

A New Kind Of Internet Has Arrived

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FREE UNLIMITED INTERNET FROM PUBLIC P2P MESH NETWORKS IS HERE, NOW!

Per The P2P Alliances at <http://p2p-internet.weebly.com>

Brian Hall gets on his laptop and types "ev.mesh" in the address bar. A splash page opens. "This is the Mesh. This is not the internet."

From this page, Hall chats with other people connected to "the Mesh." Soon, he hopes to create a social network, where people will find local events and special deals advertised by local businesses. Maybe they'll even be able to access Netflix, Hall said, admitting that this last wish is "just a wacky idea for the future."

Brian Hall is a member of NYC Mesh, an organization that tries to build a decentralized network of devices, or "nodes," which are connected between them. This network is called "the Mesh," or meshnet, and is independent from the internet: If the internet is down, people who have access to a node can still be connected to each other. And unlike the internet, access to a mesh network is free, once you've bought the hardware to set up the network.

The goal of NYC Mesh is to connect all New Yorkers, provide free internet and "be an alternative to Time Warner," Hall said.

Eight people faced their computers in a room on 3rd Avenue in Brooklyn, during one of NYC Mesh's recent meetings. In Spain, a meshnet group, Guifi.net, managed to create a 20,000-node network, Hall said — actually the network has close to 30,000 nodes, according to Guifi's website. One person at the table asked how many NYC Mesh nodes exist. "About 17, I think," Hall answered with a smile, as he looked down on the table. Four or five of these working nodes are in Brooklyn, Hall said. (Here's a map.)

The Community-Owned ISPs Building an Alternative to Big Telecom in New York City

Written by

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If you want high speed internet in most any spot in New York City, you're stuck with Time Warner Cable. Or at least, that's how it usually works. But increasingly around the city, citizens and small community groups are setting up their own locally owned and operated free wifi networks.

This week on Radio Motherboard, we take a trip to a meetup where two nascent but potentially disruptive groups were discussing how to collaborate in order to provide new connection options to people around the city. Since 2012, the nonprofit Red Hook Wifi network has been providing totally free internet to people in the small Brooklyn neighborhood. For weeks after Hurricane Sandy struck the neighborhood, the Red Hook Wifi network was the only way many in the community could get on the internet or make phone calls. On any given day, Red Hook Wifi has about 500 users.

Meanwhile, NYC Mesh is little more than a meetup group at the moment, but its organizers have big plans. Its network currently has about 40 "nodes," or routers that connect to each other to form a larger wireless network. Organizer Brian Hall is currently working to set up two "super nodes" that are jacked into a large internet exchange will allow anyone in lower Manhattan and large swaths of Brooklyn to bypass traditional internet service providers and connect directly to the NYC Mesh network.

Finally, a brand new fiber project is about to give the masses a new option, at least when they're out on the streets of New York. Link NYC is a \$200 million project to replace 7,500 payphones in the city with a free, gigabit fiber-connected wifi hotspot. We took a trip to Link NYC's headquarters to check out the new "links" and learn about how the project hopes to protect privacy, become a profitable enterprise, and provide connections that people will actually want to use.

As always, thanks for listening! Radio Motherboard is available on iTunes.

Meghan Neal contributed reporting to this podcast.

Topics: Radio Motherboard, podcasts, new york city, Red Hook Wifi, Broadband competition, Municipal Networks, NYC Mesh, mesh networks

"The challenge is to scale up to a size where it becomes a reliable internet source," Hall said.

Programmers and people with a tech background "all get the idea immediately," Hall said. They like the idea of having a community-run network that doesn't need the big internet providers. But it's hard to sustain without getting more people onboard. "The average person is just looking for internet, really," Hall said. "Non-technical people just want to watch Netflix so it's hard to explain to them."

Free internet might be a selling point for Hall. If one node has access to the internet, it can provide internet to the other nodes of the mesh network for free.

That echoes the project another Brooklyn-based organization is also currently developing.

Building a free internet network that bypasses the big providers was on the mind of workers at Red Hook Initiative (RHI) for a while, but "Hurricane Sandy kind of pushed the development," said Robert Smith, the assistant administrator for RHI's free WiFi project. During Hurricane Sandy, the internet was down, and RHI started to set up internet access points so people could get information and contact their families, Smith said.

FOR TECHNICAL DETAILS ON ONE SOLUTION SEE: <http://www.tranzeo.com/products/docs/EnRoute500-Mesh-sample-design-report.pdf>

RHI pays its internet subscription to Brooklyn Fiber, and redistributes this coverage for free to a dozen parts of Red Hook. "We still have a lot of work to do," Smith said. There are 13 routers operating now, and Smith said he thinks they need about 40 to 50 to cover the entire neighborhood.

Back in the 3rd Avenue room, Brian Hall said he's planning to offer similar services via NYC Mesh. As his organization installs more nodes, he hopes to connect network with others in New York City, including the one RHI has set up. Before his meshnet reaches Red Hook, though, Hall will have to convince a lot of Netflix lovers to set up a node.

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Profile / @GregoireMolle

The internet may feel free, but it certainly isn't. The only way for most people to get it is through a giant corporation like Comcast or Time Warner Cable, companies that choke your access and charge exorbitant prices.

In New York City, a group of activists and volunteers called NYC Mesh are trying to take back the internet. They're building something called a mesh network — a makeshift system that provides internet access. Their goal is to make TWC totally irrelevant.

How it works: Mesh networks start with one internet connection, which broadcasts that connection to another router and then jumps from router to router until it builds a whole web of "nodes." Each node is its own access point where you can log onto the internet like any other Wi-Fi connection.

In New York, NYC Mesh has about 40 of these nodes installed, and for the cost of the router (about \$30), volunteers will come by and climb trees or rooftops to wire up a new node for anyone who wants to host one.

Mesh networks aren't just a makeshift version of a mainstream internet provider — they're an opportunity to create something more free and resilient. Mesh networks like the one in Red Hook, Brooklyn, are built so that if Time Warner broadband goes down in the area, mesh users still have internet access. What mesh networks need are new nodes that can daisy-chain out to existing nodes to reach places where traditional Wi-Fi hasn't gotten to. And in some parts of the world, this is already happening.

A global revolution: Mesh networks caught fire during Hong Kong's Umbrella Revolution, a student-led protest movement in 2014. During the protests, the open internet wasn't safe: Chinese government was deleting mentions of the sit-ins online, wiping posts from Chinese sites and blacking out CNN's news coverage of the movement.

So the protesters used an app called Firechat, which turns every phone into a node by linking them all together over Wi-Fi and Bluetooth to communicate. Tens of thousands of protesters at a time were organizing anonymously, without the use of an established cellular network where they could face censorship.

Mesh networks aren't just used for subverting government censors and telecom giants. They can also bring the internet to those who don't have a national broadband infrastructure.

To bring the internet to Spanish farmland and blow past telecommunications giant Telefónica, a Spanish NGO created guifi.net, the world's largest mesh network with over 30,000 nodes. In Germany, the Freifunk initiative helps people create free local networks where there are few public Wi-Fi access points.

If a storm or flood wipes out existing cable infrastructure, or knocks out the broadband in an area, a mesh network of rooftop nodes and home routers could bounce the signal along through the air, unhindered.

The people's provider: NYC Mesh has the potential to be the internet provider of the people, but there's one problem: If you trace back the internet connections through the nodes to their root, you'll eventually reach the source of the network, which is — guess what — a Time Warner Cable connection.

"Everyone seems to hate Time Warner; that's the thing that unifies the city," NYC Mesh organizer Brian Hall told Motherboard. "It's going to be a while before we replace Time Warner, but there's some hope of it happening."

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