Inspection devices capable of detecting what applications end points are using are both new and intrusive. They do not perform a task of Network management, they are performing tasks of Session and Application management. These are both new and inappropriate roles for Internet Service Providers."

Most techs don't oppose reasonable network management (booting extreme gluttons, some QOS and prioritization) -- but so far ISPs have shown their use of

DPI gear to be anything but reasonable, much like their defense of packet forgery and behavioral advertising. "The Internet did not grow to become a raging success without management, and it borders on ridiculous for the industry to claim that the invention of full-scale wire-speed DPI is the Saviour of the Internet," says Topolski.

Related:

1. [Comcast Sued For Traffic Shaping](#)
2. [Don't Get Too Excited About The FCC's Comcast 'Investigation'](#)
3. [NY Attorney General Investigating Comcast](#)
4. [Comcast Tells FCC To Butt Out](#)
5. [Cox Explores Fiber To The Home](#)
6. [Comcast, Cox, Trot Out Their Worst 'Bandwidth Hogs'](#)
7. [Beating Comcast's Sandvine On Linux With Iptables](#)
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