

The Rise of Information Gatekeepers

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The Internet represents a revolutionary improvement in human communications. For the first time in history ordinary citizens are able to communicate directly with anyone they wish regardless of distance and time at extremely low cost. Anyone can “publish” without the approval of middlemen controlling the means of distribution.

This wonderful creation is under attack by those who want to erect tollgates controlling what is said and done on the net. The Internet is optimized for peer-to-peer communication; hosts are able to serve information as well as be a sink for information provided by other. This architecture is under attack by ISP's that want to limit how subscribers use the Internet and by copyright owners that want to exert perfect control over how and when one can access their material.

ISP as Gatekeeper

The Internet is robust because routing algorithms route around failure and obstructions. This is true of the backbone but not so for the so-called “first-mile,” the connection between user and ISP. With the roll out of high-speed services the choice of service provider is extremely limited. The two most popular are Digital Subscriber Line (DSL) over phone lines and DOCSIS Cable modem over the cable TV infrastructure. Wireless, satellite, and fiber to the home (FTTH) are also in the running but currently have minimal market share. Due to economics first mile consumer choice is limited. Only a few companies have the resources to provide service. This gives them a great deal of control over how the service is delivered.

For technical and business reasons high-speed consumer Internet service is being optimized for consumption rather than peer-to-peer networking. Both Cable and DSL services are asymmetric download speed is much faster than upload. Dynamic address assignment requires use of dynamic DNS services to map ever-changing IP address to a persistent name. This is not a conspiracy, broadband providers have technical justifications and the limitations do not prevent customers from using the connection as they see fit.

More troubling are restrictions written into the acceptable use policy that create blanket prohibitions on certain uses. These include prohibition of home networks, no server policy, blocking VPN because “it is a business use” on residential class service and blocking TCP port 25 to prevent use of an external SMTP mail server. Such restrictions are especially insidious since they affect a relatively small percentage of users. Many casual users even applaud the restriction since they assume prohibiting heavy and innovative use will improve their own speed. This has a chilling effect on development of new Internet applications by freezing network capability at the status quo.

ISP's should be in business to just deliver the bits. They should not be able to prevent legal use of the Internet. Doing so may be in the best short-term interest of the ISP but makes innovation more difficult slowing growth of Internet services. This was not a big problem in the past with dialup since dialup ISPs use the Public Switched Telephone Network (PSTN) physical layer. There are many service providers, so if an ISP implemented restrictive policy it was easy to find another. This is not the case with broadband. There are few choices this means a broadband ISP risks little revenue loss by adopting restrictive policies.

One can argue it is their business why not let them use it as they please. Unfortunately what is in their short-term business interest may not be in the best interest of the society as a whole. One need only look at the rapid adoption of Internet in the US vs Europe to understand the problem. US Telcos were forced to offer unmetered telephone service. This makes it easy to experiment with new services. Users can try out new services at no risk. Unlimited phone service means the meter is not running during the connection. This eliminates disincentive to experiment. Once people see value demand is created for faster and better service. This benefits everyone, the communication companies expand their market and users are willing to pay extra for services they value. This occurs at a much slower rate if cost to experiment is high.

The same phenomena can be observed in the growth of PCs. While the cost of a PC is substantial the incremental cost is near zero. This encourages experimentation which drives demand for ever more powerful computers.

In the current deregulatory climate in Washington the belief is market mechanisms are perfect and ultimately provide the optimum result. This is a false premise. There is no reason to believe short-term business interests aimed at creating a closed and exclusive system aligns with long term societal needs. I believe it is proper for government policy to restrict the ability of these near monopoly interests to control how customers use the Internet. This encourages experimentation, facilitates growth and is in the best interest of everyone.

Copyright as Gatekeeper

The US constitution gives Congress the power to give authors limited control over their works: "To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." Originally only a few kinds of work were covered and only for 14 years. In the subsequent 200 years Congress has dramatically expanded the number of "works" covered and the length of time the author is allowed to exert control, currently life plus 70 years for an individual and 95 years for a corporation.

One may ask what is wrong with allowing an author complete control of their work. All creative work depends heavily on what has gone before. Extending copyright virtually forever means works never become public domain benefiting of all citizens. This is

especially galling since many of the works now protected by copyright are adaptation of public domain works.

Copyright deals with the intangible world of ideas the rules governing it are very different than physical property. If I own a car and you borrow it I no longer have use of it. Disseminating information does not diminish what I have. Copyright law gets developed through a tortuous process of trading special privileges among the various participants. End users are not represented at these meeting. The result is at each revision of law owner's rights are expanded and user's rights shrink. As inequitable as this process has been at least the notion of fair-use survives. The law allows the work to be used in certain ways without requiring the permission of the copyright holder.

The music industry represented by the [RIAA](#) and the film industry represented by the [MPAA](#) were never happy with fair-use. They wanted to be able to exert perfect copyright control. The industry wants to determine whom – when - where and how customers accessed copyright material. They finally got what they want when lobbying efforts paid off and the industry convinced Congress to pass the Digital Millennium Copyright Act ([DMCA](#)). The act allows copyright owners to use technical means to control how a customer uses the material, even if it restricts or eliminates fair-use. The other even more anti-American principal incorporated into the law is to make it illegal to even discuss the technical protection mechanism and prohibits the manufacture of equipment capable of infringement even if it has non-infringing use. One can publish instructions to build a nuclear weapon but Congress has determined discussing copyright control methods is such a grave danger to the country that it cannot even be discussed. The entire notion embodies in DMCA is contrary to previous Supreme Court decisions such as Sony vs Betamax that allowed the manufacture of VCRs even through they could be used to infringe copyright because they also had substantial non-infringing use.

In effect the DMCA gives the industry total control over how protected works are used. Want to read that e-book again send more money, want to let your sister listen to your CD pay for another user license. Never in the history of copyright law have owners had this level of control and have it virtually forever. Copyright law has always tried to provide incentives for authors to create new works while allowing works to revert to public domain as quickly as possible. The industry convinced Congress to turn that principle on its head. This impoverishes society by raising the cost of new works, since everything is built on previous work, and granting copyright holders monopoly power to control who is allowed to use their work.

Not content with virtually non-expiring copyright and a legal framework for draconian technical control the industry is now lobbying for control over all forms of digital hardware and software. The latest travesty is the Consumer Broadband and Digital Television Promotion Act (CBDTPA) sponsored by Senator Hollings. CBDTPA will require virtually all-digital devices to incorporate government approved content protection. While the exact details are still being debated this will have a chilling effect on innovation and hand even more power to a few mega corporations. Non-approved

devices are banned and trafficking in them is a felony, shades of Prohibition during the 1930's.

Left unchecked this land grab will turn the Internet from an egalitarian network where anyone is free to publish to digital version of TV and Radio. In a few years a few large media corporations will own all available content while the copyright cops will make sure we pay for each and every use.

Digital communication banishes time and distance and allows information to be distributed rapidly and perfectly. Rather than embrace this wonderful technology the established media players with the connivance of Congress are attempting to turn back the clock. They are trying to institute legal and technical means to maintain their stranglehold on how artists bring their work to fans. It is as if a hundred years ago the buggy whip manufacture prevailed on Congress and banned the nascent horseless carriage. As [John Gilmore](#) put it "We have invented the technology to eliminate scarcity, but we are deliberately throwing it away to benefit those who profit from scarcity..... we should embrace the era of plenty, and work out how to mutually live with it."

Call to Action

Learn about the issues and support efforts to increase diversity and competition. Write your Senators and Congressmen expressing your disapproval at attempts to destroy the promise of the Internet.

Further Reading

Jessica Litman, Digital Copyright: Good overview of Copyright law in the US and the societal impact of ever greater control being given to content owners bolstered by the Digital Millennium Copyright Act (DMCA). <http://www.law.wayne.edu/litman/>

Lawrence Lessig, The Future of Ideas – The fate of the Commons in a Connected World: In depth examination of topics touched on in this paper. <http://lessig.org/>

Anti-DMCA site: <http://anti-dmca.org/>

Anti-CBDTPA site: <http://www.digitalconsumer.org/cbdtpa/>

Electronic Frontier Foundation: http://www.eff.org/alerts/20020329_eff_drm_alert.html

Campaign for Audiovisual Free Expression <http://www.eff.org/CAFE/resources.html>