I'd like to thank Tom Hazlett and Drew Clark for inviting me here today to talk about one of the more unusual activities in my now 20 year career as an advocate for a more open and democratic communications system – my participation on the Advisory Committee on Public Interest Obligations of Digital Television Broadcasters, otherwise known as the “Gore Commission.”

I. Background

First a little background. When Congress passed the Telecommunications Act of 1996, among other things, it gave the FCC the discretion to give an extra chunk of the public airwaves, or spectrum, to over-the-air broadcasters to assist their transition to digital broadcasting. If the Commission chose to do so, Congress directed the FCC to “prescribe such other regulations as may be necessary for the protection of the public interest, convenience and necessity.”
As we all know, the FCC did indeed give the broadcasters the extra spectrum, and in their 1997 rulemaking, set out regulations to govern that allocation, including eligibility requirements, construction schedules, allowing for flexible use of the spectrum and setting a target spectrum return date of December 31, 2006. But on the issue of what the proper public interest obligations should be for digital TV broadcasters, the FCC balked, saying instead “We are not resolving the debate today. Instead, at an appropriate time, we will issue a Notice to collect and consider all views.”

This “punt” caused an outrage among both public interest advocates and others who thought that the broadcasters were getting a windfall of billions of dollars worth of beachfront property at no cost. At a minimum, the giveaway was a ten-year loan with no interest.

It was against this background that President Clinton established the Gore Commission to recommend how the traditional principles of public trusteeship that governed broadcast television for over 70 years should be applied in the digital age. The Commission was comprised of 22 broadcasters, independent television producers, union representatives and
public interest advocates, and was chaired by Norm Ornstein and Les Moonves, then-President and CEO of CBS Television. The Commission was created to define the public interest in broadcasting, investigate forms that digital broadcasting might ultimately take, and recommend obligations that were technologically and economically feasible, effective in serving public interests, and also sensitive to the free speech rights of broadcasters.

In formulating its recommendations, the Commission was tasked to operate under three basic principles: first, that the public, as well as broadcasters, should benefit from the transition to digital television; second, that flexibility was crucial in accommodating unforeseen economic and technological developments; and third, favoring policy approaches that relied on information disclosures, voluntary self-regulation, and economic incentives as opposed to regulation.

The Commission met monthly for 6 months, from October 1997 to April 1998, and heard from a variety of stakeholders, including independent producers, educators, disability advocates, TV network Presidents, public safety experts and government officials. The deliberations over the recommendations were very contentious and strong recommendations were
largely prevented by the refusal of the Chairs, or at least the Chair not present here, to take votes.

Ultimately, the Commission did come up with 10 recommendations. The most important of these included that:

• Digital broadcasters should be required to make enhanced disclosures of their public interest programming and activities on a quarterly basis using standardized checklists;

• The FCC should adopt a set of minimum public interest obligations for broadcasters in the areas of community outreach, accountability, public service announcements, public affairs programming and closed captioning. While a majority of the Commission would have preferred quantifiable minimums, broadcasters (with the exception of Jim Goodmon and Barry Diller) prevented that from becoming a recommendation;

• Congress should create a trust fund to ensure enhanced and permanent funding for public broadcasting and should reserve an extra block of spectrum for noncommercial, educational programming;

• Digital broadcasters who choose to multicast should have the flexibility to choose between paying a fee, providing a program feed for public interest purposes and making an in-kind contribution;
• Broadcasters should voluntarily provide 5 minutes each night for candidate-centered discourse in the 30 days prior to an election. Bans on the sale of airtime to state and local officials should be prohibited;
• Digital broadcasters should expand closed captioning on public service announcements, public affairs programming and political programming, should provide video description and should ensure disability access to ancillary and supplementary services.

Ten years later, the Committee’s recommendations continue to be largely unfulfilled. Ideas have been explored and proposals floated, but little action has been taken by the FCC, Congress or the broadcast industry to make the recommendations a reality, other than the aforementioned disclosure requirement (now being challenged in court by broadcasters) and a requirement that the three hours per week requirement for children’s educational and informational programming be applied to any additional program feeds a digital broadcaster might provide. No trust fund to ensure funding for public broadcasters has been established. Broadcasters have not, as an industry, provided the recommended free time for political discourse. No minimum requirements in the categories highlighted have been adopted. Notices of Inquiry and Notices of Proposed Rulemaking have
been put out by the FCC, but a set of minimum public interest obligations has yet to be adopted.

There are any number of reasons why the Committee’s recommendations have been largely ignored, but certainly one of them has to be policymaker skepticism about the reality of spectrum scarcity and the viability of the public trustee doctrine. The idea that huge multinational companies that happen to own broadcast stations will provide programming for the public’s benefit at the government’s behest, if not outdated in 1997, is certainly outdated today. Indeed, if I were a member of the Gore Commission today, I would not advocate for the same recommendations or the underlying rationale. Instead, I would argue that the airwaves are abundant, and not scarce, and as a result, we need a new model for the public interest in the digital age.

II. The History of Spectrum Scarcity and the Public Trustee Doctrine

The concept of spectrum scarcity is rooted in technical problems inherent in the limitations of 1930s era broadcasting technology. Not surprisingly, as commercial broadcast technology has advanced beyond its Herbert Hoover-era roots, many of these limitations have been overcome or
minimized. In the digital era we live in, scarcity should no longer be the starting point for developing spectrum policy. Today, spectrum can be shared without interference in a way that was simply unimaginable eighty years ago. As result, it is time to reimagine spectrum's role in society and fundamentally alter the way in which it is regulated. We must unshackle our policy from ways of understanding radio technology that are rooted deep in the past. By recognizing that radio technology has come a long way in the past eighty years, we as a society can allow ourselves to embrace the digital future. Of course, to explain how policy must be changed, it is important to explain how it got started.

In the early part of the 20th century, spectrum scarcity was a real and legitimate concern. Communicating information by way of radio was imprecise and susceptible to all types of interference. In the 1920s, radio was still in its infancy and broadcasters were unregulated. As a result, radio was quickly becoming “a cacophony of signal interference.” Without some sort of government-backed regulation, radio was in danger of smothering itself. The Federal Radio Commission (now the FCC) was formed to bring order to the chaos. The conflict was provisionally resolved with passage of the Radio Act of 1927 and the Communications Act of 1934. Although
Congress seriously considered making broadcasters “common carriers” that would have provide access to anyone who wanted it, they instead granted broadcasters exclusive use of wide bands of spectrum, which guaranteed freedom from interference and from competition.

How did broadcasters escape a common carrier requirement? They cleverly proposed instead the public trustee doctrine, which created a *quid pro quo* - in exchange for free use of the spectrum, broadcasters promised to serve as “trustees” of the airwaves on behalf of the public. As trustees, broadcasters would use their public grant to provide certain public interest programming, including coverage of local issues and public affairs, coverage of differing viewpoints on controversial issues of public importance, children’s educational and informational programming, and promotion of political discourse.

For most of the 20th century, the judiciary also assumed that spectrum scarcity was a fact. In 1943, in landmark case of *NBC v. US*, the Supreme Court carefully examined the history of spectrum regulation and accepted that there was a fixed natural limit to the number of radio stations that could exist. In upholding the FCC’s Chain Broadcasting rules, which protected
affiliates from network control, the Court concluded that strict spectrum allocation and regulation was needed in order to “secure the maximum benefits of radio to all the people of the United States.”

Twenty-five years later, the Court in Red Lion v. FCC reaffirmed the conclusions of NBC. In upholding the constitutionality of the Fairness Doctrine, the court gave a detailed history of the evolution of early spectrum regulation. It built this history on the assumption that unregulated frequencies cause chaos, which result in a cacophony of voices that make radio useless to anyone. As far as the Red Lion court was concerned, the realities of spectrum scarcity had not changed since the 1930s and were such that broadcasting simply could not exist without strong federal regulation and spectrum apportionment.

In 1984, FCC v. League of Women Voters marked the first time the Supreme Court recognized that the doctrine of spectrum scarcity might not be immutable fact. In a footnote, Justice Brennan recognized that emerging technologies such as cable and satellite television had recently challenged the assumption of spectrum scarcity. However, Justice Brennan indicated that the Court was unwilling to reexamine spectrum scarcity on its own.
However, he did indicate that the Court might be willing to follow Congress or the FCC down this road.

Unfortunately, neither Congress nor the FCC has been willing to lead this reexamination of spectrum scarcity. Nearly a quarter century after *League of Women Voters*, both the FCC and Congress continue to base spectrum policy on the assumption that spectrum is physically scarce and that the only way for any wireless communication to function is to give exclusive rights to a handful of licensees. I believe that this is a policy mistake – the government’s and my public interest colleague’s continued reliance on spectrum scarcity and its spawn, the public trustee doctrine, has done little more than give broadcasters an exclusive license to make billions of dollars and keep out competition.

Let me be more specific about where I believe spectrum scarcity and the public trustee doctrine have failed to promote the needs of the public. First, by wrapping itself in the cloak of public trusteeship, the broadcast industry has claimed special status and obtained a litany of special benefits—such as must-carry, distant signal protection, a near monopoly on local programming and local advertising, and exclusive licensing—in
exchange for ever-decreasing and largely mediocre public interest programming. Other than sensationalist local news, local programming is virtually non-existent. Political discourse is limited largely to national candidates and political advertisements. Balanced coverage of critical issues is considered quaint. Broadcast stations neither editorialize nor make their airwaves available to the public. With a handful of exceptions, broadcasters no longer poll their communities as to what programming they would like to see. Even if the government were to impose quantifiable minimums for public interest programming and reinstate ascertainment tomorrow, I don’t believe that the results would be much better. As we have seen in the Children’s TV context, broadcasters will do the absolute minimum necessary to fulfill their public interest requirements and take with them the protections their status as public trustees bestows upon them.

Second, to the extent that the public trustee doctrine is currently used by the government to impose behavioral regulation, it is used not to increase citizen access and public service programming, but to impose regulations on indecent and/or violent speech. While most behavioral regulation is intended to increase speech, these content regulations have the opposite effect. In both cases, the public loses.
I also think that reliance on spectrum scarcity as a basis for broadcast regulation is wrong as a matter of fact. Vast technological changes render the notion of physical spectrum scarcity obsolete. Software-defined radios, in particular, have the ability to listen before they talk, and change channels when they detect interference, thereby enabling spectrum sharing. To the extent that spectrum is still scarce today, it is because the government allocates it—or more accurately, does not allocate it—that way.

According to a study by the New America Foundation, the current regulatory structure has created a situation where more than 90 percent of the most valuable spectrum is unused at any given time. In 2002, the FCC’s Spectrum Policy Task Force released its own report on improving management of spectrum in the United States. It also found wide swaths of unused and underutilized spectrum. Additionally, much of the spectrum that is allocated is done so in large blocks on an exclusive basis to one party. When that party does not utilize its entire allocation of spectrum, the law prohibits anybody else from using it, regardless of the value they might add.

Simply put, the political and judicial underpinnings of spectrum
scarcity rest on engineering realities as they existed in the early 1930s – a
time where the band-aid had just been invented and the ballpoint pen had
not. At that time, it was taken as an undeniable truth that “spectrum simply
is not large enough to accommodate everybody.” Radio of the 20s and 30s
was a classic commons, destined to tragedy without government
intervention.

Of course, pronouncement of bedrock technical “fact” in the early
days of a technology has a tendency to look quaint in hindsight. It is
instructive to remember another “fact” of radio around that time, this time as
articulated by then Secretary of Commerce Hoover in an address to one of
the first major radio conferences: “I believe that the quickest way to kill
broadcasting would be to use it for direct advertising . . . if a speech by the
President is to be used as the meat in a sandwich of two patent medicine
advertisements there will be no radio left.”

As Hoover was unable to imagine a world in which direct advertising
supported a wide range of broadcast content, he was also unable to envision
a world in which government regulation actually created, not corrected,
spectrum scarcity. It took only a few years to show that direct
advertisements would fund national broadcast of a presidential speech.
Now, 86 years after the first national radio conference was called to bring
order to the airwaves, it is time to update our understanding of spectrum.
Just as we do not let the fact that computers did not exist in 1930 prevent us
from using them now, we cannot let the fact that spectrum sharing radios did
not exist in 1930 prevent us from embracing them today.

III. Spectrum Abundance: The New Public Interest Standard

So I urge the government, and my colleagues in the public interest
community, to stop talking about spectrum scarcity and start talking about
spectrum abundance. In a world of spectrum abundance, additional users
increase, not decrease, the value of spectrum. In a world of spectrum
abundance, exclusivity is out and spectrum sharing is in. In a world of
spectrum abundance, the airwaves truly do belong to the public - not as part
of a one-sided trusteeship model - but to use as a means of communication
to the masses. Giving the public control over its airwaves should be the
public interest standard for the digital age.

A policy based on spectrum abundance should start with the
presumption that, given a few simple right-of-way rules, a multitude of users
and devices can effectively share the spectrum on an unlicensed basis. This is essentially the proposal put forth by my friend and colleague Kevin Werbach of the University of Pennsylvania in his article entitled *Supercommons: Toward a Unified Theory of Wireless Communication*.

Here’s a way to explain it: the current system is like allowing just one car on a highway at a time. We know that a highway can handle more than one car at a time. Simple rules of the road allow thousands of cars to travel on a highway freely without causing interference with each other. Similarly, modern radio technology allows thousands of speakers to share the spectrum without interfering with each other. The FCC should create right-of-way rules that let speakers do as they please as long as they do not unduly interfere with others. Once those rules are in place, the FCC should enforce them, but otherwise allow speakers to go about their business.

This does not mean that spectrum should never be licensed or that auctions should be eliminated. But those parties seeking exclusive licensing must rebut the presumption of unlicensed public access. I can foresee uses like wireless telephony or emergency communications that could make the case for an exclusive license. But under the new public interest standard I am proposing today, private users must demonstrate that the public will
benefit more from exclusive access than public access.

Having open spectrum as a default has a number of other ancillary benefits. The lack of licensing constraints will allow networks to be built faster and at lower cost, and would free speakers from the content constraints that government can command under a licensing regime. Open spectrum will also encourage greater innovation. Currently, any potential wireless innovator knows that bringing its innovation to market will require him to sell his soul and a piece of his company to the spectrum licensee. As we have seen in the case of wireless telephony, this has resulted in innovative devices and applications being kept off the market at the request of the network provider. If more unlicensed spectrum is made available, barriers to entry would be greatly reduced and technologies would quickly appear to enable the public to make better and more efficient use of the spectrum.

What happens to incumbent broadcasters under this new public interest standard? One can certainly make the case that broadcasters don’t really need spectrum – they already have must carry, and should some enterprising cable company provide free or low cost set-top boxes to enable
non-cable homes to receive broadcast signals, broadcasters can give up their spectrum and become programmers just like any other cable programmer.

Let me propose two other options. The first is simply to require broadcasters to pay the government a market rent for the use of the spectrum. Particularly in light of the recent auction of broadcast spectrum by the FCC, we have a sense of the value of this beachfront property. The money collected could free public broadcasting from its government shackle, or could fund other public service media both in the online and offline world.

I think that a better option might be to give broadcasters a choice: the first is to keep the spectrum and pay for it, or keep their special protections, such as must carry, distant signals, or re-broadcast rights and give up the spectrum. I would guess that, when forced to choose between the prestige of beaming a signal across the spectrum and the value of special protections, broadcasters would admit the right to actually broadcast has a relatively low value to them. This option has the added advantage of harnessing the interests of broadcasters to reduce scarcity, rather than attempting a wholesale restructuring.
IV. Moving Forward

So how can we move towards the spectrum abundance model of regulation? One only needs to observe the battle royale between technology companies and broadcasters over the bands between digital TV stations, or white spaces, to understand that it will not be easy.

Congress, the FCC and the Department of Commerce have in front of them a number of opportunities to move the ball forward. First and foremost, the FCC should make the DTV whitespaces available for unlicensed uses. The white spaces can serve as a useful model for how a supercommons model for spectrum can work. Second, the FCC should, either in response to Congressional pressure, or on its own, continue the work it started in 2002 with the Spectrum Policy Task Force. The Commission should identify and make available spectrum either for licensed or unlicensed uses. Third, the Department of Commerce should identify spectrum that is underutilized by the government and make it available for assignment by the FCC. Once the government gets over its inclination to allocate spectrum scarcely, it will be easier to set in place policies that allow for greater unlicensed uses of the spectrum.
V. Conclusion

It should come as no surprise to those who study communications technology and policy that ten years after its conclusion, the Gore Commission’s recommendations are outdated. Dial-up and AOL ruled, Google was in its infancy, only the most privileged had giant mobile phones, and broadcasting was by far and away the most powerful medium on the planet. The tremendous explosion of digital technologies and software applications that could do everything from publish a book to make a phone call using Internet protocol have made it possible to take a fact that went unchallenged for nearly 80 years – spectrum scarcity – and turn it into a fiction. But that story can have a very happy ending if we are very careful – the airwaves can actually be controlled and utilized by its owners – the public – adding much needed diversity to our public discourse and injecting new innovation into our economy. Thank you.