Testimony to the New York City Broadband Advisory Committee

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Ladies and Gentlemen of the Broadband Advisory Committee and Members and Staff of the New York City Council, I would like to thank you for inviting me here today to provide my testimony and provide what I hope is useful guidance on the issue of broadband availability and uptake in New York City. I hope to speak to you today about two things: one, about NYCwireless as an organization and the work that we do, and two, about the vision that we share for building a ubiquitous, affordable high-speed internet access infrastructure that will become a shining example of a truly 21st century city.

As an organization, we were founded in early 2001 by some enterprising technology enthusiasts who, in their spare time, wondered about how they could use this new technology called 802.11 and share it with their neighbors. They took an access point and hung it out their window, to see if they could receive a signal on their laptop from next door. Upon successfully connecting to their home internet connection from their neighbor's place, they began to think big, about what would happen if more people on their block had Wi-Fi access points, and everyone that had a laptop could connect with each other via wireless signals and communicate in ways that were previously unimaginable.

Since those early days, we've grown as an organization. We were one of the inventors of the phenomena of Community Wireless. We were the first group to light up a public space at Tompkins Square park. We assisted struggling software companies regain access to the internet in downtown Manhattan after 9/11. We were the first to bring public Wi-Fi to the forefront when we lit up Bryant Park in 2002, and we continue to this day to build free Wi-Fi in city parks and public spaces.

We are responsible for bringing free Wi-Fi to about 2 dozen city parks, including Madison Square Park, Union Square Park, Brooklyn Bridge Park, an early version of Washington Square Park, Stuyvesant Cove Park (one of the first solar powered hotspots on the East Coast), and our newest park: Wagner Park in Battery Park City.

We also pioneered the use of free Wi-Fi internet in affordable housing residences with Dunn Development Corporation and Community Access. In fact, this past Friday, we, along with almost 20 volunteer employees from Cisco, installed a free Wi-Fi network in a new residence on Davidson Avenue in the Bronx.

We educate the public about all things wireless, and we field questions and phone calls from any number of different people on a daily basis asking about getting access to wireless internet in their homes, or getting access to free internet because they cannot afford to purchase it from Time Warner Cable or Verizon. We teach at local universities, including Columbia, NYU, The New School, Parsons, and Monroe College, helping college students to understand the issues surrounding Wi-Fi networks as well as bringing internet to local communities. In fact, you heard at the Bronx hearing from Professor John

MacMullen, who's students work with NYCwireless to bring free internet hotspots to local businesses throughout Manhattan and the Bronx.

Why do we do it?

All of the volunteers that work with NYCwireless believe that the internet is something that has the power to change people's lives. By helping to bring the internet out of the office and home, and into the public spaces within a community, we believe that we are performing a public service and giving something back to our neighbors. We see the results of this work each and every day. More people are outside and in New York City parks because they can actually get their work done there (at least when its not raining!). And while they are outside, they can enjoy the great spaces and amenities that make New York City and its parks famous.

We've held art shows outdoors so that people can experience their environment through the eyes of artists. We see school teachers and college professors bring their classes outside to learn within a shared and public environment instead of within the locked-in, gray walls of an institution. And we've seen people who live next door to each other meet for the first time in a shared chat room, and then later form a block party and socialize with all of their neighbors.

We also believe in the unifying and transformative power of bringing the internet to those who would not otherwise have access. We hear, time and time again, from the folks that live in Community Access buildings, about how the NYCwireless free Wi-Fi network has enabled them to connect with family and friends, reach out to other people like them, and educate themselves in order to better their lives.

Lastly, we believe that ubiquitous internet access will cause more people to be engaged more often, leading to a more active and more informed citizenry.

Based on our experiences with NYCwireless, including discussions we've had with countless community leaders and local residents, there are a few things that seem clear.

First, there is no such thing as a single solution that will meet all of the needs and provide high-speed internet affordably to all New Yorkers. In fact, one of the biggest issues we've seen is that there's not enough competition for broadband in New York City. I'm sure others have told you that there are places in the City where you cannot get DSL or Cable. Still more can only get one or the other. With DSL, there are a few companies to choose from, but with new fiber deployments, which can remove the ability to get DSL at all, there's only a single vendor providing ISP service. So when residents do have a choice, its really just between Time Warner Cable and Verizon, or Cablevision and Verizon.

Competition in high-speed broadband does more than reduce prices, though that would be enough. It creates incentive for ISPs to aggressively market their services to **all** New Yorkers, not just the ones who know they want high-speed internet. It also creates incentive for other companies to enter the market and offer services because they think they can do it better and cheaper than the incumbents. As this virtuous cycle plays out, as the **competitive** marketplace plays out, prices go down, features go up, innovation increases, more people adopt the technology, and everyone, especially the consumer, wins.

This brings me to the second issue that we have encountered: **There are many people who don't have internet for any number of reasons, and the fact that they can't physically get a connection due to lacking infrastructure is only one of the lesser ones.** This is where having multiple solutions can provide an answer.

NYCwireless offers an internet service that no ISP offers. In addition to being free, it provides a service in a space that is completely unserved by Verizon, Time Warner Cable, and Cablevision. This is important. What we've found is that broadband isn't just about getting fast connections to your desk at work or your desk at home, though those things are important. Its about also having access when you leave those places and navigate around the City.

I'm sure all of you have seen the multitude of people who bring their laptops to Bryant Park or Madison Square Park to work. Internet access in these public places, these third places, has become a critical part of business in New York City. People's needs here are different from their needs at home. High-speed is less important than mobility and easy access (though broadband speeds are important). These public places also help to create new uses for high-speed internet access. As I mentioned earlier, we've brought art into parks because of the Wi-Fi there. Public Access TV stations, like Manhattan Neighborhood Network, have used our networks to broadcast live programs on their channels. And new social software enables people to meet each other when they are in the same location, or leave geographically located notes at a particular place for others to view.

According to a survey by NYCwireless Board Member Laura Forlano, Wi-Fi is a factor in attracting people to specific locations throughout the city for 70% of those surveyed. These findings have potential implications for economic development and support the rational that WiFi may enable commerce and productivity that would not have occurred otherwise. For example, one respondent commutes 20 minutes from Queens to use the Bryant Park wireless network on weekends in order to work on his food and wine website outside rather than at home.

Home broadband doesn't provide for these types of experiences, and many New Yorkers choose not to adopt home broadband because they don't see the value. Instead, they opt for access in public spaces. But there's also significant issues due to the cost of home broadband. As I'm sure all of you know, there's a cost/value equation that people play out in their heads when they make the choice to subscribe to home broadband. And for many people, the cost is way out of balance with what they perceive as its value. For some, the community and social aspects that NYCwireless networks provide increases that value significantly. But for many others, we aren't available and can't help.

At the Bronx hearing, you heard from a student who told you that his family really can't afford broadband. $50 or $60 a month is a lot for many to pay. Competition, which drives down price and will create low cost options, will help many of these folks out, at least the ones that are interested in getting broadband.

I've argued for the last few years, in speaking about municipal wireless networks in other cities, that such networks aren't competitive with cable and telecom incumbents. Their real value isn't in taking part of the pie from these companies, though certainly there would be a little attrition. **What these networks do is increase the pie for all market players.**

As a rather crude example, if you had 100 people who were currently served by broadband, 49 via Verizon, 49 via Time Warner Cable, and 2 via other DSL and satellite ISPs, the addition of a municipal wireless network doesn't reduce their numbers. Instead it takes that pie of 100 people, and expands it to 300 people.

This happens because it raises the baseline for internet access. Dial-up goes away and those people that subscribed to dial-up become part of the broadband pie. Others, like those served by NYCwireless, become part of that pie as well. And some of them, who only had dial-up or no home access before, all of a sudden see additional value in high-speed internet at home, which they didn't really have access to before, and they upgrade to the more "premium" services that Verizon and Time Warner Cable provide. So that 49 person slice that the incumbents had before balloons to 60, 70, maybe even 100 people out of the 300 person pie.

Now, there's another thing that can get people to adopt broadband. Local communities. As you've heard at other hearings, and I'm sure you've experienced, New York City isn't one single, large community. Its made up of an almost uncountable collection of smaller local communities. These local communities, each have their leaders, people whom other people gather around, groups that are created to serve needs of local residents. **These** are the people and groups that move the general population to do something or think a certain way. These leaders are the key to getting the last group of citizens on the internet, those that weren't swayed by additional value or lower price.

At NYCwireless, we've worked with many of these local leaders. Some of them are BIDs like the Downtown Alliance or public benefit corporations like the Battery Park City Authority. Some are local developers, like the one we're working with in the West Village who wants to transform a park and part of a neighborhood from being a place for homeless people to being a place for families and children. Some are activists, like Judith Escalona, an artist that runs the art space and gallery Media Noche in Spanish Harlem, who wants to create a mesh network for residents along East 102nd street.

These local leaders with whom we have worked have transformed their communities, and helped us bring internet to the people. Unfortunately so many more come to us with visions of helping out their neighborhood, but don't have the funds to make it happen. While NYCwireless provides a very low cost option for building public Wi-Fi, its not free. And many of the local leaders we've spoken to have no current means to get the funding they need to build and create local broadband. In speaking with them, we know that with just enough funding, these people too could change their communities, and bring whole groups online. So the third thing we've observed is that funding must be injected into local communities in order to provide resources for these leaders to do their work.

In speaking through these stories and experiences, we've come up with some general ideas about how to solve the broadband problem:

One, additional infrastructure is needed to enable increased competition. One solution is a municipal wireless network, but we think that a government sponsored network has the same problems as any single party solution. Additionally, wireless is just a temporary patch, since such networks really only offer 1mbps of service, and often don't reach into homes, only to their front doors. We believe the

key is building for the future, and utilizing multiple technologies, both wired and wireless. Better solutions can be found in two cities, which this Committee should study closely and take as examples, Boston and Cleveland.

In Boston, the City is setting up a truly competitive wireless infrastructure. They are seeking many different companies and organizations to build a hybrid infrastructure and provide unified, wholesale service. They are also seeking many different companies to act as ISPs that will buy access to this wholesale infrastructure and provide citizens, businesses, and visitors with internet access. Open marketplace on one side, open marketplace on the other side, and a single non-profit to coordinate and manage them.

In Cleveland, through the OneCommunity initiative led by Case Western Reserve University CIO Lev Gonick, they are building out a world class fiber infrastructure that local businesses can utilize. On top of this future proof infrastructure, they also offer free Wi-Fi to the city and surrounding areas. But don't mistake this for a municipal wireless network. Its far more than that. OneCommunity has created a high-speed internet infrastructure throughout the city, to which many different services can be connected, that will support Cleveland well into the 21st century.

Two, funding sources must be created that can support local organizations doing the heavy lifting. As I discussed earlier, there are leaders in every community in New York City who have the power and will to create local solutions for bringing the internet to the people, and bringing all of their community members to the table. Setting up a fund such that any local group can apply for and be granted a few tens of thousands of dollars to use to bring Wi-Fi to a park or a residence would help tremendously.

Additionally, building developers and boards have tremendous ability to create solutions, as our work with Dunn Development Corporation has proved. Providing a tax incentive for developers to light up the public and semipublic spaces they create would ensure that anywhere people go they would have internet access.

Funding sources can also be attracted via state and federal sources, as well as through private companies and individuals. NYCwireless has been successful, but why not have hundreds of NYCwireless-like organizations, each working to solve local broadband issues.

Three, existing infrastructure must be made affordable and available. One of the biggest barriers to creating local community networks is getting access to places to put equipment. One solution would be to make City light poles available free or at low cost on an individual basis for the deployment of community supported networks. NYCwireless can help out with this initiative by helping to create a standard, weatherproof, upgradable hardware package, which we currently use in our outdoor wireless networks.

Four, the City should get out of the way. While we certainly appreciate the fact that at least one City department, namely the Parks Department, has seen the value of bringing free Wi-Fi to city parks, their methods and plans are outmoded, poorly conceived, and unsuccessful. The most recent RFP for free Wi-Fi that the Parks Department put out generated an anemic response, even after they remove the onerous franchise fee payment requirements that were present in the previous RFP.

NYCwireless has successfully launched 6 hotspots when working **around** the Parks Department, and in the one instance we tried to work **with** the Parks Department, the hotspot, now 2 years in the making at Dag Hammarskjold Plaza, is still not launched, a delay that can be attributed directly to the failed RFP process and bureaucracy of the Department.

The power to change is in our hands as New Yorkers, and in your hands as the Broadband Advisory Committee. The urgent problems of broadband in New York City, of the growing Digital Divide, and of building for our future are within our power to fix.

I'll leave you with this recent quote from our Governor:

"As we build an Innovation Economy we must make New York the most connected and technologically advanced place to live and do business in the world.... Internet access is no longer a luxury. We must implement a strategy that leads to every New Yorker having access to affordable, high-speed Internet so that they may take advantage of the economic, social and cultural opportunities it provides."

Thank You.