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Who Should Solve This Internet Crisis?

The Internet was in crisis. Its electronic "pipes" were clogged with new bandwidth-hogging software. Engineers faced a choice: Allow the Net to succumb to fatal gridlock or find a solution.

The year was 1987. About 35,000 people, mainly academics and some government employees, used the Internet.

This story, of course, had a happy ending. The loosely knit Internet engineering community rallied to improve an automated data "traffic cop" that prioritized applications and content needing "real time" delivery over those that would not suffer from delay. Their efforts unclogged the Internet and laid the foundation for what has become the greatest deregulatory success story of all time.

The Internet has since weathered several such crises. Each time, engineers, academics, software developers, Web infrastructure builders and others have worked together to fix the problems. Over the years, some groups have become more formalized — such as the Internet Society, the Internet Engineering Task Force and the Internet Architecture Board. They have remained largely self-governing, self-funded and nonprofit, with volunteers acting on their own and not on behalf of their employers. No government owns or regulates them.

The Internet has flourished because it has operated under the principle that engineers, not politicians or bureaucrats, should solve engineering problems.

Today, a new challenge is upon us. Pipes are filling rapidly with "peer-to-peer" ("P2P") file-sharing applications that crowd out other content and slow speeds for millions. Just as Napster produced an explosion of shared (largely pirated) music files in 1999, today's P2P applications allow consumers to share movies. P2P providers store movies on users' home and office computers to avoid building huge "server farms" of giant computers for this bandwidth-intensive data. When consumers download these videos, they call on thousands of computers across the Web to upload each of their small pieces. As a result, some consumers' "last-mile" connections, especially connections over cable and wireless networks, get clogged. These electronic traffic jams slow the Internet for most consumers, a majority of whom do not use P2P software to watch videos or surf the Web.

At peak times, 5 percent of Internet consumers are using 90 percent of the available bandwidth because of the P2P explosion. This flood of data has created a tyranny by a minority. Slower speeds degrade the quality of the service that consumers have paid for and ultimately diminish America's competitiveness globally.

While we at the Federal Communications Commission are trying to spur more competitive build-out of vital "last mile" facilities, especially fiber and wireless platforms, this congestion will not be resolved merely by building fatter and faster pipes.

Last summer, a new nongovernmental organization, the P4P Working Group, was formed to find a solution. The group has already field-tested dramatically increased delivery speeds of P2P content over cable networks (up 235 percent) and other networks (up 898 percent in some cases). It is working with industry and consumers to create a "P2P Bill of Rights and Responsibilities."

Such dynamic work is progressing without a government mandate or regulatory framework. Soon, however, that could change.

Since the fall, the FCC has been considering allegations filed by public interest groups that cable operator Comcast violated FCC rules by "managing" or "interfering with" the upstream flow of certain P2P video applications, namely those of a company called BitTorrent. The allegations boil down to a suspicion that Comcast was motivated not by a need to manage its network but by a desire to discriminate against BitTorrent for anticompetitive reasons. Comcast maintains that any interference was imperceptible to consumers, occurred in minuscule amounts of time, and was limited to peak congestion periods and areas. Comcast and BitTorrent settled their dispute in March; in fact, they issued a statement saying in part that "these technical issues can be worked out through private business discussions without the need for government intervention."

Despite this settlement, some are calling for the FCC to rule that Comcast's actions were illegal and should be punished. Others contend that the FCC has no enforceable rules that apply to such situations and that the issue should be addressed through a rule-making proceeding, with an opportunity for public comment, or through congressional legislation. We have examined the arguments on both sides and are poised to decide the matter this week. But regardless of what that ruling stipulates, the issue of what constitutes appropriate Internet network management will be debated for some time.

Our Internet economy is the strongest in the world. It got that way not by government fiat but because interested parties worked together toward a common goal. As a worldwide network of networks, the Internet is the ultimate "wiki" environment — one that we all share,

build, pay for and shape. Millions endeavor each day to keep it open and free. Since its early days as a government creation, it has migrated away from government regulation.

If we choose regulation over collaboration, we will be setting a precedent by thrusting politicians and bureaucrats into engineering decisions. Another concern is that as an institution, the FCC is incapable of deciding any issue in the nanoseconds that make up Internet time. And asking government to make these decisions could mean that every few years the ground rules would change based on election results. The Internet might grind to a halt in such a climate. It would certainly die of clogged arteries if network owners had to seek government permission before serving their customers by managing surges of information flow.

A better model would allow collaborative groups to continue to do what they have done for years. If they can't reach an agreement, — which has never happened — then government could examine the situation and act accordingly. Sometimes shining sunlight on issues produces amazingly beneficial effects, and the public interest groups that raised the BitTorrent matter should be praised for doing so. Yet before venturing into the unknown, we should remember something President Bill Clinton said in 1997: "Governments should encourage industry self-regulation wherever appropriate and support the efforts of private-sector organizations to . . . facilitate the successful operation of the Internet." What we do, or don't do, will affect tomorrow's networks. Let's stick with what works and encourage collaboration over regulation.

The writer has served on the Federal Communications Commission since 2006.