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**Written Testimony of
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Senate**

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Mr. Chairman and Members of the Committee:

Thank you for your time and the invitation to testify. I am an economist and research fellow with the Regulatory Studies Program of the Mercatus Center, a 501(c)(3) research, educational, and outreach organization affiliated with George Mason University.¹ I have been with the Mercatus Center for the past ten years, with the exception of a two-year leave of absence in 2001-03 when I served as deputy director of the Office of Policy Planning at the Federal Trade Commission.

The subject of this hearing is “Competition and Convergence.” It’s useful to define “convergence” before discussing its effects on competition and public policy. I will address four questions in this testimony:

1. What is “convergence”?
2. What caused convergence?
3. What does convergence mean for competition and consumer welfare?
4. What does this imply for public policy?

¹ This testimony reflects only the views of its author and does not represent an official position of George Mason University.

1. What is “convergence”?

“Convergence” has become a buzzword in the communications industry that means a lot of different things to different people. To me, convergence means use of the same infrastructure to deliver multiple services to consumers. A big part of the infrastructure is, of course, the physical communications network: coaxial cable, copper wire, fiber optics, satellites, cell towers, switches, and various other physical facilities. But the infrastructure also includes other assets necessary to provide service to consumers: call centers, the servers that hold account information, etc.

Convergence is more than bundling. Bundling occurs when the same firm sells multiple services as a package. The services might be provided using the same infrastructure, or they might be provided separately but sold together. A good example of the difference is the marketing partnerships that some of the phone companies have with satellite TV firms. Phone service, DSL, and video are sold as a package, but the phone service and DSL are provided over the phone company’s wires, whereas the video comes via satellite.

Convergence represents a change from past practice, in which the communications industry was carved up into pieces that usually provided a single service or closely related set of services, such as landline telephone or cable television.

2. What caused convergence?

Several factors have combined to promote convergence in electronic communications. Moving an electronic communication over long distance no longer involves the huge additional cost that it once involved. Cheap fiber and computer chips have replaced expensive copper cable and mechanical switches. As a result, the additional cost associated with a long-distance phone call can be measured in tenths of a cent, if that much. The ultimate cost-reducing technological advancement, of course, occurred when digital transmission replaced analog transmission. Digital transmission using Internet Protocol allows information to be sent around the globe as cheaply as it can be sent across the street. As a result, we now have Voice over Internet Protocol offering long-distance service within the United States at no additional charge. One can even make free long-distance calls internationally, as long as they are computer-to-computer calls that do not require termination on the destination company’s telephone system. This “death of distance” phenomenon is responsible for the convergence – or perhaps “re-convergence” – of local and long-distance calling.

Digital transmission has also fostered other forms of convergence. When a phone network moves and stores calls digitally, the phone company can now offer a wide array of services that previously required costly, specialized equipment on the customer’s premises – such as voice mail, three-way calling, caller ID, and other features that many consumers now take for granted.

The convergence phenomenon extends well beyond telephone. When a phone call, television program, spreadsheet, or set of video game keystrokes is converted into bits, it can be transported on a network capable of transporting bits. Conversely, a network capable of transporting bits can support many different services that previously required different types of networks. So cable companies can offer digital cable and cable modem Internet access. They can also offer telephone service using VoIP rather than cable telephony. Broadband Service Providers offer high-speed Internet service and video over the same plant, and consumers can also use that Internet connection for VoIP. Wired telephone companies can offer voice, data, and now even video service using DSL or fiber optic cable. The major wireless companies mostly offer voice and Internet service now – but what might they do with video if more spectrum were available?

3. What does convergence mean for competition and consumer welfare?

Convergence has the potential to increase competition and consumer welfare. After all, convergence means that multiple firms which previously offered different services can now offer multiple services in competition with each other. Convergence means that we are finally achieving the broad vision of the Telecommunications Act of 1996: firms that own competing networks are invading each others' markets.

The converging firms are often well-established and well-capitalized. Examples include cable, wireline telephone, wireless, and satellite. They thus have the potential to be robust and credible competitors, with fewer of the problems that plague small startups. They wouldn't spend so much time asking you to do something about the other guy's "unfair" advantage if they weren't afraid of each other!

For consumers, convergence could mean better value for the money. In some cases that may mean lower prices for the same services consumers purchased prior to convergence. We saw this phenomenon in long-distance phone service, for example. In other cases, better value means consumers might pay more, but the amount or quality that they get improves by more than enough to make the higher price worthwhile. Realistically, I suspect we're often likely to see both: lower prices for many services, plus improved quality.

The same underlying trends that drive convergence can also facilitate the introduction of new products and services that consumers previously did not even know they wanted. One example might be interactive video games. Another might be dating, where I'm told that text messaging and Internet chat are partly substituting for actual dates.

Industry observers today speak of the "triple play" of voice, video, and data – essentially relegating anything that's not voice or video to the "data" category. But perhaps in the future we'll hear of a rush to offer the "quadruple play" of voice, data, video, and interactive entertainment, where the design of networks includes special elements that enhance the interactive gaming experience. Or a "quintuple play" that adds personal relationship management. Competing on this last attribute might require all networks to find a way of adding a high-bandwidth mobility feature. In short, it is difficult to predict

how ongoing technological change could affect the variety of services available to consumers, and the ways they are delivered.

You'll notice that I said convergence "has the potential" to increase competition and consumer welfare.

Realistically, the efficiencies associated with convergence are so large that consumers would likely receive some benefit even if electronic communications were monopolized. The history of cable television regulation provides a case in point. Cable rates rose significantly when they were deregulated in 1984, but quality (primarily the number of channels) improved significantly as well. After taking the value to consumers of quality into account, consumers were better off with unregulated cable rates after deregulation than they were with regulated rates prior to deregulation.²

Two decades of economic research, however, also demonstrates that cable consumers would have been still better off with competition. Competition will be most vigorous, and consumer welfare will be greatest, when consumers are served by multiple competitors who have the capability to offer multiple services.

4. What does this imply for public policy?

Two general principles should guide public policy. First, focus on the most important task at hand by removing barriers to market entry. Second, ensure that government intervention in communications meets a consumer welfare test.

Barriers to entry

A variety of factors either prevents firms from "converging" or prevent "converged" firms from serving consumers as expeditiously as possible.

A firm that wants to sell consumers a conduit capable of handling multiple services must have sufficient bandwidth to do so. Now that the legal uncertainty regarding the regulatory status of cable modem and DSL has been settled, the cable and wireline phone companies are in pretty good shape in this regard.³ These firms have essentially built their own bandwidth in their cables and wires.

² Robert W. Crandall and Harold Furchtgott-Roth, *Cable TV: Regulation or Competition?* (Brookings, 1996).

³ Last year's *Brand X* decision settled the issue that the FCC can ultimately determine the regulatory status of various services, and the FCC decided that cable modem service is an information service rather than telecommunications. A subsequent FCC decision determined the DSL is also an information service. For a discussion of the implications of *Brand X*, see Jerry Ellig and Alastair Walling, "Regulatory Status of VoIP in the Post-*Brand X* World," Mercatus Center Working Paper (Feb. 17, 2006), available at <http://www.mercatus.org/regulatorystudies/article.php/1542.html>. The FCC's DSL decision is available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-150A1.pdf.

Wireless

Other potential competitors aren't so fortunate. The digital wireless networks could play a bigger role as the third, fourth, fifth, and/or sixth broadband pipe into the home – but that likely requires more spectrum.

As part of the Mercatus Center's ongoing program to assess the costs and outcomes associated with regulation, I recently examined the costs of major federal telecommunications regulations.⁴ Out of all federal telecommunications regulations, spectrum policy has by far the biggest effect on consumer welfare. The costs of the current spectrum policy are large in an absolute sense—in the neighborhood of \$77 billion or more annually. Spectrum allocation is by far the costliest aspect of U.S. federal telecommunications regulation, and it represents a very large share of the total. Even if the actual costs of U.S. spectrum allocation policy were only one-tenth the size that scholars estimate, they would still account for more than 20 percent of the total consumer cost of telecommunications regulation.⁵

During the past two decades, U.S. spectrum policy has gradually become more market-oriented. In 1993, Congress directed the FCC to auction an additional 120 MHz of spectrum for wireless communications. Consumers have reaped significant benefits as a result.⁶ Nevertheless, current policy still generates large inefficiencies by preventing reallocation of additional spectrum to its most highly-valued uses – most likely wireless voice and data communications.

The costs of current spectrum allocation policy can be expected to fall sometime after 2006, if the FCC carries through on its plan to auction an additional 90 MHz of spectrum.⁷ However, the multi-billion dollar cost estimate should only be taken as a rough approximation of the negative effects of spectrum allocation policy on consumer welfare.

⁴ The results have recently been published in Jerry Ellig, "Costs and Consequences of Federal Telecommunications Regulation," *Federal Communications Law Journal* 58:1 (2006): 37-102, available at <http://www.law.indiana.edu/fclj/pubs/v58no1.html>.

⁵ Jerry Ellig, "The Economic Costs of Spectrum Misallocation: Evidence from the United States," presented to the conference on Spectrum Policy in Guatemala and Latin America, Universidad Francisco Marroquin, Guatemala City, Guatemala, June 9-10, 2005, available at <http://cadep.ufm.edu.gt/telecom/lecturas/JerryEllig.pdf>.

⁶ The results are documented succinctly in Robert W. Crandall and Jerry A. Hausman, "Competition in U.S. Telecommunications: Effects of the 1996 Legislation," in Sam Peltzman and Clifford Winston (eds.), *Deregulation of Network Industries: What's Next?* (AEI-Brookings Joint Center for Regulatory Studies, 2000): 102-07.

⁷ "FCC to Commence Spectrum Auction that will Provide American Consumers New Wireless Broadband Services," FCC press release (Dec. 29, 2004), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-255802A1.pdf. The auction cannot occur until June 2006 because the Commercial Spectrum Enhancement Act of 2004 requires the FCC to notify the National Telecommunications and Information Administration at least 18 months prior to the auction of any frequencies mentioned in the legislation, so that any public sector users can be relocated to other spectrum.

The Commercial Spectrum Enhancement Act of 2004 and last year's digital TV legislation were positive steps that will eventually make more spectrum available for wireless communications. But doling out a few more slices of spectrum for a specific use is not the same thing as a comprehensive, market-based policy. A truly market-based approach would allow market transactions to allocate spectrum rather than licenses. Potential users could buy or lease spectrum, then choose how to use it. The amount of spectrum allocated to wireless telephone, broadcasting, broadband, and other services would be determined by market transactions and decisions of users, rather than regulatory proceedings. As Ronald Coase noted in 1959,

Certainly, it is not clear why we should have to rely on the Federal Communications Commission rather than the ordinary pricing mechanism to determine whether a particular frequency should be used by the police, or for a radiotelephone, or for a taxi service, or for an oil company for geophysical exploration, or by a motion-picture company to keep in touch with its film stars or for a broadcasting station. Indeed, the multiplicity of these varied uses would suggest that the advantages to be derived from relying on the pricing mechanism would be especially great in this case.⁸

I cannot claim expertise on the recent wireless company mergers, but I can't help asking whether those mergers occurred in part because buying a competitor was the most feasible way to acquire a big chunk of bandwidth.

Satellite

Another, lesser-discussed broadband conduit is satellite. Currently, high-speed Internet via satellite is often more expensive than DSL or cable modem, which makes it a good option primarily in rural areas that lack these competitors. Could more satellite slots and associated spectrum be made available to increase bandwidth from this source? Could more satellite slots and associated spectrum be made available through competitive bidding, so that existing competitors or new entrants could acquire more? I don't know the answers to these questions, but they are well worth asking.

Cable franchising

A final set of entry barrier issues involves cable franchising, which tends to prevent additional providers of video service from entering local markets. This committee has already held a hearing on the issue. A colleague and I submitted written testimony for the record, so I will not rehash our analysis in great detail here. Suffice it to say that we estimated that cable franchising costs consumers approximately \$10 billion annually in higher prices and the value of services forgone due to the price increases. The costs attributable to anticompetitive exclusion amount to more than \$6 billion annually.⁹

⁸ Ronald Coase, "The Federal Communications Commission," *Journal of Law & Economics* 2 (1959): 16.

⁹ Our testimony is available at <http://www.mercatus.org/regulatorystudies/article.php/1540.html>.

Various new video entrants, including Broadband Service Providers and telephone companies, have identified local video franchising as a significant barrier to entry. Clearly, the potential gains to consumers from removing the franchising barrier to entry are large.

Consumer welfare test

Historically, many policy decisions about communications have been made according to a “public interest” standard. Unfortunately, a public interest standard is virtually no standard at all. A number of FCC chairmen, general counsels, and legal experts have noted that the “public interest” standard means precisely what its author, Sen. C.C. Dill, said it meant: “It covers just about everything.”¹⁰

“Whatever” is not a satisfactory principle to guide merger decisions or other communications regulation. The public interest standard is a relic of the old, regulated monopoly mindset. Under regulated monopoly, government tells the firm, “We are giving you a special privilege, and in return we expect you to use some of the monopoly profits to do things that consumers would not normally be willing to pay for.” Any regulatory decision then becomes an opportunity to extract “concessions” that may or may not benefit consumers. Historically, this has occurred at all levels of government – at the federal level at the FCC, at state public utility commissions, and on the local level (as with cable franchising).

This “taxation by regulation” violates fundamental principles of transparency in government. Indeed, regulatory scholars have shown persuasively that opaque public interest requirements effectively allow public decisionmakers to confer benefits on specific interest groups while spreading the costs among consumers, who may not even be aware of the costs.¹¹

Policy and regulatory decisions should be guided by a more concrete principle, and departures from the principle should be transparent and explicitly justified. A more specific, meaningful, and consumer-oriented principle is the “consumer welfare” standard that guides antitrust enforcement. Antitrust analysis requires public decisionmakers to define the relevant market, determine whether market power exists in the relevant market, assess whether the challenged business practice harms consumers, and identify any offsetting consumer benefits. Two examples – merger enforcement and net neutrality -- illustrate how the consumer welfare standard might imply a different approach to key government decisions that affect communications.

¹⁰ Thomas W. Hazlett, “The Wireless Craze, the Unlimited Bandwidth Myth, the Spectrum Auction Faux Pas, and the Punchline to Ronald Coase’s ‘Big Joke,’: An Essay on Airwave Allocation Policy,” AEI-Brookings Joint Center on Regulatory Studies Working Paper No. 01-01 (Jan. 2001): 43; Coase (1959): 8.

¹¹ Michael Crew and Charles Rowley, “Toward a Public Choice Theory of Monopoly Regulation,” *Public Choice* 57 (1988): 49-67; Richard A. Posner, “Taxation by Regulation,” *Bell J. of Econ. & Mgt. Science* 2 (1971).

Merger Enforcement

It is well-known that FCC merger proceedings have, in the past, been used as a vehicle to induce “concessions” from merging parties that may or may not promote overall consumer welfare. One former FCC commissioner characterized the process as “naked regulatory extraction.”¹²

In a statement on the proposed AT&T/Bellsouth merger, FCC Chairman Kevin Martin declared, “The FCC’s primary responsibility is to determine whether the proposed transaction is in the best interest of consumers.”¹³ This is a laudable sentiment, but it is unfortunate that the definition of the goal depends on the views of the FCC commissioners, rather than a much more permanent commitment enshrined in legal precedent -- as occurs under antitrust law.

Another disadvantage of current merger review practice is that the FCC is not bound by the same predictable timetables that accompany the Hart-Scott-Rodino merger review process. As Congress recognized when it created the HSR process, the potential for delay can discourage mergers that promote consumer welfare. While the FCC has improved the timeliness of merger review in recent years, it remains true that timeliness, like the consumer welfare goal, depends on the priorities and goodwill of the commissioners.

If we expect the communications industry to behave like a competitive industry, then the principles and processes guiding merger review should likewise be the same as those that apply in other competitive industries. This could be accomplished in one of two ways. One option would be for Congress to direct the FCC to review mergers under antitrust rules: employ consumer welfare as the sole standard, assess mergers under antitrust law subject to antitrust precedent, and observe the same deadlines as the antitrust agencies. The other option would be to simply take merger review away from the FCC and give it solely to the Department of Justice’s Antitrust Division and/or Federal Trade Commission.

Some communications firms are common carriers. The FTC currently lacks jurisdiction over them. By default, the Antitrust Division would end up reviewing mergers involving common carriers. If Congress believes this result is unsatisfactory, it should give the FTC jurisdiction over common carriers.

Some might argue that antitrust rules would make merger review in the communications industry less thorough, raising the likelihood that mergers harming consumers might slip through. There is no reason that this would necessarily occur. Longtime members of this Committee can no doubt recall past instances in which regulators at the Interstate

¹² Separate Statement of Commissioner Harold Furchtgott-Roth, *In re Applications of Ameritech Corp. and SBC Communications, Inc.*, Memorandum Opinion and Order, CC Docket 98-141 (Oct. 10).

¹³ Martin Statement (March 6, 2006), at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-264179A1.pdf.

Commerce Commission, Surface Transportation Board, or Department of Transportation approved railroad and airline mergers over the objections of the Antitrust Division – either because the regulators differed with the Antitrust Division’s analysis of competition, or because they believed other factors were more important.

Net Neutrality

“Net neutrality” seems to mean different things to different people. I cannot claim to know all the various meanings that different parties attach to that term. But the consumer welfare issues in the net neutrality debate are not at all new. Rather, this debate is a replay of general antitrust discussions about restrictive business practices.

If the policy goal is overall consumer welfare (as opposed to benefits for some particular segment of the communications industry, or satisfying some type of ideological objective), then competition could normally be expected to protect consumers. In a competitive market, owners of the “conduit” might engage in business practices that violate some parties’ concept of net neutrality – but only if the practice offers consumers a corresponding benefit. Conduit providers who violate net neutrality without offering consumers some other benefit in return will have a harder time gaining and keeping customers. Net neutrality should not be a problem requiring a public policy solution if there is sufficient competition among providers of broadband Internet service. If broadband providers have market power, then a more specific and fact-intensive analysis is required to determine whether the benefits to consumers justify any harms.

Viewed in this light, the net neutrality “problem” is little different from any other antitrust analysis of restrictive business practices under the rule of reason. First, define the relevant market. Second, determine whether there is significant market power. If there is market power, determine whether the business practice harms consumers. If the business practice harms consumers, determine whether there are any offsetting benefits.

Antitrust enforcement agencies have extensive expertise in this type of analysis. For example, the net neutrality issue is quite similar to the Internet Service Provider issues that the Federal Trade Commission dealt with in the AOL-Time Warner merger. I see no reason the antitrust agencies are not competent to analyze net neutrality as a restrictive business practice. And thus I see no reason that net neutrality deserves special regulatory attention.

Of course, this approach will not satisfy the purists on either side of the issue. There are pro-regulation interests who view any violation of their concept of net neutrality as abhorrent – even if it produces an offsetting benefit for consumers. There are free-market advocates who similarly view the antitrust approach as abhorrent, because it may sometimes justify government intervention.

Nevertheless, I see two key benefits to the antitrust approach. First, it avoids reinventing the wheel in terms of analysis. Second, and most important, it is probably the most effective way to promote consumer welfare. Treating net neutrality as an antitrust issue

rather than a regulatory issue would help ensure that overall consumer welfare remains the paramount consideration, since consumer welfare is the touchstone of antitrust analysis.

Conclusion

Convergence promises consumers enormous benefits. Robust competition is the key to ensuring that consumers receive the largest possible benefits. Congress can take three steps to help ensure this result:

1. Allow markets to allocate much larger swaths of spectrum, so that multiple wireless conduits have the bandwidth to offer consumers a full range of services.
2. Remove local cable franchising as a barrier to entry.
3. Ensure that competition policy decisions, such as merger review and net neutrality, employ consumer welfare as the sole standard, are consistent with antitrust precedent, and follow the same deadlines that antitrust agencies must follow.