Thanks for reading!

Stay in touch for the next edition of

BYOI: the zine

peoplesopen.net/zine

buildyourowninter.net

BYOI: the zine

1st 1/2 edition

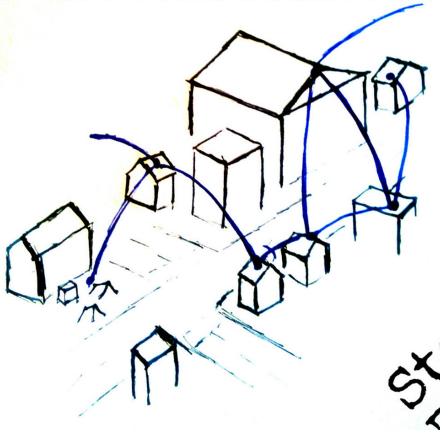
produced by
the People's Open Network
and
BuildYourOwnInter.net

Step 3. Mesh the nodes

wirelessly between, apartments, homes, community centers, etc

Step 4. Build a network

in your neighborhood, talk to nearby communities to build an inter-network connection

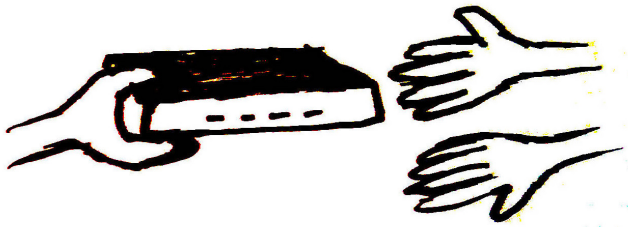


Step 5. Repeat

BYOI: 4 SIMPLE STEPS

Step 1. Get a node
for yourself, and get it to blink

Step 2. Give a node
to a neighbor, friend, or family member



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Today, the internet is controlled by a handful of corporate internet service providers (ISPs). Companies like Comcast, AT&T, and Verizon actively lobbied, and succeeded, in unraveling net neutrality protections in the United States — rules that were critical for protecting the free and open internet. These are the same companies that are failing to provide affordable internet access to low-income communities across the Bay Area, preventing already disenfranchised peoples from participating in the lucrative tech economy.

Meanwhile, digital platform monopolies such as Google and Facebook, while supporters of net neutrality, have a business model based upon the surveiling and collecting massive amounts of personal data on all of their users. These companies are far from transparent about what they are collecting and how they are using the information.

We need to build more resilient alternatives. We need to build an internet made up of local networks that are fundamentally open, democratic, and decentralized — networks that center around the needs and rights of the communities that rely on them.

The People's Open Network is one such network, providing a liberating, people-powered alternative to the top-down, corporate status quo. It is a mesh network, meaning that the more people who join the network, the more resilient it becomes. Even if one home drops out, the network can route around the damage — maintaining connections and enabling communication even if the Big Internet goes down due to an earthquake or censorship. We are not alone. Around the world, there are mesh networks that are thriving — from Catalonia to Detroit, Argentina to South Africa.

Our closely affiliated partner, Sudo Mesh, has developed free and open source firmware that enables people to mesh their connections through

"Hey, Tortoise!" showing her the antenna, "Look what I got! You think you can hack it to talk morse code to other antennas?."

"Of course." Tortoise replied.

Immediately, Tortoise took the antenna into her shell and began fiddling with it. Days went by. Finally, Tortoise poked her head out of her shell and yelled "I got it!"

"Really?!" replied a shocked Pigeon.

"Well, yes, but there's this one problem where a bug might crawl into the dish and cause a..."

This explanation went on for some time and Pigeon quickly lost interest. While Tortoise was a brilliant hacker, she couldn't do it by herself. Knowing this, Pigeon flew around the city dropping off antennas along with a copy of the hacked code to all their friends. Together, the community of hackers, artists, and writers, slowly worked out the kinks and spread the word about this new way of communicating by pointing antennas at one another. Testing new features or debugging connections, Tortoise would often send Pigeon on to the roof to adjust an antenna. This was no big deal to Pigeon because she made her roost up there amongst her new best friends, a plethora of radio antennas.

One day, as they pivoted their dish antenna looking for connections, they saw a mysterious signal. Tortoise quickly decoded the messages coming in. What they found was a website for a cow selling its raw, non-GMO, grass-fed milk!

To be continued...

in the second edition of **BYOI: the zine**

houses, directed at one another, which they used to blink messages back and forth.
Since Cow recently delivered a new calf, Chicken knew she would be home.

"Hey friend," she morse coded with the light. "I forgot to ask you earlier if you had any spare milk for me to make my favorite dish."

Chicken could see the light flashing from Cow just a few minutes later.

"Of course, buddy. I have plenty leftover. Can you come by to get it?"

"Excellent. Well I'm still getting my coop ready. Goose should be here any minute now so I'll ask him to fly over and pick it up."

"Sounds good." Cow blinked back.

Goose eventually did arrive, and didn't need any persuading to get the milk from Cow's house. Creamed corn was also, in fact, his favorite dish.

In a city some miles away, lived Tortoise and her roommate, Pigeon. They were big fans of community mesh networks. Their favorite pastime was playing around with morse code machines. Tortoise, being more of a homebody, would sit in her shell and code late into the night, tweaking and reconfiguring her machine.

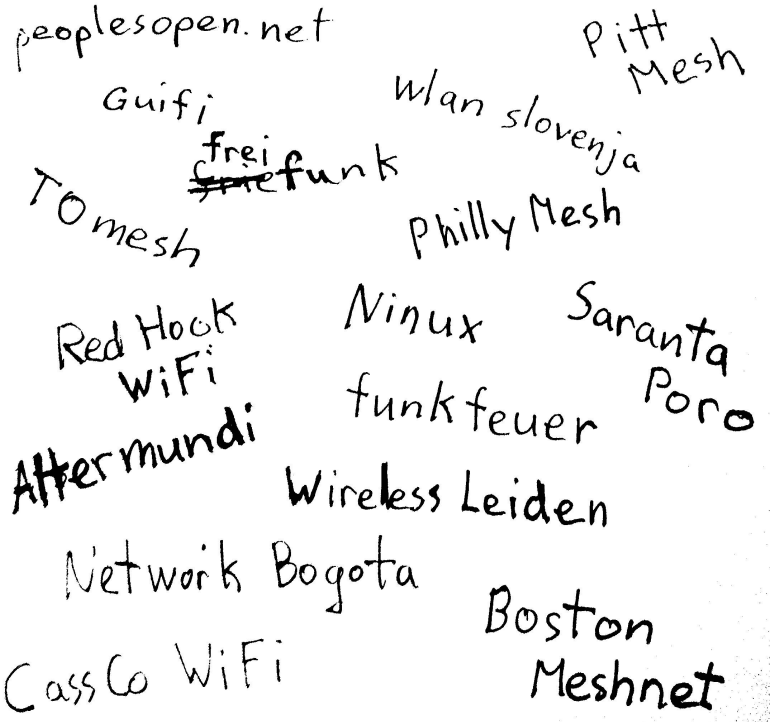
Once in awhile, she'd develop a new way accessing secret settings and wanted to securely tell all her friends. Not trusting their internet connection, provided by H.A.R.E. Corp.*, the only telecom company left in existence, Pigeon would fly all over the city, relaying Tortoise's discoveries to others. After awhile, Pigeon got tired of all the flying and bought a shiny new morse code antenna.

* H.A.R.E. Corp. = Hare, A Really Evil Corporation

their wifi routers and share their internet bandwidth with others. The hardware to enable this (i.e. home routers and roof-mounted radio antennas) has become more affordable than ever, costing between $20-$80 per device.

We have the technology. Now it's up to us to connect with other members of the East Bay community to build this network. We need to talk to our neighbors, as well as local organizations and businesses, about the potential of community networks, like People's Open, and invite them to become part of the network by setting up a router in their home or place of work.

This is how we build our own internet...
By empowering people with the knowledge, tools, and ideas so they can build their own.

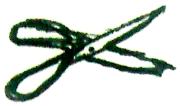


buildyourowninter.net/networks

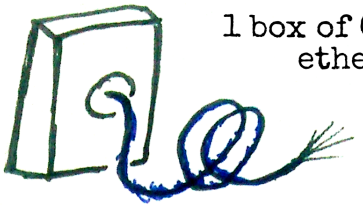
HOW TO CRIMP ETHERNET CABLE

Materials.

1 pair of scissors

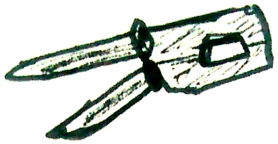


1 box of CAT6 ethernet cable

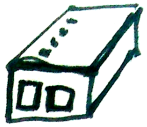


2 RJ-45 ends

1 pair of CAT6 crimpers

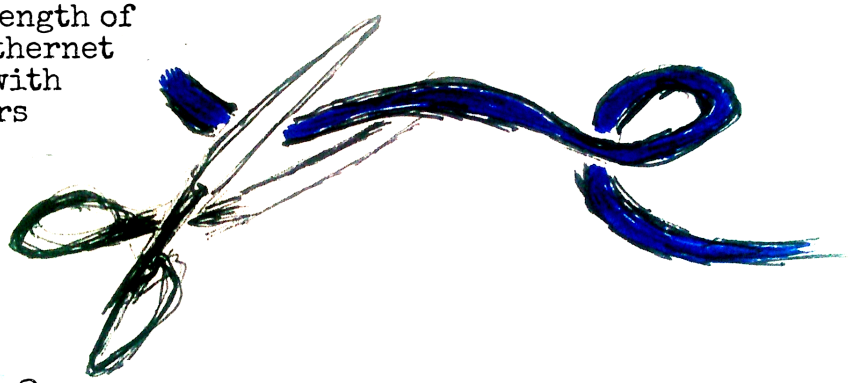


1 cable tester



Step 1.

cut a length of CAT6 ethernet cable with scissors



Step 2.

strip end of cable using scissors or by pulling the built-in string

MESH ON THE FARM

There once was a large farm out in the middle of nowhere — it was miles away from the closest place with an internet connection. But this farm was special. Despite its massive size, the inhabitants figured out a clever way to communicate and coordinate their respective farm duties.

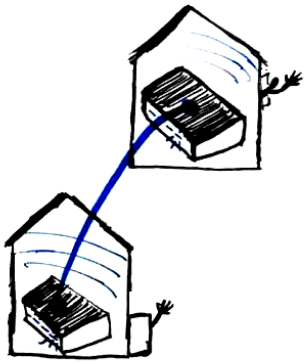
Chicken was one of the animals that lived on the farm. It was month of May, and Chicken had been waiting the whole year for her birthday. Finally, the day came! She invited Pig, Goose, and Dog over to her cozy coop for a party. Most of all, Chicken was excited to share her favorite dish: creamed corn.

As she prepared her home for guests, the day escaped her -- she realized it was already well past noon. "Oh no!" Chicken thought to herself, "I still need to go get milk from Cow but I have so much to do and she lives all the way across the ravine..." Then a solution suddenly occurred to her. "Of course! I'll just connect to Cow's house through our mesh network and see if Cow has any milk to spare."

See, Chicken, Cow, along with Pig, Goose, and Dog, shared a mesh network together. Each of them had a wifi router in their respective homes that connected to each other, instead of connecting to a centralized Internet Service Provider (ISP). Essentially, they had their own local internet on the farm, just between themselves.

Chicken ran over to her laptop and sent a message to Cow. In between their homes was a deep ravine that took nearly an hour to cross. But Chicken and Cow were close friends, an affinity that was sparked over their shared enthusiasm for morse code. They each had lights installed on their

31 FLAVORS OF NODES

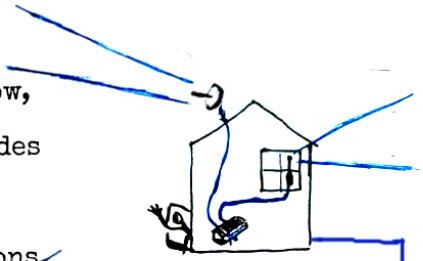


a Home Node.

- a special home router that,
- communicates wirelessly with other nearby home nodes,
- provides an open WiFi network in immediate vicinty.
- It's signal can be extended with...

an Extender Node.

- a WiFi radio transceiver that,
- is mounted on roof or in window,
- connects to other extender nodes via line-of-sight (LOS),
- bridges large distances with high bandwidth connections eventually reaching...



an Exit Node.

- a server at a local ISP that,
- acts uplink to the Internet for local mesh network,
- can also be reached virtually, allowing any home node to be a gateway to the Internet.

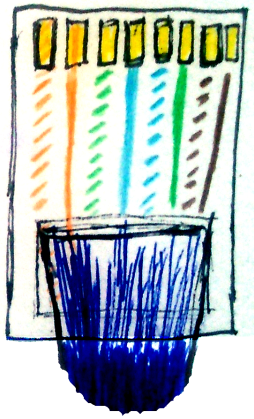
...stay tuned for the other 28 flavors, or come up with your own. personally, we like coconut flavored nodes...yum

Step 3.

straighten twisted-pairs as shown below

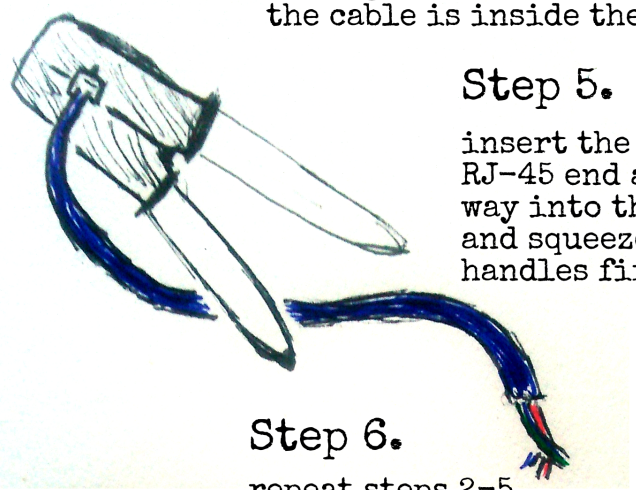
1. white-orange
2. orange
3. white-green
4. blue
5. white-blue
6. green
7. white-brown
8. brown

Pin: 1 2 3 4 5 6 7 8



Step 4.

looking at the "bottom" of an RJ-45 end, insert straightened pairs into the end in the order shown, making sure the outside cover of the cable is inside the plastic end

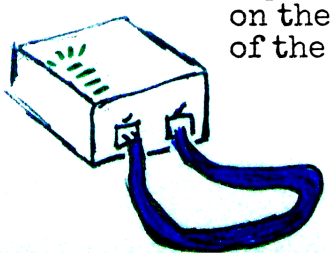


Step 5.

insert the prepared RJ-45 end all the way into the crimper and squeeze the handles firmly

Step 6.

repeat steps 2-5 on the other end of the cable



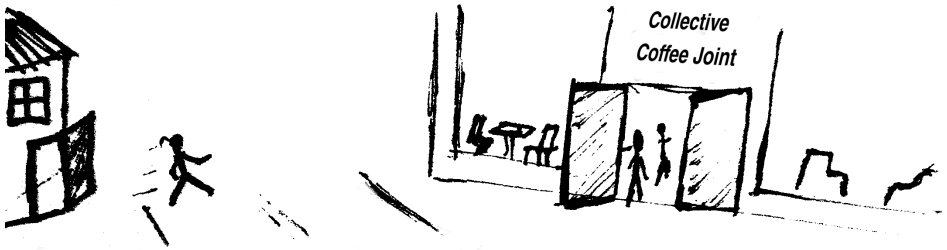
Step 7.

don't forget to test the cable after crimping both ends

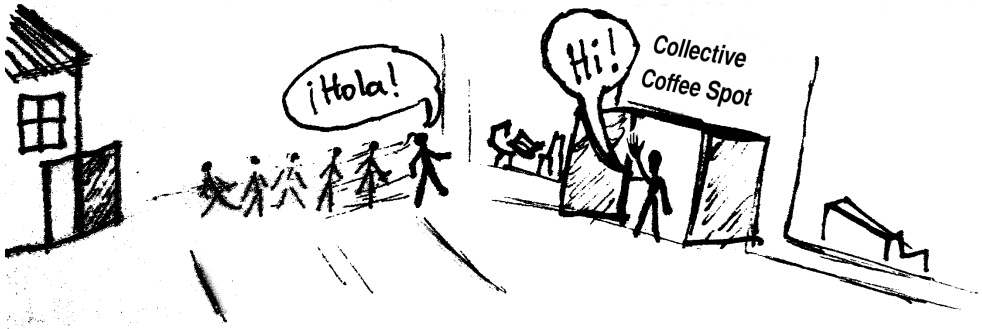
PUBLIC RELATIONS

A STEP-BY-STEP GUIDE

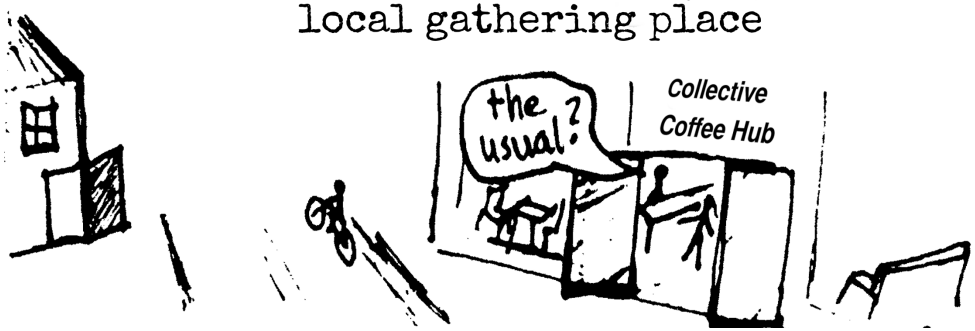
Step 1. go to local gathering place



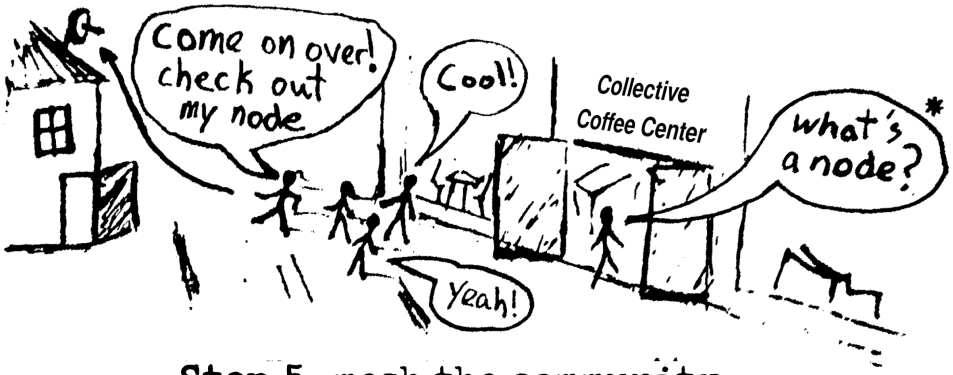
Step 2. repeat "Step 1" over the course of several years



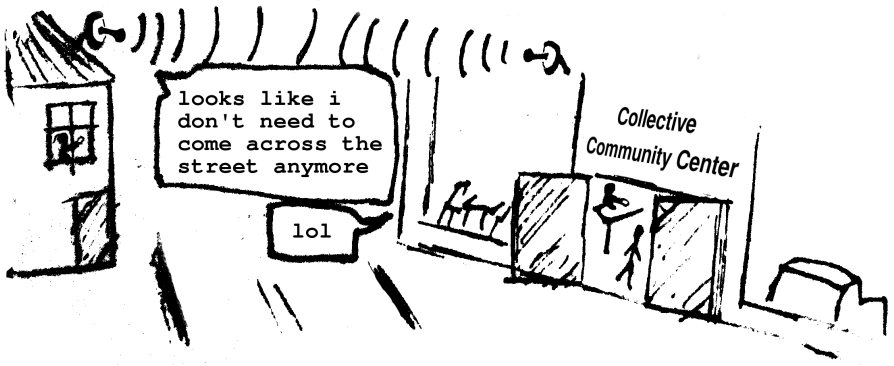
Step 3. befriend community members at local gathering place



Step 4. build trust in the community



Step 5. mesh the community



* **"what's a node?"** If you find yourself asking this question, don't worry, you're not alone. For more info about **the 31 flavors of nodes,** see the next page -->