Re: Connecting [BUILDING NAME] to Community-Owned Mesh WiFi Network

Dear [NEIGHBORS/LANDLORD NAME/MANAGEMENT COMPANY]:

I am writing to propose a very low-cost project that could provide fast wireless internet service throughout [ADDRESS and nearby parks]; improve the resiliency of our community in an emergency; and contribute to the growth of community-owned communications infrastructure in New York City. The project could be expanded to offer cooperators a real, low-cost alternative to [Verizon and RCN] for their home internet service.

The [BUILDING] can achieve these things by connecting to NYC Mesh, a community-owned wireless network that is supported by a grant from The Internet Society (<http://www.internetsociety.org/>) - a global nonprofit - and small donors. [BUILDING] could connect to the network by installing a router on the roof of one of the buildings with a clear view of 375 Pearl Street (a data center where NYC Mesh owns a "supernode" connected directly to the internet backbone). A single $80 router installed by volunteers can provide up to 150Mbps connection to the internet that will continue to work even in extended power or internet outages. A handful of "repeater" routers could broadcast the signal to the grounds around [BUILDING].

This would benefit our community in a number of ways, including the following:

* Eliminate any internet service provider (ISP) costs for WiFi service currently provided on [BUILDING]
* Potentially eliminate ISP costs for the [NAME OF MANAGEMENT OFFICE IF APPLICABLE]
* Increase our resilience by maintaining internet connectivity during emergencies and even during prolonged power outages
* Help cooperators save on mobile data costs by providing free internet access [around the buildings or in the building]
* Contribute to the local community by providing free WiFi in nearby parks and expanding the reach of a truly community-owned communications infrastructure

I think that these benefits to all cooperators warrant a small investment by the Corporation for the startup costs of about $500 for the router and repeaters required to reach the entire property, as well as a small monthly donation to NYC Mesh (tax deductible through its 501(c)(3) fiscal sponsor, the Internet Society of New York). [OPTIONAL. One volunteer proposed to take on the initial costs to pilot the program: If you prefer to begin with a more conservative pilot program, however, I am prepared to personally donate or raise the money required for equipment necessary to provide WiFi to Gulick Park and make a monthly donation of $20 to the NYC Mesh Project for six months. After that initial trial period, I would ask the Board to consider a proposal to expand the project to the rest of the Hillman Grounds and assume the small monthly costs.]

If offering WiFi on the grounds is successful, the project could even be expanded by installing a more advanced router that would provide Gigabit internet service. This equipment is more costly at around $3,000, but it could provide reliable high-speed internet to 200+ apartments, providing shareholders a significant savings. The costs could easily be recouped through a small monthly fee added to the maintenance of cooperators who make use of the service.

In the attachment to this letter, I've tried to answer a number of specific questions that you may have. If you are open to pursuing the project, I propose a site visit and meeting between Brian Hall, a principal organizer of NYC Mesh, interested members of the Board, and maintenance staff to answer any more detailed technical questions and develop a plan for the installation and location of the router(s). I'm happy to answer any questions you have in the meantime.

Cooperatively,

[YOUR NAME]

**Technical feasibility [THIS SECTION TO BE DISCUSSED IN DETAILED WITH THE MESH TEAM, BELOW IS A SAMPLE RESPONSE]**

* 375 Pearl is visible from southern side of the rooftops of the building. See the attached Google Earth photo, which shows the view from [insert description the southern edge of 500 Grand building].
* The routers do require power, but it can be provided via ethernet cable.Potential scenarios involve ethernet cable runs to the apartments or hallways on the 12th floor (which would incidentally provide hi-speed internet to those cooperators in their homes), and/or a longer cable run to the ground floor of 530 Grand, which could provide internet for the Coop Village Management Office.
* The routers require a line-of-sight connection, so "repeaters" would be necessary to spread the signal around the grounds. This might require as many as six routers to cover the entire area.
* Since there is no one centralized internet service provider, the mesh network is a resilient network. The “mesh” network differs from traditional networks in that it is decentralized. Ownership is shared by the members, servers are distributed across the city and there is no simple way to shut it down.Routers run a “mesh” software which enables them to automatically connect to multiple routers and re-route to the best connection.

**Costs, risks, and obligations [EXACT NUMBER OF ROUTERS TO BE DISCUSSED WITH MESH TEAM, BELOW IS A SAMPLE RESPONSE]**

* Approximately $80 per router, plus an optional donation of as little as $20 per month. Two routers could supply internet to one of the parks, and as many as six may be required to cover the entire grounds.
* The installation would be completed at low cost by experienced volunteers, who have completed many rooftop installs.
* As part of the agreement with NYC Mesh, we agree to host additional routers that would extend the range of the network to other buildings from which our rooftop is visible. These additional routers also help in the resiliency of the network by providing multiple gateways. The additional routers would be paid for by other NYC Mesh members or donation.

**Potential shareholder concerns**

* The routers are smaller than a loaf of bread, silent, and use just 8W of electricity (about the amount used by the smallest of incandescent light bulbs). They will not be unsightly or emit harmful radiation.
* As a community-owned network for public benefit, the network would be open to anyone within range of the signal. As such, traffic on the network is not necessarily encrypted. Users should exercise the same caution they might when using free WiFi at a coffee shop, transmitting private data only to websites that use encryption (https:// and the lock icon) or using a free or low-cost VPN service. Given that NYC Mesh does not log traffic on its network, it offers more privacy than a commercial ISP.
* NYC Mesh is a fast-growing organization that has been around for over four years. It is funded by grants, donations and members who buy their own equipment. Its major grant is from the Internet Society, a non-profit organization founded in 1992 to provide leadership in Internet-related standards.

**Community resilience**

* Generators at the 375 Pearl building will keep NYC Mesh running even in case of an extended power outage. Battery backup could also be installed at the co-op to ensure internet during blackouts.
* Even if commercial internet providers or the internet itself experiences an extended outage, the NYC Mesh network can can continue to function on its own, allowing for the dissemination of emergency information and communication with other nodes on the network. Maintaining internet connection during outages is important for individuals (i.e. elderly who may need to signal/text for help). The network can also be used to disseminate information to community members during an emergency situation (where to pick up water, etc).