

WRITTEN STATEMENT OF
SUSAN CRAWFORD, PROFESSOR, CARDOZO LAW SCHOOL

FIELD EVENT ON:
"THE INFORMATION NEEDS OF COMMUNITIES"

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Chairman Genachowski, Commissioner Copps, and FCC staff:

Thank you for inviting me to testify before you today. I'm Susan Crawford and I currently serve as a law professor at Cardozo Law School in New York City and as a member of the Department of Commerce Spectrum Management Advisory Committee. In 2008 I co-led the transition team for the FCC between the Bush and Obama administrations, and I served as a Special Assistant to the President for technology policy for 2009. Prior to joining the administration, I was a professor at the University of Michigan Law School and a member of the ICANN Board. Prior to becoming an academic, I was a partner at Wilmer, Cutler & Pickering (now WilmerHale).

As an Internet and technology policy veteran, I look forward to talking to you today about the environment in which Mr. Waldman's fine report operates and the actions the Commission can take to help improve local communities' access to information.

The Commission has always focused on putting the people of the United States first. Congress charged you with making available to all of us a "rapid, efficient . . . communication service with adequate facilities at reasonable charges." Today, the relevant communication service for the nation - the two-way, general-purpose communication on which our economic, cultural, political, and social life depends - is high-speed Internet access. Chairman Genachowski clearly understands Congress's charge. He takes every opportunity to talk about innovative efforts to deliver high-speed Internet access to the people of the United States, in a world where the global competition for jobs depends crucially on this access.

This focus on serving the people of the United States with rapid, efficient Internet access at reasonable charges helps not just ordinary individuals succeed but will also help local journalism. No single development has changed journalism in the last 50 years more than the advent of the Internet, and the report makes clear that ubiquitous, low-cost, high-speed Internet access is essential to the future of the news. Every one of the recommendations made in the Report depends on it.

In my written testimony I would like to focus on three key issues relating to the Commission's role in the context of this fine report:

- First, as the Report correctly notes, unlicensed, opportunistic access to spectrum, including unlicensed access to the TV white spaces, will exponentially increase communications capacity for purposes of mobile Internet access across the country and is integral to the Commission's high-speed Internet access plans. Unlicensed spectrum is a platform for innovation that will enable low-cost ways to provide the people of America with information - including, particularly, the civic information and news on which Mr. Waldman's fine report is focused;
- Second, the Commission could be doing much more to prioritize, protect, and encourage rapid developments in the unlicensed arena, so as to unleash billions of dollars in private investment in innovation, job creation, and economic growth;
- Third, as the Report suggests, to the extent auctions of existing broadcast spectrum are held, the Commission should retain the discretion to direct some of the proceeds of those auctions to technology efforts that help ensure that the information needs of communities are met.

The Promise of Unlicensed Wireless Internet Access

Today, even the limited unlicensed use of the peoples' airwaves that has been permitted so far by the Commission drives an enormous part of our country's information economy. WiFi, operating in a relatively high and narrow set of frequencies that are shared with cordless phones, microwave ovens, and a variety of other uses, has been a platform for a multi-billion dollar industry in chipsets and devices. Indeed, it has been the savior of the wireless carriers. Today half of the page views on Apple iPhones come through a WiFi network, according to Nielsen, and Cisco estimates that roughly 30% of mobile data traffic will be routed over WiFi by 2015.

In addition, thousands of small wireless ISPs (WISPs) and rural carriers provide extensive high-speed Internet coverage using unlicensed spectrum. In Texas, almost 75% of the land mass of the state is served only by WISPs; in Nebraska, 59% of the land mass is served only by WISPs, and in Oregon, Illinois, and Colorado, more than 30% of the land mass is served only by WISPs. Unlicensed spectrum allows tens of millions of homes and businesses to wirelessly share single wired Internet connections. Tremendous innovation has taken place that would not have occurred in a licensed-only world.

But there is much more that could be done with unlicensed, opportunistic spectrum use beyond the relatively primitive, low-bandwidth, low-power uses that are possible with existing WiFi. As President Obama directed in June 2010, we must "unlock the value of otherwise underutilized spectrum and open new avenues for spectrum users to derive value through the development of advanced, situation-aware spectrum-sharing technologies." (Presidential Memorandum: Unleashing the Wireless Broadband Revolution, June 28, 2010.) His direction then was that the agencies - with the help of the FCC - should find and make available 500 MHz of spectrum so that licensed *or unlicensed or shared* wireless high-speed Internet access technologies could be deployed.

He also directed that increased attention be given to research about shared access. The President's direction in no way prioritized licensed over unlicensed uses of the peoples' airwaves.

It is now possible, as the Department of Defense already knows, to build much more efficient and dynamically-responsive radio systems that allow many users and uses to share the same frequency bands at the same time. The technology, indeed, has gotten a lot smarter than our regulatory schemes for spectrum on the commercial side of the house; spread spectrum modulation and software-defined radios make the potential for interference much more of a political argument than a technical reality. We could be gaining enormous capacity - exponentially greater capacity - for mobile high-speed Internet access for all Americans by enabling greater unlicensed uses.

This is not news. The Commission itself has recognized the crucial importance of facilitating unlicensed uses - not as a substitute for, but in conjunction with traditional exclusive licensed spectrum.

- The FCC's 2002 Spectrum Policy Task Force Report - an effort launched by former Chairman Michael Powell aimed at reexamining 90 years of spectrum policy to ensure that the Commission's policies evolved with the evolution of new wireless technologies, devices, and services - recommended that the Commission pursue balanced spectrum policies that included both exclusive spectrum usage rights and unlicensed, opportunistic approaches.
- The FCC's National Broadband Plan of March 2010 explicitly recommended that a new, contiguous nationwide band of frequencies be made available for unlicensed use and that further development and deployment of opportunistic uses across more radio spectrum be encouraged.
- The Commission has unanimously ordered - in 2008 and again in 2010 - that unused digital television channels (white spaces) nationwide be made available on an unlicensed basis to fixed and mobile high-speed Internet access devices - as long as the devices have GPS and can check an online database before transmitting. The National Broadband Plan recommended that the white spaces proceeding be speedily concluded.

As Chairman Genachowski said just last month when a trial of a database to be used in connection with the white spaces was launched, "Unleashing white spaces spectrum will enable a new wave of wireless innovation. It has the potential to exceed the billions of dollars in economic benefit from wi-fi, the last significant release of unlicensed spectrum, and drive private investment and job creation." There is tremendous interest in the opportunities presented by unlicensed access to the white spaces; experimental high-speed Internet access has already begun in many places around the country. As you know, the UK is taking the lead in this area, having initially followed the FCC's policy direction, they are now much closer to actual white space deployment than we are.

Finally, the Report we are discussing today recognized the importance of unlicensed, opportunistic use of spectrum, saying that open, affordable, and abundant wireless access will benefit news producers and consumers alike. In particular, the Report stated: "A healthy mix of *licensed and unlicensed* spectrum will promote innovation without permission, a competitive marketplace, and affordable access--all preconditions of a robust wireless sector and all conducive to effectuating the recommendations of this report."

It is time to step up the Commission's efforts in this area.

Unlicensed Access is Threatened

In a political environment marked by so much turmoil, we need the Commission to revitalize the social compact imposed on it by Congress. It is the Commission's job to ensure the people of the United States a "rapid, efficient . . . communication service with adequate facilities at reasonable charges." It is not the Commission's job to maximize revenue - either for the wireless carriers or for the US Treasury.

The public interest in this area requires that the Commission take the long view, and the long view - as the Commission has said so many times in the past - includes ensuring balanced spectrum policy. Not all uses have to be unlicensed, but some must, and enough of the peoples' airwaves must be unlicensed in order to make high-bandwidth, truly high-speed Internet access possible for mobile devices without asking permission from either Verizon or AT&T. All of us - all Americans, rural and urban - will reap increasing returns from dedicated unlicensed mobile high-speed Internet access for decades.

Right now, several bills are being discussed on Capitol Hill that would effectively eliminate or substantially limit the promise of unlicensed access to the peoples' airwaves. Spectrum auction proceeds have proven to be unbearably tempting to legislators. Because spectrum is one of the few assets that the federal government can honorably claim to "sell," it is immediately an attractive target for deficit hawks - even though the amounts gained through auction are mere tokens in the end.

In effect, this plan to auction all possible airwaves amounts to a multi-billion dollar super tax on Super WiFi. It would reverse the successful pro-growth, pro-innovation policies that made the US the global WiFi leader. Even if companies actually bid for this non-contiguous, Swiss-cheese spectrum, and spent, say, \$6 billion on it, if they then deployed 60 million tablet devices, that would amount to an extra \$100 tax per tablet - a burden imposed on innovation. Rather than solving the longterm jobs problem by innovating our way out of it, we seem bent on solving the deficit problem. This approach is likely to send our country into a lost decade.

The Commission exists to provide its expertise to the American people in the form of enlightened longterm telecommunications policy. The Commission has stated, again and again, that unlicensed access is important. It is time to take that message to the Hill.

You, the Commission, need to make clear - both publicly and in the offices of legislators - that unlicensed access to the peoples' airwaves is a top priority that must not be squeezed in favor of short-term deficit reduction.

Because no public money beyond that allocated in the 2009 Recovery Act was thought to be available for investing in high-speed Internet access for all Americans, the National Broadband Plan as a whole depends importantly on revenues from incentive auctions. You asked for this incentive auction authority in order to serve the goals of the National Broadband Plan. A key goal in that plan is to increase the role of unlicensed mobile high-speed Internet access in the lives of Americans, thus spurring the enormous private investment we know will happen once there is certainty about the extent of that opportunistic access. You need to act to preserve the space you have begun to open. Even the white spaces are up for grabs right now. That is unbearable, or should be unbearable, from your perspective.

You, the Commission, need to join with the Department of Commerce in making this public statement. Commerce was directed by the President to examine the opportunistic use of the peoples' airwaves, and you share an interest in making our country's spectrum use far more efficient than it is now. You and Commerce both know that the situation is perilous. Protecting and extending unlicensed use of spectrum should be part of your legacy as public servants, as should promoting vastly expanded research in spectrum sharing technologies. But the door may be about to close. You should act together to prevent this.

Congress should not be allowed to sell out this set of policies in the name of short-term political capital and based on a sheer lack of knowledge. Your expertise and public profile could make a crucial difference.

Again, I am not saying and would not expect you to say that all spectrum should be unlicensed. But our policy must be balanced. Right now, if the default setting is that everything up to, say, 84 MHz of the TV bands must be auctioned for money, that will not leave enough for the rest of us. I also recognize that this is an uphill battle in the tumultuous atmosphere of today. As the Report makes clear, spectrum set-asides for public use are always very unpopular with incumbents (151).

But had it not been for the FCC's leadership in the 1930s and 1940s, we would not have had public television. Similarly, here, a useful rule of thumb would be to set aside a quarter of the airwaves made available for high-speed Internet access for unlicensed use. Otherwise, as FCC Commissioner Frieda Hennock said in 1949, we run the risk of creating a "tragic waste from the standpoint of the public interest, if, at the outset of development in this field, adequate provision were not made for the realization of almost limitless possibilities . . ."

The Need for Technology Platforms

It is our shared wish that some of the peoples' airwaves will eventually become part of incentive auctions that Congress gives you the authority to execute. At that juncture, the FCC will likely have a good deal of discretion to set the rules for the auction. It will also, as the Report makes clear, be necessary to condition use of the proceeds of that auction so as to best serve the public interest.

The Report recommends directing a portion of auction proceeds to educational purposes, and, specifically, "including technology efforts that help to ensure that the information needs of communities are well met." The Report's authors go on to state that they "have become particularly convinced that investment in this innovation infrastructure can have huge benefits for the development of local media, both nonprofit and commercial." This recommendation has attracted less attention than it should have.

I agree that it will be important to fund open technologies - open source software, widely available public video platforms - that help citizens and reporters hold democratic institutions accountable. When the FCC implements these auctions, it should attempt to ensure that open technology is a key beneficiary of this sale of public assets.

And, when it licenses spectrum, the Commission should adhere to the recommendation found in the National Broadband Plan (9.2, at p.173) that we ensure that licensed carriers offer a free or low-cost basic wireless high-speed Internet access service to the people of America. This lifeline wireless connection could provide access to both emergency services and basic local civic information - the news and government services on which our attention is focused today.

Conclusion

The thoughtful, progressive, and exhaustive Report we are discussing today has too many merits to list. I applaud you for having commissioned it, and I am grateful as an American - and an academic - that it exists. I am hopeful that it will continue to be remembered as an important milestone in the development of media policy in this country.

I am here to push you to do more where it is clearly within your power to do so, and to remind your better angels that your job - your top priority - is to ensure fast and reliable high-speed Internet access at reasonable prices for all the people of America.

Thank you for inviting me to speak today.