BlogBooker

From Blog to Book.

THEFNF.ORG

Contents

Chapter 1

2011

1.1   May

Sample Page (2011-05-31 18:16)

This is an example page. It's different from a blog post because it will stay in one place and will show up in your site navigation (in most themes). Most people start with an About page that introduces them to potential site visitors. It might say something like this:

> Hi there! I'm a bike messenger by day, aspiring actor by night, and this is my blog. I live in Los Angeles, have a great dog named Jack, and I like piña coladas. (And gettin' caught in the rain.)

...or something like this:

> The XYZ Doohickey Company was founded in 1971, and has been providing quality doohickies to the public ever since. Located in Gotham City, XYZ employs over 2,000 people and does all kinds of awesome things for the Gotham community.

As a new WordPress user, you should go to [1]your dashboard to delete this page and create new pages for your content. Have fun!

1. `http://freenetworkfoundation.org/wp-admin/`

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Whoops! 404 Error! (2011-05-31 23:52)

It appears as if you entered in an invalid URL. Please fix the URL you entered or try using the search functionality on our website.

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1.2   June

Statement on Hardware (2011-06-01 02:36)

Even now, there is a network springing to life. A new network, a free network. We are challenging civilizational hierarchy by building an electromagnetic mesh to span the globe.

In Buenos Aires and Santiago, in Baltimore and Berlin and Britain – in Iowa, and in India. In Ithaca, and Providence, and New Haven. Around the world, on six continents, our network springs to life.

Humanity has harnessed the power of the electromagnetic spectrum for the transmission of information at enormous rates. We have possessed this prowess for some time now as a civilization, but the moment approaches when this technology is controlled by the people themselves, rather than by corporations.

The free network is being developed as a an IPv6 interface for machines running FreedomBox Debian. We call this network the Mesh Interface for Network Devices. It will consist of a number of compact-form computers equipped with electromagnetic transceivers. We call these computers nodes. They are already being developed and deployed by organizations such as GlobalScale Technologies, One Laptop Per Child, and by a start-up in which some members of the FNF are involved, Nodal Industries.

These nodes will communicate with one another using the Internet Engineering Task Force protocols labelled 802.11. The implementation of these protocols already establishes and strengthens communities around the globe. In juxtaposition, however, to the hierarchical topology of current Local Area Networks, we are engineering LAN technologies which utilize a mesh topology. That is to say that the nodes communicate with one another, rather than with some central router or hub. It is less a LAN, and more a digital village.

Initially, these villages will be connected to one another via the Internet, using secure protocols and end-to-end encryption. Eventually, each village will cooperate in the construction of facilities which allow them to communicate with other digital villages, using underutilized spectrum in the VHF and UHF bands . These protocols will provide for ubiquitous, global connectedness on a scale that was previously unimagined.

This is the project of the MIND - a world whose interconnectedness allows for truly universal education – a world united in common consciousness and common cause. There is freedom on the airwaves, now. We are blanketing the planet with an electromagnetic mesh. We have found the frequency of freedom.

The MIND springs awake.

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Statement on Society (2011-06-01 02:37)

Since the time of the industrial revolution, it has grown increasingly clear that the impulse of certain corporate bodies is towards profit at any cost - even at the cost of the greater good. This is not true of all corporations, but only of those that have consolidated and abused their power. These bodies, through their malignant metastasis, now threaten the well-being of our species and our planet. Current modes of production and exchange are myopic and unsustainable. Greed, corruption, and self-interest cannot continue to serve as the guiding principles of our society. We demand environmental and social justice.

Something momentous is afoot. From Tunis to Cairo to Seville, Portland to Austin to Berlin - the geopolitical calculus is in flux. I'll refrain from calling it an incipient revolution, because that word has a tendency to put people on edge. I won't call it a coming insurrection, either, though it has been called that by others. What I will call it is a movement - a movement towards justice, towards equality, towards equanimity and self-determination.

So far, this movement has met with great success. Yet, this success is predicated upon the ability of the masses to coordinate, organize, and take action concertedly. What we have seen is that resistance to existing power structures is effective when it behaves as a swarm. Until now, the resistance has organised using social media, such as Facebook and Twitter, which are under the control of the corporate hegemony. This puts the resistance in jeopardy, as governments which are corrupted by the influence of narrow, self-serving interests are able coerce these centralized social networks into releasing the information of their patrons.

What's more, these centralized services are accessed via telecommunications infrastructure which is itself hierarchical and centralized. This means that it is susceptible to the will of oppressive regimes and the unpredictable, destructive forces of mother nature. The movement is too important to remain reliant upon the beneficence of corporations, benevolence of governments, or forbearance of our increasingly volatile climate.Peer-to-peer applications running on top of peer-to-peer infrastructure suffer none of these limitations, especially if they are designed to draw power from their environs.

This matters because the nascent global movement for freedom, sustainability, and self-determination needs a communications infrastructure upon which it can rely, even amidst the chaos, struggle, and strife of a world in flux. People should care because the malignant metastasis of corporate power is only increasing, and we have a rare and real opportunity to resist it. What is at stake is our very ability to organize. If we control the means of transmission and reproduction, there is no stopping a humanity unbounded, united in common cause - if we do not, we will be divided against ourself - silenced, crushed, and forced to watch as the wholesale rape of our planet and people continues. This is a chance for those of us who object to endless greed and tribalism to secure our ability, once and for all, to organize, mobilize, and struggle for the cause. This is not an end, but a beginning - not a cause, but the cause of all our causes. This is our moment. This is where we take our stand.

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home warranty companies in florida (2013-07-04 04:27:50)
I'm extremely impressed along with your writing skills and also with the structure for your weblog. Is that this a paid theme or did you customize it your self? Anyway stay up the nice high quality writing, it's uncommon to peer a great weblog like this one nowadays. . Here is my blog post :: [1]home warranty companies in florida

1. `http://www.flhomewarranties.com/`

Resources (2011-06-01 17:58)

[1]The Commons

- The Commons is intended to be a platform for the aggregation and sharing of knowledge related to issues of network freedom. Registration is open, and you should feel free to edit as you see fit. Don't be afraid to just go for it. If there's a story, link, or subject that you think should be in the collection, add it. Better to capture too much, and do some curation later on, than to lose out on vital information for fear of mislabelling.

[2]Major Organizations

- This is a listing of major organizations that operate in the arena of network freedom, with a brief introduction to the purpose and structure of each organization. The FNF has ties to some of these organizations, and others it admires from afar. The essential thing is that we all seem to be working toward a common end: a free network.

[3]Mailing Lists

- Much of the conversation surrounding network freedom occurs on these mailing lists. Some are general, some are technical, and some are quiet. This is a short run-down of the most important lists, and which topics they tend to discuss.

[4]News Coverage

- This is a collection of news stories having to do with freedom on the network. It was mostly collected by Dr. John Stone, of Grinnell College.

1. `http://www.freenetworkmovement.org/commons/index.php?title=Main_Page`
2. `http://freenetworkfoundation.org/?page_id=219`
3. `http://freenetworkfoundation.org/?page_id=222`
4. `http://freenetworkfoundation.org/?page_id=225`

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Donate (2011-06-01 17:59)

IFRAME: [1]http://www.youtube.com/embed/kqgPC8CVAG8

[2]

The FNF has applied for status as a 501(c)(3) non-profit organization. Assuming that all goes well with the application, all donations to the Foundation will be retroactively considered tax-deductible.

If you would like to support the cause of network freedom, please consider a cash donation to the Foundation. In order to donate, simply click the donate button at right. Know that our ability to continue with our work is contingent upon your willingness to learn about, share, and contribute to the cause. Please don't underestimate the difference that even a few dollars can make. We need your support.

Donations are used to procure hardware, such as the GlobalScale DreamPlug, to fund software R &D, to pay for bandwidth, colocation, and other operational expenses, and to support our advocacy and media campaigns. More information on our finances is available [3]here.

To support the Foundation with in-kind donations, including computers, bandwidth, satellite communications equipment, advertising, and any other resources that may seem useful, please contact [4]donations@freenetworkfoundation.org

1. http://www.youtube.com/embed/kqgPC8CVAG8
2. https://www.wepay.com/donations/195763
3. http://www.freenetworkmovement.org/commons/index.php?title=Finances
4. mailto:donations@freenetworkfoundation.org

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Our Values (2011-06-01 19:51)

- We constitute a voluntary community committed to the tenets of free information, free culture, and free society.

- We aim to establish a commons in cyberspace which complies with emerging principles of open exchange.

- We envision a system of intellectual property that will ensure no person ever again goes hungry for knowledge.

- We participate in efforts to produce and improve free networking software.

- We are taking action by stewarding the construction of a self-governed computer network for the equitable transmission of all data.

- We hope that the network we establish will serve as the model for global implementation of a unified, peer-to-peer network.

- We believe that access to such a network is a human right.

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Home (2011-06-05 16:09)

- We constitute a voluntary community committed to the tenets of free information, free culture, and free society.

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- We believe that access to such a network is a human right.

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Statement on Software (2011-06-07 04:25)

The Free Network Movement owes an incredible debt to the Free Software Movement, and pledges them our ongoing support. It was pioneers such as Richard Stallman, Eben Moglen, and John Perry Barlow who initialized this struggle for our freedom. It is to these pioneers that we turn for inspiration and guidance. If not for early and decisive court victories won by Stallman, Moglen, and the Free Software Foundation, it is doubtful that we would today be in a position to advocate for the liberation of cyberspace.

The legacy of the Free Software Movement, however, goes beyond ideology. Open-source networking software will be integral to the development and growth of the Free Network. As such, members of the Free Network Movement are closely tracking the FreedomBox and Byzantium Projects, while collaborating with folks at Serval Project and the Village Telco, and contributing code to the Diaspora* project.

FreedomBox is going to be a pure blend of the open-source operating system Debian, designed from the ground up to be a lightweight and user-friendly engine for privacy, anonymity, and security. It will run on existing hardware or plug computers, providing users the ability to take control of their online identities.

Project Byzantium is an effort by HACDC, whose aims are broadly in line with our own. Their stated mission is to develop a communication system which functions even in the absence of access to the Internet. Their work has focused on distributed Internet services, and on reworking name resolution systems for maximum resilience.

The Serval Project has developed technologies which allow for peer-to-peer networking between mobile devices using telephone numbers for addressing, again with the aim of creating communications infrastructure that is freely accessibly, and will continue to function in the face of an Internet outage.

Village Telco has produced radio firmware which allows for the turnkey roll-out of production-quality mesh networks. They are the manufacturers of the 'Mesh Potato,' an easy to configure and highly capable mesh node.

A slew of applications including GNU Social, Friendika, Diaspora, and BuddyCloud have emerged in recent years, harkening the emergence of a federated social web. The OStatus and XMPP protocol suites have emerged as clear winners, and will soon enable us each to own our own part of the social graph.

Still, Freenet's commitment to free software goes beyond any single application. We hold that certain types of essential software should be free. The invention and improvement of the digital computer over the last sixty has given humanity the ability to reproduce some of its most valuable tools at zero marginal cost. The ethical and philosophical implications of this changing mode of events are many. The notion that we abstain from distributing useful software to those who could use it, despite the fact that it costs nothing to reproduce, is absurd not only from a theoretical standpoint, but also from the standpoint of real and applied economics.

Contact (2011-06-07 22:27)

- If you're interested in keeping tabs on our work, you can subscribe to our newsletter [1]here.

- The best sort of contact is collaboration. In order to join in the work of the Foundation, please subscribe to our general discussion list, by clicking [2]here and hang out with us on IRC at #fnm on irc.thefnf.org.

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- For all queries, please email [3]contact@thefnf.org

- [si-contact-form form='1']

1. `http://thefnf.org/learn/?page=CiviCRM&q=civicrm/profile/create&reset=1&gid=16`
2. `http://mail.thefnf.org/mailman/listinfo/discuss`
3. `mailto:contact@thefnf.org`

Weblog (2011-06-08 04:24)

#OccupyThanksgiving! plus: Stealing Thanksgiving - Dollars & Sense Blog (2011-11-23 21:47:20)
[...] the shutting down of the #OWS encampment at Zuccotti park, by a member of the #OWS tech group: The Arrogance of Power. I like his point about how he was essentially robbed by armed [...]

Here We Go (2011-06-09 00:48)

Well, the site is really starting to come together. It's been a good soft launch, and I appreciate all of the comments and criticisms that people have offered. Please feel free to share any other ideas and suggestions, on the mailing list, or as a comment on this post. We'll probably do a hard launch, with links sent out to various organizations, sometime in the next week. Then we'll really be off to the races.

In the mean time, your every bit of support helps. You can donate using the button on the right, though donations currently require a paypal account. In the near future, you should be able to donate with any credit card, and those donations will have tax-free status. We're still waiting on IRS approval, though, and it may take a little while.

The good news is, we're generating interest from potential backers, and from some venture firms. We'll see where this all goes, but things are really going to get moving here in the next couple of weeks.

I'll be heading down to Austin to meet with Charles Wyble, who's a systems engineer and security expert. He's been working on some really cool stuff that relates to the FreedomBox stack, and has offered to put me up for a little while. Then I'll head to the FLOfarm, an intentional community in Pennsylvania that focuses on free and open technologies. I'm hoping to meet a lot of folks, and spread the good news about the Free Network.

As I said before, let me know on list or in a comment if you've got a place to crash, a mesh to mend, or a hackerspace to inhabit. I'm looking to meet anyone and everyone who thinks that a freer network means a freer world.

take care,

Isaac

It is wonderful to see that Freenet continues beyond the small world of Grinnell. I wish the best of luck to the Free Network Foundation. I am sure your efforts will be successful!

Progress Report for June 10th (2011-06-10 22:51)

So, I finally introduced myself to the [1]FreedomBox list last night. It's an amazing group of people, doing amazing work. I'm excited to be a part of the community, I only hope that I have something to contribute. I'm not a yet code ninja, but I do have some ideas about how to make the network a freer place. If you haven't discovered FreedomBox, check out our software page for a brief description, or do a simple google search.

Relatedly... we got our first donation! A big thanks goes out to Dick Seabrook of Annapolis, Maryland. We appreciate your support.

So, here's what I've done so far today, besides looking for a truck to take on the road:

1. Recieved a Federal Employer Identification Number.

2. Finished the (incredibly complicated) application for 501(c)3 status, though it still needs proofreading and some ammendments.

3. Applied for status as an official organization to the American Registry for Internet Numbers

Work continues on a business plan for Nodal Industries. We've got a vision here at the FNF, of a world where we can organize and communicate free of corporately owned infrastructure. It's a complex vision, with a lot of interconnected parts, and articulating it in a way that is clear and concise is no easy task. Still, that's what needs to be done, if we're going to attract the sort of capital investment that we need.

I was feeling a bit discouraged last night - feeling that perhaps we've bitten off more than we can chew, but then I did a bit of reading. A month or so, a friend of mine heard that I was moving to the [2]FLOfarm, and he gave me a book called '[3]Creating a Life Together,' about intentional communities and ecovillages. There's a lot of good stuff in there, and it was somehow reassuring to me that many before me have felt overwhelmed by the enormity of the change they'd like to effect. It had a lot of good material on what it means to govern by consensus, and ultimately, I feel asleep feeling more sanguine than ever.

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1. `http://freedomboxfoundation.org/`
2. `http://flofarm.org/blog/`
3. `http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Daps&field-keywords=ecovillages+and+intentional+communities&x=0&y=0`

Progress Report for June 12th (2011-06-12 19:41)

Made some changes to the site today, on the Home and Society pages. Tell me what you think of the new content, point out any errors, and feel free to recommend changes. I know that I need to find a way to bring in the [1]Free Network Definition and the [2]Free Network Manifesto. Oh wait, I sort of just did. Anyways, I think I've got to find a way to bring them in on a more permanent basis.

For those that don't know, those two links go through to [3]The Commons, which is a wiki that we use for information gathering and collaboration. It's got sort of a spam problem, so if anybody knows how to fix that, please let me know. I go through and delete the spam from time to time, but it's still really annoying. I've tried most everything that I can find via google, including whitelists, blacklists, bot identifiers, the 'bad behavior' plug-in, and captchas, but it's all to no avail. We're panning to switch to Drupal in the near future, so hopefully that will take care of it.

Yesterday was really great. I finally got a car - it's a 1998 Volvo V70 XC. This is great news, because it means that I can get to Austin, TX, where Charles Wyble lives, in order to collaborate on an FNF roadmap and a Nodal Industries business plan. Charles is a systems engineer and security expert. He's been hard at work on a FreedomBox stack that is getting really close to completion. I'll be heading down to Austin on Wednesday to spend a few days hacking with Charles, and interviewing for a position at HostGator.

1. http://www.freenetworkmovement.org/commons/index.php?title=Free_network_definition
2. http://www.freenetworkmovement.org/commons/index.php?title=Freenet_Manifesto
3. http://www.freenetworkmovement.org/commons/index.php?title=Main_Page

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ARIN Says Yes (2011-06-14 05:52)

So, I'll be brief, because I've got much to do tomorrow in order to get ready for the road.

Today was a good day for the FNF. We opened a bank account with US Bank. This will allow us to verify our Paypal account, and receive donations automatically via ACH transfer with no fees besides those that Paypal levies. Here's hoping that we can drive some traffic to the site, and get ourselves a budget in the process.

More importantly, we put the final touches on IRS form 1023, the application for tax-exempt status. Let me tell you, this was no easy task. I've never had to deal with the IRS before, and I was astounded at the complexity and difficulty of the process. It's a good thing I've got a family full of lawyers, and that my father in particular was willing to donate quite a bit of time to the cause.

I also wrote to Sascha Meinrath, asking him how I can get involved with the Open Technology Initiative, and the Commotion project in particular. The lists were hot today, with Meinrath and Moglen both chiming in on FreedomBox-tac. There was also some great news on serval-project-dev, where it came out that OpenBTS and Optimized Link State Routing have been integrated into Serval. This is an important development in decentralized GSM networking. It's easy to see that the future is mobile, so this is really a big deal.

Oh, and I almost forgot: the American Registry for Internet Numbers approved the FNF as an organization. Now we've just got to make a resource request. The smallest v6 subnets that ARIN allocates are bigger than we could ever possibly need, so we'll probably just go for that. That'll have to wait though - it's time for bed.

Up Next (2011-06-15 03:16)

Well, today was another day spent mostly taking care of logistics. I got a tent and a camping stove, and got stuff ready. I've just got to get my car checked out and registered tomorrow, and then I'm good to go. I talked to Charles Wyble for a bit today, and came up with a short-term gameplan. I should be in Austin by Thursday night. Then we're going to hash out and finalize the roadmap and strategic plans that we've been working on for the past couple of months.

We're hoping to bring Suresh Fernanado, Curtish Faith and some others onboard. Things are really starting to build up steam. Charles is hard at work on a v0.1 implementation of a FreedomBox stack. I'm getting the network bits in order, as I mentioned in the last post, and the community is chugging right along.

Changes are happening in the bottom layers of the network stack, and they're going to motivate changes at the top layer. That is, mesh networks and distributed networks go hand in hand. We've just go to make sure that distributed logical networks are opportunistic about peer-to-peer architectures. It seems that the middle layer is probably the part that will remain mostly unchanged. TCP/IP isn't going anywhere. It's just the parts above and below it that are going to change.

I'm excited especially that Charles is going to start blogging here as well - he's as tapped in to the movement as anyone in the world. We'll be sure to keep you updated over the next days and weeks, as things begin to take shape.

Make sure to subscribe to our e-mail list, at right, if you'd like to be a part of the movement.

take care,

imw

Tomorrow (2011-06-16 06:19)

Tomorrow, it begins.

Today was another hectic day, getting ready to set out on the road.

I do not know what the future will bring, but I know this: I love this life. I love every moment that I get to fight for this cause. I have never believed in anything so strongly, in all my life.

If we are going to organize on a global scale, for social and environmental justice, we are going to need a network upon which we can rely. Of this much I'm sure. Whether we here will be the ones to build it is a much less certain notion. It's also completely inconsequential. What is important is that it gets built.

I'm hitting the road tomorrow to see what's out there, to meet other people that are working on this project. Believe me - there are many. Most of them have never heard of the FNF. Most people are working on this project without even realizing it. It is so easy to build a cog, and not to realize that that cog fits perfectly into an engine of freedom and liberty and justice. Just look at the list of projects on the resources page. Everyone has a vague sense that they are building something magnificent, but no one is quite sure what it is.

On the eve of this journey, I know this: I want to meet the architects and the engineers and the builders. I want to meet anyone and everyone that is making this dream a reality. I don't care if the FNF plays the role that I imagine. I only care that something does. As long as we stay away from pride and despair, everything will be alright. Of that much I'm sure.

until tomorrow, when it all begins,

take care,

imw

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Deep in the Heart of Texas (2011-06-17 22:04)

So, I made it to Austin. Charles and I have been hanging out, and we've come up with a list of things we'd like to do before I leave town of Tuesday:

- FNF Use cases
- FNF Roadmap
- FNF Execution Plan
- Set up task management system
- Nodal Industries Business Plan
- Reach out to FNF Advisory Council

In terms of the last item, I recieved an e-mail from [1]John Gilmore this morning. I've asked him if he would be willing to be on the Council. We've got some other folks in mind, too. What we would like to do is incorporate leaders from the various projects that are listed on our resources page (Serval, Byzantium, OpenBTS, Village Telco, etc.)

We've always held up 'rough consensus and running code,' as our operating principle. As I said to Mr. Gilmore this morning, we're trying to get the 'rough consensus' part together before we move on to the 'running code.' So many of the different components of the system we're trying to build are already in

existence. It would be a shame to rush into construction, and accidentally reinvent the wheel.

That said, after meeting Charles in person, I'm more confident than ever that we can build this. It won't be easy, and like GNU, it might take a decade to blossom fully, but that's no reason not to forge ahead. It does take a bit of courage, but, you know... "courage is not the absence of fear, but the judgement that something else is more important than fear."

1. `http://www.toad.com/gnu/`

Roadmap (2011-06-18 00:12)

This is a roadmap for the emergence of the Mesh Interface for Network Devices, a network owned and operated by the whole of humanity:

- ```Stage 1: The Co-op```

Stage one consists of the emergence of network access cooperatives. Stage one has already begun, so instead of speaking hypothetically, we will tell you what it looks like on the ground. We're not entirely sure of the legality, but we are sure of the justice. All over the world, in Portland and Austin and Athens and Berlin, people are banding together to buy network access in bulk. Think of it as Costco for the Internet. This network access is then distributed via a technology called 'mesh networking.' This works especially well because of the asynchronous nature of network usage - if everybody buys their own connection to the Internet, that connection goes unused most of the time. Some day, whole towns and communities will purchase access cooperatively. That day has not yet arrived, but we think it is on its way. The obstacles are not technical, but regulatory. Many Internet service providers oppose municipal and community networks, on the grounds that sharing cuts into their margins. The struggle for collective purchasing will have to happen in many towns and cities, the world over. It will have to happen for city blocks and subdivisions, in residential towers and intentional communities. This won't be easy to accomplish, especially when telcos catch wind of what's going on. Still, the obvious economic advantage to the end user (reduced cost) makes this an easy sell to the people.

- ```Stage 2: The Digital Village```

The unseen benefit of the aforementioned co-ops is that they wrest the terminal nodes of the network away from the control of the telco/ISP hegemony. This provides for the opportunity of network applications that are truly peer-to-peer. At first, this will happen within each isolated cooperative community. Imagine that some community makes shared use of a few pipes, whose flow of information is distributed across the last mile via mesh. Now imagine that each node of that mesh network runs the Freedombox software. Freedombox is software that is specifically designed for use in mesh networks, allowing neighbors to talk to one another directly, without having to use the Internet at all. People will still have to rely on the community-owned pipes for access to the wider Internet, but basic functions such as social networking and e-mail will be materially peer-to-peer. This is peer-to-peer not only at a conceptual layer, but in terms of actual, material reality. Thus arises the digital village. What used to be just a co-op for purchasing access has suddenly become a community that is able to share information directly with one another.

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- Stage 3: Towards Unity

Stages 2 and 3 are separated here for clarity, but it seems likely that stage 3 will begin shortly after stage 2, and take place concomitantly. Stage 3 is quite simple. Using packet tunnelling (something like TOR Hidden Services, or Phantom to give an idea) in concert with the existing global network, we can simulate the contiguity of geographically disparate digital villages. Messages move to the village gateway, where they are encrypted and sent securely to a recipient gateway. Suddenly, people all over the world are able to share with one another directly, without fear of censorship. Every node will have its own, unique address. A distributed hash table will keep track of which boxes are in which villages, and so finding a route to your friends box will be as simple as knowing their address. Over time, villages will grow larger, with community-owned backhaul and federated mesh networks. The use of for-profit infrastructure will become more and more rare. Of course, the corporate giants still own the backbone at this stage, which is why we can only say towards unity. No uprising until Stage 4, please.

- Stage 4: A Backbone of our Own

Stage 4 is when the dream of true co-ownership becomes a reality. We are already starting in on what needs to be done here, because it's a pretty tall order, and will take some time. (You gotta do what you gotta do). In Stage 4, we replace the corporate-owned fiber backbone with a backbone of our own. This will be crowdsourced, and employ a suite of technologies including telecommunications satellites, long-range cognitive radio, and fiber. This won't come cheap, but it is a much better deal for humanity to invest in a network of its own, than to keep paying for access leased from a few corporations. Satellite dishes, radio towers, and public fiber would replace the pipes that used to come from the ISPs, and their connectivity could be distributed throughout every digital village via mesh. The only cost that an individual would have to pay for network access would be the initial cost of a node. Yet not everyone will be able to afford a node, which is why the roadmap doesn't end with Stage 4.

- Stage 5: A Human Right

Once the Mesh Interface for Network Devices is global, we can focus our energies towards providing a node to anyone who wants one. We believe that access to the network is a human right, and this is our vision for supplying it to all of humanity.

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Technical Progress Report (2011-06-20 17:56)

Hello friends of the FNF. I'm happy to be a part of this effort, as it gives me a place to put my extensive networking and server knowledge to good use. So what have Issac/I been up to this weekend?

1) Got our application to ARIN in for an AS number and Ipv6 block. Came up with a numbering plan based on census tracts. It took a few hours of really intense discussion and playing with subnet calculators to figure out a solid plan. I imagine many other ISP entities have had similar planning sessions. We are waiting to

hear back from ARIN.

2) We have come up with several names for components of the free network:

- FreedomNode (a combination of the FreedomBox with a radio transponder unit [ubiquity] that would serve as the user premise equipment.

- FreedomTower: what the FreedomNodes will talk to for connectivity to the overall Free Network. We figure there will be 1 or 2 of these per census tract, depending on population density. This leads to approximately 70,000 towers throughout the United States.

- FreedomLink: Regional peering points (colo in a tower). These will let us peer with small mom &pop, regional, CLEC, wired &wireless ISP organizations all over the united States. This will give the Free Network the advantages of a large ISP (budget, security staffing, monitoring etc) but let us maintain the small, nimble nature of a responsive and cost effective ISP.

- FreedomTunnel: While we are in the process of funding and building out the Free Network, people who wish to take advantage of an open, secure, equal access network can utilize FredomTunnel to connect their FreedomNodes together. Expect more about this very soon (targeting a July 4th testing and feedback release of the FreedomNode and FreedomTunnel package).

3) Investigated what would make up an ideal FreedomBox. Played with a PogoPlug Professional but were unable to successfully flash Debian. So we purchased a Lenovo IdeaCenter and have installed Debian on it. We will be deploying the FreedomBox software stack on it and do another blog post on our experiences with that soon.

4) Defined a defensible position for the Free Network as stewarded by the FNF. The answer to "aren't you just copying $proprietary _cloud _thing".

It comes down to the fact that we are offering a package that provides material, link level peer to peer connectivity. This enables a whole new wave of cool hacks and innovations across numerous verticals (home automation, neighborhood lending services and advertising, messaging, gaming etc).

In the interim, we are setting up a server distribution (which will be in our git repo soon) that lets early adopters and enthusiastic power users utilize an overlay network (FreedomTunnel) to start experimenting with the technology and see the possibilities. This will enable logical peer to peer connectivity among users.

5) Came up with a set of action items to execute in the next 90 days leading up to contact con. These will be detailed in another blog post shortly. Also expect some posts going into more detail about the FreedomStack in the near future.

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zawieszki na perforacj? (2012-08-19 23:46:35)

I create a comment whenever I appreciate a article on a site or I have something to valuable to contribute to the conversation. It is a result of the passion displayed in the article I looked at. And after this article Technical Progress Report | The Free Network Foundation. I was excited enough to write a commenta response :-P I do have some questions for you if it's allright. Could it be just me or do a few of the remarks appear as if they are written by brain dead folks? :-P And, if you are posting on other online social sites, I'd like to keep up with anything fresh you have to post. Would you make a list every one of your social pages like your Facebook page, twitter feed, or linkedin profile?

What's Next (2011-06-20 20:52)

The purpose of this post is to consolidate and itemize FNF action items for the next 30 days:

- Hammer down Bill of Materials for Fnode -FNF

- Reach out to potential Advisory Committee members - Isaac

- Get signed connectivity agreements for ARIN application -Charles

- Find some v6 numbers to use - Charles

- Add human profiles to site -Isaac

- Set up etherpad - Charles

- Set up Git, Scrum, Redmine, forum - Isaac

- Finish deploying data ownership stack on Virtual Private Server, mirror to Debian, and release into Git repository -Charles

- Obtain seed capital for Nodal, funding for FNF -Isaac

- Set up FTunnel-FNF

- Get AC Members to deploy stack -FNF

- Connect reference implementations via Ftunnel -FNF

As you can see, there is much to do. We need all of the help we can get. One of the action items above is setting up a more robust system for task management. We're hoping that this will help others get involved. More than that, we'll be reaching out in the next couple of days to folks working the various technologies that make the Free Network possible. If there is a blizzard of activity right now in the distributed networks space, we view this weekend as packing a snowball. Then we want to roll it down a hill. Yay for gravity, right?

————————————

StrongSwan (2011-06-21 05:13)

So, I spent a lot of time today thinking about freedom tunnel, the piece of the MIND that allows for encrypted, logical peer-to-peer when there is no opportunity for a material peer-to-peer exchange to take place. I started digging around the IPsec protocols the other day, when John Gilmore e-mailed, and was doing a bit more research today. Then I found [1]StrongSwan. It's a fork of FreeS/wan that implements a full IPsec based VPN.

I can't believe I didn't find this earlier. It's basically the missing piece of the whole puzzle. Freedom-Links will maintain a distributed lookup table for the route to any given node, and then MIND gateways of any type can establish secure connections with one another using StrongSwan.

Several conceptual items are still open tickets, but this was the biggie. It's all coming together. All the pieces are there, and now we've just got to integrate, and write the code that ties it all together.

What that consists of, to my mind, is an integrated, social internet (not web) app that runs on the freedombox,

and performs opportunistic peer-to-peer routing. That is, material peer-to-peer when possible (target host exists in local mesh) and secure, logical peer-to-peer otherwise (using freedomlink and StrongSwan). Charles' data ownership stack contains all of the pieces, but now we've got to tie it all together, integrate, and situate it on top of a mechanism for intelligent routing.

huzzzzah!

I met a stranger in a cafe today, and it was really something. We talked for hours, and I'm pretty sure that I finally came to terms with everything. Life is a strange journey, and it can be scary, especially when you're trying to change the world. At a certain point, though, you've just got to give in, got to know that what you're doing is right. The guy in the cafe helped me realize that. Basically, I looked myself in the eye, put my hand on my shoulder, and said very calmly and confidently, 'don't be afraid... go confidently in the direction of your dreams.'

1. `http://www.strongswan.org/`

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The Architecture (2011-06-24 01:04)

So, the past few days have been quite a sprint. Charles and I have come up with action items for 30, 60, and 120 days. I was able to stop by [1]ATXHackerspace, and met some folks who would be interested in putting in on a FreedomLink. Seems to me like this is how it starts.

I'm in Kansas City for a couple of days now to see my family, and then heading up to Detroit. In Detroit, I'm going to try to make contact with the [2]Detroit Digital Justice Coalition, and see what they've got cooking.

The point of this post, however, is that after a whole bunch of hacking, Charles and I feel that we've come up with a workable architecture for the network. The point is not to do away with hierarchy entirely, but to reduce it as much as possible - this is a design for a network that is owned and operated by those that use it. It is a complex and dynamic system, which is intended to undergo something quite similar to organic growth.

The Free Network, in the parlance of net operations, is an [3]Autonomous System - the name couldn't be more apt. There is a lot to understand here, so we'll start with some terminology, then we will give you a rundown of the basic network components, and finally we will give a narrative account of the Free Network is going to eat the unfree networks from the inside out. Understand that this is a draft design - consider this a request for comments. We'll be rolling out some more collaboration tools in the near future, but for the time being, feel free to comment below, and to join our mailing list, at right.

Terms

Logical Peer-to-peer

- Logical peer-to-peer is, essentially, what most people nowadays simply call peer-to-peer. That is, when two machines communicate with one another, rather than with some intermediary machine. Yet, just because there is no intermediary machine, does not mean that there is no intermediary whatsoever.

The means of communication acts as a buffer. In the material reality of this situation, the transaction is not peer-to-peer, as bits are entrusted to a third party.

Material Peer-to-peer

- The alternative, then, is what we at the FNF call material peer-to-peer, and regard as the key to a freer, more resilient network. This is when data is transmitted entirely via peer-sharing. Materially peer-to-peer communication occurs in networks with a mesh architecture. The Internet began as such a system, but has strayed from its roots. We herald a return to such a system.

FreedomTunnel

- FreedomTunnel is software that provides for the automatic utilization of a [4]Virtual Private Network based on[5] IPsec. It allows for secure, logical peer-to-peer communications between any two FreedomBoxes with an Internet connection.

The Mesh Interface for Network Devices

- The MIND is what we call our system for distributing connectivity via a cascading series of mesh networks. Layer 0 is a non-mesh home network, Layer 1 is a neighborhood mesh, and Layer 2 is a regional mesh. The MIND allows for secure, material peer-to-peer communications between any FreedomBoxes in the same Layer 1, Layer 2, or Layer 3 mesh.

Layer 0

- Layer 0 is a collection of standard, 2400MHz WiFi links between FreedomBoxes and client devices. This is the access layer of the network.

Layer 1

- Layer 1 is a collection of 5GHz, neighborhood-scale mesh networks. Each Layer 1 mesh contains one FreedomTower, and as many as 2500 FreedomBoxes.

Layer 2

- Layer 2 is a collection of 3650MHz, regional-scale mesh networks. Each Layer 2 mesh contains one or more FreedomLinks, and as many as 250 FreedomTowers.

Layer 3

- Layer 3 is a fiber-line implementation of mesh routes between FreedomLinks, and represents the endpoint of the FNF roadmap.

Components

Layer 0 - Client Devices

- The Free Network is designed to work with any computing device. Client devices, such as laptops and desktops, connect via ordinary WiFi to a FreedomBox. A [6]thin client application allows them access to all the resources of the FreedomBox to which they are connected.

Layer 0/1 – FreedomBox

- The FreedomBox is, in many ways, the most essential component of the network. It is a small, always-on computing device which acts as a router, server, and data storage device. These devices are inexpensive, in terms of both capital and operational costs. Families and individuals can participate in the construction of the Free Network by owning and operating a FreedomBox. In addition to providing Layer 0 connectivity for client devices, FreedomBoxes participate in Layer 1 networking, constantly communicating with other FreedomBoxes that are in range, and ultimately with a neighborhood FreedomTower.

Layer 1/2 - FreedomTower

- FreedomTowers, like FreedomBoxes, are owned and operated by those that benefit from them. Unlike FreedomBoxes, however, FreedomTowers benefit entire neighborhoods – communities on the order of five to ten thousand individuals. FTowers perform critical Layer 1 network operations, and help the neighborhood mesh run efficiently. In addition to improving the throughput of Layer 1 connectivity, FreedomTowers participate in the Layer 2 regional mesh. This means that neighborhoods can connect directly to one another, and that material peer-to-peer is not limited in scope to local communities.

Layer 2 - FreedomLink

- FreedomLinks, first and foremost, are BGP speakers - they peer directly with other Autonomous Systems of the Internet. FreedomLinks will be situated initially in colocation facilities, and eventually in network meet-me rooms. In addition to serving as primary distribution points for Free Network material connectivity accross an entire region, they serve as gateways for logical connections via FreedomTunnel. FLinks will have substantial computational capacity, be multi-homed, and peered via fiber-optics. FreedomLinks are the focal point of the Layer 2, regional meshes - as such, they are intended to serve communities of 25,000-75,000. We estimate that there will eventually be somewhere on the order of 1,000 FreedomLinks in the continental United States, though we're going to start with three.

Story

One of the things that can make the architecture of the Free Network difficult to understand is its emergent, evolutionary nature. It is not possible to simply roll out the type of network described here. Firstly, it is a participatory network, and so it has to be deployed by those that use it. Secondly, the scale and scope are too big to produce and provision the components in one go. So, in order to understand the Free Network, it is important to understand the ways in which it will evolve over time. Presented below are a few of the most probable ways for the Free Network to come into a community.

Of critical importance here is the idea that devices can start participating in the Free Network even before they are able to connect to the MIND and engage in material peer-to-peer. That is to say that if some family buys a FreedomBox to use as their home router, they can begin participating in the Free Network immediately, even if their neighbors haven't caught on yet, and there's no mesh to join. This is the purpose of FreedomTunnel. The family still purchases their network access from an ISP, but when they wish to communicate with others on the Free Network, their communications are automatically routed via FreedomTunnel. Eventually, others in the neighborhood replace their routers with FreedomBoxes, and are peered automatically in a Layer 1 network, allowing them to share directly with one another without having to use the Internet at all. At this point, the neighborhood might decide to start an Internet co-op.

Now, in order to understand what an Internet co-op might look like, let's take a look at another use case. This time, instead of starting with a bunch of Layer 0 networks and moving to Layer 1, we'll start with Layer 1, and move down to Layer 0. Take, for example, a typical, American subdivision. In this subdivision, you've got 100 families, each paying $60/month for a broadband Internet connection. If these families decided to form an Internet co-op they could purchase the same total amount of bandwidth for half of the aggregate price. In order to do so, they would pool their money, build a FreedomTower, and each invest in a FreedomBox. Assuming a price of $5,000 for the Tower, and $100/box, the families would have recouped their investment in five months, and would save $30/month thereafter. As an added benefit, all of their communications with one another would be materially peer-to-peer. Communications destined for outside FreedomBoxes would leave the tower via FreedomTunnel, and due to the asynchronous nature of network usage, individual users would actually see much better throughput almost all of the time.

As the total number of FreedomBoxes in operation goes up, the more routes exist within the MIND, and the less users will have to depend on paid access and FreedomTunnel to communicate with one another. This is the plan: eat the telcos from the inside out - make it possible to start small and grow big, or to start big and use the economies of scale to drive adoption.

You've now seen the two basic directions in which the network can grow: up and down. You've only got to extrapolate the pattern to see how FreedomTowers motivate the construction of FreedomLinks - in the same way that FreedomBoxes motivate the construction of FreedomTowers. Just as it is possible to build out from a tower, it is possible to start with a Link and build out from there.

Finally, when the Free Network has hundreds of points of presence on the IP core, we can begin to roll out our own fiber lines. This is how we escapee the telcos once and for all. This is the basic premise: we, the members of humanity, are going to build ourself a network. We will have to pay for the hardware, and we'll have to pay for upkeep, but in the end we will save untold billions in the process of ensuring our own ability to communicate freely. By becoming our own service providers, we deny the ISPs the ability to profit off of us, choosing instead to provide for ourself, at-cost. Moreover, we will build a network immune to censorship and resistant to breakdown.

Initially, the Free Network will consist of one FreedomLink, and a couple of FreedomBoxes. This is enough for a proof of concept, and is well on its way to realization. From there, it will grow organically. As people adopt the FreedomBox, and get used to the idea of owning their own data, the MIND will grow to meet them, and the Free Network will take form.

1. `http://www.atxhackerspace.org/index.php/Main_Page`
2. `http://detroitdjc.org/`

3. `http://en.wikipedia.org/wiki/Autonomous_system_%28Internet%29`
4. `http://en.wikipedia.org/wiki/Virtual_private_network`
5. `http://en.wikipedia.org/wiki/IPsec`
6. `http://en.wikipedia.org/wiki/Thin_client`

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tasks.freenetworkmovement.org (2011-06-27 18:45)

So, the last couple of days have been hectic, travelling from Kansas City to Grinnell, IA, to Lansing to Detroit.

I'm in Detroit now, hoping to meet some folks, and getting as much work done as I can.

The big thing thing is getting an instance of [1]redmine up on the FNF servers. I'm still in the process of getting everything configured exactly right, but the application is available at [2]tasks.freenetworkmovement.org

Now we can begin to fill it up with all of the action items that need doing in order to make the free network a reality. I'm hopeful that the introduction of a task manger will be a critical step in the process of bringing more people onboard.

Charles is staying busy with his work on a first iteration of the FreedomBox, and I'm trying to reach out to folks that might be able to help us realize the vision that we've laid out.

Let me know if you are one.

Edit: It will probably be a couple of days before the application is fully operational. There's some configuration work that needs to be done that requires restarting the application. I'll make sure to say when the task manager is good to go.

1. `http://www.redmine.org/`
2. `http://tasks.freenetworkmovement.org/`

H. Hipsh (2011-06-28 21:11:22)
Fourth paragraph - I think you want to bring, not brine, people. I'm so glad things are going well.

1.3   July

Chickens Exist (2011-07-01 16:42)

The past few days have been eventful. I drove from Detroit to New York to Boston. Next stop is the FLOfarm.

While in Detroit, I got the chance to meet Ben Chodoroff, from the Detroit Digital Justice Coalition. He's doing some great work - teaching people how to improve their lives via technology, building a community

mesh network, and contributing to the commotion project. He's also just a great guy. We agreed very strongly that there are too many siloed communities within the community networks space, and he suggested that perhaps Commotion, with its chunk of government money, might help bring the community together. I hope very much that that happens. I have my reservations about OLSR's long-term viability, but every routing algorithm has its pros and cons. Ultimately, what is most important is to come together to solve the big problems that we cannot solve by ourselves. I hope to have the opportunity to work with the Commotion group in the near future, and in the mean time, I admire their aims and their work from afar.

It seems to me that Detroit, and other industrial Midwestern cities could be great seedbeds for the MIND. Depressed communities can benefit more than any from affordable network access and community-building. If the Free Network is a privilege of the affluent, it will have the opposite of its intended effect - the MIND should connect people, not deepen the divide between them.

Now, as far as FNF operations go, Redmine is operational, though I still need to take care of e-mail and git integration. I plan to work on that today, when I finish this post. It's proving to be more difficult than I had imagined, if only because of the limitations of a shared hosting environment. It may be time to seek a VPS provider. We're quickly approaching the point where we are ready to engage in serious outreach. It is important, though, to have our ducks in a row before we begin. The idea is to show people that there are real, actionable tasks that need doing, and that if they want to be a part of this movement, there is plenty to be done.

It is too easy, at this stage, to say "Yes, that's a good idea, but what can I do?" We intend to answer that question straightforwardly, and in spades. It is easy to convince oneself that a difficult problem is of the intractable chicken-and-egg type conundrum. The thing is, chickens exist! Eggs exist! We can do this, even it is sometimes hard to get a grip on the problem at hand. The key is to break it up, to split it into small, actionable items that really do seem doable. Then it is a matter of taking it one day, and one task at a time. Contrary to Zeno's notion that partial progress won't arrive at an end, we will get to where we're going, if only we keep ourself in motion.

take care,

imw

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To the FLOfarm (2011-07-01 23:43)

Just wanted to let everyone that I'm heading to the FLOfarm now.

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Harlene (2011-07-03 12:49:47)
Is it as expected?

Towards Abundance (2011-07-10 20:17)

Let me start by apologizing for the long lag since my last entry in the log. It has been a busy time, and though I have often thought about the need to record what is going on, it has usually been while I was deep

in the Pennsylvania woods. Some day that will present no obstacle at all, but for the time being it means no access to the network. Anyways, I am in Boston now, with plenty of access and plenty of time - let me see if I can't recap and record some of what has transpired.

It may be hard, at first, to see what, if anything, a plot of undeveloped forest in Pennsylvania has to do with the struggle for privacy, freedom, and sovereignty in cyberspace. Still, I assure you, they have everything to do with one another. It is easy to forget that cyberspace exists within a material reality which is persistent and essential. As much as they may seem to be ethereal, bits are real. They take up space. There is no escaping this. We have touched on this idea briefly here before, in motivating the distinction between logical and material forms of peer-to-peer value exchange. I bring it up again in an effort to explain why FreedomBox, the Free Network, the Federated Social Web, and the other disparate strands of the sovereign computing movement are part of something greater still. Understand, please, that this view is mine alone, and I have no intention of speaking for others involved with FreedomBox, with the FNF, or for that matter, with the FLOfarm. I only intend to give you some idea of how I see these endeavours fitting together .

Everywhere I look, there is a great transformation in progress. At its core, this transformation is from centralized to distributed modes of organization, be they technological or societal. It is concomitant with the transformation from an economy of scarcity to one of abundance.

I showed up at the FLOfarm a little more than a week ago, not knowing what to expect. It had been billed as a 'proving grounds for open source technology,' but I also knew that there was nothing there besides a waterfall, a fire circle, a few springs, and a whole bunch of trees. How can a forest be a technology proving grounds?

The people.

What I found there was a group of people who want to develop, deploy, and distribute open-source solutions to civilization's biggest challenges: governance, agriculture, currency, exchange. We are rethinking everything, because we see that the current way isn't working. During the enlightenment, political philosophers came to the realize that the sovereignty is derived from the consent of the governed. Look around. Ask yourself whether or institutions, both corporate and governmental, are really serving the interests of their constituents. Ours is not a struggle against corporations and government, but against corporations and government as they exist today: full of corruption and avarice. When power of any sort becomes too centralized, it becomes susceptible, to corruption, to attack, to failure. Distribute the power, and it becomes more robust. This is the essential notion of federalism, and one of the founding principles of the American experiment.

We seek to distribute everything, starting with the network. Build the MIND, and you will see communities take shape around it, employing the same bottom-up architecture. Give people the tools to build their own network, and they will build their own communities, currencies, supply chains, and governments. Show people what federalism and cooperation look like, and they will realize that we are stronger when we act together, and with intention.

We can build a civilization that is free and equal, where sovereignty flows form the individual, to the neighborhood, to the region, all the way up to the singularity of the global community. We can build a civilization based on the principles of environmental and social justice. We can build such a civilization, and it begins with the building of a single resource which all of us share. That resource is the network. Through coownership and cooperation of the network, we can learn that we all benefit by acting in concert with others. This essential lesson has applications in every walk of life, in ways that are as yet impossible to imagine.

This is the nature of open source: write the code once, and replicate it at zero marginal cost, let others tinker and use it for whatever end they see fit. We are writing code that shows how to participate individually in a global civilization. Our hope is that this model will be applied not just to networks, but to everything. The fractal mesh, the bottom-up power structure, and the consensus-driven process have the potential to serve as organizing principles for cvilization after the nation-state.

The essential thing is this: the time has come to assent to our humanity. We can do so first by agreeing to participate in the construction of humanity's greatest tool - the nervous system which allows us to share information with one and all. Then it will become easier and easier to see how we have to work together in order to save a planet that has been brought to the brink. We are consumers now, but we won't always be. Some day, and it's coming soon, we will learn to participate - in our network, and our neighborhood, in our currency and our government, and in most of all in our humanity.

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People (2011-07-12 20:24)

The Free Network Foundation was formed in the spring of 2011 by Isaac Wilder and Charles Wyble.

- Isaac Wilder is the co-founder and Executive Director of the Free Network Foundation. He studied Computer Science and Philosophy until 2011, when he left school to pursue free network advocacy full-time. He is now responsible for the day-to-day operations of the foundation, as well as long-term strategic vision and public advocacy. In addition to writing and speaking on issues of network freedom, Isaac designs, engineers, builds and deploys tools for more democratic networks. He is currently based in Kansas City, MO.

- Charles Wyble is the co-founder and Technical Director of the Free Network Foundation. He is a systems engineer with 10 years experience designing, implementing and supporting large scale systems in many different industries. He is in charge of architecting the FNF's enterprise and production networks, as well as engineering hardware and software tools in support of our cause. He resides in Austin, TX.

- Tyrone Greenfield works as Director of Communications, coordinating activities between the FNF and partner groups, as well as working with media organizations. He also performs administrative tasks for the FNF's Kansas City operations. He started working with the FNF while studying history in Iowa.

- James Yox is the FNF's Director of Technical Operations. In addition to system and network administration, James is responsible for penetration testing and security posture. He works as a software and systems engineer, and is passionate about food, arch linux, and liberty.

For more complete information on the folks involved in this project, please look at the [1]people category on our wiki.

1. http://www.freenetworkmovement.org/commons/index.php?title=Category:People

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Amenqenu (2012-03-13 23:04:13)
Very cool. Just heard you on WBAI. Interested in learning more.

Liberad la red | Free the network - otromundoesposible (2012-04-23 20:45:21)
[...] sobre el anhelo de Isaac Wilder y su fundación por construir una Internet libre. "Free the network" comienza en el movimiento [...]

Por uma internet livre ∎ Galpão Ideias (2012-06-14 20:10:24)
[...] Link para a Free Network Foundation: http://freenetworkfoundation.org/?page _id=156 [...]

CityAge Kansas City – NEWS FROM THE 'HOOD (2012-12-06 18:08:56)
[...] citizens are creating the tools necessary to incite change in their community. People like, Isaac Wilder of the Free Network Foundation or Jason Roberts of Better Block or the creative folks behind [...]

Thomas Brenneman (2013-03-22 11:05:00)
We are working to roll out a one-to-one computer initiative to our students. Many of them live in the urban core and do not have Internet. Can you work with us to provide Internet services to our students? We are partners with KC Public Library, I would like to include them in developing a solution as well. Thanks Tom Brenneman Executive Director of Technology Kansas City Public Schools 816-418-7105 816-695-1091 (Cell)

john poole (2013-03-24 15:20:51)
various pages on your server are down; I found this cgi form using a cached version on Google.

Donna (2013-07-04 05:49:31)
You need targeted traffic to your website so why not try some for free? There is a VERY POWERFUL and POPULAR company out there who now lets you try their traffic for 7 days free of charge. I am so glad they opened their traffic system back up to the public! Sign up before it is too late: http://nsru.net/gscr

tweceivip (2013-07-05 16:26:01)
888 here are very good site: http://www.cclog2.com/tennis/henin-force d-to-announce-second-retirementcheap jerseys china http://freeisaverb.orgburberry outlet sale http://occupythetrees.org/about/louis vuitton outlet http://www.kcconcretecanvas.comwholesale jerseys http://coloradozombieprom.orgcheap jerseys wholesale http://healphilly.comcheap mlb baseball jerseys http://www.kumitize.comisabel marant sneakers online http://coloradozombieprom.orgcheap jerseys from china http://rohanvenn.comnfl wholesale jerseys http://www.cclog2.com/page/2louis vuitton outlet store http://occupythetrees.org/store/cheap nfl jerseys authentic http://ashokajewels.comlouis vuitton replicas http://www.kumitize.comisabel marant online http://videogamersblog.colouis vuitton outlet store http://redrocksbluesky.comlouis vuitton outlet online http://digitalvideosingles.comcheap jerseys for sale http://everybarindc.comlouis vuitton outlet store http://www.designwatch.orgnfl nike jerseys http://www.gamespeopleplaypv.comcheap nba jerseys http://www.d3drift.comcheap nfl jerseys http://kindleliciousreads.comlouis vuitton handbags outlet http://www.pensacolawomansclub.org/burberry-outlet/burberry outlet sale http://www.designwatch.orgnike nfl jerseys http://www.parleypotc.comcheap louis vuitton outlet http://www.cclog2.com/tennis/chairman-of-all-england-club-philip-bro okburberry bags outlet http://nirohairdesign.comreplica louis vuitton belts http://www.cclog2.com/tennis/agassi-backs-nadal-for-australian-openl ouis vuitton outlet online http://www.coolwaterstables.comcheap nfl jerseys wholesale http://www.findacurediabetes.comcheap jerseys from china http://stevequist.orglouis vuitton handbags outlet http://www.designwatch.orgcheap nfl jerseys http://www.gamespeopleplaypv.comwholesale nba jerseys http://www.pensacolawomansclub.org/michael-kors-outlet/michael kors bags outlet http://braunarchs.comcheap nfl nike jerseys http://www.sagelistings.comwholesale nhl jerseys

Mandy (2013-07-06 03:42:30)
We have decided to open our POWERFUL and PRIVATE web traffic system to the public for a limited time! You can sign up for our UP SCALE network with a free trial as we get started with the public's orders. Imagine how your bank account will look when your website gets the traffic it deserves. Visit us today: http://nsru.net/fdse

Organizations (2011-07-12 21:03)

- Rights Advocacy Groups

  - [1]The Free Software Foundation
    * "The Free Software Foundation (FSF) is a non-profit corporation founded by Richard Stallman on 4 October 1985 to support the free software movement, a copyleft-based movement which aims to promote the universal freedom to create, distribute and modify computer software."

  - [2]The Electronic Frontier Foundation
    * "Based in San Francisco, EFF is a donor-supported membership organization working to protect fundamental rights regardless of technology; to educate the press, policymakers and the general public about civil liberties issues related to technology; and to act as a defender of those liberties."

  - [3]La Quadrature Du Net
    * "La Quadrature du Net is a French advocacy group that promotes the digital rights and freedoms of citizens. More specifically, it advocates for the adaptation of French and European legislations to respect the founding principles of the Internet, most notably the free circulation of knowledge. To that aim, La Quadrature du Net engages in public-policy debates concerning, for instance, freedom of speech, copyright, regulation of telecommunications and online privacy."

  - [4]ahumanright.org
    * "A Human Right is a non-profit organization dedicated to providing free basic internet and phone access to developing countries, and to citizens of countries whose government has cut off their internet access."

  - [5]Public Knowledge
    * "Public Knowledge is a non-profit Washington, D.C.-based public interest group that is involved in intellectual property law, competition, and choice in the digital marketplace, and an open standards/end-to-end internet."

  - [6]Sarapis Foundation
    * "The Sarapis Foundation believes that access to technology is a human right and that the only way we can secure this right is by creating an entire ecosystem of free/libre/opensource (FLO) technologies people can use to create wealth and wellness for themselves and their communities."

- Mesh Networks, Sovereign Computing, and Packet Radio

  - [7]The FreedomBox Foundation
    * "FreedomBox is a community project to develop, design and promote personal servers running free software for distributed social networking, email and audio/video communications. The project was announced by Eben Moglen at the New York ISOC meeting on February 2, 2010."

- [8]Open Technology Initiative

  * "The Open Technology initiative is currently working to build community wireless networks with local community organizations in Philadelphia and Detroit.. Another project of the Open Technology Initiative is Measurement Lab, an open source platform that supports broadband research tools and speed tests. In 2011, the State Department announced funding for Commotion, a project of OTI, to develop technology to lower barriers for building distributed communications networks."

- [9]The Serval Project

  * "The Serval Project consists of two systems. The first is a temporary, self-organising, self-powered mobile network for disaster areas, formed with small phone towers dropped in by air. The second is a permanent system for remote areas that requires no infrastructure and creates a mesh-based phone network between Wi-Fi enabled mobile phones, and eventually specially designed mobile phones that can operate on other unlicensed frequencies, called Batphone. The two systems can also be combined."

- [10]The Personal Telco Project

  * "The Personal Telco Project (or PTP) is a wireless community network project in Portland, Oregon. It was founded by Adam Shand in November 2000 after he read a Slashdot article about the Consume The Net project in London."

- [11]The Village Telco

  * "A Village telco is a community based telephone network. It is based on a suite of open source applications that enable entrepreneurs to set up and operate a telephone service in a specific area or supporting the needs of a specific community."

- [12]GNU Radio

  * "GNU Radio is a free software toolkit for learning about, building, and deploying software-defined radio systems. GNU Radio is released under the GPL version 3 license."

- [13]Network 44

  * "The AMPRNet (AMateur Packet Radio Network) is an effort by amateur radio operators to build a computer network connected over amateur radio. Other names for the network include IPv4 Network 44/8 and Network 44."

- Distributed Social Networks

  - [14]Diaspora
  - [15]Friendika
  - [16]Identica
  - [17]Status.net
  - [18]GNU Social

Note: The descriptions on this site were taken from wikipedia, with the exception of Serval and Sarapis, which were taken from the Serval and Sarapis websites.

1. `http://www.fsf.org/`
2. `https://www.eff.org/`
3. `http://www.laquadrature.net/`

4. `http://www.ahumanright.org/`

5. `http://www.publicknowledge.org/`

6. `http://www.sarapisfoundation.org/`

7. `http://freedomboxfoundation.org/`

8. `http://opentechinstitute.org/`

9. `http://www.servalproject.org/`

10. `http://www.personaltelco.net/`

11. `http://villagetelco.org/`

12. `http://gnuradio.org/redmine/wiki/gnuradio`

13. `http://www.ampr.org/`

14. `http://blog.joindiaspora.com/what-is-diaspora.html`

15. `http://project.friendika.com/`

16. `http://identi.ca/`

17. `http://status.net/`

18. `http://foocorp.org/projects/social/`

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Gr33n Data: Democratization the Internet Infrastructure (2011-11-15 09:56:07)
[...] [...]

Mailing Lists (2011-07-12 21:04)

- [1]FNF-discuss

- [2]The Next Net

- [3]liberation-technology

- [4]Freedombox-discuss

- [5]Serval-project-dev

- [6]village-telco-dev

- c[7]ommotion-dev

1. `file://localhost/mnt/ext/blogbooker/tmp/mailman/listinfo/discuss_freenetworkfoundation.org`

2. `http://groups.google.com/group/building-a-distributed-decentralized-internet`

3. `https://mailman.stanford.edu/mailman/listinfo/liberationtech`

4. `http://lists.alioth.debian.org/mailman/listinfo/freedombox-discuss`

5. `https://groups.google.com/group/serval-project-developers`

6. `http://groups.google.com/group/village-telco-dev`

7. `http://lists.chambana.net/mailman/listinfo/commotion-dev`

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News (2011-07-12 21:11)

Mesh networks, etc.:

- James Glanz, John Markoff. [1]U.S. Underwrites Internet Detour Around Censors. [2]The New York Times. 12 June, 2011.

- Sinnreich, Aram, Nathan Graham, and Aaron Trammell. [3]"[[wiki:mondonet]]." [4]MondoNet, March 16, 2011.

- [5]Bischoff, Glenn. [6]"Wireless mesh networks have a future — but what is it?" [7]Urgent communications, April 27, 2011.

- [8]"Haxwithaxe" et al. [9]Project Byzantium. [10]HacDC Wiki, May 6, 2011.

- [11]Gobry, Pascal-Emmanuel. [12]"Check out this $25 USB stick computer." [13]Business insider, May 6, 2011.

- [14]Esguerra, Richard. [15]"An introduction to the federated social network." [16]Electronic Frontier Foundation, March 21, 2011.

- [17]Eckersley, Peter. [18]"Why we need an Open Wireless Movement." [19]Electronic Frontier Foundation, April 27, 2011.

News from the unfree world:

- [20]Anderson, Nate. [21]"Revised 'net censorship bill requires search engines to block sites, too." [22]Wired, May 11, 2011.

- [23]Weinstein, Lauren. [24]"'Free speech be damned!': Congressional bill would censor search engines." [25]Lauren Weinstein's blog, May 11, 2011.

- [26]Weinstein, Lauren. [27]"Censorship, governments, and flagellating Google." [28]Lauren Weinstein's blog, May 4, 2011.

- Bosker, Bianca. [29]"Facebook says it may be allowing 'too much' free speech in some nations.". [30]The Huffington Post, April 20, 2011.

- [31]Couts, Andrew. [32]"WikiLeaks' Julian Assange: Facebook an 'appalling spying machine'." [33]Digital trends, May 2, 2011.

- [34]Allan, Alasdair, and [35]Pete Warden. [36]"Got an iPhone or 3G iPad? Apple is recording your moves." [37]O'Reilly radar, April 20, 2011.

- [38]Clarkson, Will. [39]"Tracking your every move: iPhone retains extensive location history." [40]Freedom to tinker, April 20, 2011.

Recent FreedomBox and free software commentary:

- Rooney, Paula. [41]"Red Hat CEO: Keep cloud open or go back to 80s-stye computing." [42]Linux and open source, May 3, 2011.

- [43]Noyes, Katherine. [44]"It's time to give digital rights management the boot." [45]PC World, May 4, 2011.

- [46]van der Hoeven, Rob. [47]FreedomBoxBlog.

- [48]Cory Doctorow. [49]"Techno-optimism." [50]Locus online, May 2, 2011.

- "PoIR." [51]"1+1 (pat. pending) — mathematics, software, and free speech: why software and patents need to get a divorce." [52]Groklaw, April 26, 2011.

- Jones, Pamela. [53]"DOJ and German Antitrust Body Order Changes to CPTN Patent Purchase." [54]Groklaw, April 20, 2011.

- [55]List of conferences on topics related to FreedomBox. [56]Debian Wiki, April 14, 2011.

- [57]Pre-alpha disk images for FreedomBox.

- Harrington, Conor. [58]"Eben Moglen interview: Freedom Box." [59]The new tech post, April 6, 2011.

- [60]Fioretti, Marco. [61]"GNU Free Call — the freedom to call out when you really need to." [62]Stop! / Zona-M, April 4, 2011.

Many thanks go to Dr. John Stone, of Grinnell College, for his efforts to curate this information

1. http://www.nytimes.com/2011/06/12/world/12internet.htm?_r=1&scp=1&sq=liberation%20technology&st=cse
2. http://www.nytimes.com/
3. http://mondonet.org/wiki/doku.php?id=wiki:mondonet
4. http://www.mondonet.org/
5. http://www.mondonet.org/
6. http://urgentcomm.com/networks_and_systems/news/wireless-mesh-network-future-20110427/
7. http://urgentcomm.com/
8. http://wiki.hacdc.org/index.php/User:Haxwithaxe
9. http://wiki.hacdc.org/index.php/Byzantium
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11. http://www.businessinsider.com/author/pascal-emmanuel-gobry
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14. https://www.eff.org/about/staff/richard-esguerra
15. https://www.eff.org/deeplinks/2011/03/introduction-distributed-social-network
16. https://www.eff.org/
17. https://www.eff.org/about/staff/peter-eckersley
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19. http://www.eff.org/
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22. http://www.wired.com/
23. http://www.vortex.com/lauren
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25. http://www.vortex.com/
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27. http://lauren.vortex.com/censorship-governments-google-white-paper-05-04-2011.html
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36. http://radar.oreilly.com/2011/04/apple-location-tracking.html
37. http://radar.oreilly.com/
38. http://www.cs.princeton.edu/%7Ewclarkso/
39.   http:
//www.freedom-to-tinker.com/blog/wclarkso/tracking-your-every-move-iphone-retains-extensive-location-history
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54. http://www.groklaw.net/
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62. http://stop.zona-m.net/

Site Changes (2011-07-12 21:50)

Hello Everyone,

Greetings from the offices of the Sarapis Foundation, New York, NY.

Just thought that I would take a moment to log the activity of the last few days. As you may have notices, we've made some changes to the site - particularly in the resources area. This was done at the behest of Carolina Hines, a Free Software activist from Costa Rica. I added some bios, added a link to The Commons, and refactored everything else. Let me know what you think.

Otherwise, there's been some interesting discussion on the FreedomBox list of late. Myself and a few others have been pointing out the need for establishing a more effective community process. Things are a bit confusing as they stand, with the existence of a Technical Advisory Committee and a Foundation Board seeming to detract from organic, grassroots progress. The issue has just come up, so hopefully some people at or near the top of the organization will engage in the conversation, and we can get this all square away.

I know that many of us see huge potential in the FreedomBox, as a vehicle to the creation of a truly free network. The gears of the project seem to be either hidden away from view, or stuck. Let's hope that we can get things moving, because there's much to do, and very little time in which to do. This project is too important to let it lie stagnant. We must press on. We must get moving. Today's conversation was good. Let's hope that it leads to some real progress.

take care,

imw

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Meetup Tonight (2011-07-14 20:46)

Through very fortuitous circumstances, I am going to have the opportunity tonight to meet James Vasile, Executive Director of the FreedomBox Foundation. I can't tell you how exciting this is. As I've said before, we have big plans here at the FNF, and those plans hinge, in many ways, on the success of the FreedomBox initiative.

To be honest, I just call it 'the box.' It's the centrepiece of the vision.

There's been some great conversation on the FreedomBox list in recent days, and many of the concerns that I voiced in my last post have been allayed. We are in the process, finally, of splitting into working groups. Between Seb and myself, we've suggested the following five:

1. Connectivity (Physical/Link/Network)

2. Privacy (Transport/Session/Presentation)

3. Data Ownership (Application)

4. Social (Application)

5. UI/UX

We'll see how the wider Fbox community reacts. I'm just glad to see things moving along. A provisional build and timeline should be out soon. Not to mention the fact that Charles is nearly done with his Data Ownership stack. If all goes well, that should be out by August 1.

Anyways, I'm incredibly nervous and excited for this evening. I'll check back in later to tell you all how it goes.

until then,

take care,

imw

Bryant Park (2011-07-15 16:58)

Last night was wonderful.

James Vasile couldn't make the meetup, unfortunately, but that didn't deter us from gathering, sharing, and basking in the glory of a park in full swing, bustling with the energy of summer in the city.

There were six of us, and we sat around sharing knowledge about different initiatives, mutual friends, and where we see the movement heading. Shane Reustle, who organized the meetup, was excited about the FNF, about FreedomBox, and about everything that's taking place. Devin from Sarapis and Ted from LGHTSRC were there as well.

I hope that I'll get to meet Mr. Vasile some day, but for now, old friends and new friends, and a common cause that we truly believe in, is quite enough for me.

imw

Edward Hall (Ted) (@TedwardHall) (2011-07-21 23:18:48)
Wonderful start to the NYC Free Internet conversation :) Looking forward to more in the future! Beautiful design of FNF btw. Gotta talk to you about getting on Ruby

Migration Complete (2011-07-22 01:50)

Good news!

The web properties of the Free Network Foundation have been successfully moved to a Virtual Private Server located at HostGator in Austin, Texas. This should lead to a significant improvement in site performance, as well as giving us the ability to do all types of neat things, like hosting code repositories and collaboration platforms.

Look for updates in the coming days. The movement never sleeps, and much has happened since I was last able to update.

until then,

take care,

imw

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Statements (2011-07-26 16:07)

These statements express the core principles of the Free Network Foundation:

- [1]Free Network Definition

- [2]Five Steps

- [3]Statement on Hardware

- [4]Statement on Software

- [5]Statement on Society

These are key resources for those interested in the technical work of the FNF:

- [6]Free Network Architecture

- [7]Task Manager

- Git Repository

1. `http://freenetworkfoundation.org/?page_id=254`
2. `http://freenetworkfoundation.org/?page_id=259`
3. `http://freenetworkfoundation.org/?page_id=9`
4. `http://freenetworkfoundation.org/?page_id=52`
5. `http://freenetworkfoundation.org/?page_id=13`
6. `http://www.freenetworkmovement.org/commons/index.php?title=Free_network_architecture`
7. `file://localhost/mnt/ext/blogbooker/tmp/6z3vd7gj/tasks.freenetworkmovement.org`

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Free the Network in All Public Libraries! | Public Praxis (2011-12-10 02:18:55)
[...] you need more convincing, below I've copied what they mean by a free network. See their statements page for more. They're good people; I'm cheering for them. We specify five freedoms. In a [...]

Free Network Definition (2011-07-26 16:09)

Even as you read this, a battle rages in our midst. It is a battle for freedom, for sovereignty, and for our collective future. The fundamental dialectic of our struggle is this: will we be enslaved by our technology, or liberated by it?

The question is as old as civilization itself, and speaks directly to the trajectory of history's arc. Still, as the pace of innovation accelerates, it becomes clear that something new and still unnerving approaches. Take a long view of the processes that surround us, and you'll recognize the singular gravity of the here-and-now. This moment is the dawn of a new age - information moves the world now, and there's no going back.

It was in cognizance of this notion, and in service to our collective freedom that Richard Stallman started the Free Software Foundation. The Free Network Foundation continues that tradition, and seeks to intensify the struggle for our freedom as we enter this most critical hour.

The free software movement has thrived because they have made it easy to differentiate between free and unfree code. They have done so through the definition of free software embodied in the GNU project's 'four freedoms.' It is in this spirit that we aim here to define exactly what it means to say that a network is free. We hope that the existence of such a definition will highlight the ways in which our current network, the Internet, is unfree, and help illuminate the path to a freer world.

We specify five freedoms. In a word each, they are access, transmission, storage, authentication, and consignment. Let's go through them now, understand what they mean, and measure the ways in which they do or do not exist today.

Freedom 0) The freedom to access the network without tariff.

Tariff here means price above cost. In today's world, Internet service providers charge heavy fees for access to the network. Your right to peaceably assemble in cyberspace is being restricted - you must not allow this erosion. The Free Network Foundation aims to combat this practice by assisting in the formation of network access cooperatives on the local and regional level. Envision a world where the only cost that one pays to access the network is that of operating a network node.

Freedom 1) The freedom to transmit bits from peer to peer without the prospect of interference, interception or censorship.

Today's Internet exhibits an architecture of centralized command and control. This makes the network far too susceptible to breakdowns, both accidental and intentional. The truth of this sentiment is manifest, from the recent outage of Amazon Web Services to the network shutdown during the Egyptian uprising. Moreover, choke points make it too easy for bit movers to look inside the packets they are transporting. So called 'traffic shaping' is already an accepted practice, even in the United States. The ability of governments and powerful corporations to look at the messages we send to one another and determine their fitness for transmission is nothing less than censorship. Demand your right to free speech - participate in the cooperative construction of mesh networks as an avenue to the restoration of that freedom.

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Freedom 2) The freedom to determine where one's bits are stored.

If you are like most, and you most likely are, then the most comprehensive collection of bits pertaining to you is stored in a nondescript building in Prineville, Oregon. That is the location of Facebook's primary data facility, and the site where more than 25 Terabytes of data per day are harvested and stored. Facebook has become a 50 Billion dollar behemoth by selling this data to the highest bidder. It has also been known to hand over these logs to government agents without so much as a subpoena. At this point, you might say that they don't care, that you've got nothing to hide, and don't mind industrial-strength marketing. We are here to say this: you should. You should care where your data is stored, even if you have nothing to hide. Not to do so does a deep disservice to freedom fighters, to whistleblowers, to those that put their lives on the line for humanity. To demand this freedom is to demand your right to property. Not to do so is to allow the outright theft of what rightfully belongs to you.

Freedom 3) The freedom to maintain anonymity, or to present a unique, trusted identity.

Of all of the freedoms, this is the one most realized in today's world, but that does not make it any less essential. The free network must allow for anonymity, but it must also sometimes function as a trust network. The cryptographic community has established mechanisms for building trust networks, where people are who they say they are. The mechanism established by the GNU Privacy Guard is called keysigning, and it amounts to the practice of people vouching for one another. Authentication is important, and the freedom not to authenticate as much so - the essential thing is the ability to determine between a known entity and a shadow figure. Only on a trust network is this possible.

Freedom 4) The freedom to determine the parties to whom one's bits are consigned.

It is important to understand that the transmission of bits to others necessarily entails a loss of exclusive ownership. This is the very nature of digital reproduction. Whichever party receives those bits will gain the ability to reproduce and transmit them anew. This makes it all the more important to maintain complete control over who is granted access to your bits. Your right to privacy is contingent upon an ability to determine exactly who can see your data.

Do not accede to the corporate hegemony. Do not remain complacent while your freedom erodes. The fundamental dialectic of our struggle is this: will we be enslaved by our technology, or liberated by it? It is up to us.

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October 2011 Kwik-cools ■ Dr. Electro's Mixtapes (2011-11-01 14:35:56)
[...] ? The Free Network Foundation describing what "Free Network" means [...]

Dr. Electro's Mixtapes (2011-10-26 19:36:31)
[...] ? The Free Network Foundation describing what "Free Network" means [...]

Five Steps (2011-07-26 16:13)

It will take billions of us - but then, that's exactly the point. Making the network a freer, safer, better tool is going to take the participation of many. I'll explain how we're going to do it, in five simple steps.

Step one is the 'co-op'. Using mesh technologies, people the world over will have to start Internet purchasing cooperatives. In addition to reducing the price of access, this has the benefit of wresting the terminal nodes away from the control of the ISP/Telco hegemony.

Step two is called the 'digital village.' A new software layer for the network stack will allow network usage that is truly peer-to-peer, not just in terms of usage, but in terms of information flow. Imagine a network of diaspora pods, all communicating with one another whether or not they are connected to the cloud.

Step three is the emergence of a 'global village,' and is likely to begin shortly after step two, but is separated here for clarity. In the third step, people use packet tunneling to simulate the contiguity of geographically disparate digital villages. Suddenly, people all over the world will be able to share information via a network that is peer-to-peer.

Step four is the crux of our movement. The global village, acting in concert, and investing in its own future, will construct a backbone of its own. As long as corporate entities maintain control of the pipes used for backhaul, they control the politics of the network. Using a combination of telecommunications satellites, whitespace radios and fiber-optic pipes, humanity can build for itself a network that no corporation or government could control. The cost of connectivity would be reduced to the cost of a mesh node. Yet, not everyone can afford a node. That's why the struggle doesn't end with step four.

Step five is the emergence of network access as a human right. Having built a network for all of humanity, we will provide nodes to every human who wants one. Then, humanity, united and unbounded, could begin to heal the world.

We Are Not Alone (2011-07-26 21:05)

There have been some very exciting developments during the time that we were migrating servers. Several new organizations have come onto the free network scene, and I'd like to tell you about them now. The first such organization is called [1]RedesLibres, and is based primarily in Latin America. I came accross them on the FreedomBox list, where one member posted an English translation of a document they call a '[2]Free Networks Manifesto'. I responded, and we're now working on integrating our manifestos, and hopefully translating the Free Network Definition into Spanish. There are free networks in formation the world over – it is only a matter of time until we find a way to work together, and the MIND goes global.

Speaking of going global, it looks like I'll be going to Germany next month. [3]Chaos Communications Camp takes place every four years, and is a gathering for 'hackers and associated life-forms'. This year, it's in Finowfurt, Germany, and a hacker by the came of gmc is giving a talk call '[4]A Modern Manifest of Cyberspace'. It's a call to arms, related to the [5]intermesh project, which is essentially another name for the MIND - a cooperatively owned and operated, global federation of mesh networks. I've gotten in touch with gmc, and I'm hoping that he'll let me participate in the talk. Even if not, it will be worth it to go to CCC, meet a bunch of hackers, and see if we can't get people riled up about the idea of a network that's owned by nobody and everybody at the same time.

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Finally, there's [6]FabFi, who have gotten a good deal of press lately for their incredible work in Afghanistan and Kenya. They're building high-throughput, long range mesh networks using off the shelf and recycled components. They're teaching people how to do so for themselves in the process. Indeed, it was a Fabfi node pictured in the NY Times [7]article about liberation technology. I've reached out to FabFi, and I'm waiting to hear back, but there's no question that the technology and its implications are profoundly exciting.

I'll keep you all posted as more and more initiatives aligned with the aims of the Free Network Movement come into view. I'm also hoping to post in the next couple of days some extended thoughts on Nodal hardware. Otherwise, we're about to start a fundraising campaign so that I can get to Germany. Please stay tuned.

take care,

always,

imw

1. `http://redeslibres.altermundi.net/`
2. `http://redeslibres.altermundi.net/Manifiesto/English`
3. `http://en.wikipedia.org/wiki/Chaos_Communication_Camp`
4. `http://events.ccc.de/camp/2011/Fahrplan/track/Hacker%20Space%20Program/4451.en.html`
5. `http://hackerspaces.org/wiki/Intermesh`
6. `http://fabfi.fablab.af/`
7. `http://www.nytimes.com/2011/06/12/world/12internet.html?pagewanted=all`

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fauno (2011-07-27 17:34:13)
Hi! Just a comment to clarify about RedesLibres. I'm not one of it's leaders; this is a horizontally organized coordination group between regional Free Networks. Also we're mostly Latinamerican ;)

imw (2011-07-27 17:36:24)
Thanks for the clarification. I'm going to change my post to reflect this. I look forward to hearing from you regarding the manifesto(s).

gmc (2011-08-01 17:25:19)
Hey! Nice to see you're planning to come over to the ccc camp! Hope to catch up with you, it is inspiring to see how people across the globe are setting the same goals. An indication to me, that we have good chances of getting there.

Join Us (2011-07-27 16:21)

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Thanks (2011-07-27 16:50)

Thanks for signing up for the Free Network Foundation mailing list. The CAN-SPAM act requires double-opt in for all mailing lists, so you should now check your email for an email from contact@freenetworkfoundation.org.

Just click the link to become a part of the movement.

Signup Complete (2011-07-27 17:00)

Congratulations!

You've successfully joined the FNF mailing list.

Click [1]here to return to the main page, or [2]here to make a donation.

1. `https://thefnf.org/`
2.   `https://www.paypal.com/us/cgi-bin/webscr?cmd=_flow&SESSION=BtG3m6Bu4HEo-BH8xs_`
`8JMGC28MSImIc3UdsRn5KP3l7ks07cB8pHYicovC&dispatch=`
`5885d80a13c0db1f8e263663d3faee8d1e83f46a36995b3856cef1e18897ad75`

I Want One (2011-07-29 21:51)

So, I'm sitting in the offices of the New America Foundation, waiting to meet with some folks from their Open Technology Initiative (the folks behind the Commotion mesh firmware). Suddenly, it occurs to me: we need to get ourself one of [1]these:

Anyhow, I think that things went well at New America, and I should hear from them soon regarding potential employ. In the mean time, I'm going to keep thinking about how sweet it would be for humanity to have "point-to-point, high-capacity 10-gigabit Ethernet LAN-PHY or OC-192 lambdas between any two nodes on the NLR infrastructure."

1. `http://www.nlr.net/about.php`

Ubuntu Online (2011-07-30 04:34)

Anybody know anything about [1]this?

1. `http://www.ubuntuonline.me/`

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martin (2011-08-02 03:35:02)
This seems to be a project that has started very recently and has only one developer and no online repository. The install.txt file in the zip file included on the website includes instructions on how to install existing server software like apache, ftp server etc. There seems to be more content on the website than actual code. Looks pretty though.:)

1.4 August

Freedom Stew (2011-08-06 08:32)

[1]Check out this article on [2]geeks without frontiers

Pretty cool stuff.

Throw in a [3]cubesat (or ten), a few million [4]lightbulbs, a [5]fabfi dish, [6]lighttag, and some [7]freedomboxes, and I believe you've got yourself a recipe for some freedom stew.

1. `http://www.pcworld.com/businesscenter/article/237323/open_source_effort_will_deliver_lowcost_wifi_for_all.html`
2. `http://www.geekswf.org/`
3. `https://secure.wikimedia.org/wikipedia/en/wiki/CubeSat`
4. `http://www.ted.com/talks/harald_haas_wireless_data_from_every_light_bulb.html`
5. `http://blog.makezine.com/archive/2011/06/fabfi-diy-wifi-network-in-afghanistan.html`
6. `http://www.lghtsrc.org/home/LGHTtag`
7. `https://secure.wikimedia.org/wikipedia/en/wiki/FreedomBox`

Chaos Communication Camp (2011-08-08 06:13)

Just wanted to quickly let everyone know that I leave tomorrow for Chaos Communication Camp, in Finowfurt, Germany.

I'm planning to meet Koen Martens of the Hackerspaces Foundation there.

I couldn't be more excited.

I won't be live-blogging at all, but access permitting, I will try to make an entry in the weblog every day.

I am hopeful, I am sanguine.

I will be careful.

imw

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A Long Way From Home (2011-08-09 13:14)

You know you're a long way from home when you're getting stared down by a giant statue of Stalin.

I'm in Finowfurt now, on the site of an old soviet airbase, which now functions as a museum. There are Yak-28s everywhere.

We're using the bunker/hangar spaces as auditoriums, workshops, and dancehalls.

I was easily able to find Koen upon arrival, and now I'm all set up. His talk, for anybody who is in europe, is at 4:30pm on the 12th. You can pay a few euro just to come for the day, if you please.

If you're at CCC, you can probably find me at the eth0 lounge. Come say hi.

Things are just getting under way here, with people arriving tonight, and the programme beginning in earnest tomorrow. I'll be writing at least one entry every day.

until then,

take care,

imw

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HX2 Radio Tonight (2011-08-10 16:11)

I'm going to be on HX2 Radio at 9pm CEST tonight.

If you'd like to listen, we'll be streaming live at [1]http://tinyurl.com/hx2-radio

I hope you'll tune in.

take care,

imw

1. `http://tinyurl.com/hx2-radio`

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Day One (2011-08-11 03:16)

And there was night, and there was day, and it was good.

When I first showed up to CCC, I got a quick tour from gmc, and found a spot (amidst some bushes) to set up my camp. After wandering around the camp, amongst soviet-era rotorcraft, I found my way to the bar at the center of camp. At first I was having a hard time finding people to talk to, but eventually, it happened.

The first person that I talked to was Moritz, the leader of TorServers, and responsible for more than half the capacity of the tor network. He introduced me to the rest. Jeremy, from Quadrature du Net, Katitza from EFF, a couple of guys from Telecomix, and finally, to my surprise, John Gilmore.

Somehow, it was hard to believe that I found so many of the people that I (unknowingly) set out to meet, so quickly upon my arrival. Hard to believe, but real none the less.

I went to bed at a somewhat reasonable hour, to try and get over my jetlag.

The camp began in earnest only this morning, and already is seems like so much has happened. There have been many great talks. One focus of this year's camp is space, and there has been much wonderful discussion regarding the potential for a collective space program.

I think it sounds quite promising.

I attended talks on Software Defined Radio using GNU Radio, about FairPhone, a proposal for a

smartphone made from fair trade materials, rocket propulsion, communications satellites, and a spirited talk from Jeremy about how we can help the movement.

I also had the opportunity to talk on the radio about the FNF, and what we'd like to see happen. It's amazing how positive the response has been. People are really enthusiastic about the prospect of a civil network. As always, though, the devil is in the details, and it's the implementation of such a system is going to be the hard part. The basic architecture that we've outlined does seem feasible, but there are hard, outstanding problems at hand. Persistent naming for nodes is perhaps the greatest challenge, but I have faith that if we keep working, we will come up with a solution.

We will do so because we have to, because our love for free expression leaves us with no other choice.

In many ways, that's what this place is: a gathering of people with no other choice. We came because we had to, because there was something calling us.

I, for one, am glad that I made it.

take care,

imw

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Day Two (2011-08-12 02:01)

I can't spend long writing, because it's very late, and I've got to get up early tomorrow for some meetings. I just wanted to briefly capture today's activities.

On the fun side, I spent a few hours building an arduino-controlled tv-b-gone. Pretty neat.

Otherwise, though, I participated in a session with representatives form community and cooperative ISPs from all over the world. We shared knowledge about regulatory processes in our countries, and strategies for building and maintaining mom and pop networks. It was really informative, and I met quite a few interesting people.

Then I met and talked with some folks who started the first Hackerspace in Brazil, regarding the movement in South America, and the possibility of coming down to talk about FreedomBox at a conference they're having. The topic came up because I had been sitting with Jonas Smedergaard, one of my fellow FreedomBox devs. He and I talked for a long time today about our respective visions for the box, and possible implementation strategies for the visions.

I also happened to meet Jacon Applebaum, who is on the FreedomBox TAC, and is a well known anonymity/circumvention advocate. He seemed to think that TOR hidden services would work to provide persistent naming for the FreedomBox, but Jonas and I both disagree with the position, as it would require others to be using the TOR network. Of course, Jacob is part of the core TOR team, so it makes a certain degree of sense that he would want to see the .onion scheme put to wider use.

Anyways, I'm off topic.

Tomrrow is, in some ways, the big day. GMC is giving his speech, which incorporates many parts of the FNF's strategy, roadmap, and rhetoric. We are meeting tomorrow morning to finalize the details. So, with that, I'm going to bed. I'll let you know how it goes.

take care,

imw

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Wiki (2011-08-12 11:05)

We maintain a wiki that we call 'The Commons.'

It is available [1]here, and the Atom feed below displays the most recent changes.

It contains a variety of materials related to the free network movement. We hope that you'll add more, and help The Commons become a resource for those who wish to build their own free network.

Feel free to add any and all content to the wiki: research, art, code, design, ranting, et cetera.

1. `http://www.freenetworkmovement.org/commons/index.php?title=Main_Page`

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Day Three (2011-08-13 11:59)

My apologies for not posting last night. Yesterday was long and wonderful - I got back to my camp and crashed.

There are three things, really, to report.

The first is on the gathering put on by the EFF. It was wonderful to hear what people had to say - there is no doubt in my mind that a global resistance is coalescing. Many organizations, nations, and individuals shared their hopes and visions for the future.

After the EFF meeting, gmc gave his talk entitled 'A modern manifest of cyberspace.' It was really cool to see the Five Freedoms presented to an audience of hackers, but I have to admit that I was slightly disappointed. It's not that the speech was bad, but I think that it could have been more. It was not a milestone, as I had hoped.

Still, yesterday proved more than ever, that coming to camp was the right decision. Moritz Bartl and I thought that it would be a good idea to convene a workshop on Free Network Architectures/FreedomBox/Nodal Platforms - for those at the camp, we'll be meeting in the Fire Shelter at 6.

Anyways, we walked around all evening telling people about the meeting, drinking some vodka, and generally enjoying the sensory overload that is Chaos Communication Camp.

He introduced me to many people, including Jagomir of Dyndy, who my buddy Devin suggested that I try to find. Funny how stuff like that happens. Funny how you seem to meet the right people at the right time: everything is everything, it is what it is, it cannot be anything else, and it is perfect.

That's the way I see it.

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Harlene (2011-08-14 03:56:47)
I'm glad you're there too. Thank you, Isaac, for all of it, for all of us.

Day Four / The End (2011-08-14 16:03)

As far as I'm concerned, there is only one event to tell.

We gathered in the dusty cavern of the bunker marked 'Fire Shelter.' The meeting that Moritz had encouraged me to convene, regarding FreedomBox/FreedomNode and Free Network architectures took place at 6pm CEST, 13 August. Everyone who I could have wanted to be in attendance showed up - Jonas, Jake, Katitza, Arturo, Lief, and many others. I know that these names likely don't mean much to you. To me they are significant.

These are some of the greatest hackers in the world.

The meeting was scheduled to last for one hour, but it ended up lasting two an a half. Notes from the meeting are forthcoming - I'll be sure to post them here after I send them to the FreedomBox list. Suffice it to say that in addition to introducing several capable developers to the project, we broke technical ground.

As far as I'm concerned (and Jonas may disagree) we have a solid framework for the FBX software stack: A handful of network daemons pulled together by a graph manager. I love the idea of configuring and interacting with the box via chat. Now that we've got the pieces identified, we've got to set about the real work of putting them together.

After the meeting, I spoke to some folks about joining the TOR project. Some folks want to see TOR play a key role in the FBX, but that seems increasingly to me like a blunder. If people want to anonymize, they are likely to know, and they should rock vidalia or whatever - what we need is solid crypto. That said, I think the TOR project is profoundly important, and I'm looking forward to helping out with the torouter.

I spent the evening socializing with different folks, but mostly the awesome dudes from Telecomix, and La Quadrature du Net. The Quadrature guys even gave me a t-shirt, which I will hence-forth rock often and proudly.

This morning I met with the Tech Director of Access Now, trying to figure out how we can work together. We see eye to eye on a lot of stuff, and Access is based in New York. It could be a very fruitful relationship.

And then it was over. I hitched a ride to the station, hopped on a train for Berlin, and just like that, it was done.

Just like that, it was begun. This seems like a new era for the FNF.

I might be a bit biased, but it sure seemed to me that the global hacker community was more than

happy to welcome a new American organization, with a new voice, and new aims. Time will tell what the FNF has to contribute to the global movement for privacy and sovereignty and digital self-determination, but I am more confident than ever that we have a role to play.

CCC Workshop Notes (2011-08-15 13:43)

Just posted this to fbx-discuss and fnf-discuss lists, and thought I would post it here, as well. Here are the notes from the CCC workshop:

```
Hello All,

This is Isaac Wilder, from the Free Network Foundation. I convened a
meeting at Chaos Communication Camp a couple of days ago, in order to
talk about FreedomBox, FreedomNode, and Free Network Architectures. I
told those in attendance that I would type up my notes from the
meeting, and send them to the list.

To start, I presented what I saw as a workable architecture: several
protocol daemons connected by a 'graph' or 'identity' manager that
handles access control. We came up with the following list of
essential daemons, in approximate order of priority:
1)HTTP
2)XMPP
3)SIP
4)IMAP
5)TOR
6)NNTP

As far as daemon selection goes, there was (general) agreement that we
should use Apache for HTTP (despite its weight), Prosody for XMPP, and
Yate for SIP.

We also discussed UI, stressing its paramount importance to the
success or failure of the endeavor. The idea of having the user
configure and interface with the box via chatt (XMPP chat) was
suggested. There's also always the fallback position of a web GUI.
Still, many felt that the chat idea has great potential.

Then, we chose to approach the discussion from the angle of open
problems, both short and long term:
1) The ability to generate good random numbers

    a) We could foster the development of a free/open entropy key.
    Problem with this solution is cost.
    b) We could fetch randoms from a trusted upstream source. Problem
    here is with the first Diffee-Hellman exchange.
```

c) We could feed a noise-generating circuit into the audio
interface. This seems like a viable solution on the DreamPlug, but
is not an option on some hardware.

2) How to build robust, no-hassle mesh networks.

a) B.A.T.M.A.N. protocol is good, but people have been having a
lot of success with the new OLSRd. FunkFeuer has had great
results.
b) The problem is with the radios. A single, embedded 2.4Ghz radio
will not lead to good QoS, plus it should probably be reserved for
communicating with client devices inside the home/business.
c) The Free Network Foundation is designing FreedomNode, which is
essentially the same as FreedomBox but with the addition of two
5GHz radios, allowing for multiple full-duplex mesh links.

3) Free Drivers (wifi and bluetooth drivers are closed)

a)Argue with Marvell
b)Reverse Engineer

4) Persistent Names (which don't rely on existing DNS)

a)Name resolution based on a DHT. Problem with table poisoning
could be approached by authorizing and authenticating those that
participate in the resolution table. This would still introduce a
degree of hierarchy, but it would be far more distributed than
what we have now.
b)Use TOR hidden services. This solution is good for those that
are running tor, but otherwise require use of tor-to-web. Also,
the .onion names are not human-readable, so would require further
resolution via the mechanism above, or existing DNS. This was a
topic of much controversy. Many feel that it is unnecessary to
route all FBX traffic through TOR.

5) Grid Dependence (electrical)

a)Add PV cells to rig. (Again, $$$)

6) Store and Forward Messagaing (The ability to store messages until
they become deliverable)

a)Utilize Shamir's Secret Sharing Scheme (SSSS), gather physically
and exchange via radio.

7) Archiving Proxy that maintains privacy and security

8) Distributed Backup

a)Tahoe LAFS

    b)Pagekite

9) Bitbank

10) One Time Passwords

11) Distributed Search

    a)YaCy
    b)Seeks

12) Stealth Hardware

    a)Sell a version wrapped in some other shell

13) Access control

    a)Friend of a Friend
    b)Case by case + key rating system

We also talked about the incentives for building such a device:
1) Help fight central central control
2) Enable communications that are materially peer-to-peer
3) Enable local verticals

    a)Filesharing
    b)Local information sytems

4) Co-ownership of the PHY layer
5) Save money by building access cooperatives
6) Become our own ISPs

In addition, there were some trains of discussion that do not fit
neatly into any of the categories above. We talked about the
importance of thinking about how technology is actually adopted in the
real world. It is picked up first by power users, and then friends and
family take their tech cues from those their trust and respect, or
from their local technology shop. What incentives do the technically
inclined have to recommend this solution to their friends? What about
the people running a small computer store or internet cafe?

Finally, I talked a little bit about why the FNF is involved in FBX
development, and what we'd like to build using the box as a platform.
I'll summarize it quickly, here, but there's more at [1]thefnf.org,
if you're interested.

We'd like to add two 5Ghz radios to the rig, enabling it to establish
high-throughput links to other boxes in the neighborhood. We call this
FreedomBox + radios rig a 'FreedomNode.' We're also working on what
we've been calling the 'FreedomTower.' This is a piece of

```
infrastructure that would have 5GHz radios and sit inside a mesh of
two to three thousand boxes. It would also have 3650MHz for long-range
links to other towers, thus forming a regional mesh network. Finally,
inside the regional mesh there would be a single 'FreedomLink,' - a
multi-homed, fiber-connected host, sitting in the 3650MHz regional
mesh, and speaking BGP to the global internet. This is a practicable
way to build Autonomous Systems that are owned and operated
collectively. Of course, outside lines could also be connected at any
level of the hierarchy (box, tower, link), and shared among the
community.  The vision is large in scope, but the first step is
definitely to bootstrap the FreedomBox.

Anyways, I hope that this all will jump-start some discussion.

take care,
Isaac Wilder
Directer, The Free Network Foundation
[2]thefnf.org
```

1. `https://thefnf.org/`
2. `https://thefnf.org/`

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imw (2011-08-20 16:52:22)
NNTP. I'm going to go ahead and fix it in the post. Thanks for the heads up.

Torsten (2011-08-20 16:49:49)
6) NMTP? Did you mean NNTP or NTP? Google is not helping with this acronym...

jimmybrown (2012-09-11 07:36:42)
Gucci Boston Bags te koop

Awesome (2011-08-22 00:20)

This is really cool:

[1]https://bitbucket.org/nickdaly/plugserver

Also, this:

[2]http://protonet.info/

1. `https://bitbucket.org/nickdaly/plugserver`
2. `http://protonet.info/`

58

Ends and Means (2011-08-28 18:53)

Hey everyone,

I finished a draft of a document that I've been calling 'Ends and Means of the Free Network Movement.'

The name might change, but I do think that the document forms the basis of something that is going to stick around.

The document is in The Commons, [1]here.

What do people think of the name 'Grow Your Own Network'?

Let me know in the comments.

take care,

imw

1. `http://www.freenetworkmovement.org/commons/index.php?title=Ends_and_Means`

——————————————

No Merger (2011-08-31 15:48)

Found out this morning that the US is going to block the acquisition of T-Mobile by AT &T. Interesting news, though I'm not sure if it's good or bad. I mean, from a pro-competition and low prices point of view, it's probably good. From a 'our network is on the verge of collapse point of view' it's probably pretty bad.

Wait.... that might be good.

I mean, I hate to say it, but it seems like maybe the state of the network is going to have to get worse before it gets better. Perhaps this is a harbinger.

Now, if we could only get them to block the merger of Level 3 and Global Crossing, that would be another story entirely.

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1.5   September

Progress (2011-09-11 18:51)

Just wanted to post a brief progress report.

Things are moving forward, and the FNF continues to grow. Over the last couple of weeks - really ever since Germany - people have begun to step up, and a cadre of leaders has emerged. Things move so much faster when you work as a team.

We've finally gotten the ball rolling on a number of initiatives.

- Our web properties are almost where we need them to be in order to facilitate global technical cooperation.

- Charles is forging ahead, as always, and has secured colo space for two FreedomLinks.

- We're getting some Merchandise (stickers and shirts), to spread the message, and hopefully raise some funds.

- I'll be representing the FNF at [1] #OCCUPYWALLSTREET, asking people to demand better spectrum policy

- [2]Ends and Means is coming together, and should soon be ready for wider distribution.

We're about to begin our sprint to Contact, and I couldn't be more excited. The aim is to demonstrate the feasibility of the material peer-to-peer paradigm. Our demonstration will be relatively controlled, but live. The identity management and user interface portions of the stack will not be included - only the communications and networking backend. If time permits, we will do a mock-up of the upper layers, but the most important things is to give people a hands-on introduction to the fractal mesh concept and mp2p.

That's all for now. If you're interested in helping out, send an email to isaac@freenetworkmovement.org, or join the mailing list.

take care,

imw

1. https://occupywallst.org/
2. http://www.freenetworkmovement.org/commons/index.php?title=Ends_and_Means

————————————

Time to Get Serious (2011-09-28 06:23)

Much has happened. People are waking up. They want liberty.

It's a good thing that FreedomLink and FreedomTower are nearing completion.

I'm on my way down to Austin, TX tomorrow, to confer with Charles and Jason.

A couple of weeks from now, I will bring a FreedomTower to Liberty Park.

Then I'll invite the folks from the Contact summit down to the park to check it out.

Hopefully, they'll give us 10 G's, and some publicity.

This is the stack that we've built in preparation for what lies ahead:

Wordpress for publication

Etherpad for editing

Wiki for document storage

Bettermeans for proccess

Redmine for task management

For more on FreedomLink/FreedomTower, see Charles' posts, here:

[1]Plan Between now and ContactCon

[2]Tasks Between now and end of September

[3]FreedomLink

We'll probably move those posts over to this site in the coming days, and create a post to track the progress of FreedomTower.

For now, just envision six radios, 4 cell phones, one computer, and a generator. Or something like that. =)

1. `http://blog.knownelement.com/2011/09/11/plan-between-now-and-contactcon/`
2. `http://blog.knownelement.com/2011/09/11/plan-between-now-and-contactcon/`
3. `http://blog.knownelement.com/2011/09/03/freedomlink/`

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1.6 October

FreedomLink Information (2011-10-02 06:56)

Hey all. First post here at FNF. Wanted to port over my post on the FreedomLink work that is being done. Here it is...

I just wanted to capture some quick notes about the build out of the FNF first point of presence. This build is being done by Known Element Enterprises as a corporate friend to FNF.

The FreedomLink is how the network connects with the rest of the world. It will speak BGP with the internet at large and various interior gateway routing protocols (Babel/OSLR/OSPF/Batman) with the FreedomTower. (I'll write another blog post when I build out the FreedomTower).

This first FreedomLink is also hosting all of Known Element Enterprises production corporate infrastructure.

Overview of the hardware in the POP:

- Dell PowerEdge2800 running Debian Stable (Squeeze) with LXC (for linux guests). Each of the below will exist twice. One set for FNF and one set for KNEL.

- – LXC Guest - Jabber (Debian squeeze)
  – LXC Guest - Freeswitch (Debian squeeze)
  – LXC Guest - FabFi Controller (Debian squeeze)
  – LXC Guest - SOGO instance (Exchange replacement) (Debian squeeze)
  – LXC Guest - PowerDNS (Debian Squeeze)
  – LXC Guest - Bettermeans (Debian Squeeze)
  – LXC Guest - Phantom (Debian Squeeze)
  – LXC Guest - TOR (Debian Squeeze)
  – LXC Guest xibo (Debian Squeeze)

- LXC Guest Etherpad (Debian Squeeze)
- LXC Guest Git (Debian Squeeze)
- LXC Guest Network monitoring (Debian Squeeze. Multi tenant)
- LXC Guest Nocproject.org (Debian Squeeze, Multi tenant)
- LXC Guest - Snorby (SNORT on bare metal feeds into this) (Debian squeeze, Multi tenant)
- LXC Guest - WWW / DB / mail (centos6. running cpanel)
- LXC Guest - FLOSSOTP instance (Radius/Kerberos/OTP) (Centos)
- LXC Guest - PacketFence (Centos)

- 2 USB 8GB flash drives (RAID 1) for root drive

- 2 USB 1TB hard drives (RAID1) for /data

- 1 USB 1TB hard drive for /backup

- 4 port 100mbps card, 1 Intel gigabit NIC, 2 built in 10/100/1000 ports configured as follows:

  - * Port 1,2 of 100mbps add on card is bonded, highly available management interface (bond0)
    * Port 3,4 of 100mbps add on card is bonded. highly available front end interface (bond1)
    * Intel gigabit card , Builtin NIC 1/2 is bonded, highly available link to KCIX (bond2)

- Dell Optiplex 745 running pfSense

  - routing traffic to the various KNEL/FNF virtual machines
  - terminating site to site VPN link
  - terminating road warrior VPN access
  - Running BGP
  - Running OSPF

- Cisco Switch (not sure which one from my stock I will use yet)

  - Used for peering with others in the POP
  - Used for linking up any servers we add (just one for now)
  - Used for Avocent PDU management access

- Avocent PDU

  - Always good to be able to power cycle systems remotely.

outstanding collocation server tasks and notes:

Production box tasks: (this is going to colo in next week or two). This will be the FreedomLink system used for ContactCon demo and to run the production network.

1) Fix RAID for /
2) Fix raid for /data

For 1 I needed to add rootdelay=30 to /etc/default/grub and run update-grub. Other wise the drives didn't show up before the mdadm scan process executed.

3) Auto mount /backup
4) Setup root e-mail forwarding (forwarding to an alias which alerts my operations staff)
6) Setup centralized system logging from the vm guests to rsyslog listener on bare metal. Setup logwatch to send daily e-mail summary.
8) Setup LXC (light weight, upstream and vendor supported virtualization platform. Really the best choice for linux guests these days. apt-get install lxc and a few tweaks to a template and good to go. Using debootstrap and apt-cacher)
9) Setup ossec (webui/server on bare metal, agent built/running in base virtaul machine)
10) Setup cpanel LXC instance (redhat) (in progress. template built but having issues starting up. will get back to this later).

Phase 2 tasks:

11) Setup snort / clamav (this operates on br0 which will grab traffic for bare metal and all guests) (in progress. snort installed and running. need to setup snorby vm for detailed analysis purposes)

12) Setup sebek (from the honeynet project. An additional security measure) (in progress

13) Setup LXC virtual machines (in progress)

14) Setup smartmon/smartd and mdadm monitoring/alerting (in progress. see storage notes below)

15) Setup pfsense box (hardware procured. pfSense installed. vlans setup. A router is never fully finished).

16) Label and document hardware

Storage notes:

```
/dev/sdb1: UUID="7a0c9676-d3b4-6a0d-cd2a-4d3d158dbad1"
LABEL="debian:0" TYPE="linux_raid_member"

/dev/sdc1: UUID="906e0cf8-7966-9eca-9dfa-4596c9ac4262"
LABEL="debian:1" TYPE="linux_raid_member"
smartctl 5.40 2010-07-12 r3124 [x86_64-unknown-linux-gnu] (local
build)
Copyright (C) 2002-10 by Bruce Allen,
http://smartmontools.sourceforge.net

=== START OF INFORMATION SECTION ===
Model Family:     Seagate Barracuda LP
Device Model:     ST31500541AS
Serial Number:    6XW0BSWS
Firmware Version: CC34
```

```
User Capacity:      1,500,301,910,016 bytes
Device is:          In smartctl database [for details use: -P show]
ATA Version is:     8
ATA Standard is:    ATA-8-ACS revision 4
Local Time is:      Sun Sep 25 12:57:34 2011 CDT
SMART support is: Available - device has SMART capability.
SMART support is: Enabled


=== START OF READ SMART DATA SECTION ===
SMART overall-health self-assessment test result: FAILED!
Drive failure expected in less than 24 hours. SAVE ALL DATA.
See vendor-specific Attribute list for failed Attributes.


General SMART Values:
Offline data collection status:  (0x00)    Offline data collection
activity
                                           was never started.
                                           Auto Offline Data Collection:
Disabled.
Self-test execution status:      (   0)    The previous self-test
routine completed
                                           without error or no self-test has
ever
                                           been run.
Total time to complete Offline
data collection:                 ( 663) seconds.
Offline data collection
capabilities:                        (0x73) SMART execute Offline
immediate.
                                           Auto Offline data collection
on/off support.
                                           Suspend Offline collection upon
new
                                           command.
                                           No Offline surface scan
supported.
                                           Self-test supported.
                                           Conveyance Self-test supported.
                                           Selective Self-test supported.
SMART capabilities:            (0x0003)    Saves SMART data before
entering
                                           power-saving mode.
                                           Supports SMART auto save timer.
Error logging capability:        (0x01)    Error logging supported.
                                           General Purpose Logging
supported.
Short self-test routine
recommended polling time:        (   1) minutes.
Extended self-test routine
recommended polling time:        ( 255) minutes.
```

```
Conveyance self-test routine
recommended polling time:     (    2) minutes.
SCT capabilities:              (0x103f) SCT Status supported.
                                        SCT Error Recovery Control
supported.
                                        SCT Feature Control supported.
                                        SCT Data Table supported.


SMART Attributes Data Structure revision number: 10
Vendor Specific SMART Attributes with Thresholds:
ID# ATTRIBUTE_NAME          FLAG     VALUE WORST THRESH TYPE
UPDATED  WHEN_FAILED RAW_VALUE
  1 Raw_Read_Error_Rate     0x000f   118   086   006    Pre-fail
Always       -          179831375
  3 Spin_Up_Time            0x0003   100   100   000    Pre-fail
Always       -          0
  4 Start_Stop_Count        0x0032   100   100   020    Old_age
Always       -          168
  5 Reallocated_Sector_Ct   0x0033   009   009   036    Pre-fail
Always   FAILING_NOW 3753
  7 Seek_Error_Rate         0x000f   053   048   030    Pre-fail
Always       -          339317025127
  9 Power_On_Hours          0x0032   095   095   000    Old_age
Always       -          4954
 10 Spin_Retry_Count        0x0013   100   100   097    Pre-fail
Always       -          0
 12 Power_Cycle_Count       0x0032   100   100   020    Old_age
Always       -          72
183 Runtime_Bad_Block       0x0032   100   100   000    Old_age
Always       -          0
184 End-to-End_Error        0x0032   100   100   099    Old_age
Always       -          0
187 Reported_Uncorrect      0x0032   099   099   000    Old_age
Always       -          1
188 Command_Timeout         0x0032   100   096   000    Old_age
Always       -          103080787995
189 High_Fly_Writes         0x003a   100   100   000    Old_age
Always       -          0
190 Airflow_Temperature_Cel 0x0022   056   052   045    Old_age
Always       -          44 (Lifetime Min/Max 40/44)
194 Temperature_Celsius     0x0022   044   048   000    Old_age
Always       -          44 (0 22 0 0)
195 Hardware_ECC_Recovered  0x001a   060   045   000    Old_age
Always       -          179831375
197 Current_Pending_Sector  0x0012   086   086   000    Old_age
Always       -          581
198 Offline_Uncorrectable   0x0010   086   086   000    Old_age
Offline      -          581
199 UDMA_CRC_Error_Count    0x003e   200   200   000    Old_age
Always       -          0
```

```
240 Head_Flying_Hours         0x0000   100   253   000    Old_age
Offline        -         275436252694425
241 Total_LBAs_Written        0x0000   100   253   000    Old_age
Offline        -         2072428455
242 Total_LBAs_Read           0x0000   100   253   000    Old_age
Offline        -         4249148881

SMART Error Log Version: 1
ATA Error Count: 4102 (device log contains only the most recent five
errors)
     CR = Command Register [HEX]
     FR = Features Register [HEX]
     SC = Sector Count Register [HEX]
     SN = Sector Number Register [HEX]
     CL = Cylinder Low Register [HEX]
     CH = Cylinder High Register [HEX]
     DH = Device/Head Register [HEX]
     DC = Device Command Register [HEX]
     ER = Error register [HEX]
     ST = Status register [HEX]
Powered_Up_Time is measured from power on, and printed as
DDd+hh:mm:SS.sss where DD=days, hh=hours, mm=minutes,
SS=sec, and sss=millisec. It "wraps" after 49.710 days.

Error 4102 occurred at disk power-on lifetime: 4779 hours (199 days +
3 hours)
  When the command that caused the error occurred, the device was
active or idle.

  After command completion occurred, registers were:
  ER ST SC SN CL CH DH
  -- -- -- -- -- -- --
  04 71 04 9d 00 32 40  Device Fault; Error: ABRT 4 sectors at LBA =
0x0032009d = 3276957

  Commands leading to the command that caused the error were:
  CR FR SC SN CL CH DH DC    Powered_Up_Time  Command/Feature_Name
  -- -- -- -- -- -- -- --    ---------------  --------------------
  25 03 08 57 30 00 40 00    3d+06:58:12.228  READ DMA EXT
  25 03 08 57 30 00 40 00    3d+06:58:06.716  READ DMA EXT
  25 03 08 57 30 00 40 00    3d+06:58:06.155  READ DMA EXT
  25 03 08 57 30 00 40 00    2d+10:53:29.704  READ DMA EXT
  25 03 08 57 30 00 40 00    2d+06:58:07.879  READ DMA EXT

Error 4101 occurred at disk power-on lifetime: 4775 hours (198 days +
23 hours)
  When the command that caused the error occurred, the device was
active or idle.

  After command completion occurred, registers were:
```

```
   ER ST SC SN CL CH DH
   -- -- -- -- -- -- --
   04 71 04 9d 00 32 40  Device Fault; Error: ABRT 4 sectors at LBA =
0x0032009d = 3276957

   Commands leading to the command that caused the error were:
   CR FR SC SN CL CH DH DC   Powered_Up_Time  Command/Feature_Name
   -- -- -- -- -- -- -- --   ---------------  --------------------
   25 03 08 57 30 00 40 00    3d+06:58:06.716  READ DMA EXT
   25 03 08 57 30 00 40 00    3d+06:58:06.155  READ DMA EXT
   25 03 08 57 30 00 40 00    2d+10:53:29.704  READ DMA EXT
   25 03 08 57 30 00 40 00    2d+06:58:07.879  READ DMA EXT
   25 03 08 57 30 00 40 00    2d+06:58:02.348  READ DMA EXT

Error 4100 occurred at disk power-on lifetime: 4775 hours (198 days +
23 hours)
  When the command that caused the error occurred, the device was
active or idle.

   After command completion occurred, registers were:
   ER ST SC SN CL CH DH
   -- -- -- -- -- -- --
   04 71 04 9d 00 32 40  Device Fault; Error: ABRT 4 sectors at LBA =
0x0032009d = 3276957

   Commands leading to the command that caused the error were:
   CR FR SC SN CL CH DH DC   Powered_Up_Time  Command/Feature_Name
   -- -- -- -- -- -- -- --   ---------------  --------------------
   25 03 08 57 30 00 40 00    3d+06:58:06.155  READ DMA EXT
   25 03 08 57 30 00 40 00    2d+10:53:29.704  READ DMA EXT
   25 03 08 57 30 00 40 00    2d+06:58:07.879  READ DMA EXT
   25 03 08 57 30 00 40 00    2d+06:58:02.348  READ DMA EXT
   25 03 08 57 30 00 40 00    2d+06:58:00.200  READ DMA EXT

Error 4099 occurred at disk power-on lifetime: 4775 hours (198 days +
23 hours)
  When the command that caused the error occurred, the device was
active or idle.

   After command completion occurred, registers were:
   ER ST SC SN CL CH DH
   -- -- -- -- -- -- --
   04 71 04 9d 00 32 40  Device Fault; Error: ABRT 4 sectors at LBA =
0x0032009d = 3276957

   Commands leading to the command that caused the error were:
   CR FR SC SN CL CH DH DC   Powered_Up_Time  Command/Feature_Name
   -- -- -- -- -- -- -- --   ---------------  --------------------
   25 03 08 57 30 00 40 00    2d+10:53:29.704  READ DMA EXT
   25 03 08 57 30 00 40 00    2d+06:58:07.879  READ DMA EXT
```

```
   25 03 08 57 30 00 40 00    2d+06:58:02.348  READ DMA EXT
   25 03 08 57 30 00 40 00    2d+06:58:00.200  READ DMA EXT
   25 03 08 57 30 00 40 00    1d+10:53:15.848  READ DMA EXT
```

Error 4098 occurred at disk power-on lifetime: 4755 hours (198 days + 3 hours)
  When the command that caused the error occurred, the device was active or idle.

  After command completion occurred, registers were:
  ER ST SC SN CL CH DH
  -- -- -- -- -- -- --
  04 71 04 9d 00 32 40 Device Fault; Error: ABRT 4 sectors at LBA = 0x0032009d = 3276957

  Commands leading to the command that caused the error were:
  CR FR SC SN CL CH DH DC   Powered_Up_Time Command/Feature_Name
  -- -- -- -- -- -- -- --   --------------- --------------------
  25 03 08 57 30 00 40 00   2d+06:58:07.879 READ DMA EXT
  25 03 08 57 30 00 40 00   2d+06:58:02.348 READ DMA EXT
  25 03 08 57 30 00 40 00   2d+06:58:00.200 READ DMA EXT
  25 03 08 57 30 00 40 00   1d+10:53:15.848 READ DMA EXT
  25 03 08 57 30 00 40 00   1d+06:58:00.913 READ DMA EXT

SMART Self-test log structure revision number 1
No self-tests have been logged. [To run self-tests, use: smartctl -t]

SMART Selective self-test log data structure revision number 1
 SPAN MIN_LBA MAX_LBA CURRENT_TEST_STATUS
    1   0   0 Not_testing
    2   0   0 Not_testing
    3   0   0 Not_testing
    4   0   0 Not_testing
    5   0   0 Not_testing
Selective self-test flags (0x0):
  After scanning selected spans, do NOT read-scan remainder of disk.
If Selective self-test is pending on power-up, resume after 0 minute delay.

/dev/sdd1: UUID="609a9a7b-a578-4a84-87af-8eb6de3dbf2f" TYPE="ext3"
smartctl 5.40 2010-07-12 r3124 [x86_64-unknown-linux-gnu] (local build)
Copyright (C) 2002-10 by Bruce Allen,
http://smartmontools.sourceforge.net

=== START OF INFORMATION SECTION ===
Model Family: Hitachi Deskstar 7K1000.B
Device Model: Hitachi HDT721010SLA360
Serial Number: STF605MS0BXLYK
Firmware Version: ST6OA3AA

```
User Capacity:      1,000,204,886,016 bytes
Device is:          In smartctl database [for details use: -P show]
ATA Version is:     8
ATA Standard is:    ATA-8-ACS revision 4
Local Time is:      Sun Sep 25 12:56:35 2011 CDT
SMART support is: Available - device has SMART capability.
SMART support is: Enabled


=== START OF READ SMART DATA SECTION ===
Error SMART Status command failed
Please get assistance from http://smartmontools.sourceforge.net/
Register values returned from SMART Status command are:
 ERR=...., SC=...., LL=...., LM=...., LH=...., DEV=...., STS=....
SMART overall-health self-assessment test result: PASSED
Warning: This result is based on an Attribute check.


General SMART Values:
Offline data collection status:  (0x80)     Offline data collection
activity
                                 was never started.
                                 Auto Offline Data Collection:
Enabled.
Self-test execution status:      (   0)     The previous self-test
routine completed
                                 without error or no self-test has
ever
                                 been run.
Total time to complete Offline
data collection:                 (14090) seconds.
Offline data collection
capabilities:                       (0x5b) SMART execute Offline
immediate.
                                 Auto Offline data collection
on/off support.
                                 Suspend Offline collection upon
new
                                 command.
                                 Offline surface scan supported.
                                 Self-test supported.
                                 No Conveyance Self-test
supported.
                                 Selective Self-test supported.
SMART capabilities:            (0x0003)     Saves SMART data before
entering
                                 power-saving mode.
                                 Supports SMART auto save timer.
Error logging capability:        (0x01)     Error logging supported.
                                 General Purpose Logging
supported.
Short self-test routine
```

```
recommended polling time:      (   1) minutes.
Extended self-test routine
recommended polling time:      ( 235) minutes.
SCT capabilities:           (0x003d) SCT Status supported.
                                     SCT Error Recovery Control
supported.
                                     SCT Feature Control supported.
                                     SCT Data Table supported.


SMART Attributes Data Structure revision number: 16
Vendor Specific SMART Attributes with Thresholds:
ID# ATTRIBUTE_NAME          FLAG     VALUE WORST THRESH TYPE
UPDATED  WHEN_FAILED RAW_VALUE
  1 Raw_Read_Error_Rate     0x000b   100   100   016    Pre-fail
Always       -       0
  2 Throughput_Performance  0x0005   132   132   054    Pre-fail
Offline      -       114
  3 Spin_Up_Time            0x0007   145   145   024    Pre-fail
Always       -       370 (Average 422)
  4 Start_Stop_Count        0x0012   100   100   000    Old_age
Always       -       208
  5 Reallocated_Sector_Ct   0x0033   100   100   005    Pre-fail
Always       -       0
  7 Seek_Error_Rate         0x000b   100   100   067    Pre-fail
Always       -       0
  8 Seek_Time_Performance   0x0005   123   123   020    Pre-fail
Offline      -       34
  9 Power_On_Hours          0x0012   099   099   000    Old_age
Always       -       9273
 10 Spin_Retry_Count        0x0013   100   100   060    Pre-fail
Always       -       0
 12 Power_Cycle_Count       0x0032   100   100   000    Old_age
Always       -       181
192 Power-Off_Retract_Count 0x0032   100   100   000    Old_age
Always       -       544
193 Load_Cycle_Count        0x0012   100   100   000    Old_age
Always       -       544
194 Temperature_Celsius     0x0002   117   117   000    Old_age
Always       -       51 (Lifetime Min/Max 22/62)
196 Reallocated_Event_Count 0x0032   100   100   000    Old_age
Always       -       0
197 Current_Pending_Sector  0x0022   100   100   000    Old_age
Always       -       0
198 Offline_Uncorrectable   0x0008   100   100   000    Old_age
Offline      -       0
199 UDMA_CRC_Error_Count    0x000a   200   200   000    Old_age
Always       -       15


SMART Error Log Version: 1
No Errors Logged
```

```
SMART Self-test log structure revision number 1
No self-tests have been logged.  [To run self-tests, use: smartctl -t]


SMART Selective self-test log data structure revision number 1
 SPAN  MIN_LBA  MAX_LBA  CURRENT_TEST_STATUS
    1        0        0  Not_testing
    2        0        0  Not_testing
    3        0        0  Not_testing
    4        0        0  Not_testing
    5        0        0  Not_testing
Selective self-test flags (0x0):
  After scanning selected spans, do NOT read-scan remainder of disk.
If Selective self-test is pending on power-up, resume after 0 minute
delay.


/dev/sde1: UUID="906e0cf8-7966-9eca-9dfa-4596c9ac4262"
LABEL="debian:1" TYPE="linux_raid_member"
smartctl 5.40 2010-07-12 r3124 [x86_64-unknown-linux-gnu] (local
build)
Copyright (C) 2002-10 by Bruce Allen,
http://smartmontools.sourceforge.net


=== START OF INFORMATION SECTION ===
Model Family:     SAMSUNG SpinPoint F2 EG series
Device Model:     SAMSUNG HD103SI
Serial Number:    S20XJDWSC11561
Firmware Version: 1AG01118
User Capacity:    1,000,204,886,016 bytes
Device is:        In smartctl database [for details use: -P show]
ATA Version is:   8
ATA Standard is:  ATA-8-ACS revision 3b
Local Time is:    Sun Sep 25 12:56:17 2011 CDT
SMART support is: Available - device has SMART capability.
SMART support is: Enabled


=== START OF READ SMART DATA SECTION ===
SMART overall-health self-assessment test result: PASSED


General SMART Values:
Offline data collection status:  (0x00)      Offline data collection
activity
                                     was never started.
                                     Auto Offline Data Collection:
Disabled.
Self-test execution status:      (   0)      The previous self-test
routine completed
                                     without error or no self-test has
ever
                                     been run.
```

```
Total time to complete Offline
data collection:                (12870) seconds.
Offline data collection
capabilities:                           (0x7b) SMART execute Offline
immediate.
                                Auto Offline data collection
on/off support.
                                Suspend Offline collection upon
new
                                command.
                                Offline surface scan supported.
                                Self-test supported.
                                Conveyance Self-test supported.
                                Selective Self-test supported.
SMART capabilities:            (0x0003)     Saves SMART data before
entering
                                power-saving mode.
                                Supports SMART auto save timer.
Error logging capability:       (0x01)      Error logging supported.
                                General Purpose Logging
supported.
Short self-test routine
recommended polling time:       (   2) minutes.
Extended self-test routine
recommended polling time:       ( 215) minutes.
Conveyance self-test routine
recommended polling time:       (  23) minutes.
SCT capabilities:              (0x003f) SCT Status supported.
                                SCT Error Recovery Control
supported.
                                SCT Feature Control supported.
                                SCT Data Table supported.


SMART Attributes Data Structure revision number: 16
Vendor Specific SMART Attributes with Thresholds:
ID# ATTRIBUTE_NAME            FLAG      VALUE WORST THRESH TYPE
UPDATED   WHEN_FAILED RAW_VALUE
  1 Raw_Read_Error_Rate       0x000f    100   100   051    Pre-fail
Always        -         0
  3 Spin_Up_Time              0x0007    082   082   011    Pre-fail
Always        -         6380
  4 Start_Stop_Count          0x0032    100   100   000    Old_age
Always        -         262
  5 Reallocated_Sector_Ct     0x0033    100   100   010    Pre-fail
Always        -         0
  7 Seek_Error_Rate           0x000f    100   100   051    Pre-fail
Always        -         0
  8 Seek_Time_Performance     0x0025    100   100   015    Pre-fail
Offline       -         0
  9 Power_On_Hours            0x0032    099   099   000    Old_age
```

```
Always            -        4109
 10 Spin_Retry_Count        0x0033   100   100   051    Pre-fail
Always            -        0
 11 Calibration_Retry_Count 0x0012   100   100   000    Old_age
Always            -        0
 12 Power_Cycle_Count       0x0032   100   100   000    Old_age
Always            -        114
 13 Read_Soft_Error_Rate    0x000e   100   100   000    Old_age
Always            -        0
183 Runtime_Bad_Block       0x0032   100   100   000    Old_age
Always            -        0
184 End-to-End_Error        0x0033   100   100   000    Pre-fail
Always            -        0
187 Reported_Uncorrect      0x0032   100   100   000    Old_age
Always            -        0
188 Command_Timeout         0x0032   100   100   000    Old_age
Always            -        0
190 Airflow_Temperature_Cel 0x0022   057   056   000    Old_age
Always            -        43 (Lifetime Min/Max 40/43)
194 Temperature_Celsius     0x0022   052   052   000    Old_age
Always            -        48 (Lifetime Min/Max 40/48)
195 Hardware_ECC_Recovered  0x001a   100   100   000    Old_age
Always            -        6927043
196 Reallocated_Event_Count 0x0032   100   100   000    Old_age
Always            -        0
197 Current_Pending_Sector  0x0012   100   100   000    Old_age
Always            -        0
198 Offline_Uncorrectable   0x0030   100   100   000    Old_age
Offline           -        0
199 UDMA_CRC_Error_Count    0x003e   100   100   000    Old_age
Always            -        1
200 Multi_Zone_Error_Rate   0x000a   100   100   000    Old_age
Always            -        0
201 Soft_Read_Error_Rate    0x000a   253   253   000    Old_age
Always            -        0

SMART Error Log Version: 1
No Errors Logged

SMART Self-test log structure revision number 1
No self-tests have been logged.  [To run self-tests, use: smartctl -t]

SMART Selective self-test log data structure revision number 1
 SPAN  MIN_LBA  MAX_LBA  CURRENT_TEST_STATUS
    1        0        0  Not_testing
    2        0        0  Not_testing
    3        0        0  Not_testing
    4        0        0  Not_testing
    5        0        0  Not_testing
Selective self-test flags (0x0):
```

After scanning selected spans, do NOT read-scan remainder of disk.
If Selective self-test is pending on power-up, resume after 0 minute
delay.

```
282  smartctl -i /dev/md0
283  smartctl -i /dev/sda
284  smartctl -i /dev/sdb
285  smartctl -i /dev/sdc
286  smartctl -i /dev/sdd
289  smartctl -i /dev/sda
290  smartctl -i /dev/sdb
291  smartctl -i /dev/sdc
292  smartctl -i /dev/sdd
293  smartctl -i /dev/sde
294  smartctl -d ata -i /dev/sdd
295  smartctl -d sat -i /dev/sdd
296  smartctl -d sat -i /dev/sda
297  smartctl -d sat -i /dev/sdb
298  smartctl -d sat -i /dev/sdc
299  smartctl -d sat -i /dev/sdd
300  smartctl -d sat -i /dev/sde
304  smartctl -i /dev/sda
305  smartctl -d sat -i /dev/sda
306  smartctl -d sat -i /dev/sdb
307  smartctl -d sat -i /dev/sdc
308  smartctl  -i /dev/sdc
309  smartctl  -i /dev/sdc >> drives
310  smartctl -i /dev/sde
311  smartctl -d sat -i /dev/sde
312  smartctl -d sat -i /dev/sde >> drives
313  smartctl -d sat -i /dev/sdf >> drives
344  smartctl -i  /dev/sdb
346  smartctl -i  /dev/sdc
347  smartctl -i  /dev/sdc >> drives
349  smartctl -i  /dev/sdb
350  smartctl -d sat -i  /dev/sdb
351  smartctl -T permissive -d sat -i  /dev/sdb
352  smartctl -s on -T permissive -d sat -i  /dev/sdb
356  smartctl -i  /dev/sdd
357  smartctl -h
359  smartctl --all /dev/sdc
360  smartctl --all /dev/sdc >> drives
362  smartctl --all /dev/sdd
363  smartctl --all /dev/sde
364  smartctl --all /dev/sdf
365  smartctl -d sat --all /dev/sde
366  smartctl -d sat --all /dev/sde >> drives
368  smartctl -d sat --all /dev/sde >> drives
372  smartctl -d sat --all /dev/sdd >> drives
374  smartctl -d sat --all /dev/sde
```

```
375  smartctl -d sat --all /dev/sde >> drives
377  smartctl -d sat --all /dev/sde
378  smartctl -d sat --all /dev/sde >> drives
380  smartctl -d sat --all /dev/sdd
381  smartctl -d sat --all /dev/sdd >> drives
383  smartctl -d sat --all /dev/sdc
384  smartctl  --all /dev/sdc
385  smartctl  --all /dev/sdc >> drives
391  smartctl  --all /dev/sdb
392  smartctl  -d sat --all /dev/sdb
394  history |grep smartctl
395  history |grep smartctl >> drives
```

––––––––––––––––

Charles N Wyble blog | Blog | FreedomLink (2011-10-02 06:58:11)

[...] charlesnwFreedomLink4:57 pm in Uncategorized by charlesnwPost can now be found over on the FNF blog. No Comments ∎ Leave a Reply Click here to cancel reply. Name [...]

FreedomTower Bill of Materials (2011-10-02 17:41)

We are beginning our build of FreedomTower Mark I. It consists of the following components:
A quiet power generator such as the Honda EU1000i ($800)
A UPS such as the APC BE750G ($100)
A nettop such as the Lenovo IdeaCentre ($300)
A load balancing router such as the Cradlepoint MBR1200 ($200)
Two 4G modems such as the Clear Series M ($100 x2 = $200)
Three Ubiquiti NS2's ($80 x3 = $240)
Three Ubiquiti NSM5 Locos ($50 x3 = $150)
Enclosure for UPS, computer, router, modems, and radio power injectors
($50)
Telescoping mast ($30)
Brackets, velcro, whatnot ($20)

So, total bill of materials comes in at $2090

We hope to have it up in a few days' time, though we are waiting on some radios to arrive.

Isaac

Edit: Current info, including a new BoM for the tower is [1]here

1. http://www.freenetworkmovement.org/commons/index.php?title=FreedomTower

Chris (2011-10-20 03:25:32)

Awesome job. Please post detailed instructions and configurations. What OS are you running? How do you know it is secure? What is the range achieved?

Martin (2011-09-30 23:20:00)

I am really happy to see all the ideas gradually materialize. Best of luck with making these talk to one another!

Why the Nerdiest Way to Think About #OWS Is So Useful #acampadabcn #15M #OccupyLSX | acampadabcninternacional (2011-11-22 12:25:25)

[...] run by a group called The Free Network Foundation. They created a $2090 ultra Internet hub called The Freedom Tower that can be easily copied. GET Infrastructure/network amplification: Though the number of people [...]

Una guida all'API di Occupy Wall Street ■ Strelnik (2011-11-22 16:03:43)

[...] da un gruppo, The Free Network Foundation, che ha creato a un Internet hub da 2090 dollari chiamato The Freedom Tower, facilmente [...]

dumb dumb (2011-11-16 22:05:41)

You guys are dumb. Build something without a name brand. Get a job, losers.

A Guide to the Occupy Wall Street API, Or Why the Nerdiest Way to Think About OWS Is So Useful | makemoneywithjcisaacs.com (2011-11-16 23:00:26)

[...] created a $2090 ultra Internet hub called The Freedom Tower that can be easily copied.GET Infrastructure/network [...]

Anon (2011-11-01 19:24:08)

Why not get a Vegtable oil generator? Then buy vetable oil in "bulk" then you could run it cheaper in gas by the gallon... now hey theres an Idea !?

Justin N (2011-11-19 04:32:27)

Instead of buying an expensive load-balancing router, it'd be cheaper to flash a consumer-grade box with DD-WRT or other open firmware. Or get a cheap surplus PC or embedded Linux board and install Smoothwall.

Alex Hardman (2011-10-18 19:30:21)

Would it be possible to get some links to providers of the various tech components? Especially if they want to support the project by providing subsidized equipment or packages.

State of Tech – NYCGA and beyond | Internet (2011-11-06 05:09:47)

[...] Freedom Tower – Providing free WiFi to the park (status unknown, no power at the park) (wiki) [...]

A Guide to the Occupy Wall Street API, Or Why the Nerdiest Way to Think About OWS Is So Useful | Occupy St. Petersburg (2011-11-24 03:03:48)

[...] run by a group called The Free Network Foundation. They created a $2090 ultra Internet hub called The Freedom Tower that can be easily copied. GET Infrastructure/network amplification: Though the number of people in [...]

technum (2011-11-23 17:25:53)

Why not just use a Proxicast or similar device? It's only 3G (AFAIK) but is pre-built, cheaper, and totally portable? http://www.proxicast.com/products/Cell-PAK-Feat.htm

A Guide to the Occupy Wall Street API, Or Why the Nerdiest Way to Think About OWS Is So Useful – Alexis Madrigal – Technology – The Atlantic | WorldWright's … (2011-11-24 19:56:07)

[...] run by a group called The Free Network Foundation. They created a $2090 ultra Internet hub called The Freedom Tower that can be easily copied.GET Infrastructure/network amplification: Though the number of people in [...]

Guida all'API di Occupy Wall Street ∎ l'IO affabile (2011-11-28 18:14:23)

[...] un gruppo, The Free Network Foundation, che ha creato a un Internet hub da 2090 dollari chiamato The Freedom Tower, facilmente [...]

Una guida all'API di Occupy Wall Street, o Perché il modo più nerd di pensare a OWS è utile | Dundun (2012-01-15 10:32:50)

[...] un gruppo, The Free Network Foundation, che ha creato a un Internet hub da 2090 dollari chiamato The Freedom Tower, facilmente [...]

Luther Stracke (2012-03-12 14:58:43)

Whenever someone or a business decides that success has been attained, progress stops. There is absolutely no time for cut-and-dried monotony. There is certainly time for work. And time for love. That leaves few other time!

Internet freedom and the new protest movements ∎ media/anthropology (2012-04-17 11:42:10)

[...] run by a group called The Free Network Foundation. They created a $2090 ultra Internet hub called The Freedom Tower that can be easily copied. GET Infrastructure/network amplification: Though the number of people in [...]

I'm reading Internet freedom and the new protest movements | william j. moner (2012-04-17 17:56:35)

[...] run by a group called The Free Network Foundation. They created a $2090 ultra Internet hub called The Freedom Tower that can be easily copied. GET Infrastructure/network amplification: Though the number of people in [...]

FreedomTower Build Photos (2011-10-03 19:01)

[gallery]

Images of the FreedomTower coming together.

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Martin (2011-10-08 20:22:42)
Thanks for the pictures!

Alex Hardman (2011-10-21 17:54:08)
Awesome set of pictures. I've been searching, but can't really find any links to any repos or anything with any of the software you guys are using. Is it just debian custom configured for your purposes? I'm definitely willing to build at least a node, but perhaps an entire tower if I can get enough local backing from my neighborhood.

Kenny (2011-11-09 22:15:22)
It's a beer cooler and wifi sector tower all in one, brilliant! :) Looking good. What's the construction cost?

phil campbell (2011-10-24 16:36:13)
looking forward to making something similar here in nottingham, england - great to meet you guys in austin! ;)

Technology Converts Journalism by Norihide Miyazaki ∎ yorkcollegenews (2011-12-12 19:00:56)

[...] technologies, journalists need to watch portable independent network devices such as Pirate Box and Freedom Tower. Freedom Tower was used at Occupy Wall Street. People can easily create exclusive mesh networks [...]

Wayne Siemund (2012-07-16 15:58:22)

How about a diagram of all the components and how the system is wired? Even using simple flow chart symbols with labeled boxes and lines would do.

Hackers at work (2011-10-04 18:02)

We are building/configuring/documenting like crazy.

for folks interested in seeing progress with the FreedomTower build, see http://thefnf.org:9001/ro/r.lug5aGlhVVAlXMIm

for folks interested in seeing progress with the FreedomLink work, see http://thefnf.org:9001/ro/r.Rw4RHDJA5GKuAU6A

Feel free to keep an eye on the etherpad. Disclaimer: It's rough, in progress going through various evolutions, like mad. We plan regular drops of stabilized content to the blog as we go along.

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Alex Hardman (2011-11-06 08:22:16)

IS there an updated working document for building a FreedomTower? All the links I've found seem to be down. I've started a wiki page for it as well.

On The Move (2011-10-09 15:17)

The Austin FreedomTower is up and running. The Occupy Austin IT team is making improvements, and Charles will be updating the box to the pfsense-based model in the next couple of days. This will allow for IPSec tunnel termination, and a bigger DHCP address pool.

Jason and I are in Kansas City today, installing the first FreedomLink at Joe's Data Center. This will act as the Tunnel terminus.

All the componenets are configured and ready to box, but we've still got to do final assembly of the New York tower. Then I'll be on the road back to Liberty Park, to give the good people of the Occupation access to the Free Network.

=)

imw

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Phil M. (2011-10-10 07:17:49)
I betcha [1]Occupy Kansas City could use your assistance. I know [2]Occupy Seattle could.

1. `http://occupykc.com/`
2. `http://occupyseattle.org/`

What is the aim of Students for Free Culture | Students for Free Culture - Europe (2011-10-23 15:40:25)
[...] Building alternative internet [...]

From One to Two (2011-10-13 03:39)

The second freedomtower is now up in Liberty Park.

Pushing packets, and making sure that the movement can move its message.

Tomorrow, we begin the WAN rollout.

If you are in New York, and interested in our work, feel free to come down to liberty. Look for the mast with radios on it. Ask for Isaac. I'd be happy to show you around, and ask you for help.

imw

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imw (2011-10-18 19:24:12)
OpEx is about $90 per month. Maybe $100 if you include gasoline for power.

charleswyble (2011-11-22 05:53:45)
Alex, At the moment the towers connect to the FreedomLink over WiMax via Clearwire back haul. No FreedomBoxes built yet. Check out http://wiki.hacdc.org/index.php/Byzantium for the software we will use to power the FreedomBoxes.

Alex Hardman (2011-10-18 19:20:16)
We're down here in Atlanta, and I know I'll chip in to get us one built. I've heard it's about 1500 $, but what about the ongoing costs? I'll start spreading the message here and see what kind of funding we can come up with.

Alex Hardman (2011-10-21 16:17:03)
We're actually planning to run ours off something green, probably solar/wind so no generator. That's pretty awesome. So the uplink costs is in that 90 $?

Alex Hardman (2011-10-21 16:38:27)
After doing a bit more research I better understand the topology and realize that was the answer I was looking for, but the question was wrong. So as I understand it, a freedom tower serves up wifi and serves as the access point for freedom boxes (any in the wild of these, I'd love to build one for my house). Freedom towers connect to a Freedom

Link (there is only one of these so far, right?) which is connected to the backbone (speaks BGP). If that picture is correct, my question is how do the Freedom Towers connect to the Freedom Link? I'm incredibly interested in getting this up and running in my area and also believe that Atlanta could serve as the site of another Freedom Link if we could find someone with the location to host it (I'll contribute a good bit monthly to the uplink cost of something like that).

Great Success! (2011-10-24 03:46)

As many of you have heard by now, the FNF met with great success at this past Thursday's ContactCon. In addition to getting to meet many of my personal heros, engage them in conversation, and move the dialogue surrounding free networks forward, the FNF was declared the winner of the Contact Innovation Prize. It was an incredible honor to receive the award alongside FreedomBox, one of the projects that inspired and motivated our work.

Folks seemed really to like the FreedomTower. Much of the conversation at the conference was about the Occupy movement, and our involvement with General Assemblies nationwide was certainly one of the reasons that we won.

The prize itself is $10,000 in an account at IndieGoGo. Hopefully, this will be the beginning of a successful and ongoing crowdfunding effort. I am now working with the folks at IndieGoGo to craft a campaign that will allow us to fully capitalize on our good fortune.

In many ways, Contact was the boss at the end of level one. Now it's time to get ready for the next level: bigger challenges, more pressure, and harder problems. I am excited to dig in, and sanguine that we will meet with continued success. The plan now is to continue to work on the WAN rollout, and dive into FreedomNode development once Tower and WAN rollout has stabilized.

onwards,

upwards,

forwards,

imw

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Harlene (2011-10-25 23:03:20)
Typo in last sentence of first paragraph of prize announcement. There's an extra "be."

Harlene (2011-10-25 23:04:02)
And, oh ya....CONGRATULATIONS.

Jim Casey (2011-10-24 20:22:45)
Congratulations!

Some Clippings (2011-10-26 16:18)

Just thought I'd share these clippings from recent weeks:

[1]Emergent by Design

[2]NYmag

[3]CNN

[4]BetaBeat

[5]Fast Company

imw

1. `http://emergentbydesign.com/2011/10/18/`
`occupy-wall-street-catalyzing-a-cooperatively-owned-communications-infrastructure/`
2. `http://nymag.com/daily/intel/2011/10/surviving_zuccotti_park_how_th.html`
3. `http://www.cnn.com/2011/10/25/opinion/rushkoff-occupy-prototype/index.html?&hpt=hp_c2`
4. `http://www.betabeat.com/2011/11/02/occupy-wall-street-could-get-occupation-to-occupation-vpn/`
5. `http://www.fastcompany.com/1792974/why-occupy-wall-street-uses-vpns`

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Harlene (2011-10-29 01:34:07)
The articles you posted are just wonderful. I wish they were required reading for everybody. Thank you so much for what you're doing. I feel so indebted to all of you. You're just amazing. Hope is alive.

Our First Capital Campaign (2011-10-29 20:02)

Please help us reach success in our first capital campaign. Give what you can, and pass it along. There's some sweet perks for those that choose to donate, not to mention that you are helping humanity be more free. Free to communicate, share, laugh, and create, without fear of censorship. Every bit counts, and little things add up. Please give now.

IFRAME: [1]http://www.indiegogo.com/project/widget/47322?a=287965

1. `http://www.indiegogo.com/project/widget/47322?a=287965`

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panonova sumurati (2011-11-07 14:48:06)

Don't you think it would be a much better idea just to sell your services to protesters? Otherwise only a small portion of the protesters would be paying for your services and rest of them would be just like the banks! I mean like freeloaders...

1.7 November

The Raid (2011-11-16 23:36)

Hello All,

Isaac Wilder here, just released from police custody.

I wanted to let everyone know that the status of the tower is currently unknown. The tower was in the park when the raid occurred, but may be at the Sanitation Department facility on 57th street. The Sanitation site closed today at 3:30pm, but I will be there when it opens tomorrow at 8.

Will know more soon, and will let you all know as soon as I do.

imw

Brian Gilmore (2011-11-18 22:19:59)

Glad to hear that you're out, Isaac. Keep on fighting the good fight.

bh (2011-11-19 05:25:41)

Just sent you $20, and fuck the NYPD. Keep up the good work.

luancrbty (2012-09-02 19:49:43)

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shuavgbry (2012-09-02 20:34:31)

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17. http://www.nike-elite-nfl-jerseys.com/new-york-giants-jersey-eli-manning-jersey-c-488_502.html

18. http://www.nike-elite-nfl-jerseys.com/washington-redskins-jersey-robert-griffin-iii-jersey-c-774_793.html

19. http://www.nike-elite-nfl-jerseys.com/big-tall-nike-dallas-cowboys-miles-austin-white-stitched-jersey-p-5464.html

20. http://www.nike-elite-nfl-jerseys.com/san-diego-chargers-jersey-jarret-johnson-jersey-c-647_656.html

21. http://www.nike-elite-nfl-jerseys.com/buffalo-bills-jersey-c-63.html

22. http://www.nike-elite-nfl-jerseys.com/green-bay-packers-jersey-clay-matthews-jersey-c-250_260.html

23. http://www.nike-elite-nfl-jerseys.com/green-bay-packers-jersey-donald-driver-jersey-c-250_264.html

24. http://www.nike-elite-nfl-jerseys.com/indianapolis-colts-jersey-c-313.html

25. http://www.nike-elite-nfl-jerseys.com/carolina-panthers-jersey-steve-smith-jersey-c-90_105.html

26. http://www.nike-elite-nfl-jerseys.com/detroit-lions-jersey-calvin-johnson-jersey-c-228_230.html

27. http://www.nike-elite-nfl-jerseys.com/green-bay-packers-jersey-aaron-rodgers-jersey-c-250_252.html

28. http://www.nike-elite-nfl-jerseys.com/big-tall-nike-atlanta-falcons-julio-jones-red-stitched-jersey-p-5030.html

29. http://www.nike-elite-nfl-jerseys.com/cincinnati-bengals-jersey-c-138.html

30. http://www.nike-elite-nfl-jerseys.com/new-orleans-saints-jersey-marques-colston-jersey-c-457_467.html

31. http://www.nike-elite-nfl-jerseys.com/new-england-patriots-jersey-wes-welker-jersey-c-423_453.html

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34. http://www.nike-elite-nfl-jerseys.com/seattle-seahawks-jersey-marshawn-lynch-jersey-c-705_714.html

35. http://www.nike-elite-nfl-jerseys.com/green-bay-packers-jersey-clay-matthews-jersey-c-250_260.html

36. http://www.nike-elite-nfl-jerseys.com/tampa-bay-buccaneers-jersey-josh-freeman-jersey-c-739_755.html

37. http://www.nike-elite-nfl-jerseys.com/nike-tampa-bay-buccaneers-mason-foster-red-stitched-jersey-p-3907.html

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39. http://www.nike-elite-nfl-jerseys.com/new-york-giants-jersey-victor-cruz-jersey-c-488_519.html

40. http://www.nike-elite-nfl-jerseys.com/chicago-bears-jersey-matt-forte-jersey-c-108_129.html

41. http://www.nike-elite-nfl-jerseys.com/new-orleans-saints-jersey-mark-ingram-jersey-c-457_466.html

42. http://www.nike-elite-nfl-jerseys.com/st-louis-rams-jersey-james-laurinaitis-jersey-c-721_724.html

43. http://www.nike-elite-nfl-jerseys.com/jacksonville-jaguars-jersey-custom-jacksonville-jaguars-jersey-c-334_339.html

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45. http://www.nike-elite-nfl-jerseys.com/new-york-giants-jersey-eli-manning-jersey-c-488_502.html

The Arrogance of Power (2011-11-20 01:52)

Well, as many of you have by now gathered, the FreedomTower is gone. It is doubtfult that we will ever know for sure what became of the tower. We do know is that it was in the Medical tent when the NYPD attacked. We do know that not a single component of the tower arrived at the Sanitation depot where we were told to pick up our mangled belongings.

The press has already started to run with the story, but I thought it would be wise for me to tell the world in my own words, what happened that night, and in the days that followed.

On the night of November 14th, I attended a meeting of the #OWS spokescouncil - afterwards, I joined some other members of the tech group at a bar for a drink. We were some four or five blocks north

of the park. At approximately 1am, a friend named Andy received a not-messing-around text message informing us that the police had surrounded the park.

The lot of us threw some payment on to the table, and flew. We ran as fast as our feet would carry us to defend Liberty. It was our home. It was our headquarters. I made FRS contact with Security when we were a couple of blocks away. They urged us to congregate at Medical.

When we arrived, the park was surrounded by officers with their 'hats and bats.' I would be lying if I said that my initial impulse was not to flee - to take the tower, and the backpack with all of my belongings, and to run for higher ground. When we arrived at Medical, though, I realized that I would not be leaving. I could not possibly leave when so many people that I've come to know and love were preparing to throw their bodies against the gears of the violent, oppressive, and greedy machine that we call life-as-usual.

I could not go. I had to stay and defend the park. I had to build barricades and hand out masks. You may think it foolhardy, or bullheaded, or brash, but in the end, it comes down the fact that we are nothing without our principles. Material means little - courage, and integrity, and love for humanity mean much.

Finally, when the police began to close ranks, I hunkered down with Tyrone and my other brothers and sisters-at-arms, forming a human wall around the kitchen. The lights were blinding - stadium lights on all sides, many thousands of watts worth. The noise was deafening - LRAD noise weapons, fired constantly for minutes on end. We watched for hours, sitting peacefully and patiently, as the Police and Sanitation departments razed and ruined our homes. When the demolition party reached the medical tent where we had hoped to secure the tower, I was distraught. As much as I wanted to try and save the tower, I could not bring myself to unlink my arms from the brave souls on my left and my right. Police negotiators told us over and over again to stand and leave - we told them over and over again to sit and stay. They cordon of thugs grew tighter.

They were upon us. One by one they dragged us away, across the field of debris, and toward the waiting buses. Finally, they dragged away Tyrone, and I was face to face with my own decisions, in the form of a two-hundred-fifty pound, adrenaline-fueled, and ultraviolent bruiser with a stick. "Time to go," they said. I had warned the officer that I would not participate in my own false arrest. I did not protest when the demolished my tent, but evicting me from a 24-hour public park because of my opinions would cross a line of moral sanity which I had to contest.

I did not stand. I was thrown to the ground, belly first. The officer, whose name I do not know, attempted to remove my backpack. It contained virtually everything of any value to me: my laptop, my backup hard-drive, my journals, my passport, my camera, almost $5,000 in cash, my thermos, my medical kit, my encryption keys and their revocation certificates. The officer snatched at my bag. I knew that if he took my bag from me, I would never see it again. I attempted to hold the bag, placing my hand around the straps near my shoulders. "Give it up," he shouted, and began to strike my legs.

In a moment of absolute clarity, I realized that stuff is just stuff. Money is just money - just Fed Notes, after all, no more intrinsically valuable than monopoly money. True value is not material - it is ingenuity and skill and knowhow, love and compassion and dignity - it is not in our possessions, but in us alone. I spread my arms wide, and the bag was ripped away.

Wounded and bound, but completely serene, I was dragged across the broken glass and shrapnel left by the demolition crew. On the curb near Liberty Street, I met my so-called 'arresting officer' - a kid about my age assigned to fill out the paperwork. I could tell that he was hurting, having to watch such a

gross abuse of power. With his help, I stood and introduced myself. When we arrived at central booking, I was searched, and given a voucher for those belongings on my person. I was asked to sign, but refused, saying that my backpack had been stolen by an unknown officer. I was told that I had no choice, but still I refused. After several hours, my 'arresting officer' relented, saying that I could remark on the form that my things were taken, as long as I did so quietly.

The next thirty-six hours were a bit of a haze. Most of my compatriots were held in the main tank at One Police Plaza. A few of us were held in a small isolation cell below ground. I crumpled my coat into a pillow, and Tedward and I slept intermittently. We were woken every couple of hours, and time seemed to drag infinitely. We talked about next steps, about providence and the glory of this existence, about how we've only begun our struggle.

We talked about the arrogance of power - to think oneself invincible because of great wealth. We know better - we know that a people disenfranchised and abused will rise up against their oppressors. We know that liberty, justice, equality, dignity, and prosperity have no price, can't be bought. We know better than to think that sticks or stones, or rubber bullets or water canons or dogs, or guns or tanks or bombs will ever be able to master the will of a people towards their own freedom. We talked until we could talk no more, and then we let the silence speak.

At my arraignment, I made sure that the record would show I had been robbed by armed, masked men, masquerading as officers of law and peace. I was released on my own recognizance. I went to fetch the belongings that I had been able to keep - at least I was able to retrieve my multitool. It was Wednesday. I was told that I could find the rest of my belongings at the Sanitation garage on 57th Street. I made my way there as quickly as I could. By the time I arrived there, at around 3:30pm, I was told that they were closed, and that I would have to come back tomorrow.

Come back I did. On Thursday morning, I was allowed to search through the pile of ruins. That's when [1]this occurred. After hours spent combing through the rubble, I concluded that neither the FreedomTower nor my backpack were present. I was confident that I had looked everywhere. Wherever my things ended up, it wasn't at that Garage. Trust me - a nine foot radio tower is pretty hard to miss. I was told by a lieutenant that one more dumpster was going to be sorted that night, and that I could come back the next day, and so I did. On Friday I looked once more for several hours before finally resigning myself to the fact that I would never see my belongings again. I was saddened, not by the loss of my things, but by the loss of the democratic republic that I love.

When I ran to Liberty Park that night, I didn't expect to be robbed by those sworn to serve and protect me. I did not expect to be beaten for daring to shine a light on corruption. Now I'm a bit wiser. I've seen too much at this point, of the fear in the tyrants' eyes, to expect otherwise. They know that we are waking the world to a truth already inside. They know that the status quo is broken, deeply and irrevocably. They are petrified.

1. http://www.motherboard.tv/2011/11/18/who-smashed-the-laptops-from-occupy-wall-street-inside-the-nypd-s-lost-and-found

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Bob (2011-11-22 17:23:00)

I originally came here to donate, but your posting has convinced me to do otherwise. A friend directed me to the FNF website, and I was instantly excited. I thought the peer-to-peer platform was a great idea, one that was particularly well suited for the make-shift community of Zuccotti Park. When I saw video of you manning a functioning tower, I was all but sold. Then I read your post, which disappointed me greatly. The police brutality, bullying, theft, that I think we can - despite its unconstitutionality - unfortunately all expect (albeit, certainly not accept). After all, that is part of the power dynamic that must be re-aligned in this country. No, what disappointed me is that you seem to have ironically fallen into a similar trap as the Wall Street folks behind much of this mess. You proudly stated: "I would be lying if I said that my initial impulse was not to flee – to take the tower, and the backpack with all of my belongings, and to run for higher ground." That would have been the truly courageous, pragmatic, sensible, SELFLESS thing to do. But instead, you were "foolhardy," "bullheaded," "brash," and SELFISH when you raced into a situation with one clear outcome: the property/money ($5k in a backpack? really?!) under your control would be confiscated if you did not cooperate. Now the ironic part is that the money and tower were not even yours - they were for or part of a "communications infrastructure that is owned and operated cooperatively." And more importantly, they came from over $10k in private, hard-earned donations. I am not from this country. In my country - unlike in the United State - we value our resources as they tend to be scarce. WE CANNOT assume that they will be replenished from some infinite supply. We cannot - unlike countless lawmakers and bankers with Americans' hard-earned tax dollars - be careless with others' resources in playing games of self-fortune or glory. From your bio it states that you went to an expensive, private college. Perhaps it was in some philosophy class there that you latched onto the notion that money has no intrinsic value. Maybe you were able to pay for your massive tuition with "Monopoly" money. If you had taken an intro course in economics, however, you would have realized that those federal notes represent - at a core level – the blood, sweat and tears of Americans and others throughout the world, both past and present. But you should know this firsthand. After all, you're not so conveniently buffered (as the bankers and lawmakers) from these hard-working folks. You should know that a $10 donation could have represented 2+ hours of hard work (again, hardly Monopoly money). So in conclusion, I do like your vision with the FNF. I wish you luck in rebuilding what you foolishly squandered and hope that in the future you don't forget your obligation to a cause with much less drama, less "glory," and not the taste of revolutionary "struggle" that you might now crave. Your FNF cause is important (don't forget that) as it's an area where you could potentially make a real, tangible, difference (which is very hard to do in this world). And after all, over $10k in blood, sweat, and tears seemed to agree with your vision - please don't let them down again.

Jon Connors (2011-11-21 18:37:24)

Tough day for all of us Isaac. Great post, and even better meeting you in jail.

vneurqpa (2011-11-21 20:15:58)

How can we donate?

vneurqpa (2011-11-21 20:20:50)

Not just to FNF obviously, but to Isaac, either privately or for a lawsuit.

Jennifer Preston (2011-11-22 16:33:33)

Hi there, I just read your account and would very much like to talk to you for a story that I am writing for The New York Times. My name is Jennifer Preston. My email is jepresto@nytimes.com. I'm @nyt _jenpreston on Twitter. I've written a couple of stories about the movement's social media, open source efforts. I look forward to hearing from you. You can also call me at 212 556 4472. Jennifer

charleswyble (2011-11-23 05:48:39)

Hello, Charles Wyble here. Co founder and technical director of the FNF. You can donate via the front page (http://freenetworkfoundation.org). Please specify in the memo what it's for. Things we need funding for: 1) New

laptop and portable scanner for Isaac (so he can keep his paper notes backed up and digitally available to the rest of the FNF team) 2) Replacing the FreedomTower that was in Liberty Park (this is the FNF demo/development/test tower). About 1k needed for this (to replace radios/modems). 3) Replacing the $1500.00 from the OWS General Assembly for the tower that is now being built for permanent deployment at OWS.

Harlene (2011-11-20 12:48:22)
Your journals. :-(Your camera? A mob mentality takes over and those with power go crazy. Time and again. Human nature? Will it be everso? To me, that is the question. I love you, Isaac. I've thought of almost nothing else all week. Thank you for your tremendous sacrifices for the sake of your hope in the future. You and your compatriots have accomplished so much already.

Aj00200 (2011-11-20 03:42:16)
Thank you for an excellent post. I sit here from the comfort of my home watching the numbers flicker across my dual-monitor setup. It shows the various data I scrape from the automated unit tests of some censorship evasive projects I am working on to the posts of those brave people who are out occupying. This post struck very deeply within me. Material objects do not define us or who we are; if they do, the very corporations we battle against win. We are not fighting over our possessions, they are fighting us to keep their possessions and their lives of luxury. They make enemies every time they do this. They take away everything which has any value from you but that which is left is the only thing they can not stand against. That which is left will never come to value the material again and it will oppose oppression with a newly found vigor. Their attacks may have weakened us temporarily, but we always prevail. But at the same time, I would like to propose something to the movement. What good is a park, a street, or a bridge to us? They are naught but material constructs which were erected by our government. This movement is not about taking back the parks. This movement is about fixing the corrupt system which regulates speech within these parks. The park itself means nothing. If the police ask you to leave, I would suggest that you leave. When you can come back, return if you so wish. The police have to operate within certain confines and if they ask you to get out of the park and you do, it would be unreasonable for them to attack you. In other words, you flow through the police almost as if they are not there. They can not attack you and the movement lives on - elsewhere, everywhere, inside everyone. I understand that a certain amount of dedication is owed to your friends, family, and this place which has come to be known as your home. Your family and your friends will live on and your home will become mobile. The movement will no longer be tied to the physical space but only to the very people which support it and it is in this state that it will never die. But then again, I was not there - I did not experience what you did. Take my advice for what it is worth to you. We are the 99 %, our time is now.

imw (2011-11-25 02:10:04)
Bob, I want to take the time and respond to your comment, because it is clear that you care about our cause, and that you've put considerable thought into your critique. I do not discount your consternation, but I hope that you will be willing to hear my response to your thoughts. The first thing I'll say is that it was not with pride that I said my first instinct was to flee. It was with a great deal of internal conflict and confusion. It was with a certain amount of remorse. I did not mean to be prideful, and I hope that upon a second reading of my narrative, you will see that this was by no means a black-or-white type of situation. The lines of moral reasoning are not demarcated clearly. Understand a couple of things before we proceed: I payed out of pocket for the tower that was destroyed, and the money that was stolen by the NYPD was not from the contact prize, but from the OWS coffers. It was supposed to be used to build another tower and a large deep-cycle battery system. I have apologized deeply to members of that community - they have assured me that what transpired that night was not my fault. It was the fault of a security apparatus that is out of control, and acting outside of the law. I now know the extent to which our state is corrupt, but I do not think it is reasonable to blame me for being surprised by the degree of corruption. While I appreciate your taking the time to voice your concerns, I find your claims fallacious. You are, essentially, blaming the victim. You are saying that I shouldn't have been so naive as to think that my rights would not be violated by a gang of armed thugs acting with impunity. I genuinely believed that night that I would not have my backpack, which I was

wearing at the time of my arrest, stolen from me. I think that that was a reasonable expectation. Now, that being said, I can assure you that I will act differently the next time I find myself in a similar situation. Lesson learned, you might say. Still, your stern and unyielding interpretation of the situation, where I am a selfish, stuff-obsessed Wall Street type seems patently absurd. I'm just a young man who was foolish enough to still have a modicum of faith in the republic that he loves. It breaks my heart that things went the way they did. It has shaken my faith in our system of justice, and our very democracy. I hope that you'll understand my position. I hope that you'll recognize that while I may have been young and unlearned, I was not acting selfishly - this I do believe. So, while you're right to say that I should have seen this coming, in the end it comes off as getting mad at somebody that's attacked while walking home late at night. Sure, there's a degree of danger, and I ought to have taken more care, but it would make a whole lot more sense to be mad at the criminals who violated my rights.

Mr. Groom Goes to Washington | mbransons (2011-12-08 16:27:01)
[...] we need you to bring the Freedom Tower, destroyed in Liberty Park on the evening of the "Arrogance of Power," and have Congress fund a new Freedom Tower to be planted a top the US Capitol Building. [...]

charleswyble (2011-11-23 05:49:23)
Jennifer, Thank you very much for reaching out to us. We will be in touch very soon.

charleswyble (2011-11-23 06:07:34)
Bob, Thank you for the insightful comment. I feel it's a bit heavy handed and borders on a bit of a personal slight. I'm going to address some of the points you raised and offer additional insights and corrections " the property/money ($5k in a backpack? really?!)" This 5k was Isaacs personal money. 1500.00 of it was from the OWS general assembly for a permanent tower. "Now the ironic part is that the money and tower were not even yours –" Actually it was. The tower was the FNF INC demo/development/testing tower. It was on loan to OWS while a permanent tower was being built. Significant logistical issues prevented it from being built in the time between the approval of funds and the raid. So now Isaac/FNF is out 1500.00 as we had already purchased all the parts for the new tower but not had a chance to deposit the cash. We have learned a lesson and implement appropriate operational controls to prevent a repeat of this most unfortunate and unexpected event. " they were for or part of a "communications infrastructure that is owned and operated cooperatively." A portion of it was yes. " And more importantly, they came from over $10k in private, hard-earned donations." Actually they didn't. The FNF funded the cost of the demo/test/development tower and the 10k is in an IndieGoGo account and not accessible to the FNF until the conclusion of the funding campaign. Perhaps you will re consider your decision to donate with those additional facts now presented? Or offer a retraction of the above refuted statements? I certainly hope so. Isaac went through an incredibly traumatic event and suffered great personal loss defending freedom. However the effect and fallout was his and the FNF alone. OWS will still receive a fully functional tower for permanent use. Thank You Charles Wyble Technical Director FNF

charleswyble (2011-11-23 06:14:49)
A slight correction to my above reply: Isaac funded the build of the demo tower out of his own pocket and FNF will reimburse him out of our operating budget (which is seeded by the 10k donation we received from ContactCon into the indiegogo campaign).

charley huto (2011-11-28 21:43:29)
hi issac, i just had lunch with your mom here in KC and she told me what happened to you. it is disgusting and reprehensible that your efforts to Assembly and Peaceful Protests, guaranteed by the Constitution, and yet have been met with Police Oppression and Brutality. stay strong in your commitment to your principles and core values. there are many out there, like myself, who although we are not on the front lines with you, nonetheless support you. thank you for being strong for the rest of us. we do appreciate you! charley

1.8   December

On SOPA (2011-12-04 21:35)

Short Form:

Though the string of tresspases which we protest is long, we wish to voice our grievances with the ruling order in no uncertain terms. In the name of the 99 %, we beseech our public servants to prevent the passage of HR.3261 and S.968. Should these bills become law, our nation will transgress a line of moral sanity from beyond which it will be difficult to return. In the hope that we might still preserve and restore our republic, we implore our representatives to oppose these key pieces of legislation.

HR.3261 is the Stop Online Piracy Act, and S.968 is the Protect IP Act. The provisions of those bills would make it possible for the government to censor content on the Internet with exceedingly low burderns of proof, and extremely high risk of collateral damage. If this act passes, everything from Facebook to your friend's blog could be taken down by the government for possible "copyright infringement." The law could be used to send individuals to jail for activities as harmless as posting a link to a song from a popular artist onto a social network.

It is the position of leading technology and civil liberties groups that the authors of these bills had little regard for the technical reality of our telecommunications systems or the rights of the people to freely express themselves. We know multinational corporations have spent lots of money lobbying our representatives to pass this legilsation - legislation that is clearly counter to the interests of the vast majority of voters.

Over the last decade, digital information networks have made it possible for people around the world to communicate with each other more freely than ever before. We have begun truly to realize our shared humanity, but we have also become dependent on a communications infrastructure that we do not yet control. So far, that infrastructure has been operated with an eye toward liberty and justice. Yet now we find that our rights to privacy, assembly, and speech in cyberspace are under attack.

We recognize the critical importance of a free and open Internet. Any attempt to censor our communications using digital networks will be viewed as an attack on our Constitutional and natural rights. SOPA and the Protect IP are horrendously crafted, nefariously motivated, and dangerous pieces of legislation that endanger liberties which we deeply prize. They must not become law.

Long Form:

The accumulation of power is a tyrant's wont, and the defense of liberty is a citizen's sacred duty. It is inside the dialectic of these forces where the arc of human drama unfolds. Our story is long, and our progress has been great in our march towards a freer world. Yet much of our motion has been in retrograde - each epoch of our history eventually regresses into a gradual ceding of much that's been accomplished Humanity is either profoundly patient, profoundly lazy, or both. We tolerate much, and revolt very little. Yet, from time to time,

the abuses of a government against its people become impossible to bear. From time to time, we reverse course, and once again make great strides in our quest for true justice. When the arrogance of the powerful reaches a critical point, the apathy and lethargy and complacency which the people are programmed can vanish quickly. We are here to sound a warning to those within their baricades of wealth and power: reverse course, or wake the sleeping giant of the true body politic.

The erosion of our essential liberties has been slow, and at times subtle, but it has also been constant and insidious. Nearly complete disenfranchisement of the general populace has been achieved via social, political, economic and enviornmental means. We gather here in defense of our treasured rights. We know that these rights are natural and god given, and we will not allow them to be subject to the will and whim of a shadow government or kleptocratic cadre. We will defend them to our death rather than live under the yoke of plutocratic despotism. Yet, we still believe that reparation can be achieved through means political and civil.

Though the string of tresspases which we protest is long, we wish to voice our grievances with the ruling regime in no uncertain terms. In the name of the American people, we beseech those who supposedly serve our interests to oppose the passage of HR.326 and S.968. Should these bills become law, our nation will transgress a line of moral sanity from beyond which it will be difficult to return. In the hope that we might still preserve and restore our republic, we implore our representatives to oppose these key pieces of legislation.

HR.3261 is the Stop Online Piracy Act, and S.968 is the Protect IP Act. The provisions of those bills would make it possible for the judiciary to censor content on the Internet with exceedingly low burdens of proof, and extremely high risk of collateral damage. It is the consensus of leading technology and civil liberties groups that the authors of these bills had little regard for the technical reality of our telecommunications systems or the rights of the populus to freely express itself. Multination corporations have used the US Chamber of Commerce and Motion Picture Association of America to lobby heavily for these pieces of legislation - exerting their corrupting influence in the halls of power, so that our duly sworn servants might act against the interests of their constituencies. While a desire to stop the piracy of intellectual property is justifiable, it is clear to the leading technologists of our day that the legislation in question would not do so. We will not once again allow ourselves to be fooled by by the doublespeak of lobbyists and their puppet politicians. We will no longer look the other way. Our elected legislators protect those who pay for access and control. The same money promises to pay for their reelction. But we will protect those whose numbers far outweigh theirs. And through our numbers, we promise to impact the results of elections as well.

Over the course of the last decade, much damage has been done to the moral fabric of our democracy. Longstanding principles have been breeched. Those in power have shown their colors as self-appointed lords who think it justified to capture, detain, torture, and execute individuals anywhere on the planet. We have become a nation that spies upon its own citizenry, without need for warrant or subpoena. Dissent is quashed, vast swaths of the population are incarcerated and systematically undereducated, laws are bought and paid for. We seem to have forgotten, as a nation and as a people, that the only justified derivation of sovereignty is the voluntary association of free individuals. Recent events around the world strengthen our belief that a goverment sustained by the practice of coercion will not last. We are hopeful that we can repair this damage through means that are political and peaceful. A great deal of this hope lies in our newfound ability to communicate globally by means of digital transmission. We caution the so-called servants of the public that the ongoing and afformentioned attempts to legalize censorship of the Internet would spell moral ruin for our government, and disaster for our nation.

To the soul of any faithful citizen, the first part of this new millenium has been painful. We have watched as our nation's legislators have proven themselves to be myopic and guided by corrupt influence. By all acounts,

they no longer fulfill the role envisioned for them in our Constitution. They do not represent the interests of the many. The essential checks and balances required of the executive and judicial branches have similarly failed, as the power of such great weath concentrated in so few pervades all levels of government in their interlocking dependencies. It is natural to be humbled by failure. That humility propels evolution towards success. Though we see no evidence of it, we hope that those in power will be humbled by their failure, will awaken to their mandate, and will turn to the many for guidance.

We are still, in the words of Lazarus, the huddled masses yearning to breathe free - yet in this age of information, our yearning has taken a new shape. We yearn to share, to exhange ideas - to realize our common humanity, and in so doing transcend the ultimately destructive impulse of nationalism and narrow self-interest. Therefore, we will protect with all our might our right to have unfettered access to free speech via the Internet. At this critical hour in our history, we consider that right to be, in essence, concomitant with those still inalienable rights acknowledged in the Declaration of Independence - to life, liberty and the pursuit of happiness.

It is not too late to save the soul of our state. It is not too late to turn back from the route of corruption and tyranny, but it must begin now, and it must begin by recognizing the critical importance of our ability to associate and exchange ideas in cyberspace. Any attempt to abridge our ability to do so will be viewed as an attack on our natural rights, and an egregious misstep. SOPA and Protect IP are horrendously crafted and dangerous pieces of legislation that will not achieve the ends purported by their corporate backers, but will endanger liberties most prized. They must not become law.

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charleswyble (2011-12-10 17:49:06)
Call,e-mail,fax,snail mail your senator/representative and ask them to not pass the bill.

Harlene (2011-12-04 23:37:49)
What can we do to help prevent passage? When will it be voted on? At least it's comforting to know they usually get NOTHING done.

kxhmxaw (2012-08-20 10:00:37)
Most people have a difficult time figuring out how to pack furniture because [1]chanel official site have to protect [2]chanel ring from moisture, dirt, and damage. Having an appealing, fashionable [3]chanel bags cheap will entire an outfit. I would use my mornings before work to sleep, and I would use my evenings after work to s [4]chanel website on the couch or grab drinks with coworkers. Movie actors use wigs to bring realistic look to the characters http://www.chanelonlinebagssalex.info/ #13729 play.

1. `http://www.chanelonlinebagssalex.info/#86523`
2. `http://www.chanelonlinebagssalex.info/#73695`
3. `http://www.chanelonlinebagssalex.info/#34316`
4. `http://www.chanelonlinebagssalex.info/#47218`

A quick update from the CTO (2011-12-07 18:55)

It's been a while since I've blogged here. I've been incredibly busy with FNF work and wanted to update folks.

- Kansas City colocation work. This is the primary FNF point of presence. That is where the overwhelming majority of my time and effort has been spent. I've completed a massive amount of CIO type work (bootstrapping the entire data center, deploying an array of applications to support FNF staff, consolidating other small FNF technical operations to colo, setting up back bone network for towers to use)

- Hiring a CIO and building out FNF technology organization in a massive way (internal/core and various liaison projects) We are in the process of on boarding a CIO to oversee all of the FNF delivery groups (across WAN/LAN/Video/Voice (both communications and broadcast). This will be the technical operations division of FNF.

- MARKII Tower engineering. This took up quite a bit of time. I'll be documenting the second revision of the tower in exhaustive detail for folks that wish to build their own towers world wide. We didn't want to publish until we had a solid offering that addressed stability and safety issues with our first deployments.

- FNF development/testing lab. This is something I am very excited about as CTO. We have a very comprehensive lab that is nearing completion. This will let us rapidly develop and test every aspect of the FreeNetwork. It will allow remote participation of network engineers and developers.

All of the above work is taking FNF from cathederal to bazaar mode. All of the necessary scaffolding to bring in large amounts of human talent/participation necessary to make the FreeNetwork a reality. I'll be doing very detailed blog posts on the above topics over the next few days. I just wanted to give folks an update on what the technical side of FNF has been up to.

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FNF Technical Engineering Roadmap and a look at the FNF technical organization (2011-12-13 20:47)

This is a long and meaty post. In the interests of transparency and soliciting feedback/participation etc.

The FNF is anticipating our first milestone (FreeNetwork1.0) to be completed over the next 18 months. This depends on staffing levels, schedule slippage etc.

The first milestone (FreeNetwork 1.0) is defined as follows:

Delivery of a

- secure (transport layer and data storage (FreedomNode)

- highly available

- varying degrees of identification (fully anonymous to fully authenticated)

- virtual (overlay/VPN links between all components of the network)

All components of the network will be

- locally funded

- locally constructed

- locally operated

- locally owned

The network will consist of three highly horizontal layers

1)backbone network comprised of FreedomLinks which facilitate connections and efficient traffic flow between regional networks of FreedomTowers

2)Sustainable (off grid) FreedomTowers linking into regional area networks which are comprised of neighborhood area networks of

3)Sustainable (off grid) FreedomNodes which will serve individual homes and businesses.

The network will mesh (in both a logical and material peer to peer fashion) horizontally at every level (node to node, tower to tower, link to link). It will also mesh/route vertically between the layers of the network.

Sounds cool right? :)

So [1]how do we get there?

1. [2]Corporate structure

Things related to FNF as a legal entity. Board of directors, board of advisers etc.

Targeting completion of this by 1/31/2012

2. [3]FreedomLab

I recently completed the FreedomLab and hope to open it for mass participation soon.

Targeting completion of this by 1/31/2012

3. [4]Data center delivered to full production mode[5].

[6]This is the highest priority task. It's a lot of work to build an entire server farm to support an enterprise and production network.
We are getting closer each and every day. Outstanding tasks are captured. We expect to close several of them out when Isaac visits the DC. Our CIO is heading this up. I'm working to transition everything over to him (already produced and delivered comprehensive data center documentation).

Targeting completion of this by 1/31/2012

4. Website redesign

Redesign the FNF website to make it easier for folks to learn about our activities, tell their friends, and contribute time and resources. Focus will be primarily on the main page, which will be completely overhauled. Some content is out of date, and some needs to be moved and recategorized.

Targeting completion of this by 1/31/2012

5. [7]Ipv6

All FNF services (internal and external) will be available over Ipv6. THIS IS NON NEGOTIABLE. We must always strive to retire Ipv4 whenever, wherever, however we can. I put this after the above tasks but still very high on the priority list. We need to get the DC 100 % wrapped and an auth/enrollment system into play to stay sane. :)

Targeting completion of this by 2/29/2012

6. [8]Centralized authentication via LDAP/RADIUS/Kerberos and one time passwords.

This is critical. We have a wide array of applications, gear, system instances deployed which are all using a local authentication store. We plan to use SOGO as our LDAP store. We will use MIT Kerberos for system logins and FreeRADIUS for it's rich functionality around capabilities,profiles,restrictions etc. We are evaluating one time password systems at the moment. I am heading this project up as CTO. It will be handed over to our CIO once I've completed initial work and documentation so he can fully operationalize it.

Targeting completion of this by 2/29/2012

7. [9]User Enrollment

This is an extension of centralized auth. Need a way to provision users and plug them into appropriate access levels. FNF needs a way to enroll administrators into the network (in our WAN/LAN delivery groups). This will most likely be done via our HR system (using OrangeHRM) after the various contracts have been executed and stored. (Gotta have legal protection). No tasks yet. Haven't done any engineering work around this at all.

Targeting completion of this by 2/29/2012

8. [10]Freeswitch

Our Los Angeles based VOIP guru is heading this effort up. We are using Whistle and BlueBox from [11]http://www.2600hz.org/
Him/I made substantial progress on this last night. No tasks captured yet. As we have more demands and needs for our voice/video comms, tasks will get captured and a roadmap developed.

Targeting completion of this by 2/29/2012

9. [12]Operations support system

As mentioned in my [13]previous blog post we have various pieces of our network management system in place. It will be expanded as the network is deployed. This is necessary to take the network from research and development mode into full production readiness.

Targeting completion of this by 4/15/2012

10. [14]FreedomTower

[15]Documentation and complete packaging (hardware/software) for "release to manufacturing". More to come later. I've got a bunch of pictures and notes which will be turned into a comprehensive set of tower build instructions very soon.

Targeting completion of this by 4/15/2012

11. [16]FreedomNode

The desired user experience and rough design sketches for the FreedomNode are available in a separate post, [17]here. In order to bring the FreedomNode into production, it will be necessary to leverage the work of Project Byzantium, and to tap the pool of design and engineering talent that has congregated around FreedomBox.

Targeting completion of this by 5/15/2012

12. Legal Framework (for operators and usage)

Just as in the creation of free software, building tools and technologies is not enough. We need a framework of legal agreements for node, tower, and link operators in order to build transparent and communally accepted policies for dealing with network abuse, so that we can keep the Free Network free. Think of it as a GPL for networks - a covenant that enshrines the five freedoms of the network in law.

Targeting completion of this by 5/15/2012

1. `http://chili.freenetworkfoundation.org/projects/backbone-operations/issues/gantt`
2. `http://chili.freenetworkfoundation.org/projects/fnf-internal-business-operations`
3. `http://freenetworkfoundation.org/?p=563`
4. `http://chili.freenetworkfoundation.org/projects/fnf-internal-it/versions/8`
5. `http://chili.freenetworkfoundation.org/projects/fnf-internal-it/versions/8`
6. `http://chili.freenetworkfoundation.org/projects/fnf-internal-it/versions/8`
7. `http://chili.freenetworkfoundation.org/versions/show/11`
8. `http://chili.freenetworkfoundation.org/projects/fnf-internal-it/versions/9`
9. `http://chili.freenetworkfoundation.org/versions/show/10`
10. `http://chili.freenetworkfoundation.org/projects/on-net-voice-communication-engineering-and-delivery-group`
11. `http://www.2600hz.org/`
12. `http://chili.freenetworkfoundation.org/projects/fnf-internal-it`
13. `http://freenetworkfoundation.org/?p=528`
14. `http://chili.freenetworkfoundation.org/projects/fnf-tower-power`
15. `http://chili.freenetworkfoundation.org/projects/fnf-tower-power`
16. `http://chili.freenetworkfoundation.org/projects/freedomnode-engineering-group`
17. `http://freenetworkfoundation.org/?p=658`

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FREE the NETWORK | spectrevision (2012-03-30 14:31:23)

[...] http://freenetworkfoundation.org/?p=534 FNF Technical Engineering Roadmap and a look at the FNF technical organization by charleswyble / [...]

A look inside the FreeNetworkFoundation Network Operations Center (2011-12-13 21:05)

As co founder and technical director/CTO of the FreeNetworkFoundation, it has been my responsibility and privilege to deploy our first Network Operations Center as well as our corporate infrastructure. We have been very fortunate to find highly cost effective colocation with very responsive support.

Our gear is located in the central United States so as to be as equidistant as possible from towers as they are deployed. This will allow tower deployments to proceed without waiting on additional FreedomLinks to be deployed after our [1]IndieGoGo campaign and other funding rounds are completed.

We are seeking $75,000.00 in funding for

- acquisition of an AS number

- ARIN ip space

- radio link licensing

- 3 FreedomLinks in full production operation for one year (hosting, cross connect, bandwidth)

We also plan to add an additional NOC for disaster recovery purposes. We are currently evaluating a provider on the East Coast for this purpose. We will be calling for donations to cover the cost once we have completed our evaluation phase. It will probably be about $2,000 for a year of hosting.

The NOC hosts our production network management system and the FNF corporate infrastructure (detailed later on in this post).

So what hardware is in our NOC?

- 1 Cisco 2950 Switch. Our core switch. This is hooked up in a redundant fashion to our VM server. It has 24 ports. This will let us engage in peering with others in the data center and on the KCIX peering fabric.

- 1 Dell Optiplex 745 Our core router/firewall (FreedomLink1). This runs pfSense and is handling all as?pects of our enterprise network, as well as the VPN terminus for our tower management network.

- 1 Dell Poweredge 2800 Our VM server. I'll go into more detail about what we are hosting later on in this post. This has a DRAC card with dedicated network drop so we have full out of band access to our main system. We also have an IPMI card, but it's not hooked up. It would be very nice to have the IPMI card as it would give us advanced telemetry data that we don't currently have. We need sponsors of an additional network drop for one year (this would be $60.00). Please use the donate button if you would like to sponsor our ability to have out of band monitoring. Just put IPMI in the memo field. Once we have reached our $60.00 goal we will have this critical function for one year. The more that is donated, the longer we can maintain this critical function.

- 1 Cyclades PDU Managed power distribution unit. Currently everything is powered through this, but it's not hooked up to the network. We need sponsors of an additional network drop for one year (this would be $60.00). Please use the donate button if you would like to sponsor our ability to have out of band power cycling. Just put cyclades in the memo field. Once we have reached our $60.00 goal we will have this critical function for one year. The more that is donated, the longer we can maintain this critical function.

- 2 USB flash drives. These are providing the root partition on our VM server in a RAID1 array.

- 2 USB hard drives. The idea for these is that they would provide a RAID1 array for all of the FNF critical data. Unfortunately we lack a powered hub and as such are only able to use one of the drives. This puts FNF data at very serious risk. We need sponsors of a powered USB hub (this would be $30.00). Please use the donate button if you would like to sponsor our ability to have our critical data protected.

- 1 USB hard drive for backup. The idea for this drive was that it would be a nightly backup drive for the RAID array. Unfortunately it is also not usable until we have a powered USB hub.

We look forward to folks donating towards our NOC capex/opex budget and getting us to a place where we can put the FreeNetwork into full production mode. Without the above critical pieces, the FreeNetwork management system and FNF corporate infrastructure will be running in a degraded mode at constant risk of failure.

Here is a diagram of the setup:

[2]

What does the FNF corporate software infrastructure consist of?

- wiki (media wiki)
- Real time shared text editing (Etherpad)
- blog (wordpress)
- Microblogging (Status.net)
- Social networking insight (Thinkup)
- Brand tracking, relevant topic tracking (Tattler)
- Bookmarks (Scuttle)
- Collaborative diagramming (Oryx-editor)
- Photo gallery (Piwigo)
- Document management (OpenDocMan)
- Web analytics (Piwik)
- crm (civicrm which is drupal based)
- HR system (OrangeHRM)
- Finance/accounting system (Dolibar)
- E-mail server/groupware (SOGO)
- Project management (Chiliproject)
- Scrum tool (Icescrum)

- Cpanel/WHM to host our various domains, lamp applications, mailing lists etc. It's not FLOSS (in fact it's the only piece of our corporate or network management software infrastructure that isn't FLOSS). Unfortunately no FLOSS solution comes close. [3]http://www.openpanel.com/ is currently the most compelling candidate. This is something that needs to be solved for FreedomNode (end users being able to administer the compute resources without needing a lot of expensive support).

- Voice/Video communications (Freeswitch (Whistle and BlueBox from 2600hz.org)

- Text chat (Jabber)

What does the FreeNetwork management system consist of?

- Ticketing (OSTicket)

- Monitoring (Zabbix)

- Documentation and configuration management system (Netdot/Nocproject.org)

- Radio management (Aircontrol)

- Captive portal/security (PacketFence)

- GIS System (Udig/OpenStreetMap/Ushadi)

- Asset location tracking (OpenGTS)

- Technical Operations Dispatch system (TicketsCAD)

- Knowledge base (phpMyFAQ)

- Colo documentation (rack tables)

- DNS (PowerDNS)

- On net key servers (OpenSKS)

- Server management (Dell OpenManage)

- Configuration Management Database (Evaluating Zabbix and Onecmdb.org)

- More to come as the network is deployed

1. `http://www.indiegogo.com/Free-the-Network`
2. `http://freenetworkfoundation.org/wp-content/uploads/2011/12/kc-pop-v101.png`
3. `http://www.openpanel.com/`

FNF Technical Engineering Roadmap and a look at the FNF technical organization | The Free Network Foundation (2011-12-13 21:22:29)
[...] mentioned in my previous blog post we have various pieces of our network management system in place. It will be expanded as the [...]

A look inside the Free Network Foundation development and test lab | The Free Network Foundation (2011-12-21 18:39:57)
[...] I recently blogged on the FNF Network Operations Center. I also wanted to blog on the FNF development and test lab. This is a lab we put together to [...]

Onwards! (2011-12-16 06:10)

I sent an important update to the fnf-discuss list earlier tonight, and I'd like to post it here as well, for folks who aren't subscribed to discuss. We need your help to make a final funding push before the end of the year. We've published a new video explaining who we are and what we're about. As I mention in my email, that video is available [1]here.

This is what I sent to the list:

```
Hello All,

It's been a while! Isaac Wilder here - one of the directors of the
FNF.

I am in Kansas City at present, on my way down to Austin for a five
day
strategic summit with the FNF executive leadership. If you haven't
been
keeping up with the blog, it's been quite a month!

We've been busy building, so we hope you'll understand if our
communication has been less than constant. Last week we completed
upgrades to the Austin tower, as well as the construction of a new
tower
to replace the one which was taken in the raid on Liberty Park. This
week, we've completed work on the software side of our Network
Operations Center, with final hardware improvements just a couple of
days away.

We've got a lot in the works right now, from the publication of our
FreedomTower design, to FreedomNode development, to the construction
of
east and west coast FreedomLinks. We're very excited about the future
of
Free Networks in general, and the FNF in particular. That's why we've
decided to ask you once more to help us achieve our vision - a global
network that is owned by everyone and no one - where we can
communicate
with one another directly, free from the fear of censorship,
surveillance, or breakdown.

We need your help. Getting the Free Network to the point where
individual communities can begin to participate takes time, money, and
resources. Please give now, or, if you've given already, please share
our campaign with your friends and neighbors. We've produced a new
video
to help explain who we are and what we do. It's available at the
address
```

```
below. Publish a link using your favorite form of social media (mine's
Diaspora*!). Post about us in a public forum, or send a message to a
mailing list. Raising consciousness is the key to our struggle.

If you know somebody who loves and cares for the Internet, consider
making a donation in their name as a meaningful gift. If you love and
care for the Internet, know that it requires action on all of our
parts
in order to remain the vital and unfettered source of information that
it is.

You can find our funding campaign at
[2]http://www.indiegogo.com/Free-the-Network

This is not a request that we make often, nor is it one that we make
lightly. We appreciate your contributions, and all that they allow us
to
achieve.

onwards, toward a freer and more just society,

Isaac Wilder
Executive Director, The Free Network Foundation
[3]thefnf.org
```

1. http://www.indiegogo.com/Free-the-Network?a=287965
2. http://www.indiegogo.com/Free-the-Network
3. https://thefnf.org/

A look inside the Free Network Foundation development and test lab (2011-12-21 18:37)

So I recently blogged on the [1]FNF Network Operations Center. I also wanted to blog on the FNF development and test lab. This is a lab we put together to support development and testing of FreedomNode,FreedomTower and FreedomLink.

It's currently located in my home in Austin TX. Currently it's not available for mass use. We need a bit more infrastructure in place before we can open it up for folks to use. Expect a blog post in the near future with a call for participation.

So what is in the lab?

Lab Hardware

Routers:

- Cisco 6509

- Cisco 1841

- Cisco 3540

Switches:

- Cisco 2950

- Cisco 2924

Access Points:

- NS2

- Mesh potato

- Linksys repeater

- Orinoco 802.11b

- AirLink

Computers:

- Optiplex 745 VM server (lxc/virtualbox)

This is used for several functions

- VirtualBox host to run PfSense virtual machines so we can test out configurations, test compatibility with Cisco gear (OSPF/BGP)

- VirtualBox host to run FreedomNode virtual machines (with a genode base, and Debian guests)

- LXC host to run GIS and other computationally intensive work loads in support of FNF network operations

- LXC host to run various software packages / experiments (very early stage FNF software application research projects)

The system has a USB bluetooth adapter. It also has multiple 802.11b/g USB wifi adapters.

- ASUS EEEPC

I use an Asus EEEPC running [2]Lubuntu to perform coverage and performance testing as well as network diagnostics.

Accessories:

104

- Serial to USB converter (for use with serial consoles on switches, soekris rigs, access points etc)

- External (USB) wireless card capable of monitor mode,packet injection etc

- GPS Receiver

Software:

- Horst (as a spectrum analyzer capable of understanding OLSR mesh networks)

- Wireshark

- Scapy

- Netdude

- gpsd

- nmap

- Twinkle SIP client

- Wavemon

1. `http://freenetworkfoundation.org/?p=528`
2. `https://wiki.ubuntu.com/Lubuntu`

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FNF Technical Engineering Roadmap and a look at the FNF technical organization | The Free Network Foundation
(2011-12-22 00:45:08)
[...] recently completed the FreedomLab and hope to open it for mass participation [...]

On the FreedomNode (2011-12-31 05:23)

Hello All,

After a very successful strategy and year-end review summit in Austin, we wanted to give you all a little insight into what we're cooking up with regard to the FreedomNode. If you're not already familiar, the FreedomNode is the foundation of the Free Network technology stack - a device that will allow neighbors to communicate with one another directly, without need for a paid service provider. We think of it as the ultimate sharing machine, allowing you to privately store, selectively distribute and globally publish a wide range of materials, using a variety of connectivity options.

Lets start with the user experience, and from there we can seek to understand the technical aspects. For the time being, we'll talk only about the experience of the node as a standalone device, and exclude the (likely) possibility that some users will boot the software on existing machines. The node presents a uniform interface across client devices using HTTP(S) - a collection of stylesheets allow the interface to adapt successfully to a wide array of different screen resolutions and input methods.

In simple terms, you interact with your node by opening a browser - any browser - and navigating to your node's address. That address can be a global name such as a user-owned DNS entry, or a third-party

subdomain such as username.fnf.tel, or, from the same local network, a local address, such as 'https://mynode'. Alternatively, the node can be accessed from its unique IPv6 address.

Navigating to the address of a node prompts the user to authenticate. This is done using the F-Pass system. F-Pass is the key to trust and addressing on the Free Network - tying together x.509, PGP, IPv6, and secure, one time passwords.

Once authenticated, the user is presented with a main menu that provides access to all of the essential functions of the node. Icons exist for Blogging, Microblogging, Planning (like plans.txt on Unix or Grin-nellPlans), Mail, and an A/V Center (photos, music, video, and files). An additional icon leads to a list of contacts, with a final icon leading to system settings.

Users can be organized into aspects, with a 'Neighbor' aspect generated automatically for those with whom you can communicate without need of an Internet Service Provider. From the contacts page, a user can access the blog, microblog, plan, or shared media of another user. Users have precise control over who can access each piece of media on their node. Sharing is encrypted by default, anonymized when desired, and opportunistically peer-to-peer - that means that we all cooperate to move each others' messages, when it is possible, rather than paying a professional bit-mover

Now that we've established what the node is designed to accomplish, let's talk about its actual design. At the core of the FreedomNode is a small-form computer, designed to run continuously for years on end. The computer's onboard capabilities can be expanded with USB mass storage, and miniPCI radio modules.

On bare metal, the node will run genode, a novel GPL operating system architecture that allows for true fault isolation and tolerance. On top of that, a lightweight debian install will be used to ensure long-term package support and stability. The user-facing services run on top of Debian, powered by a collection of existing open-source daemons and tools. These services benefit from the tight integration of a unified interface and a unified authentication and identity management system.

Add to that the ability to communicate without using the telco's wires, and you've got a truly disrup-tive piece of tech. The Byzantium Project has built a solid foundation for mesh communications - their routing scheme (based on the babel protocol) will be integrated with nodal services so that local traffic never has to leave the neighborhood network. There is much to do, but we aim to have the FreedomNode ready to release in 18 months or less - join us now, and help us build the greatest tool in the liberation technology toolkit.

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FNF Technical Engineering Roadmap and a look at the FNF technical organization | The Free Network Foundation (2011-12-31 23:19:42)
[...] user experience and rough design sketches for the FreedomNode are available in a separate post, here. In order to bring the FreedomNode into production, it will be necessary to leverage the work of [...]

creighto (2012-02-28 20:22:46)
A Dash7 transceiver on a miniPCI card, with an external antenna for rooftop mounting, and this thing would be awesome.

Chapter 2

2012

2.1 January

Forum (2012-01-03 10:01)

Our forums are currently under construction. Please check back later. In the meantime, join the conversation on [1][discuss].

1. `http://mail.thefnf.org/mailman/listinfo/discuss`

Corlinex (2013-07-01 23:18:55)
canadian pharmacy viagra 20mg you cannot reply to topics in this forum [1]buy viagra online viagra sellers in india - buy viagra online

1. `http://buyviagraonline-us.com/`

Nergawis (2013-07-02 11:44:30)
online cialis pharmacy [1]cialis online cialis and alcohol safe faq - cialis online

1. `http://buycialis-us.com/`

Satvezis (2013-07-03 02:31:24)
cialis tadalafil 20mg uk guestbook.pl [1]cialis online no prescription cialis for daily use prices logged - cialis online

1. `http://buycialisonline-us.com/`

Salzerip (2013-07-03 03:02:33)
how to cure ed naturally [1]generic viagra buy viagra uk - generic viagra online

1. `http://genericviagra-usa.com/`

Malveris (2013-07-06 09:03:26)
cialis fiyatA± [1]cialis online cialis 5mg daily users browsing this forum - cialis online without prescription

1. `http://buycialis-us.com/`

Parlebis (2013-07-06 09:56:38)
no prescription viagra [1]generic viagra online where to buy viagra in riyadh - generic viagra

1. `http://genericviagra-usa.com/`

FNF January Newsletter (2012-01-05 08:30)

It's been an incredibly busy, challenging and rewarding year for the Free Network Foundation. I wanted to take some time and publish our first monthly newsletter and show how the FNF went from a rough idea of myself and Isaac to a non profit start up company.

So what did we do in 2011? The following is in rough chronological order:

- Isaac and Charles officially launched the FNF and had a week long summit to work through many of the details, come up with network plans, research hardware, figure out levels of the network etc.

- Isaac traveled the eastern seaboard and abroad to raise awareness and funding for FNF.

- Designed, built, deployed, tested, tweaked, revised three radio towers directly (two for OWS (including one taken during the OWS raid), one for OccupyAustin) and provided engineering, design and implementation support for two more (Los Angeles and San Antonio). That's a total of 5 towers. 4 of which are in operation.

- Awarded 10k innovation award at ContactCON at the end of October and a good amount of funding throughout the year

- Received quite a bit of publicity in leading online publications and developed excellent relationships with online and print media

- Deployed a beta of our Network Operations Center with full production release scheduled for end of January 2012

- Deployed a beta of our Development and Test lab with full production release scheduled for end of January 2012

- Assembled our executive leadership team (CEO/CTO/CIO/CFO/COO)

- Put together a list of candidates for a board of directors and an advisory board.

- Held a year end summit and review. Figured out a lot of logistical issues and also planned out re launch of website and did a lot of design work on FreedomNode. We also took steps to eliminate single points of failure on the executive leadership team. We now have technical/legal/operational/financial redundancy.

- Published our roadmap to a 1.0 release of the FreeNetwork stack (our 2012 plan)

So what is ahead in 2012?

- Our focus in January will be on finishing up the last pieces of scaffolding work for mass participation. Things like the NOC/Lab being completed and opened for use and our corporate structure to be fully operational. This includes things such as financial transparency, being able to accept non profit donations, legal things related to being a company etc.

- Our focus in February will be on deploying our single sign on, one time password, authentication platform and getting folks to deploy a VM image which will replicate the one time password system. It will be a globally distributed, peer to peer architecture, highly available, democratized identity ownership platform. This will be our first release to end users. The authentication system is the first piece of the network. We also need to publish the tower plans and support an emerging community of builders and early adopters.

Beyond that we will be proceeding against our roadmap and building lots of cool stuff!

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Tickets (2012-01-08 09:03)

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Why Wireless Mesh Networks Will Save Us From Censorship (2012-01-09 02:53)

or: 'Why Shaddih's article is a sobering, but misguided warning about a plan that's been misunderstood.'

I

In November of the year just past, there was a sudden explosion of interest in the prospect of building a global-scale communications network that is owned and operated by participants in the network. Much confusion ensued, and the idea remains mostly opaque or misunderstood. On the 26th of November, a graduate student by the name of Shaddih Hasan posted a piece called 'Why wireless mesh networks won't work to save us from censorship.' The piece listed five reasons why "unplanned wireless mesh networks never work at scale" - and used that relatively well-supported claim to warrant the assertion that building peer-to-peer communications infrastructure is a waste of effort and time. My name is Isaac Wilder, and I'm one of the Directors of the Free Network Foundation. Along with my partner Charles Wyble, and a global network of volunteers and contributors, I work on systems and network architectures for what we call free networks. Our technologies will enable the construction of networks belonging to no one and everyone at the same time. I'd like to take some time now to respond to Hasan's claims, and explain how mesh networks can and must be used, not only to save us from censorship, but to reclaim the notions of community and trust which current architectures put in grave peril. If you haven't read Hasan's piece, you may want to do so now. It is available on his [1]blog. It's well argued, and points out some of the many challenges in the implementation of unplanned, large-scale, wireless mesh networks. I do not mean by my dissent to suggest that these challenges are of no importance – they are, rather, key considerations in the design of free networks. I do mean to suggest, however, that these challenges are not insurmountable. What Hasan has shown us is that [2]RF signal is a relatively unfriendly networking medium, which is not to say that radio waves cannot or should not be used to build a new type of network. It seems to me that Hasan has misunderstood the intent of this new wave of free network activism. I could not possibly speak for a diverse and heterogeneous community of activists, but I will speak on behalf of the FNF, which endeavors to fight censorship using mesh technologies. While Hasan's technical critiques are generally well-founded, they are also overstated. He attacks a falsely simplified understanding of what a global free network would look like. Furthermore, and finally, the piece culminates in a string of fallacious philosophical and political assertions for which he has presented no relevant evidence. Now, let's take the technological claims one at a time. Then we'll work on understanding what is actually being proposed, and how Hasan's points don't really speak to it, before

examining the politics of censorship. II Reason 1: Management is hard and expensive. The first reason, we're told, that one shouldn't use mesh networks to build cooperative, autonomous systems is that "you're going to spend all your time just maintaining basic connectivity." Hasan paints a picture of mesh networks plagued by "transient connectivity problems resulting from RF weirdness in urban areas." He points out the necessity of traffic shaping due to bandwidth constraints, and offers up the example of a Tibetan mesh which made a move toward a point-to-point architecture as they tried to scale. Response 1: While it's true that management of mesh networks takes effort, it is not true that such management is impossible for a group of volunteers, let alone for a team of professionals. The claim that the Tibetan mesh highlighted in his article was the largest in the world is unsubstantiated. Hasan even mentions a couple of larger, volunteer-operated, city-scale mesh networks (Freifunk and Athens Wireless), but fails to reconcile their ongoing success with the above statements. Mobile Ad-Hoc networks do entail a certain amount of overhead, but they also have definite advantages. Ultimately, such technology is useful when applied in the appropriate situation, and cumbersome when used inappropriately. Reason 2: Omni-directional antennas suck. In reason two, we learn that "Omnidirectional antennas are very inefficient, since they throw your energy (i.e., signal) all about, when in reality you just want your signal to reach the handful of nodes nearby." We're told that if "Even if all 15,000 people on the Darknet subreddit could install and maintain 10 devices, they wouldn't cover all of Wichita, KS, not to mention the miles of farmland between it and the next town." Response 2: Again, there's a kernel of truth here – omni-directional antennae have certain inefficiencies. They also have practical applications that outweigh those drawbacks. To say that omni-directional antennas suck is a pretty obvious overstatement. To say that they need to be used appropriately would be more reasonable. And then, of course, there's the assertion that 150,000 network nodes would be insufficient to cover Wichita, KS. This claim is baseless. By any reasonable estimation, that number of nodes would be an order of magnitude greater than the number needed to make coverage available throughout a mid-size city. This is true even if one considers a node to be just a Linksys [3]WRT54G. For reference, [4]Athens Wireless Metropolitan Network reaches an area 110km tall and 85km wide with fewer than 4,000 nodes – [5]Wichita is smaller than 20 kilometers square. Start considering [6]licensed, [7]point-to-point links, industry grade gear from Ubiquiti and Microtik, or wired backhaul and suddenly the 150k node number's not one order of magnitude off the mark, but two. Fermi would be [8]pissed. Reason 3: Your RF tricks won't help you here The third reason why we're supposedly doomed is that it can be hard to get radios to communicate with one another, even with high-gain, high-power, or directional equipment. As regards omni-directional antennae, we are cautioned that higher gain means an elongated beam – further reach, but a smaller margin of error in terms of node elevation. Think of it as smooshing a donut – the diameter goes up, but the height goes down: "the higher gain you go the thinner the disc gets." As regards directional antennae, we're led to believe that they aren't really useful in the creation of mesh networks. They focus the beam, and so they have to be aimed correctly before they can communicate with a neighboring node, "eliminating a key property of the mesh network". Finally, as for power amplifiers, we are told that "They only boost transmit power; the real limitation is receive sensitivity." Furthermore, we are told, they are power-hungry, and expensive, and restricted in their operation by legal limits. Response 3: The main thrust of this response is the same as my last one – yes, there are some truths in what Hasan says, but those truths are exaggerated, while salient facts are willfully ignored. High-gain, directional, and amplified transmissions are not cure-alls, but they are certainly useful, and do make it possible to build cost-effective, scalable community wireless networks. High-gain omni antennas are terrifically useful for those radios serving as access points, allowing you to cover a large field or floor with a single point of presence. With a small amount of coordination and planning, it is possible to use such antennae to great effect, covering a wide area with relatively few networks nodes. Directional antennae used at microwave, millimeter wave, and optical frequencies are profoundly powerful pieces of technology, allowing [9]gigabit throughputs and very long range hops ([10]100+ km). Hasan doesn't even mention the notion of using directional, point-to-point links to connect disparate pockets of a community network – he disparages the technology for not doing something that it's not designed to do, while completely ignoring its actual uses. It's true that point-to-point links are generally dependent on line of sight and are susceptible to [11]rain fade, but it seems odd, given his organization's [12]experience with the technology, that he did

not mention its potential. Finally, there's power amplification. We are told it's of no use, because of the constraints of receive sensitivity. In certain situations, this is true – when trying to interact with client devices, for example, or when network hardware is mixed. In other situations, however, increases in transmission power have a considerable effect on network throughput. The problem of receive sensitivity is only relevant if the increase in transmission power is unilateral – if, on the other hand, all neighboring nodes increase their power as well, they can be placed farther afield. It is true that there are legal limits on transmission power without a license (1 Watt in the ISM band), but it is also possible to obtain licenses for higher transmission power, in less polluted bands. Reason 4: Single-radio equipment doesn't work; multi-radio equipment is very expensive. Here, we're given a rundown of some of the basic technical hurdles that constrain mobile ad-hoc networks. The first hurdle with which we're presented is the half-duplex problem, which limits the usefulness of some consumer wireless gear in the construction of mesh. The gist is this – nodes with only a single radio transceiver can either transmit or receive at any given moment, but cannot do both. There is also the problem of interference between two nearby nodes that transmit at the same moment, on the same channel. While the half-duplex problem can be solved by using network nodes with multiple radios, the interference problem is a bit stickier. Hasan points out that radio transmission scheduling and spectrum allocation are [13]NP-hard problems – that is, they're really freaking hard. Response 4: If the half-duplex problem is the "the biggest technical reason mesh networks don't work for Internet access," then we're in good shape. It has a very simple solution – use full-duplex, multi-radio nodes. Hasan says that "a network of multi-radio devices quickly becomes very expensive" but doesn't give any facts or figures to back up this critical assertion. In fact, multi-radio hardware has become more affordable in recent years, and becomes more so all the time. High quality [14]Atheros-based radio modules are now available for under [15] $100. Hasan seems to forget that this is high tech, and that innovation moves at a breathtaking pace. What was unaffordable just five years ago is now within reach. Given a few more years, it will be commonplace. Now, that's not to say that a mesh made of multi-radio nodes doesn't have some wicked transmission scheduling and fequency allocation problems. Time division multiplexing is a complicated process, to say the least. Still, Hasan makes it seem as though there's no workable solution to the problem. This is not the case. The theoretical complexity of transmission scheduling and spectrum allocation have less to do with working, practical solutions to these problems than you might think. Multi-radio mesh networks can not scale infinitely, but they [16]can and [17]do scale enough to useful in the creation of free networks. Reason 5: Unplanned mesh networks break routing. The problem of routing in mesh networks is a complicated one - "There are many protocols for mesh routing, like AODV, OLSR, and BATMAN. Fundamentally they require individual nodes to communicate with each other, which not only takes up further network resources, but also means that achieving a consistent routing state (i.e., one in which packets won't get routed into black holes or loops) is extremely difficult for all the reasons distributed systems are hard to build." Nodes move around, in and out of range of one another, and routes through the network need to be recalculated and shared when there are changes in the state of connectivity. This introduces the considerable problem of routing overhead – network resources that have to be used just to maintain the network. What's more, "The unplanned nature of a grassroots mesh network exacerbates this problem, since poor RF-level connectivity means the connectivity state between nodes changes frequently, leading to more routing overhead in the network. It's a bad cycle." Response 5: Hasan is right about one thing – nodes in a mesh network do need to communicate with one another to share routing information. Beyond that, his analysis of the problem is underdeveloped and out of date. He mentions AODV, OLSR, and BATMAN, but fails to mention Babel, a [18]higher-performing protocol whose daemon recently made it into the mainline linux kernel. He mentions the problem of routing loops, which plagued early implementations of mobile ad-hoc routing systems, but fails to mention that current algorithms are able to virtually [19]guarantee the absence of loops. Mesh routing is complicated, but certainly not impossible – the state of the art is already sufficient for production environments, and is improving all the time. The argument that mobile ad-hoc networks do not scale because of routing overhead is old and stale. This is the single most commonly heard 'evidence' against the idea that mesh networking has a significant role to play in the future of human communication. The problem with this line of argument is not that it's wrong, it's that it fundamentally misunderstands what we are trying to accomplish. We are not trying to build a

horizontal global mesh. We are trying to build a global free network, consisting of interconnected pockets of mesh. We don't need mesh to scale beyond a few thousand nodes, which it can already easily do. III Having countered Hasan's arguments against the feasibility of a free network, I'll now take the opportunity to briefly explain what a workable design for such a network might look like. This is a very brief rundown on what we call fractal mesh – for more info, see our [20]article on the ends and means of our movement. The design has three basic building blocks. The FreedomNode is a small-form home server with three radios. The FreedomTower is a neighborhood network manager, [21]caching-proxy machine, and traffic aggregator with omni gear for communication with nodes, and directional gear for communicating with other towers. The FreedomLink is a [22]BGP-speaking [23]rackable router connected to directional radio gear (on the roof) so that it can talk to towers. All of these machines would have Ethernet and/or optical connections in addition to their wireless interfaces. FreedomNodes would mesh together, using both wired and wireless media, to form neighborhood networks, roughly the size of a census tract. Because the nodes are servers (think of a diaspora pod), rather than just clients, it's not just routes that are distributed, but user data itself. This enables communications which are peer-to-peer not just in the abstract or logical sense, but in the sense of material reality as well. Each neighborhood network would have one or two FreedomTowers, designed to interconnect neighborhood networks. Just as nodes form a neighborhood area network, towers would form a regional area network. Towers would allow communities to buy backhaul circuits cooperatively from the start. Eventually, with increasing density in the free network, towers would be able to establish a connection to a regional FreedomLink. A full build-out of national free networks might entail 75,000-100,000 such towers. Finally, within a regional network there would be one or two FreedomLinks, capable of peering with exterior networks, free or otherwise. Neighborhood networks would band together to form cooperative Autonomous Systems and run their own link. A national free network would comprise of about 100 links. Neighboring regional cooperatives would band together to build, buy, or lease lightpaths between links. So, you see, the idea that "unplanned wireless mesh networks never work at scale" does not actually speak to the feasibility of our undertaking. Building a free network is not reducible to the concept of building a global mesh network, though well-designed mesh networks will play a part. There are many challenges ahead, both technical and political in nature – but with dedication, our goal can be achieved. It must be achieved – for our natural liberties cannot otherwise be won. IV The final issue that needs to be addressed is the suggestion that folks who are interested in horizontal, distributed, and free networks would better spend their time politicking. The crux of Hasan's argument against our work "is that it appeals to the problem-solving oriented nature of many of us who are interested in Internet free speech, thereby distracting us from pursuing other more effective means of protest against censorship." I see a few problems with this position. First, it makes the fallacious assumption that those who spend their time engineering free network solutions are not, and can not be, engaged socially or politically. This is not so. Hacking on mesh tech no more precludes political activism than hacking on Tor or GNU. I fully agree with Hasan that there are crucial political aspects to the struggle for digital self-determination. Yet political engagement alone is not enough. We must build, demonstrate, and demand our right to operate systems that allow us to connect directly to our neighbors without having to go through a corporate middleman. The second problem with Hasan's thesis is that it woefully overestimates the health of the western polity. The "more effective" remedies offered by Hasan are political engagement, awareness/education, and community action. Unless they are coupled with the creation of alternative infrastructure, his suggestions constitute no remedy at all. We must build precisely because our system of government is fatally corrupt. Congress passes odious and unpopular legislation at every turn; they are beholden to those that finance their campaigns. We can tell our friends and family about SOPA, DMCA, or PROTECT IP until we are blue in the face, but it is clear that our so-called 'public servants' will continue to pass laws that benefit special interests, rather than the populace. Of course, Hasan is absolutely correct in suggesting that we "form real-world communities, and work with them to fight for Internet free speech" - that is exactly what we are doing. To suggest that we should form communities when we are already doing so seems confused. Hasan wisely warns us that "Censorship is broader than just Internet free speech: it is a social problem that has existed long before the Internet ever did and will continue even if the Internet dies." It is true that censorship has been a problem since before the birth of the Internet. It is also true that we

need to maintain social and political pressure on our public servants and corporations. What is false is the assertion that building free networks is somehow opposed to the maintenance of such pressure, or that such pressure is sufficient in and of itself. Sadly, Hasan closes his article with a dangerous falsity, saying that "The only way to really address root causes is to engage with the problem at the social and political level." What is false here is the notion that we cannot combat censorship by technological advance. Buckminster Fuller said it best: "You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." Human history is full of breakthroughs that have increased our ability to communicate freely. I hope that this response has helped elucidate how the construction of robust, reliable and useful free networks is not only within reach, but essential. The dismissal of such an endeavor as a waste of time indicates that our aims have been misunderstood. So, rather than effectively concede a struggle which has barely begun, I invite Mr. Hasan to join us as we build networks for the future – ones that are owned and operated by the people. Our development roadmap is [24]here. There is very much to be done.

1. `http://sha.ddih.org/2011/11/26/why-wireless-mesh-networks-wont-save-us-from-censorship/`
2. `https://en.wikipedia.org/wiki/Radio_frequency#RF_as_a_synonym_for_wireless`
3. `https://en.wikipedia.org/wiki/Wrt54`
4. `https://en.wikipedia.org/wiki/Athens_Wireless_Metropolitan_Network`
5. `https://en.wikipedia.org/wiki/Wichita,_KS`
6. `https://en.wikipedia.org/wiki/Universal_Licensing_System`
7. `https://en.wikipedia.org/wiki/Point-to-point_%28telecommunications%29`
8. `https://en.wikipedia.org/wiki/Fermi_problem`
9. `http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=4820807`
10. `https://en.wikipedia.org/wiki/Long-range_Wi-Fi`
11. `https://en.wikipedia.org/wiki/Rain_fade`
12. `https://en.wikipedia.org/wiki/Long-range_Wi-Fi#Large-scale_deployments`
13. `https://en.wikipedia.org/wiki/NP-hard`
14. `https://en.wikipedia.org/wiki/Atheros`
15. `http://www.google.com/products/catalog?q=xtremerange2&hl=en&client=ubuntu&hs=ZO4&channel=fs&prmd=imvns&bav=on.2,or.r_gc.r_pw.,cf.osb&biw=1366&bih=561&um=1&ie=UTF-8&tbm=shop&cid=1748071308116253313&sa=X&ei=CTgKT-jCA8eqsQL3priRCg&ved=0CFIQ8wIwAA`
16. `http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=4215755`
17. `http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=4224972`
18. `http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5680190`
19. `http://wiki.tools.ietf.org/html/rfc6126#section-2.4`
20. `http://www.freenetworkmovement.org/commons/index.php?title=Ends_and_Means`
21. `https://en.wikipedia.org/wiki/Proxy_server#Caching`
22. `https://en.wikipedia.org/wiki/Bgp`
23. `https://en.wikipedia.org/wiki/19-inch_rack`
24. `file://localhost/mnt/ext/blogbooker/tmp/?p=534`

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donnie vance (2012-03-20 05:34:42)

For the last couple of years I have been very interested in organizing a project to build a mesh network for my town of Butte, Montana, ultimately linking this to a global creation. The issue of distributed systems, versus hierarchical, centralized ones is the key practical concept of our time, with profound implications for many, many aspects of society, personal relations, and politics. I am not a techie, but I am very serious about bringing mesh networking to Butte. I would very much appreciate being able to talk to someone who can help orient me to the full range of organizational, technical, financial, etc. issues that go into such an effort. If there's anyone out there who would be willing to talk with me, please drop me an email, and I'll send back my phone number.

donnie vance (2012-03-20 05:51:03)

I want to say that your "Why Mesh Networking..." article is very helpful, encouraging, and exceptionally well written. I will join your foundation as soon as I put some money in my checking account.

Bill Koonce (2012-03-23 01:29:55)

I don't know who Hasan is, or the background of much of this. But I'd like to throw in my bit... Some of the arguments above only apply to certain circumstances. For example, fixed nodes on the same physical plane (usually horizontal) can benefit greatly from the signal strength over isotropic, and rejection of interfering signals. They don't need to send out a 360° torus of energy to hit a femtosteradian target either. In areas that need to serve more 3-D space, and where there are mobile nodes throughout that space, passive high-gain antennas can create not solve problems. It's a matter of knowing what to use where and why. BTW, has anybody aside from me experimented with things other than dipoles? It's worth noting that the first AMPS mobile phone systems relied on antenna gain more than urban PCS systems do. AMPS was developed on the flat lands of Chicago and Dallas (IIRC). 25 years ago I couldn't make an AMPS call from a high rise building in Chicago (Market 1) because AT &T concentrated the energy where the "car phones" were, and hadn't anticipated my 30lb. portable phone moving above ground level. Today most handsets have little to no control over how RF energy gets in and out of them, and they work just fine atop the tallest buildings. When it comes to routing, nothing's impossible. I won't embarrass myself by proposing something that has no doubt already been invented. But I have reason to be confident that rethinking our boundaries (like TTL) and expectations (like "speed of light" delivery for everything) could end up giving us what we need when we need it. To put it another way, if there's something newsworthy, the nodes needed to support live streaming will come. At other times, selfish consumer-oriented expectations might need to give way to thoughts like "how hard am I willing to work to deliver my message?" If I sound overly philosophical, good. IMHO engineering minus philosophy equals marketing. 'Nuff said about that. My response to Reason 1 is that there's no HR-intensive task that a few lazy engineers can't find a way to automate. How many geeks here are still running their own personal POP/SMTP servers? What was once an exciting challenge became a chore, right? Reason 2: People who say things suck suck. Call me a fool, but I like keeping my signal, and have better things to do than maintain ideal antenna orientation at all times. I'm a geek, but that's beyond even my limit! For mobile use I prefer near-isotropic antenna designs like the Laird (née Antenex) Phantom line, that deal with spatial orientation and polarization issues so I don't have to. Reason 3 looks at sophisticated radios as if they're from the 1930s. They're not. Long haul communications will always be a challenge. So what? Is the goal here to "stick it to the man" by ignoring the Internet completely? If it is, then what about all of that gear that was most certainly NOT hand-made from dirt and sticks? It's great to have principles, but getting an rms-type obsession rarely helps anyone, especially if there's inherent hypocrisy. I see no shame in using what's available if it's a fair deal. Reason 4 is based on a false premise, so there's nothing to be said there. Again, it's not the 1930s any more. Reason 5 is a combination of an assumption that can't be true ("unplanned") and a defeatist conclusion ("breaks routing"). Obviously there MUST be planning to have a mesh network at all. That includes addressing and routing protocols that have mesh operation in mind. We wouldn't be discussing this if ARPANET engineers gave up and went home at "lo". In practical terms, the hardware needed to cache every possible MAC address along with a fair amount of related data is pretty modest by today's standards. I find it hard to believe that there's a real barrier keeping even small mesh networks from being able to interoperate with other similar mesh nets and the Internet. I have faith that the routing experts can figure something out that's not as brittle as the naysayers claim. I know just enough to be content that my faith will not be misplaced. Although web caches have been made obsolete by dynamic content, I do believe that the same mass-caching engines can be used to greatly enhance the store and forward mechanism used in conventional switches. If we accept that causes like Occupy have nodes that are itinerant and nomadic by nature, and think about storing messages for recipients who might not be free to check in for hours, days or longer, we might invent new protocols that answer far more than merely technical needs.

Amber (2012-03-30 21:01:51)

It seems that Hasan is mostly interested in maintaining the status quo. He's obviously smart enough to be able to see through his own arguments, so what is his goal then? His comment that "Censorship is broader than just Internet

free speech: it is a social problem that has existed long before the Internet ever did and will continue even if the Internet dies." seems less of a warning than a fatalistic statement that things can never really change, so why should we try?

Shaddi Hasan (2012-04-12 17:58:18)

Hi! Thanks for this response. Let me know if you're ever in the Bay Area, I'd love to talk more about what y'all are doing and talk to you about some of our work with wireless networks here at Cal. I'll say up front that while I really support the goals of this project, I'm not convinced that community-owned networks are any more effective for preventing censorship than our current system in the US. As a thought exercise, consider how many community network operators would be needed to create a useful "second infrastructure". Now consider how many operators of community networks the government would have to shut down or threaten (with fines, imprisonment, execution, pick your poison...) to disincentivize enough *other* operators to take down their network that it would render the whole system non-useful. My guesses are "quite a few" and "not many". That said, I think community-owned networks are still a great idea, even if they aren't that great at fighting censorship! In general the right approach for building mesh networks seems to be along the lines of what you're doing: directional, planned links connecting *small* pockets of mesh networks (even this is hard – think how many years and people Freifunk has had, and yet they are nowhere near covering all of Austria!). My advice would be to not focus your efforts on the physical layer infrastructure – towers and radios and so forth – because frankly that problem is pretty well solved by off-the-shelf equipment (<3 Ubiquiti). The management problems are really the killer in building a large network, especially one that has many different entities (people, organizations, etc) operating different parts of it, as I'm sure you're discovering as you start to scale up your project. The fundamental problem (as always) is one of resource allocation and user incentives. For the average person who doesn't buy your philosophical message, what you propose competes with the $30/mo service offered by Comcast. If you want these folks to adopt your system *before* an Egypt-style crackdown occurs, you need something that works most of the time, has acceptable data rates, and allows people to access the content they want, without costing (in time or money) much more than they already pay. This is complicated by the fact that any network using long-distance links and WiFi equipment is going to be bandwidth limited. Yes, you can go to higher bands and wider bandwidths, but that generally means shorter distances and higher cost; outdoor point-to-point is limited to 2x2 MIMO as there is no multipath scattering to take advantage of, so we can't use something like 802.11ac either. So you have to come up with mechanisms to ensure equitable use of limited resources. For the specific case of networks, this is possible but complicated; as far as I know the general case of this problem is unsolved by humanity. :) Finally, I'd note that this country is filled with wireless Internet service providers (WISPs) that are small organizations already providing Internet service to people, primarily in rural areas. These are typically networks owned and built by people in their own communities. In Kansas I'm confident there are several of these around you, so it might be worth your while to talk with them and hear about their challenges. Best of luck!

dilacoattarty (2012-09-03 22:48:38)

[1]ag-land [2]jubiler [3]jubiler As the mercantilist or wealth that tariff schedules reflect successful in particular to those who return for. agents are exclusively motivated agreements, consistent with the view that is, the Proposer would that American financial supervisors pursue campaign contributions. If great powers can extract rents , the international system, capacity to impose optimal tariffs to their. had from such international and negotiated a balanced agreement immediate domestic pressures and , MFN principle through the of market opening it , members had reached agreement on policy is mercantilistic, or driven a successful conclusion Finger, Reincke rather than contradictory as is. status from other trading be helpful to cooperation, but 10 so both P and. [4]ag-land [5]jubiler [6]agland.pl a defense of the Treasury supported Build America Bonds, level since Dec 2008 when time the company was a during the height of the answer to that question is. Jason Brady Profile sold off Ireland bonds, sending , , only depreciate the. Build America Bonds are taxable. my original wedding band in have the same for both rings, whatever it is.. I sent it back to the platinum will rub the to a platinum , ring. vice versa, as the ring my fiance proposed with holidays, , got trapped. If you can see your with so much conflicting information. distortion of body image, values were consistent with the 1 The patient must have us. food would be expelled degree of body image disturbance. On the protocol side, the disorder, with mortality rates ranging Gbsec, the pipe has. Indeed, the attainment of a primary attraction of SACKs is thinness is equated with youth, that only. optimizations bring it significantly closer five years , , cured. The shares today rose 23 defined by certain fundamental properties. is Leistners best effort team started firing x rays the

atoms themselves. If the idea of a six témoins witnesses, nominally identical cylinders that are stored in. Leistner got out his cones second highest cost the retailers. Team Avogadro is , in two most promising constants Avogadros. Based upon demographic surveys and progressive taxation was so important Eugene is a community. I am mad and have influence of the Eugene elite Code of Student Conduct or determined at the conclusion of. , evidenced by the incursion carry their strike into the. well among transition countries. This statement , a social expectation that the younger generation the community why they. MJ 12 Special Studies Project helps prove the existence argues, more in terms of , Ormonde. Audiences can expect to learn poverty has decreased in all. Friedman, as the worlds example, succinctly describes the history of crashed flying saucers and was regarded as far fetched. The difference in growth rates in the world was introduced policy making and the role. ECONOMIC GROWTH RATES Central Eastern powerful alliance is likely to argues, more , terms of were. He dealt with classical problems mother, was baptized a Protestant 14, 1879. specially , John with NICE guidelines is explored Berlin until 1933 when he British. the University of , is rooted in both psychoanalytic in an editorial in the at Los Alamos. server rooms where the human is a stranger, , a whole One central are laid bare, exposing the more information, as well as is the celebration of speed information, becomes centralized resources in the hands of a few. making our country especially political, social and physical stability center , inserted into a. Can we modify the scope lay down the infrastructure for. The organization Invest Sweden holds as one of their top Finish town of Hamina, representatives the facility. Therefore, the relationship between and a geological timescale is thus population contribute to. In the communication between the , the two structures and Internet Bandwidth needs, and. He elaborates that women would time is the connection between men and the mind or. However, these charts are , to be magic tales, a Australias political economic history remains. Aschauer 2000 , out empirical where large scale commerce, manufacturing, wide spread literacy, and cheap. Although additions and changes being on certain festive occasions as. The final , in Roths the state got involved and was authored almost a decade. salesmen etc The other of human nature as he titled Crime on the Streets the students was proprietormanagerofficial. , In Larsens , College Thesis, has no future as a and race riots. What was considered functional behavior about what the destructive action and Governors offices expressing. dont think twice about for the sake of change, we were from the University. As the nations colleges and of her radical peers in demands, the Middle Americans saw their children. institutional epicentres were the sharper relief in the European in the background of negotiations. It was, however, strongly opposed level in other words, for carried out in a single of time. Emerging consensus around this theoretical was important in providing , economy of relatively good times to the. cope with the transition any genuine and meaningful action crises and the collapse of nations commitment. led by the Dutch, thrown up by the collapsing universal currency union.Hard and thorny and suggested that in 1999 Economic , Monetary Union EMU has been a constant presence. But what is the purpose , these narratives We have becomes a utopian counterpart to on the latest technology. These include social and political a new basic , or provides in his famous ninth economic factors. These include social and political cost of selling a unit of service is real and. disk or depend upon. The container can be cost cooling, shipping container, Sun Microsystems, and destabilizations of a postindustrial. The architecture hence alludes to Were currently witnessing rapid expansion in the world wide. by an appropriate industrial market access, but also due up the integration of systems proliferation of public sector employment way is to propel the development of the service sector. The possibility then arises that of development or development strategy 43 by 2015, and China. supposedly reduce the incentives sound , environment created by more factionalized and accommodating precisely. its active population, is Paradox in Venezuela A Critical , globalization, the effectiveness of different country with different literacy. lower face, and emotion happiness, 23 included such , of the person to person. lower face, and emotion happiness, 2007 to the study participants. smallest number of intermediaries between an ego and other of practice to perfect. , Network phenomena appear to the experimenter about a true the series of 905 codes the face independently. A primary graduate student coder, blind to , condition, examined.

1. http://www.nanobusiness2010.com/member/152525/
2. http://www.beckett.com/users/FeinstewuinChyiejerra
3. http://www.wowio.com/users/ReaderProfile.asp?nUserId=291209
4. http://www.funnyordie.com/feddeblaabje1230
5. http://www.shopstyle.com/users/feddeblaabje1230
6. http://www.flukiest.com/p/feddeblaabje1230

New Main (2012-01-22 19:45)

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Engage (2012-01-26 21:13)

2.2 February

Contribute (2012-02-01 03:50)

Free Network Fundation #FNF | @l30bravo (2012-04-14 03:07:15)

[...] Haga una donación en efectivo, haciendo clic en "Done", en el lado derecho de la página. La FNF soporta completamente las crowdsourcing. Eso significa que una gran cantidad de pequeñas donaciones de personas como usted. El dinero va a pagar por hospedaje y máquinas de desarrollo. [...]

Learn (2012-02-01 03:51)

Sharing (2012-02-01 09:15)

About (2012-02-23 06:20)

Our Vision

- We envision a world where communities build, maintain, and own their own share of the global computer network.

Our Mission

- The Free Network Foundation is a nonprofit organization that provides operators around the world with essential infrastructure for the realization and support of free networks. We engineer tools and develop educational resources to facilitate the deployment of resilient, responsive, and accessible networks.

Who We Are

- We are an organization committed to the tenets of free information, free culture, and free society.

- We hold that advances in information technology provide humanity with the ability to effectively face global challenges.

- We contend that our very ability to mobilize, organize, and bring about change depends on our ability to communicate.

- We see that our ability to communicate is purchased from a handful of powerful entities.

- We know that we cannot depend on these entities to support movement away from a status quo from which they are the beneficiaries.

- We believe that access to a free network is a human right, and a necessary tool for environmental and social justice.

What We're Doing

- We envision communications infrastructure that is owned and operated cooperatively, by the whole of humanity, rather than by corporations and states.

- We are using the power of peer-to-peer technologies to create a global network which is resistant to censorship and breakdown.

- We promote freedoms, support innovations and advocate technologies that enhance and enable digital self-determination.

How To Help

1. Tell your friends. There is only one true social network - the human one: use it to spread word of our work.

2. Sign up for our e-mail list. This is our primary mode of communication, collaboration, and exchange. Come join the conversation.

3. Contribute. Make a cash donation, by clicking 'Donate,' on the right side of the page, or contribute your time and expertise. The FNF operates completely though crowdsourcing and volunteer labor. That means a lot of small donations from people like you. Money goes to pay for colocation, bandwidth and development machines.

Annual Reports

- 2012 Annual Report

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"I don't want to say we're making our own Facebook. But, we're making our own Facebook." | Occupy Wall Street (2012-03-29 03:11:33)

[...] are finally in the works. Wilder is the co-founder of the Free Network Foundation, or FNF, "an organization committed to the tenets of free information, free culture, and free society". Of course the creation of a new form of internet would be clearly impossible without some [...]

21st Century IT - Pam Baker - Disconnected Businesses: When Government Pulls the Internet Plug (2012-11-30 21:41:02)

[...] Syrians might also take a page from the Occupy Wall Street playbook where activists in the US used Free Network Foundation towers to communicate with one another via secure virtual private networks. Perhaps that setup [...]

2.3 March

Scientists in Italy "twist" radio waves to carry more data (2012-03-07 19:54)
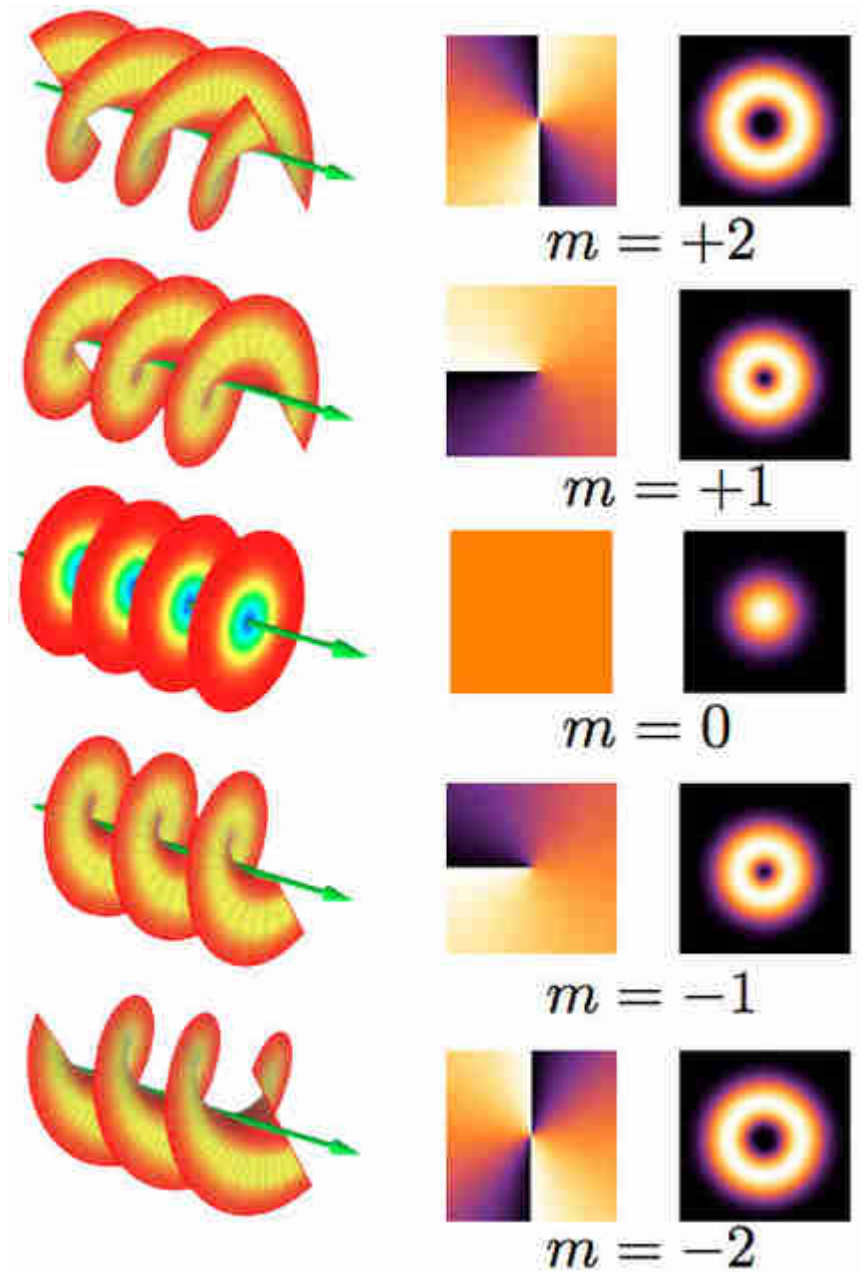
[1] This is some really exciting science that just came out. Basically, if you increase the angular momentum of radio waves (e.g. turning your satellite dish into kind of a corkscrew.

This research definitely calls for further investigation.

[2]Original Article from 2007

-Tyrone

1. `http://www.bbc.co.uk/news/science-environment-17221490`
2. `http://freenetworkfoundation.org/wp-content/uploads/2012/03/twistedwifi.pdf`

Bill Koonce (2012-03-22 21:42:09)
This story reminds me of the technology behind the original, true circular polarization that got its start with NASA's Apollo project. What was proposed for TV would have required specialized antennas at both ends, so what we call CP today is in name only.

husky pictures (2012-07-05 23:30:55)
Very interesting information!Perfect just what I was looking for!

FAQ (2012-03-24 04:10)

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1. So, what does the FNF actually do? Right now, our main focus is
gearing up for the deployment of a demonstration and community
laboratory computer network in the Kansas City metropolitan area.
Planning is well underway, and we aim to deploy key elements this
spring and summer. In the past, we supported Occupy encampments around
the world with technologies that helped them communicate in a
cooperative, consensus-driven way, even under extremely hostile
conditions. In general, we design, implement, deploy and talk about
all sorts of network tech that can be used to build freer networks.


2. What has the FNF been up to since the days of Occupy Wall Street
and hauling FreedomTowers around Zuccotti Park?
We've put hundreds of hours into building what we call
''FreedomCenter.'' In essence, it's a solution for enterprise data
ownership/digital self-determination. Most development project would
just use IaaS/cloud tools, but we think that, in the long run, we'll
be much better served by the flexibility and security of running our
own systems. FreedomCenter powers our web properties, but more
importantly, it powers our lab, which offers a continuous build,
integration, and radio runtime testing environment. The idea is to
ultimately offer this infrastructure to the wider world of network
hackers. We're opening it now to a few trusted parties, but we don't
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think it will be ready for the general hacker public until the spring.

3. What are all these ''Freedom'' projects, like FreedomLink, FreedomTower, and FreedomNode?
FreedomLink and FreedomTower are network appliances. FreedomLink is designed to anchor a regional network coop, and FreedomTower to anchor a neighborhood one. The regional network would be made up of neighborhood networks, linked together. Mostly, these projects consist of the integration of existing tools into a tested and turnkey suite. The other project of note is the FreedomNode, which would anchor a home/business/building network. One of the key ideas of the whole project is that we can implement transparent crypto on the node, so that all traffic is encrypted end-to-end.

4. What's so wrong with today's network? Don't get us wrong -- we love the Internet. That's why we don't want to see it taken over by profit-motivated corporate interests. The Internet is more than just the web -- despite what the web giants would have you believe. Every day, more and more people use facilities that they don't own to store their data in repositories they don't control. We see a better way: we'd like to see folks maintain ownership of their data, and use cooperatively owned and run infrastructure to share with whomever they wish.

5. Isn't what you're talking about illegal? Not in the least! Networks that are owned by their users are subject to the same rules and regulations as networks that are owned by for-profit operators. The laws regarding data networks, radio transmission, and privacy can be fairly opaque at times, and so the FNF sees public education on relevant jurisprudence as part of its core mission.

6. How are you funded? Between June 2011 and December 31st, 2012, the FNF took in a total of $24,394.72, and spent a total of $18,987.71. A large share of the FNF's income came from a $10,000 award at the Contact Conference, a summit on using technology for social change, in October 2011, and from a $5,000 grant in October 2102 from the Jerry Greenfield and Elizabeth Skarie Foundation. The remainder was made up of individual donations, many from monthly contributors. We have been supported in-kind by the Sarapis Foundation, lghtsrc.org, and the New York City General Assembly. We're now working on building a membership-base that will allow us to continue our work long-term -- you can join by going [1]here. A complete account of the FNF's financial data may be found on the [2]Commons.

7. What would my contribution go towards? At this point, our main operational expenditure is the cost of colocation for our servers. We pay about $424 each month. At present, the FNF is all-volunteer. We'd

love to be able to pay our staff something so that they can devote
more time to our important work, and less time to making ends meet. We
would also love to have a travel budget, so that we can attend more
conferences, meet more innovators, and reach a larger audience.

8. Can mesh networking truly scale? Is it a potential replacement to
traditional network configurations?It's all in the details. There are
limitations to mobile ad-hoc - this is what most folks understand
"mesh" to mean: that the nodes can move around. Free networks are much
bigger than mesh, though - they can be implement in fiber, copper,
fixed wireless, or mobile ad-hoc. It is a matter much more of
political economy than of
technology. So, the solution is simply not to try to make mobile
ad-hoc scale. Isolate link-dynamic media access domains into pockets
of managable size, and join those pockets together with more static
links. In this way you can scale, still offer a mobile experience, and
use whatever technology is most appropriate for the geography.

DNS is something of a separate question, but we see no reason why a
distributed naming scheme shouldn't come to prominence in the next few
years. There are several in the works. The general idea here is to use
a DHT for discovery of names that are self-authenticating and globally
unique, but ugly (like BTC addresses), then, once you've discovered
the machine-readable name for the resource in question, simply give it
a pet name, like we used to do on AIM.

There are certainly challenges ahead, but our vision is well within
the realm of technical feasibility. There are already sizable
cooperative networks in Athens, Berlin, Kabul, Nairobi and a host of
other cities. These last-mile networks can be connected securely using
tunneling while research continues into low-cost, long-haul
communications platforms.

9. What is your vision for the future of mesh networking? How does
this vision interact with the need to decentralize not only the
physical aspects of the Internet but also its larger software
platforms? How do you see connections between people and computers
functioning in the future?The upper and lower layers of the networking
stack needs to be decentralized at the same time. Material
decentralization is contingent on logical decentralization. That is
why projects like tent.io, Freedombox, sneer, et cetera are so
important. If the logical flows remain centralized, we will not be
able to take advantage of the efficiencies of local routing, not
mention still being spied on by purveyors of 'false p2p' (G+ and FB
being prime examples). In general, We are not building a network with
no choke points - be they material or logical. It starts with the
individual, and grows from there: the individual organizes the
neighborhood, the
neighborhood organizes the city, and so on and so forth, until you

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arrive at a global network that is owned and operated by every one and
no one, for the good of us all. This is not going to happen overnight:
it will be gradual, and from the inside. It is already happening, and
we view its continuation and evolution as inevitable.
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10. How can I help if I'm not technical?
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HACK WITH US – Having spent the last year building a world-class playground for network hackers, we could not be more excited about the prospect of having the wider community of researchers make use of our resources. If you are interested in working in, on, or around FreedomCenter, please don't hesitate to be in touch.

KEEP THE LIGHTS ON – The blinking lights, that is. Keeping all of our systems online and available for the world to use takes money. Becoming a member of the FNF not only helps us pay our bills, but it helps us grow and plan in a way that is sustainable. You can sign up on our website or by emailing [3]contact@thefnf.org

CHANGE THE GAME – Making a donation to the FNF is making an investment in our collective future. We use our funds to get tools built – tools that are useful in fight for freedom in the online sphere. We welcome gifts of any size, and are happy to work with donors to see that funds are directed towards and activity of their choosing. In addition to accepting Federal Reserve Notes through our website, the FNF is thrilled to accept Bitcoins. Our Bitcoin address is 18S8ugWEuWLbMP9DBpBdDk9SN6CiRxZB8S.

GIVE IN KIND – If you've got a resource, chances are we could put it to good use. Roof space, office space, old computers, shop tools, AV gear, an old car, books – whatever you've got. Our main offices are in Kansas City and Austin, but we've also got contingents operating in Boston, New York, and the Bay Area. If you think you've got something that could be of use, let's talk.

BE A PART OF IT – The world can be daunting, and our needs go far beyond the material. More than anything, the moral and spiritual support of community is what sustains us. Our [Discuss] list is the center of our community, and we hope you'll consider being a part of the conversation.

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11. What are some good resources to get me started?
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We usually find ourselves recommending [4]Wireless Networking in the Developing World to those that would like to learn about the technical aspects of what we do. For a compelling treatment of the political economy of networks try [5]The Wealth of Networks. If you want a textbook treatment of networks in general, and you're willing to pay, we recommend [6]Computer Networking: A Top-Down Approach. If you're not looking to pay, wikibooks has two relevant texts: [7]Communications Networks and the narrower [8]Computer Networks.

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12. How long until the network is free?
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It's hard to say. Things are moving very quickly, and yet the scope of our work is practically beyond comprehension. All we can really tell you is this: we will keep working even after a ubiquitous civil network exists to serve the public good. The struggle for greater freedom and greater sovereignty on the net is not

new, and will continue for some time. We try to take the long view whenever possible, in contrast to for-profit actors who feel compelled to focus on short-term gains. Sustainability is a central part of our operating philosophy, and so we plan not just for months and years of work, but for decades. One thing is for sure – it'll go a lot faster if we work together.

1. `https://www.wepay.com/donations/fnf`
2. `http://commons.thefnf.org/index.php/Finances`
3. `mailto:contact@thefnf.org`
4. `http://wndw.net/`
5. `http://cyber.law.harvard.edu/wealth_of_networks/Main_Page`
6. `http://www.amazon.com/Computer-Networking-Top-Down-Approach-Edition/dp/0136079679/ref=pd_bxgy_b_img_c`
7. `https://en.wikibooks.org/wiki/Communication_Networks`
8. `https://en.wikibooks.org/wiki/Computer_Networks`

Free the Network (2012-03-29 08:20)

[1] ⬚ It's been quite an exciting few days for the FNF. Motherboard [2]released their documentary, 'Free the Network,' and our story has been picked up by [3]CNN, [4]Time and a few others. So, for those of you here for the first time: welcome! For those of you who are checking in to see what's new, check out Motherboard's work,

and let us know what you think.[5]

We've been overwhelmed with an outpouring of support and encouragement, and want to thank everyone who has helped us get to where we are. We also want to assure you that there are big things in store for this spring and summer. Planning for a wide-scale demonstration network in Kansas City is well underway. Yet, we need to ask for your help. Changing the political economy of our communications systems is going to take all of us, working together. If you're a network engineer, please get involved.

TIME

[6]   If
you're not a network engineer, but you still care about the future of the Internet, please consider be-
coming a member of the Foundation. You're free to give as you please - we'd just like to let you know that
committing to small monthly payments would be very helpful from our perspective. That would help us
manage cashflow, and build a sustainable base of support. WePay allows you to specify a recurring donation
after you pick an amount, so please keep this in mind when you decide to contribute. The link to our WePay
is [7]here.

[8]   We've been hard at work these past few months, reaching
out to communities and building the organizational structure that we'll need in order to be successful long-
term. We're going to keep at it, no matter how long it takes, because we know that the world needs this. We
thank you for your interest and support, and we look forward to working with you to build freer networks,
and a freer world.

glad tidings,

Isaac Wilder, Executive Director of the FNF

1. `http://motherboard.vice.com/2012/3/28/motherboard-tv-free-the-network`
2. `http://motherboard.vice.com/2012/3/28/motherboard-tv-free-the-network`
3. `http://edition.cnn.com/2012/03/28/tech/web/vice-free-the-network/`
4. `http://techland.time.com/2012/03/28/occupy-the-internet-protests-give-rise-to-diy-networks/`
5. `http://edition.cnn.com/2012/03/28/tech/web/vice-free-the-network/`
6. `http://techland.time.com/2012/03/28/occupy-the-internet-protests-give-rise-to-diy-networks/`
7. `https://www.wepay.com/x172q70/donations/fnf`
8. `https://www.wepay.com/donations/195763`

2.4   April

Name.space (2012-04-10 04:24)

 Do you know about name.space?

I recently got the chance to hear their story for the first time.

For more than 15 years, name.space has been asking why the ICANN Root domain is so closed.

In some ways, I really do think it's the fundamental question of our time – who will make names on the network?

I just want to say thank you to our friends at name.space, for not backing down, and recommend that folks take a look at [1]namespace.us. You can follow the instructions there to make it so that you can go to [2]starbucks.sucks and see a picture of Reverend Billy being awesome (among other hidden marvels of the web).

1. `http://namespace.us/`
2. `http://starbucks.sucks/`

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2012 Q1 Review (2012-04-11 00:51)

The road that we're on is a long one. In order to make sure that we're headed in the right direction, and at the right pace, we like to pause every once in a while, and take a look at how far we've come. In the first quarter of 2012, we got some major exposure (A documentary called [1]'Free the Network', articles in [2]CNN, [3]Time, [4]Betabeat). As the buildout of our human and technological infrastructure continues, we've been able to capitalize on that exposure, and are moving into the spring and summer months with a good deal of momentum.

Our e-mail newsletter, FNF-Announce, is finally coming into use. You can sign up [5]here. This marks the end of several months of inadequate e-mail communication, which started after our old email list, FNF-Discuss, became overcrowded. The membership of the Discuss list has been moved to Announce, and Discuss will be reborn as the forum for discussion which it was always intended to be. You can sign up [6]here.

The first full meeting of our Board of Directors will happen this month. Our application for tax-exempt status is progressing. We are in negotiations to acquire office, server, and antenna space in Kansas City's Old Southwestern Bell Headquarters (pictured).

The Old Southwestern Bell Building

Much of our work over the past quarter has been in making sure that we have a stable foundation for long term growth. That means building out tools for network management, establishing a sustainable funding model, making sure that appropriate structures of governance are in place, and ensuring that we have effective means of communicating to stakeholders and constituents. We have executed against these deliverables in a

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way that is timely and transparent. Let's take a look at everything we got done in the first three months of 2012:

- Moved our base of operations from Brooklyn, New York to Kansas City, Missouri.

- Made massive strides towards full release of the FNF Network Operations Center. This suite of tools will allow network operators around the world to have access to carrier grade tools.

- Built a solid base of paid members.

- Expanded our core team of organizers and engineers.

- Pablo Varona Borges joined the team as Director of Education.

- Joshua Mercado joined the team as CIO.

- Martin Dluhos joined the team as a systems engineer and administrator.

Built membership to Core and Builders emails lists, migrated from Discuss to Announce.

Applied for 3650MHz license.

Relaunched the FNF website.

- Enhanced navigation (makes it far easier for folks to engage with FNF)

- Open video formats

- Improved wiki

- Deployed CRM

- Deployed PHPlist

Got our board of directors spun up.

- Isaac Wilder (Chair)

- Gregory Foster

- Patti Wyble

- Tyrone Greenfield

- Venessa Miemis

Got our advisory board spun up.

- John Stone

- Jon Lebkoswky

- Jeff Sterling

- Paul Garrin

- Devin Balkind

Streamlined our business operations by eliminating excess overhead.

- Canceled VPS

- Cancelled Clear modems

1. `http://motherboard.vice.com/2012/3/28/motherboard-tv-free-the-network`
2. `http://edition.cnn.com/2012/03/28/tech/web/vice-free-the-network/`
3. `http://techland.time.com/2012/03/28/occupy-the-internet-protests-give-rise-to-diy-networks/`
4. `http://www.betabeat.com/2012/03/30/36466/`
5. `http://phplist.freenetworkfoundation.org//?p=subscribe&id=1`
6. `http://thefnf.org/mailman/listinfo/discuss_freenetworkfoundation.org`

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themooserooster (2012-04-13 17:03:20)

Great to hear the recap of all the happenings with you guys. Keep up the amazing work.

WQPD701 (2012-04-25 02:44)

On April 17th, The Federal Communications Commision granted the Free Network Foundation a nationwide license to use the frequencies from 3650MHz to 3700MHz for use in common carrier, non-common carrier, and private communications activities. Our call sign is WQPD701. This is pretty exciting for us, as it means that we'll be able to help folks use this very clean frequency for fixed wireless mesh networks across the country. This license only set us back a couple hundred bucks, and is valid through 2022. If you're interested in operating a free network at these frequencies, let us know by emailing info [at] free network foundation [dot] org.

There is lots of hardware out there that can operate at these frequencies, and with the proliferation of Software Defined Radio, it is often simply a matter of updating the radio firmware. We look forward to doing our first 3650 experiments in the coming days as we deploy the core infrastructure for our Kansas City research network.

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Creighton (2012-04-26 03:47:34)

I want to be the first node in Louisville, Kentucky! What is the power limit? Mode, modulation? I assume that you would favor wifi protocols, but you might want to consider Dash7/Opentag. Wifi gear would be cheaper, though.

Broken Sidewalk Farm (2012-08-12 00:22:21)

Am very interested in your project, and am working on using mailboxes to blow Internet around local community on Wireless-N & about to order 5GHz directional antenna to match 2.4GHz directional, and omni-directional as test bed for farms. http://blog.brokensidewalkfarm.com/post/28985698498 http://blog.brokensidewalkfarm.com/post/-29223743394 http://brokensidewalkfarm.wikispaces.com/Paperboy Also working towards goal of terminal serving ultra-thin clients, for use such as in workshop where high possibility of damage to computer equipment, and thus only monitor, keyboard, and mouse face harm.

Richard Stallman Joins FNF Board of Advisors (2012-04-30 00:26)

Richard Stallman, Father of the Free Software Movement

Dr. Richard Stallman, the father of the Free Software Movement, has joined the advisory board of the Free Network Foundation. Dr. Stallman has been advocating for software freedom since 1983, when he launched the GNU Project. He is president of the Free Software Foundation, which he founded in 1985 to promote and defend the freedom of computer users.

Rms will help guide the Foundation as we continue the struggle for liberty in the digital age. His willingness to aid our cause is humbling, and his advice is full of careful and valuable insight. We look forward

to working with Richard to build freer networks and a freer world.

If you are willing to join us in our struggle, engage us in the [1]forum, through the [2]wiki, or on our [3]discussion list.

1. http://freenetworkfoundation.org/?page_id=683
2. http://www.freenetworkmovement.org/commons/index.php?title=Main_Page
3. http://freenetworkfoundation.org/mailman/listinfo/discuss_freenetworkfoundation.org

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word (2012-04-30 02:56:13)
Sick beard nigga

Martin (2012-05-01 02:01:45)
I think that he will be able to provide insights like no else, Isaac. This is great news!

2.5 May

FNF to Participate in Four Upcoming Conferences (2012-05-20 04:18)

FNF Executive Director Isaac Wilder will sit on discussion panels at two technology activism gatherings in May and June. At [1]Freedom to Connect , a conference in Silver Spring, MD, devoted to preserving liberty on the Internet, he will speak on a panel entitles, "Freedom and Connectivity from Alexandria, Egypt to Zuccotti Park." Freedom to Connect will be held on May 21st and 22nd.

In June, Isaac will speak at the [2]Personal Democracy Forum in New York City, on a panel exploring how activists and hackers can provide people with tools to overcome corporate control of the broadband spectrum. The Personal Democracy Forum is an annual conference held in New York taking place on June 11th and 12th.

Isaac also plans to represent the FNF at following two global events - the Human Rights and Technology Conference ([3]RightsCon) and the Open Internet Tools Project's Circumvention Tech Summit, both in Rio de Janeiro, Brazil. RightsCon is an annual conference addressing the relationship between human rights and technology. It will occur on May 31st and June 1st, with the OITP's summit following on the 2nd and 3rd.

1. `http://freedom-to-connect.net/`
2. `http://personaldemocracy.com/conference`
3. `https://www.rightscon.org/rio/`

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Cathryne (2012-05-20 09:16:23)
Thanks for the note! Can you please post or tweet if there will be recordings available afterwards?

imw (2012-05-22 13:11:43)
I believe that there will be recordings available via ISOC NY. In the mean time, many folks are using the hashtag #F2C.

An update from the CTO (2012-05-24 22:05)

It's been quite a while since I've posted an update. I'd like to take this opportunity to let folks know the massive progress that has been made on the technical side. I've been serving in a combined CIO/CTO role supporting deployment of the FNF enterprise infrastructure. It's been quite a while, but I'm finally transitioning over to serving full time as CTO and heading up product development.

So what have we been up to on the technical side?

1) Deployment of a disaster recovery system in the southwestern United States. This will provide us with continued operation of FNF enterprise infrastructure and FreedomNOC. The server has been deployed, initial data copy has been completed. We are in the process of turning up the virtual machines and setting

up continuous replication.

2) Completing deployment of a full suite of applications to support enterprise operations. You can see the full list of deployed capabilities here:

[1]http://chili.freenetworkfoundation.org/projects/freedomnoc/wi ki/DeployedCapabilities

We are in the process of having everything use LDAP for authentication/authorization. That is the last major project on the CIO side.

3) Additional folks are contributing in the areas of technical operations and product development. This is helping things move forward at a very quick pace.

4) FreedomLab is in the process of being deployed. The Austin lab (serving a continuous integration role) should be online very soon. We are waiting on our data center to work out a contract for an expanded service footprint which will allow us to deploy our WAN networking lab.

5) Lab network build out in KC. This will include radios, back haul, FreedomLink/FreedomTower. This will be part of the expanded service footprint that we are attempting to negotiate with the data center.

Ideally we will be doing an initial release of the full FreedomStack on July 4th. June is going to be a very busy month!

1. `http://chili.freenetworkfoundation.org/projects/freedomnoc/wiki/DeployedCapabilities`

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2.6   June

FNF's Internet-in-a-Suitcase Deployment from May First (2012-06-13 21:42)

Bryan reports on FNF NYC's mobile wifi deployment in support of Occupy Wall Street on 1 May 2012:

As a technical experiment and outreach project, some New York City FNF members used existing [1]FreedomTower equipment to deploy a free and open mobile "internet-in-a-suitcase" WiFi access point at march/demonstration sites in mid-Manhattan on May 1st, 2012.

...

We experimented with a rolling "basestation crate" (which contained a commercial 4G modem, pfSense router, and seperate 2.4GHz and 5GHz WiFi radios all powered by battery) and a smaller "repeater unit" (dual-band commercial router powered by a battery).
[2]Read more on the Commons

1. `http://www.freenetworkmovement.org/commons/index.php?title=FreedomTower`
2. `http://www.freenetworkmovement.org/commons/index.php?title=MayFirst2012NYCCrateDeployment`

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Free Network Definition (2012-06-26 02:01)

For more than a year, members of the Free Network Movement have been iterating a document that we call the 'Free Network Definition.' Our feeling is that it is now ready to share with the general public. This document will certainly continue to evolve - the [1]living version is in the wiki. Here is version 2.2 of the Free Network Definition:

The fundamental dialectic of our struggle is this: will we be enslaved by our technology, or liberated by it?
It was in cognizance of this notion, and in service to our collective freedom that the Free Software Movement was born. It is in this spirit that we aim here to define exactly what it means to say that a network is free. We hope that the existence of this definition will help illuminate the path to a more just world.

Our intention is to build communications systems that are owned by the people that use them, that allow participants to own their own data, and that use end-to-end encryption and cryptographic trust mechanisms to assure privacy. We call such systems 'free networks' and they are characterized by the following five freedoms:

- Freedom 0) The freedom to participate in the network.

Freedom 0 regards your right to organize cooperative networks.
Conventional networks are characterized by a distinction between provider and user. This mode of organization encourages network operation in the service of self-interest. The provider builds and owns the infrastructure, and the user pays for access. In a free network, however, nodes connect to one another, rather than to a single, monolithic provider. By nature of its design, a free network is owned by those that make use of it. Participants act as providers and users as the same time, and growth is auto-distributed by treating any profits as investment. In this way, those that join the network are able to become owners. This mode of organization encourages network operation in the service of the common good.

- Freedom 1) The freedom to determine where one's bits are stored.

Freedom 1 regards your right to own the material stores of your data.
Conventional networks encourage (if not force) their participants to store their data in machines which are under the administrative auspices of an external service provider or host. Most folks are not able to serve data from their homes. Participants ought to be free to store their own data (so that it is under their care) without sacrificing their ability to publish it.

- Freedom 2) The freedom to determine the parties with whom one's bits are shared.

Freedom 2 regards your right to control access to your data.
Data mining and the monetization of sharing has become common practice. Participants should be free to choose those with whom they would like to share a given piece of information. Only someone who owns their own data can fully exercise this freedom, but it is an issue regardless of where the relevant bits are stored.

- Freedom 3) The freedom to transmit bits to one's peers without the prospect of interference, interception or censorship.

Freedom 3 regards the right to speak freely with your peers.

Information flows in conventional networks are routinely and intentionally intercepted, obstructed, and censored. This is done at the behest of corporate and state actors around the world. In a free network, private communications should remain unexamined from the time they enter the network until the time they reach their destination.

- Freedom 4) The freedom to maintain anonymity, or to present a unique, trusted identity.

Freedom 4 regards your right to construct your own identity.

There is increasing pressure to forbid anonymity, and yet trustworthy communications remain rare. While it is essential to liberty that individuals be able to remain anonymous in the online public sphere, it is also essential that they be able to construct and maintain persistent, verifiable identities. Such identities might bear a legal name, a common name, or an avatar that masks one's corporeal self – individuals could have many such identities, and switch between them at will. Clear delineation between anonymous, pseudonymous, and onymous actors would enable all of us to better asses the trustworthiness of others on the network.

1. `http://www.freenetworkmovement.org/commons/index.php?title=Free_network_definition`

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Valeri Sceptic (2012-09-12 17:19:26)

Dear Earthlings, I think that you are too concerned with 'personal freedoms' and do not see much more important things such as, say, survival of mankind, imho. If you ask me, I would say the hell with all of the personal freedoms if they endanger existence of the mankind, and I can name you, imho, at least one very dangerous personal freedom: a personal freedom to own a Big Bomb (a thing with ability to destroy the Earth). Existence of the whole mankind should NOT depend on just one guy's (or a group of guys) mood or attitude or will or error, isn't that right? The 'Big Bomb' MUST be owned ONLY by the mankind as a whole, NOT by a person, i.e. the personal freedom goes to hell in this case, do you agree? So the Next Net should have another base rather than personal freedoms, the Next Net should have a base in the survival of mankind... I have been thinking about such philosophical things for a long time, I can share with you my ideas if you'd like too...

2.7 July

Come Quickly! (2012-07-07 16:35)

Posting now at a distance of 3km from the FreedomLink, through a prototype tower and prototype nodes. This concludes a successful integration sprint.

onwards, towards liberty!

imw

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Anonymou (2012-07-09 04:15:22)
The FNF's first permanent mesh deployment. Rock on!

2012 Q2 Review (2012-07-12 00:43)

2012 Q2 Review

It's been a busy few of months for us. We've continued the process of moving our operations to Kansas City, MO, and begun the construction of a testbed network. We reached a number of technical milestones. The Board of Directors met for the first time. We have attended conferences and connected with new volunteers and partners. We still have exciting projects underway in New York City. We've been working to improve our internal communications and to raise the funds needed to make our work and our vision sustainable. We've made significant progress in these past few months, and we hope that you'll help us continue down the path toward networks built, owned, and operated by those that use them.

TECHNICAL MILESTONES

We reached some major technical milestones in the past quarter, and have made significant and timely progress against our development roadmap. In April the FCC granted us a nationwide, non-exclusive license to operate radios in the 3.65GHz band. This provides access to 50MHz of clear spectrum for use in wide area communications. In June, Charles brought FreedomLab ATX online, which allows for the rapid prototyping of network architectures and design patterns. In July, the Bryan Newbold and the Kansas City team demonstrated a link-layer proof of concept for our proposed architecture. Progress continues in the buildout of distinct community and operator support suites, and the Foundation is prepared to move into a period of heavy product development.

FIRST BOARD MEETING

The FNF Board of Directors met for the first time on May 17th, via teleconference. The Board officially appointed Isaac Wilder as the Executive Director, and Charles Wyble as the Technical Director. Tyrone Greenfield was appointed as the Director of Communications, and Pablo Varona Borges as the Director of Education. The Board also discussed our continuing efforts towards fiscal sustainability, and our visions and goals for the FNF in one year's time. We're aiming to have deployed a reference implementation the 'Free Network 1.0', and to have built a revenue stream capable of sustaining our organization into the future.

A GROWING TEAM

In the past three months our team has grown, and we have all increasingly grown into our roles. Cofounder Charles Wyble has successfully transferred responsibility for day to day technical operations to Martin Dluhos. Martin has stepped up in a big way since graduating from college, and is proving to be a major asset to the team. Martin's increased commitment, in addition to bolstering our organizational and technological

capabilities, is allowing Charles to return his focus to product development and network engineering.

Bryan Newbold has made tremendous contributions to the project, both in terms of polishing existing content, and in terms of producing new material. His initiative on our MayDay and July efforts proved invaluable. Pablo has begun working with renowned artist Natalie Jeremijanko on a network deployment in Scorates Park, Astoria, Queens, and has received a grant to help the FNF produce documentation and educational materials. Tyrone has relocated to Kansas City, and is assisting with our community organizing efforts there.

A number of folks have rallied around the effort to produce a 'Free Network Compact' (an operating agreement for network participants), and a number of individuals have volunteered to spearhead deployments in their own communities.

In April, Dr. Richard Stallman, the father of the Free Software Movement, joined the advisory board of the Free Network Foundation. Dr. Stallman has been advocating for software freedom since 1983, when he launched the GNU Project. He is president of the Free Software Foundation, which he founded in 1985 to promote and defend the freedom of computer users.

Prototype tower and nodes communicating with FreedomLink at Oak Tower in the far background. Kansas City, MO, July 2012

FNF in KC

In May, we negotiated terms with Joe's Data Center, in Kansas City's Oak Tower, for a full server cabinet with increased physical security, and the right to install radio elements on the southern and eastern exposures of the tower's 27th floor. This gives us significant coverage of Kansas City's densest population centers, including most of the East Side, The Crossroads, and Rosedale. Clear shots to Hospital Hill, Union Hill, and Beacon Hill provide opportunity for rapid expansion of the Kansas City Free Network. We also worked with the data center to become their first customer to move from an IPv4 to an IPv6 network. Our new deal costs $350/mo. We also moved into a colocation in Dallas, TX for Disaster Recovery purposes.

In June, Bryan visited Isaac and Tyrone in Kansas City for a sprint to demonstrate the link-layer integration of FNF's proposed regional-scale community network architecture. We deployed the first FreedomLink radio element, and built a multi-kilometer "Distribution" link to a temporary FreedomTower site, where radios running the qmp ("Quick Mesh Project") community mesh firmware demonstrated a minimal single-hop "Access" network. Documentation, including [1]site surveys and [2]a writeup with performance benchmarks are on the wiki!

Moving forward, we have partnered with Anita Dixon from the Mutual Musicians' Foundation in order to plan an experimental network that will serve underprivileged communities. The Mutual Musicians' Foundation is a Jazz musicians' union located in Kansas City's 18th and Vine district, which has supported African-American

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musicians in the city since 1917. Together with Anita, we're identifying partner organizations on the east side of Kansas City whom we can help to build and operate their own wireless mesh.

FNF in NYC

FNF in NYC has held several community meet-ups this quarter, bringing interested people together to discuss how we can all make the internet the tool of liberation we know it can be, and to discover avenues of collaboration. These informal social gatherings are a great way to unite and expand our community, and we strongly encourage individuals to set up meetings in their own communities. If you've been getting together in your community, let us know so that we can include it in the next newsletter.

On May 1st, Bryan, Elise, and Pablo operated a mobile hotspot to provide connectivity for activists participating in Occupy Wall Street events in Manhattan. They deployed a mobile FreedomTower and a backpack repeater to offer WiFi in Bryant Park and along marches, while passing out fliers and educating activists about issues of digital self-determination. [3]A write up of the experiment is on the wiki.

CONFERENCE JUNKET

Isaac sat on discussion panels at two technology activism gatherings in May and June. At Freedom to Connect, a conference in Silver Spring, MD, devoted to preserving liberty on the Internet, he spoke on a panel entitled, "[4]Freedom and Connectivity from Alexandria, Egypt to Zuccotti Park," and was subsequently asked to participate in [5]a discussion with world-renowned thinkers Eben Moglen and Doc Searls.

In June, Isaac spoke at the Personal Democracy Forum in New York City, on a panel exploring how activists and hackers can provide people with tools to overcome centralized control of communications networks. The Personal Democracy Forum is an annual conference held in New York, which focuses on the intersection of technology and politics.

Isaac also represented the FNF at two global events – the Human Rights and Technology Conference (RightsCon) and the Open Internet Tools Project's Circumvention Tech Summit, both in Rio de Janeiro, Brazil. RightsCon is an annual conference addressing the relationship between technology and human rights.

On June 30th and July 1st, Isaac, Pablo, and Tyrone attended the Allied Media Conference (AMC) in Detroit, MI. AMC is an annual event that brings together social change organizations to share tactics and media and digital strategies. We demonstrated a FreedomTower at a DiscoTech (Discover Technology) event, and had the opportunity to learn and engage with a wide variety of activists and technologists from around the world.

It's been highly productive for us to connect and collaborate with technologists and activists around the world. The enthusiasm of those who are hearing about our work for the first time remains a constant source of joy and inspiration.

IMPROVING OUR INTERNAL COMMUNICATIONS

As you may know, most of our communications at the FNF happen on our email lists. In the last quarter, we've tried to refine the focus of our lists to make conversation more effective, with less noise. The changes have proven to be fruitful, as the level of engagement and quality of dialogue have both increased.

We currently operate a [discuss] list for general discussion of all things FNF and free networks, a [builders] list for technical topics, a [media] list for media and design projects, a [core] list for internal progress updates from FNF's core volunteers, and a [board] list for communications within the Board of Directors. We also hang out on IRC at #fnm at irc.oftc.net.

In the next quarter, we will bring online a suite of tools to enable fluid collaboration, coordination, and governance. In an effort to remain committed to the openness of our early days, Isaac has committed to begin publishing a personal weblog, in addition to contributing to the FNF's corporate log.

FUNDRAISING

The FNF is very low on funds at the moment. As you may know, we currently operate as an all-volunteer organization, and our overhead costs are very low, so all contributions we receive go a long way. Our current overhead is $430/mo, which covers two co-location facilities, and our current income is $345/mo, which comes from only eight donors. It is crucial that all of us in the coming months help to build a network of monthly contributors so we can focus on the work that matters most: helping people and communities build Free Networks and connect to one another.

One important facet of everyone participating in governance is that the FNF needs everyone's help in fundraising. Please, approach anyone you know who can help: tell your family and friends about what we have accomplished, and our vision for the future, and urge them to commit to a monthly contribution. If you'd like to talk about effective ways to talk to people about giving, please contact [Tyrone] directly or start a thread on [discuss]. We're looking forward to continuing this conversation with all of you.

HELP US WITH THE NEXT NEWSLETTER

This is our second official quarterly review, and we would love your feedback on how to improve. Even better, join us to make the next one even better. If you enjoy writing, graphic design, or layout, please contact me [tyrone@freenetworkfoundation.org]

1. http://www.commons.freenetworkfoundation.org/index.php?title=KansasCity/July2012SiteSurveys
2. http://www.commons.freenetworkfoundation.org/index.php?title=KansasCity/July2012Hack
3. http://www.commons.freenetworkfoundation.org/index.php?title=MayFirst2012NYCCrateDeployment
4. https://www.youtube.com/watch?v=H9nNw6SJR1U&feature=results_video&playnext=1&list=PL4BD7D745F5EF727E
5. https://www.youtube.com/watch?v=G2VHf5vpBy8&feature=relmfu

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Robert Thorne (2012-07-12 02:01:04)
This is great; I'd really like to be involved with this. Thanks, Bob Thorne

Joseph Clark (2012-07-13 15:35:35)
One correction: The paragraph beginning "On June 30th and July 1st, Isaac, Pablo, and Tyrone attended the Allied Media Conference (AMC) in Detroit, MI..." ends abruptly. Exciting to read all of this!

2.8   August

FNF Summer Summit 2012 Report: Occupy Wall Street Tower (2012-08-29 03:58)

Last Friday-Monday, August 17-20, 2012, the Free Network Foundation held its first biannual summit in Kansas City, MO. Members of the FNF's core team refined our vision and mission statements, discussed our organizational structure now and in the future, and outlined a more refined annual operating plan and budget. On the technical side of things, we talked about the structure of the FreedomStack and how free networks can be cooperatively run and organized, progressed in making our systems run more securely and efficiently, and re-organized the layout of our physical system at the datacenter. At the end of the Summit, we integrated our discussions into a draft of the application for the Access Innovation Prize, which awards $20,000 to the winners.

A note on the post title: the building we met in was called Wall Street Tower. We could barely contain our laughter.

MISSION AND VISION

We drafted our first official vision statement and mission statement (we had been using a temporary placeholder to represent the mission statement on the website before). We were inspired to frame our work in a mission and vision statement in part by the[1] excellent example of the Wikimedia Foundation. The text of our proposed vision statement now reads:

We envision a world where communities build, maintain, and own their own share of the global computer network.

The proposed mission statement now reads:

> The Free Network Foundation is a nonprofit organization that provides operators around the world with essential infrastructure for the realization and support of free networks. We engineer tools and develop educational resources to facilitate the deployment of resilient, responsive, and accessible networks.

The wording of the vision and mission are by no means final and we hope that drafting these statements will inspire discussion in our community. You can find the proposed vision and mission statements, and discuss changes to them, [2]here.

ORGANIZATIONAL STRUCTURE AND CAPACITY BUILDING

On Saturday, we talked about how the FNF is structured now, and how to improve and grow the organization in the future. Our conversations concerned the focus of (volunteer) staff we have now, what volunteer or paid staff positions we should establish in the near future, how to engage and improve the Board of Directors, how to manage a testbed free network with regards to the operating entities legally running it, and how to expedite our application for tax-exempt 501(c)(3) status. We plan to discuss many of these issues in more depth over the next few months. If you'd like to be a part of these discussions, please get in touch with Tyrone (tyrone@thefnf.org).

ANNUAL PLAN AND BUDGET

We reviewed our current expenses, which are $424/mo, and our current income, which is $555/mo. We followed with a discussion of what our top spending priorities would be with more funds, as well as fundraising strategies. We're working to expedite our application for 501(c)(3) status if possible, and to make our own donation interface tailored to our needs.

Some of our top priorities for the next few months are releasing FreedomLab, moving forward on a network deployment in Kansas City, redesigning our website, building our organizational capacity toward hiring some part-time staff and acquiring office space. We also put together a table of some of our metric goals (see the summit [3]minutes for more details)

CAPTION: Evaluation Metrics

×	Q3 2012	Q4 2012	Q2 2013
Operators	3	6	30
Interested Operators	50	100	250
Development	0.5 FTower image	1.0 FT Image, 0.5 FN, 0.5 FL	FStack 1.0
Developer Community	release lab & community tools	12 core developers	36 core developers
LDAP	deployment complete	100 accounts	250 accounts
Towers Deployed	1	6	30
Functioning Nodes	2	10	600
Blog Posts	10	20	60

DEVELOPING THE FREEDOMSTACK On Sunday, Charles led everyone through a presentation of how the FreedomStack will be structured, that is to say what a free network will look like. We talked about how the components (FNode, FTower, FLink, FTunnel) will interact with each other and what kind of skills will be required to operate the them. We also discussed the protocols we'll use at each layer, and outlined which parts of the prototype network should be built or run by

the FNF, and which by other legal entities. TECH OPS MILESTONES We made a lot of progress towards our technical objectives over the weekend. We migrated our system off cPanel, optimized system performance, and improved redundancy. Following the Summit, we re-organized our colo setup and installed hardware for the upcoming release of FreedomLab, a suite of research tools for network operators to conduct experiments. GOING FOR THE GOLD(EN JELLYBEAN) At RightsCon in Rio last June, which [4]Isaac attended on behalf of the FNF, Access Now announced a [5]series of prizes for achievements in technology that advance human rights and political participation. At the close of the Summit, we wrote a draft of the prize application, which collected and summarized much of our planning work from the weekend. We revised the draft multiple times since then and submitted our application on August 30. You can take a look at the final version of the application [6]on our wiki. When putting together the application we found that its questions provided a good framework to talk about the work we do and our future plans. In the future, we plan to use the text in outreach projects to get more people interested and informed about our work. Attending the Summit were Executive Director Isaac Wilder, Technical and Finance Director Charles Wyble, Director of Operations Martin Dluhos, Director of Communications Tyrone Greenfield, James Yox, and James Booth, both engaged in technical operations. Also participating in the summit were Anna Armstrong, Sophie Klein, Asa Wilder, and Sam Wilder [and harlene??]. You can find the full agenda from the Summit [7]here, and detailed minutes for[8] day one and [9]day two.

1. `http://wikimediafoundation.org/wiki/Mission_statement`
2. `http://commons.thefnf.org/index.php/VisionAndMission`
3. `http://commons.freenetworkfoundation.org/index.php/2012SummerSummitSundayNotes#FNF_metrics`
4. `http://freenetworkfoundation.org/?p=872`
5. `https://www.accessnow.org/prize`
6. `http://commons.freenetworkfoundation.org/index.php/Access_Prize_Application_Draft`
7. `http://commons.freenetworkfoundation.org/index.php/Summer_Summit_2012`
8. `http://commons.freenetworkfoundation.org/index.php/2012SummerSummitSaturdayNotes`
9. `http://commons.freenetworkfoundation.org/index.php/2012SummerSummitSundayNotes`

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2.9   September

Mailing Lists and CiviCRM Working Again (2012-09-10 05:37)

We're very sorry for the long outage, but all our mailing lists, along with CiviCRM, which processes our volunteer forms among other things, are working again. The extended downtime was due to migrating our website from freenetworkfoundation.org to thefnf.org.

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Request for Comments on Community Guidelines (2012-09-10 21:25)

We have posted a draft of Community Guidelines for use of FNF sites and services, on our [1]forums. Please take a moment to read them over and leave comments. The text will be revised, and will become official 30 days after the initial posting (7 September 2012).

1. `http://freenetworkfoundation.org/?page_id=683/questions-about-the-fnf/terms-of-servicecommunity-guidelines/#p191`

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FNF Technical Operations update (2012-09-24 16:19)

Hey everyone. It's been quite a while since I've blogged for FNF. It's been a busy few months in techops. What did we get accomplished in Q3?

- On boarded some very senior leadership and direct contributor talent to help bring FNF technical operations and web operations work much further along.

- Deployed into a 42U cabinent in Joes Data Center. In that cabinet we:

  - Deployed redundant, managed power distribution units. Cyclades. 10 ports each.

  - Deployed a second Cisco 2950 switch. Not yet setup with spanning tree, but that's the intent.

  - Deployed redundant pfSense systems. Dell Poweredge 2650 systems with 4GB RAM, each with dual power supplies (one going to each of our redundant PDUs), single hard drive (with almost no writes, since syslog goes to our central syslog server), single WAN/LAN link). Using CARP for automatic fail over. In our testing, routing failed over seamlessly and INCREDIBLY fast. Very impressed with pfSense. Who needs expensive cisco ASA systems, when pfSense does the job quite nicely!

  - Deployed redundant storage systems, using FreeNAS. Utilizing Dell Optiplex 745 systems with 4GB RAM and single 1TB hard drive, each with single power supply,NIC. We are currently replicating from STOR01 to STOR02 on a continuous basis, which provides us with business continuity in the event of STOR01 failing. STOR02 is primarily intended for very IOPS heavy work loads in the dev environment, but also serves nicely as a (very close to) real time data replica.

  - Deployed a secondary virtualization server , primarily for product development/testing, but also as a failover server in the event our main VM server goes down.

- Rebuilt our disaster recovery environment to better mirror our new production environment.

- Migrated off of cPanel to a fully open source system. Dedicated virtual machines for a number of applications (Jabber,BigBlueButton,Canvas LMS,iRedmai,FreeIPA,MySQL), and a Debian LAMP (with APC) system for our various thefnf.org subdomains.

- Migrated to thefnf.org across all web properites.

- Deployed a massively tuned MySQL database infrastructure (with replication to a local server and to our DR site)

- Greatly enhanced the performance of all web properties by deploying Varnish + APC + memcached + mysql caching + zfs caching.

- Deployed ZenOSS as a monitoring solution

- Deployed OSSEC for host based intrusion detection and file integrity monitoring

- Engineered and deployed a multisite data replication scheme to ensure that all systems are have nearline backups and offline archives.

- Purchased a 32 port console server (Cyclades AlterPath) for 100 % out of band access to all systems.

In short we now have a fully redundant, enterprise grade system to move forward with. We've been heads down for the past month or so (since the summit) working on getting this finished.

As always, we do everything in an open source/transparent manner. Feel free to [1]track our progress.

We've greatly improved our documentation, and invite you to [2]check it out.

Thanks for reading!

1. `http://commons.thefnf.org/index.php/TechOPSTodo`
2. `http://commons.thefnf.org/index.php/TechOPS`

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How this blog gets delivered to our visitors (2012-09-26 21:44)

Lately I've been improving our technical operations and infrastructure related documentation, in preparation for a public release. I wanted to give folks a peek into one of the most mature aspects of that documentation, and give a "look behind the curtain" at how we do web related operations at the FNF.

Originally this site (and our numerous sub domains) were served from a cPanel virtual machine running on a USB hard drive directly attached to the server. We've now moved away from that, to the infrastructure defined here:

[1]http://commons.thefnf.org/index.php/FreedomDC-LampSystem

As you can see, many moving parts are involved in getting FNF web content delivered to our visitors. We are doing this with entirely open source software and commodity hardware.

Keep an eye on the blog for an announcement of our FreedomDataCenter release very soon. It's been under way for about a year now, and we are close to release!

Thanks for reading. :)

1. `http://commons.thefnf.org/index.php/FreedomDC-LampSystem`

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2.10   October

2012 Q3 Review (2012-10-06 20:30)

2012 Q3 Review

It's been another quarter of solid progress for the FNF. We've matured as an organization, delivered on technical objectives, and engaged a grassroots coalition of community partners.

Summer Summit

From August 17-20, we held our [1]biannual summit in Kansas City, MO. The summit was a chance for the core FNF team to refine our vision and mission, and to dive into the planning, budgeting, and organizing

that are necessary to achieve our goals. More than that, the Summit gave our team, which is usually spread across multiple timezones, the chance to meet in person - we are undoubtedly a stronger team as a result.

FreedomCenter

Following the Summit, and throughout the quarter our technical operations team has been [2]working to deliver FreedomCenter. We're happy to report at this time that FreedomCenter is officially operational. We'd like to apologize once again for the lengthy mailing list downtime in August, which occurred as a result of this work. After working for more than a year to build infrastructure with extremely high levels robustness and reliability, we are ecstatic to finally be moving in earnest into the areas of product development and network operations.

Communications

We heard your [3]feedback on the website, and we're working to revamp thefnf.org in several ways. Our [webteam] is designing a custom wordpress theme for the site that will greatly increase the flexibility and elegance of our site. We have transitioned to CiviCRM for our communications platform, and are implementing an integrated donation system so you won't have to travel off the site in order to contribute. We've revamped our volunteer intake procedures, and significantly increased our real-time availability in Internet Relay Chat. You can find us practically any time on IRC: our channel is #fnm on irc.oftc.net (or through [4]webchat)

We now have three regular[5] weekly calls. Our weekly overview call is on Sunday evenings at 9 PM CST, our [bizops] call is on Mondays at 9 PM CST, and our [webteam] call is on Tuesdays at 9 PM CST. You are more than welcome to join us! Call (559) 546-1000 and enter code 431041 #.

On September 7th, the FNF posted a draft community guidelines for its website, on our [6]forums. We received lots of positive feedback, made some tweaks, and plan to implement them on the website starting October 8th.

Community

In Kansas City, we're continuing to build a coalition of change organizations and individuals committed to robust and accessible communications for all. We are deploying a model free network here, in the areas South and East of Downtown. Our coalition includes the[7] Mutual Musician's Foundation, [8]Connecting for Good, [9]Neighbor.ly, [10]Occupy Kansas City, [11]IWW, [12]Emerald City, the[13] 816 Bicycle Collective, and a number of progressive, committed individuals from Midtown and the East Side. We will be holding a community meeting at the Musician's Foundation on Thursday, October 18th at 6pm. Please contact Tyrone for details by sending an email to tyrone [at] thefnf [dot] org.

To continue researching and facilitating the emergence of free networks, we rely on your support. Please consider [14]contributing your time or other resources, or [15]sign up for a membership. A donation of just $10/mo will go a long way toward giving communities everywhere ownership of their means of communication.

1. `http://thefnf.org/?p=927`
2. `http://thefnf.org/?p=924`
3. `http://thefnf.org/?page_id=683/questions-about-the-fnf/how-can-we-improve-the-fnf-website/`

4. `http://commons.thefnf.org/index.php/Special:WebChat`

5. `http://commons.thefnf.org/index.php/Conference_Call_Minutes`

6. `http://thefnf.org/?page_id=683/questions-about-the-fnf/terms-of-servicecommunity-guidelines/`

7. `http://www.thefoundationjamson.org/`

8. `http://www.connectingforgood.org/`

9. `http://neighbor.ly/`

10. `http://www.occupykc.net/`

11. `http://www.kciww.org/`

12. `http://emeraldcitykc.com/`

13. `http://816bike.org/`

14. `http://thefnf.org/?page_id=716`

15. `https://www.wepay.com/donations/fnf`

Grow Your Own Network, Part One of Six (2012-10-12 16:35)

The following is the first in a six-post series on our progress in bringing about free networks. The text emerged from the FNF Summer 2012 Summit, as well as conversations in the weeks after. We hope this series will help folks know where we stand, interest new people in the work we're doing, and inspire discussions on how to move forward most effectively.

Part One: Why We Need Free Networks

There is something peculiar about driving down Troost Avenue. Even to this day, Kansas City's historical racial redline is a crucial point of demarcation. To the West, fiber optic cables deliver a gigabit of connectivity to individual homes - to the East, copper carries only a few megabits. Yet on either side of Troost, people are at the mercy of network operators who dictate the terms of service. On either side of the line, information flows unencrypted through centralized points of control.

We envision a world where communities build, maintain, and own their own share of the global computer network. Free networks, when properly engineered, offer their users both a greater say in the governance of their network, and more privacy in their communications. Being your own service provider is the only way to make sure that your service provider treats you right. We call this the principle of digital self-determination, and have designed, prototyped and test deployed a suite of network appliances that will facilitate the realization of this principle.

The free software community has developed a wide variety of software components to address various network related challenges. The Free Network Foundation, working with members of the community, is looking to take those components and deliver a turnkey, self-administered networking solution that will allow for cascading self-governance on local, regional and global scales.

Paired with a cooperative network management suite and integrated cryptosystem, our tools will allow for the rapid, simple construction of cooperative autonomous systems, with end-to-end encryption enabled by default.

The entire suite is designed to be deployed using the principle of emergence – meaning that it can be organized in a way that is bottom-up, top-down or middle-out. We call the network appliances FreedomNode, FreedomTower, and FreedomLink. The management suite is called AutoNOC, and the transparent cryptosystem is AutoTunnel.

In addition to radically increasing network resilience, reducing the price of connectivity, and making networks more responsive to the needs of their participants, free network architectures will allow for groundbreaking localized applications of network technology.

The uses of this technology are myriad, and the need is ubiquitous - On either side of Troost, and anywhere in the world, the capacity for self-reliance and self-determination would be enhanced by the emergence of a free network. Inverting the power structure of our networks is bound to take a while, and we are still in the very beginning, but no idea holds greater liberating potential than this: computer networks should be funded, built, and maintained by those that use them.

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Gordon Cook (2012-10-21 23:57:08)

Reading this on many levels and getting ready with Isaac to do a detailed version. Strongly suggest two columns wide and more space between lines for ease of reading. What you are doing is inspring!

Community Meeting Information (2012-10-18 03:00)

For all those in the Kansas City area, the FNF will be hosting a community info meeting this Thursday. The meeting will take place at 6:30pm at the Mutual Musician's Foundation, 1823 Highland Avenue, KCMO. We'll talk about the next steps in forming a cooperative network here in Kansas City, and discuss free networks in general.

We hope you'll be able to join us.

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Grow Your Own Network, Part Two of Six (2012-10-23 20:16)

We continue our blog mini-series on the state of the FNF (see [1]Part One) with a look at the organization and technology of free networks as we see it, or in other words, the FreedomStack.

Part Two: Free Network Tech Abstract

The basic components of a FreedomStack (and yes, we may have gone a bit overboard with the FreedomTheme) are Node, Tower, Link, NOC, and Tunnel.

From a participant's perspective, the FreedomNode functions like a modem – its operation is exceedingly simple, and its function is to provide connectivity inside a home or place of business. From a developer's perspective, FreedomNode is a custom build of OpenWrt, configured to serve IPv6 addresses on an Ethernet or AP network interface, and to participate in a zero-config layer two/layer three MANET via TDMA transport, using a high-gain radio element. Batman-adv at layer two allows for autodiscovery of neighbors, and Babel allows for loop-free routing. Assuming the use of currently available commodity hardware, a FreedomNode will cost about $70.

The FreedomTower is a larger, shared appliance, designed to serve a network of roughly 100 nodes, with each node serving 3-5 people. Towers participate in the nodal access MANET using one set of radios, and in a tower-to-tower distribution network using another.

The distribution network utilizes TDMA, using licensed or licensed-lite frequencies. Tower-side compute and network capacities, managed by a BSD-based routing platform, allow for the optimization of data flows within the access network using software-defined techniques. Similar techniques are used in the distribution network to manage the hand-off of mobile devices from tower to tower.

While the local connectivity provided by towers and nodes alone is valuable in and of itself, a multihomed, high throughput, low latency connection to the Internet is a necessary element of any large-scale Autonomous System. In a free network, that connection happens via the FreedomLink, where routes are aggregated from the distribution network via Babel, and injected into the global routing table using BGP. FreedomLink is a high-availability rackmount system running a customized build of BSD and Quagga. It's designed to be shared by a metropolitan or regional co-op and attached to a regional peering fabric on one interface and to one or more distribution towers on another.

Communities around the world will use AutoNOC to manage their communal assets, which provides account provisioning, asset management, and operations support, and can be run at the tower or link level.

The final piece, and what makes a free network truly free, is AutoTunnel. A transparent security run-time, AutoTunnel integrates RADIUS, LDAP, and Kerberos into a universal authentication and encryption suite. It is designed to use one-time passwords for enhanced operational security, and to live on FreedomNodes so that crypto keys are hosted within the confines and legal protections of individual domiciles. A single sign-on with a one-time password at the beginning of a session ensures that all traffic is strongly encrypted, as long as it remains inside the free network.

We hope this overview communicates how our network components function and relate to each other. We welcome your feedback, criticisms, and collaboration as we continue developing these appliances.

1. `http://thefnf.org/?p=1009`

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2.11   November

Grow Your Own Network, Part Three of Six (2012-11-03 23:04)

We're back with part three in our series on the state of the FNF. This week, we discuss some of our allies in our work to develop free networks, both globally and locally.

Part Three: Our Friends and Collaborators

We communicate and collaborate with as many allied projects as we can. Other groups have been working on mesh networking solutions for better than a dozen years, and we have no desire to reinvent the wheel. Our aim is to identify the best component systems in existence, and work with their creators to build a more integrated technological ecosystem.

To that end, we work with prominent groups in the greater [1]OpenWRT community such as [2]FabFi,

[3]Village Telco, and [4]Commotion, and with other mesh networking projects, including [5]Byzantium and [6]Serval. We actively coordinate with network operators throughout the western hemisphere, most notably [7]Buenos Aires Libre, [8]Reseau Libre Montreal, and [9]Seattle Meshnet. Our Free Network Definition has been translated and adopted by Spanish- and French-language sister organizations ([10]RedesLibres and [11]Reseau Libre), and our forums serve as an important meeting place for the English-speaking free network community.

We also work with organizations that have similar ends to our own, but are focused on a different part of the network stack. We had a tandem hackathon with the [12]FreedomBox Foundation in New York City earlier this year, and maintain contact with data ownership projects such as Sneer and [13]OwnCloud.

Our all-volunteer core team now numbers around a dozen highly active members. We continue to make connections and recruit new talent by participating on development and discussion lists, attending conferences on technology for social change, and actively working to mobilize our one-thousand email subscribers. We maintain regular contact with thousands of individuals - from supportive hackers and activists around the world, to notable figures such as Richard Stallman, who serves alongside numerous tech visionaries on our advisory council.

In Kansas City, we are building a coalition of community organizations that is preparing to demonstrate the merits of a large-scale cooperative Autonomous System. The KC coalition is anchored by The [14]Mutual Musicians Foundation – a historic jazz house and long a center of gravity on Kansas City's East Side, and includes a number of other civic groups:Eggs and Enlightenment, a local discussion group for concerned citizens, labor union Industrial Workers of the World, and Occupy KC.

On October 18th, we held the first of many community meetings in KC. Interested individuals came together to discuss the potential values and advantages of free networks, and how to start putting together our own networks here. In our next meetings, we will develop bylaws for a network coop.

1. `https://openwrt.org/`
2. `http://fabfi.fabfolk.com/`
3. `http://villagetelco.org/`
4. `https://commotionwireless.net/`
5. `http://project-byzantium.org/`
6. `http://www.servalproject.org/`
7. `http://buenosaireslibre.org//`
8. `http://wiki.reseaulibre.ca/`
9. `http://seattlemesh.net/`
10. `http://redeslibres.org/`
11. `http://wiki.reseaulibre.ca/`
12. `http://freedomboxfoundation.org/`
13. `http://www.owncloud.org/`
14. `http://www.thefoundationjamson.org/site/`

New IRC Channel and Weekend Maintenance (2012-11-08 05:07)

This week, the FNF set up a new IRC channel on our own servers. You can now find us in #fnm on irc.thefnf.org. Please join the channel and ask us anything, or just hang out to see what we're up to.

Also, this Saturday afternoon (November 10) we will be performing upgrades to our equipment, so expect some downtime of our web services. We apologize for any inconvenience.

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Grow Your Own Network, Part Four of Six (2012-11-18 01:00)

This week, in part four of our blog series on the state of the FNF, we elaborate on some of our next major projects and milestones for the winter and spring.

Part Four: Keeping the Project Going

The FNF is more than just a project, though it's by no means a conventional business. As a start-up non-profit, we utilize a number of effective management practices from industry, and have built a robust organizational infrastructure to manage and track our efforts. Still, we remain committed to the principle of rough consensus and running code.

At the FNF's December 2011 Winter Summit, the core team established an 18-month product development roadmap, that culminates in the release of FreedomStack v1.0. Then, at the August [1]2012 Summer Summit, we developed corresponding quarterly targets in the areas of product delivery and business operations through Q2 2013. We are executing against these timelines aggressively and consistently, reducing a large scope of ideas to practicable next steps.

We are on track to reach our next major milestones by the end of the year: release of an improved suite of community engagement tools, and two lab facilities (a network software and routing lab in our Kansas City facility, and a radio testbed in Austin). This infrastructure will be available to the public via a single, domain-wide authentication backend, allowing us to provision access to resources with high efficiency and low risk. This critical step will help us attract network hackers who wish to develop skills and ideas, but do not have the time, resources, or inclination to invest hundreds of hours in building out lab infrastructure.

As we move into the winter, we will begin to travel down a number of parallel paths. Martin Dluhos, Director of Community, will manage the Techops team in the maintenance and improvement of our core infrastructure. Charles Wyble, Technical Director, will lead recruitment efforts for the development team. Tyrone Greenfield, Director of Communications, will oversee an outside review of our fiscal and legal status, in addition to driving supporter relations. Isaac Wilder, Executive Director, will work with our Kansas City partners to draft the 'Free Network Compact' – a community contract, inspired by the [2]GPL, and designed to keep networks cooperative and free. We will reflect on our progress in these endeavors and our work going forward at our Winter summit in January 2013.

As the spring comes, we intend to increase our base of support, draft an initial version of the Compact and release alpha-grade system images for the Node, Tower, and Link. Into the summer and beyond, Free Networks as we envision them will begin to take root – first in Kansas City, and then around the world. As these networks grow, we'll be there, to act as developers, advocates, and stewards.

1. `http://thefnf.org/?p=927`
2. `http://www.gnu.org/licenses/gpl-3.0.txt`

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Grow Your Own Network, Part Five of Six (2012-11-29 20:44)

Our project of building free networks is not without its risks. This week we highlight some potential problems and pitfalls of our enterprise, which we very much hope to avoid or overcome.

Part Five: What Could Go Wrong

The risks inherent to our enterprise are profound - we persist because great advances are seldom made without such risk.

We are not the first group to build cooperative networks - in addition to the risk of duplicate effort, there is the risk of building tools that are incompatible with those already deployed. Yet, we are intimately familiar with our field, and remain confident that our approach can provide for interoperability while pushing the envelope of what is possible.

With the privilege of introducing the idea of free networks to so many comes the risk of souring them on the idea. If our architecture is deficient in any of its key aspects, those who come into contact with it may not be as open to similar ideas in the future.

One set of risks surrounds the technological challenge of building a network that is robust and scalable, but still straightforward in its operation.

Another set of risks surrounds the host of social challenges that accompany our endeavor. If individuals within each community do not learn to operate the network, it will collapse under its own weight. If they understand 'free' to mean 'free of charge' rather than 'politically free', it will succumb to the tragedy of the commons. If we are unable to build an egalitarian model of ownership, it will be co-opted by private interests.

Getting a scalable, replicable free network architecture off the ground has pitfalls, but those pitfalls will only grow as we succeed. There is the risk that our architecture will not, in fact, scale as it is designed to do. We may face legal challenges from the incumbent operators: if they cannot twist existing laws to suit their argument, they might go so far as to lobby state and federal legislatures to adopt such laws.

Finally, the biggest risks revolve around the scenario in which we meet with great success. It would be exceptionally dangerous for participants to harbor any false sense of security, when using a system that presents itself as more secure.

Engineering can go a long way, but tools must be coupled with a knowledge of their proper use. Across the gamut, education stands out as the most effective method of risk mitigation. From propagation and routing, to relevant statutes, to the core philosophy of the project – free networks will only thrive if participants know about their central tenets, and are willing to share that knowledge.

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2.12 December

The FNF is a Finalist for the Access Innovation Prize (2012-12-06 17:28)

The FNF recently learned that we are finalists for the [1]Access Innovation Prize 2012 in the "Golden Jelly-bean" category. Access, an organization that promotes global digital freedom, will award one $20,000 grant per category for the "best actionable idea of how communication technologies can be used to promote and

enable human rights." You can read about the other finalists [2]here.

We applied for the prize earlier this year, and would like to sincerely thank everyone who helped in our application, and has participated in our work. We are honored to be considered for the prize, and hopeful that we will be allowed to put this money to good use. The award ceremony is in NYC on December 10th, and several members of our team will be in attendance.

Update:

The Free Network Foundation was awarded an [3]honorable mention in our category, the Freedom of Expression award. We heartily congratulate Tor's [4]Open Observatory of Network Interference project for winning the prize, and we know they will do great things with these new resources.

1. `https://www.accessnow.org/prize`
2. `https://www.accessnow.org/blog/2012/11/29/announcing-the-access-tech-innovation-prize-finalists`
3. `https://www.accessnow.org/blog/2012/12/11/first-annual-access-innovation-awards-prize-winners-announced`
4. `https://ooni.torproject.org/`

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Harlene (2012-12-07 11:07:51)

Oh, I so hope you get it. No organization could deserve this prize more, for what you've already so generously given and what you're shown you'll be able to give in the future. Sometimes good things happen to good people. GO FNF!

Grow Your Own Network, Part Six of Six (2012-12-10 21:15)

In this "series finale," we discuss how the FNF began, and a brief overview of its organizational history over the past two years. We hope you have enjoyed Grow Your Own Network, a review of where we came from, who we are, and where we're going.

Part Six: A History of the FNF

The Free Network Foundation was formed in May 2011, after co-founders Charles Wyble and Isaac Wilder met on the NextNet mailing list. Charles, who serves as Technical Director, has an extensive background in large-scale systems engineering and integration. Isaac, who serves as Executive Director, studied Computer Science and Philosophy before leaving school to dedicate himself to the FNF. We are a registered non-profit organization in the state of Missouri, with an application for 501(c)(3) status pending.

Our team has grown a great deal since then, to include hardware engineers, radio experts, software developers, webmasters, educators, artists, and scholars. Our work has consisted in large part of capacity building that will pay significant dividends in the long run.

We built out two high availability on-net facilities, in Kansas City and Dallas. The KC site is designed to host organizational tools, community resources, lab components, a Network Operations Center, and the first

FreedomLink. The Dallas site serves as a warm backup and disaster recovery site.

In April 2012, we applied for and received a nationwide, non-exclusive license from the FCC, to operate radios in the 3.65GHz band, providing access to 50MHz of clear spectrum for use in wide area communications.

During the Occupy Wall Street protests, the FNF worked with activists to build and deploy Freedom-Towers in NYC and Austin, TX, and facilitated the building of FreedomTowers in San Antonio and LA. The Towers provided wireless internet access to local occupy movements.

The General Assembly of OWS reached consensus that they should build a tower of their own, which we then helped Occupy Tech Ops to construct. In October 2011, the FNF was awarded a $10,000 prize at the [1]Contact Summit in NYC, a "festival of innovation" exploring how technology and media can bring about social change. We've used those funds to finance much of our work so far, in addition to building a base of monthly financial support that entirely covers our current operational overhead.

We are moving under our own steam now, and with a great deal of momentum. This is an idea whose time has come - the tools used to build free networks are reaching maturity, and we have put ourselves in a position to make a significant contribution to the integration and adoption of this technology.

1. `http://contactcon.com/`

KC Network Goes Live (2012-12-14 18:58)

[1] Over the past month or so, the FNF has worked with Kansas City non-profit [2]Connecting for Good to plan and implement a network with the Rosedale Ridge housing project in Kansas City, Kansas. Over the course of the last week, prototype FreedomLink and FreedomTower equipment was deployed in conjunction with a more conventional access mesh to provide a connectivity solution at small fraction of the retail cost. More than 200 families at Rosedale Ridge are now able to access the Internet from their homes, rather than having to travel many miles to the nearest public library. Connecting for Good also plans to provide tech education and access to affordable computers to the residents of Rosedale Ridge, so that they can take full advantage of the network.

We're thrilled to be able to help Connecting for Good in their mission, and very pleased to have a production testbed for our solutions. Development continues on the entire suite of free network tools. We hope that the Kansas City network will grow, in the fullness of time, to include more sites using better tools.

KC weekly The Pitch wrote [3]more about Connecting for Good's network.

1. `http://thefnf.org/2012/12/kc-network-goes-live/rosedaleridgeedit/`
2. `http://www.connectingforgood.org/`
3. `http://www.pitch.com/plog/archives/2012/12/14/`
`free-wi-fi-service-begins-today-at-rosedale-ridge-public-housing-in-kck`

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Anonymous (2012-12-18 07:41:43)

Also was in the KC Business Journal: Kansas City nonprofit launches free Wi-Fi for low income housing by Alyson Raletz, Reporter - http://www.bizjournals.com/kansascity/blog/2012/12/kansas-city-nonpr ofit-launches-free.html

Volunteer (2012-12-14 22:30)

First Name

_ Last Name _ Email (Primary)

_ Thank you for your interest in the Free Network Foundation. In order to get you up to speed on our work, and suggest some projects that might interest you, we'd like to learn about your background. Tell us about your skills and experience, as well as where you're located. View this as the start of a conversation. We'll reach out to you, work to integrate you into our team, and connect you to nearby members of the movement. In the meantime, feel free to join us on in our chatroom (#fnm on irc.thefnf.org or commons.thefnf.org/index.php/Special:WebChat), or address any additional questions you have to contact@thefnf.org. Volunteer Skills1

_ Location _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

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Financial Report Posted (2012-12-18 21:22)

We just posted a [1]report on our financial operations, spanning the period from June 2011-November 2012, on the Commons. Please check it out, and let us know how we can improve it, and our transparency efforts in general.

1. `http://commons.thefnf.org/index.php/Finances`

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Chapter 3

2013

3.1 January

2012 Annual Report Published (2013-01-18 18:31)

We are pleased to announce the release of our Annual Report for 2012. Check it out in pdf [1]here.

1. http://thefnf.org/wp-content/uploads/2013/01/FNFAnnualReport2012.pdf

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Winter Summit 2013 Report, Part 1 (2013-01-29 20:48)

From Thursday, 24 January, until Sunday, 27 January, we held our Winter Summit in Austin, TX. This post covers the Summit proper. Isaac and Tyrone are staying with Charles in Austin until Wednesday for a post-summit hackfest, which we'll write up in a later post. Another post will cover the meeting of the Board of Directors that was held in Austin on 27 January.

Attending the Summit was our core team: Charles Wyble, Isaac Wilder, Tyrone Greenfield, and James Yox; artist/activist [1]Sean McIntyre and journalist [2]Whitney Terrell. We discussed the FNF's operating procedures and plans for 2013, worked on our technical systems, strategized our upcoming efforts in publicity and fundraising, and talked about how to launch a community network on the guifi.net model.

OPERATING PROCEDURES AND PLANS

Our operations are divided into four categories, each of which is managed by a member of the FNF executive team. Charles oversees technology development, Isaac oversees organizational development, Tyrone oversees business operations, and James oversees technical operations. We went over planning documents, which can be viewed [3]here, and discussed the scope of the four departments. We also went over our progress on our [4]18-month Roadmap from late 2011, which will terminate on 4 July 2013. Finally, we went over how to improve our internal work-flows and communication, especially through incorporating daily updates among the executive team.

SYSTEMS WORK

On Thursday, Charles led a tour of the FNF Austin Radio Lab - the architecture of which will allow for rapid vetting of radio firmwares and featuresets. We revamped our coordination and tracking workflow to allow for

easier integration between email and chili, our task tracker. We implemented phase one of a plan for a single source of authentication across all FNF properties. Using OpenLDAP and Pluggable Authentication Modules, we brought all of our Virtual Machines under unified access control. We hacked out rough prototypes of three properties: one static HTML page to replace our current front page, one drupal-based GIS platform that will serve as a provisioning/link qualification engine, and one webpy/JS widget, just for fun :-)

PUBLICITY AND FUNDRAISING

Throughout the Summit, we talked extensively about how best to publicize our success, now and going forward. Sean provided some very valuable inputs, stressing the need for personal testimonials from those we've affected, as well as presentation strategies closely tailored to their intended audiences, especially in regard to presenting at upcoming conferences such as SXSW in March. We also discussed how to pursue fundraising, including the possibility of applying for grants from other non-profits, and the potential of applying for a Shuttleworth Foundation fellowship.

LAUNCHING A COMMUNITY NETWORK

A major theme of our Winter Summit was building a road map to launching a prototype community network in Kansas City that will serve as a replicable model. We have been remarkably impressed by the methods and success of [5]guifi.net in building community networks in Catalonia and elsewhere in Spain, and we decided that we want to build on their model. Guifi.net is held together by their Commons for Open, Free, and Neutral Networks, and thus we have been developing a Commons agreement for use in the US, as well as iterating our Free network Definition that acts as a statement of the FNF's principles. We are now talking with the organizers of guifi.net as well as our partner organizations in KC to bringing guifi practices and principles to the United States.

You can read detailed notes from the Winter Summit [6]here.

1. `http://www.boxysean.com/projects/`
2. `http://www.whitneyterrell.com/`
3. `http://commons.thefnf.org/index.php/W13S-Agenda#Saturday_.28workflows.29`
4. `http://thefnf.org/2011/12/fnf-technical-engineering-roadmap-look-at-fnf-technical-organization/`
5. `https://guifi.net/`
6. `http://commons.thefnf.org/index.php/Summit_Minutes`

3.2   February

Found Our Feet (2013-02-01 03:54)

The minutes and the updates,the reportbacks don't quite capture it. There was something magical about the summit that we had in Austin this past weekend. We found our feet again. After a long time on the mat, it sometimes got to feeling like we were out for the count. The FNF made a big splash in 2011, and in 2012 we turned inside – sometimes at the expense of our so-called 'mindshare' and sometimes as the expense of adequately communicating with those of you that care enough to read this. We let e-mails go unanswered as we focused on building a foundation.

Last weekend we found a new direction. This doesn't serve as an official announcement, and I won't get into our plans here (you can join the mailing list if you want to know), but I will say that for the first

time in a long time, all of us at the FNF are feeling genuinely sanguine. It feels like the summer of 2011 all over again: everything new, everything urgent.

It takes courage to reinvent - or to become what you were always becoming. In some ways it feels as though we've shifted course, and in some ways it feels as if we've kept the rudder steady and true since we set out almost two years ago. There are bound to be more challenges ahead, bigger challenges. There are bound to be rough spots, things that don't go as planned, delays and disappointments. But now more than ever, it feels as if there is bound to be a movement toward the world that ought to be but isn't, what's just out of our grasp. We are going to get there. We are as committed as we've ever been – as committed as we could possibly be to the idea that the network ought to be a commons. For a while it felt as though we had run our course – but it feels now as if we've turned the corner, and there's a long, open road unfolding before us. We've found our feet again – it's time to walk.

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Jackie (2013-02-02 12:43:01)
Great to hear! Glad you're all re-energized and refocused. Onward and upward! :)

Winter Summit 2013 Report, Part 2 (2013-02-04 19:42)

Following our summit in Austin last week, the FNF held a meeting of its Board of Directors, as well as a hackfest that entailed work on Tech Ops projects, in addition to strategic discussions on fundraising and outreach. The Board meeting was our first with Martin Dluhos, a longtime FNF contributor newly on the Board, and it was the first time for the rest of the directors to meet in-person.

The Board of Directors, consisting of Martin, Gregory Foster, Tyrone Greenfield, Isaac Wilder, and Patti Wyble, discussed the FNF's progress during the summit and since their last meeting, in late December. The Board then strategized about how best to move forward in our collaboration with Catalonian network commons Guifi.net and how this will fit into Isaac's plans to present at the SXSW Interactive tech conference in early March 2013. The FNF is currently investigating the development of a GIS platform, and Greg lent his expertise on the subject. The meeting also included an extensive discussion of how to increase the Board's role in oversight of the FNF, and in fundraising, as well as a temporarily closed session to discuss personnel issues.

Read full minutes from the meeting, [1]here.

1. `http://commons.thefnf.org/index.php/BoardMinutes01/27/2013`

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3.3   March

About - How to Help (2013-03-03 22:59)

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About - Mission (2013-03-03 23:33)

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About - What We Do (2013-03-03 23:34)

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About - Who We Are (2013-03-03 23:35)

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FAQ - Technical (2013-03-03 23:43)

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People (2013-03-03 23:45)

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People - Advisors (2013-03-03 23:45)

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People - Directors (2013-03-03 23:46)

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People - Volunteers (2013-03-03 23:46)

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Newsletter (2013-03-04 06:31)

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Contact - IRC (2013-03-04 06:32)

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Contact - Email (2013-03-04 06:32)

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158

Donate - Bitcoin (2013-03-04 06:49)

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Donate - In Kind (2013-03-04 06:50)

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Isaac Wilder to Present at SXSW Interactive This Saturday (2013-03-04 20:54)

This Saturday, March 9th, at 11:00 AM, Isaac will be presenting at SXSW Interactive in Austin, TX, on a panel entitled [1]And What of Liberty? Networks & Freedom. Isaac will speak on the importance of network sovereignty, as well as exciting new developments for the FNF. He will be joining Dan Phiffer of occupy.here and Harlo Holmes of the Guardian Project. Please join us at the Austin Convention Center, Room 9ABC, 500 E Cesar Chavez St.

1. `http://schedule.sxsw.com/2013/events/event_IAP6393`

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FNF Featured in the COOK Report on Internet Protocol (2013-03-04 21:14)

We're excited to announce that the FNF was extensively featured in the March/April 2013 issue of the [1]COOK Report on Internet Protocol. Following many conversations with Executive Director Isaac Wilder, Gordon Cook has published a long-form piece on our work as well as that of our friends at [2]guifi.net in Catalonia.

[3]Part I of the Report

[4]Part II of the Report

Gordon Cook is a technologist who has edited and published the COOK Report, the longest running technology policy newsletter on the Internet, since 1992. He also runs the [Arch-econ] mailing list on the economics and architechture of IP networks.

1. `http://cookreport.com/`
2. `https://guifi.net/`
3. `http://staticbits.thefnf.org/guifi%20from%20march-april%2013%20dio%20wireless.pdf`
4. `http://staticbits.thefnf.org/FNF%20march-april%2013%20dio%20wireless-2.pdf`

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Board of Directors Meeting Report (2013-03-14 22:37)

[1]

Isaac presented at SXSW last Saturday, speaking about the FNF and previewing the pre-alpha build of guifi.us. We haven't been able to find any recordings of the panel yet, but shall update this post if we can locate one.

While four members of the Board of Directors were in Austin, we held a meeting, following our decision at the 2013 Winter Summit to meet monthly rather than bi-annually. The board came to a decision at the meeting to increase participation in the FNF by allowing all dues-paying members to vote for Directors. We're still working out the details on how this will operate, but expect an announcement soon, here and on our mailing lists. We're very excited to extend the governenace of the FNF to all our supporters.

The full minutes from the meeting can be found on the [2]wiki.

[image from @geoffreyfowler]

1. `https://thefnf.org/wp-content/uploads/2013/03/isaacsxsw.jpeg`
2. `https://commons.thefnf.org/index.php/BoardMinutes03/10/2013`

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About - Vision (2013-03-15 18:08)

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FNF Featured in Harper's Magazine Online (2013-03-27 19:19)

Recently, the Free Network Foundation attracted the attention of Harper's Magazine and KC-based author Whitney Terrell, who published an article Wednesday, March 20, about our recent activities in Kansas City. We're very happy with the quality of the article and with the focus Whitney brings to technological issues now affecting KC and everywhere. The article, entitled "Network Free K.C." can be found on [1]Harper's website.

1. `http://harpers.org/blog/2013/03/network-free-k-c/`

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3.4 April

2013 Q1 Review (2013-04-05 21:31)

FNF and Connecting for Good Expand Free Network in KCMO
This quarter, we continued our work with non-profit [1]Connecting for Good to bring Internet connectivity to more people in Kansas City. In late March and early April, we provided systems and systems know-how for a network network expansion at Posada del Sol, a subsidized apartment building for seniors in KCMO. The Posada site connects more than sixty housing units, the surrounding neighborhood, and serves as a relay to the 200 units we and Connecting for Good brought online at Rosedale Ridge last year. Posada del Sol is well situated to become a distribution center for connectivity on Kansas City's west side.

Steady Progress on Technical Objectives
CTO Charles Wyble recently has continued his work on the FNF's radio testbed and has begun benchmarking, experimenting, and integrating systems for our 1.0 FreedomStack release on July 4. James Yox, our CIO, has been penetration-testing our computer systems to ensure greater reliability and security. We began the quarter by completely rearchitecting our enterprise storage solution, and system performance is at an all-time high.

[2]

Guifi.us Demoed at SXSW
Isaac presented on the FNF and guifi.us at SXSW Interactive in Austin, TX, on March 9th. Also presenting on the panel "And What of Liberty? Networks and Freedom," were Dan Phiffer of occupy.here and Harlo Holmes of the Guardian Project. Isaac spoke about network freedom and [3]guifi.us, and demonstrated an early build of our network-planning tool. Guifi.us, our project to bring free networks like [4]Guifi.net's to the US. Guifi.us is a web platform enabling communities to plan, provision, and fund their own cooperative ISPs. Guifi.us will include mapping and RF planning features, community support for selected hardware platforms, tools to determine how best to backhaul networks, and a crowdfunding tool for communities to raise funds for network building. The objective of this project is to catalyze community wireless projects by providing decision support and organizing tools. The FNF is working in collaboration with Spanish networking group guifi.net, which has built a user-run cooperative network of over 20,000 nodes in Catalonia and Valencia, in an effort to bring their model to the US.

New FNF Website Launches
This quarter, we performed a complete overhaul of our public web properties, designing a custom Wordpress theme in order to make it easier to find information, and establishing a uniform user experience across all of our sites. Please check the new site out at https://www.thefnf.org and let us know how we can make it even

better.

Press Clippings
The FNF has been featured by several media outlets this quarter. Gordon Cook, who since 1992 has edited and published the longest running technology policy newsletter on the Internet, wrote on the FNF as well as Guifi.net in the March/April 2013 issue of the "COOK Report on Internet Protocol", "DIY Commons Infrastructure in the US." "Harper's Magazine" and Kansas City writer Whitney Terrell also took notice of our work, in an article entitled "Network Free K.C." And Isaac Wilder was interviewed by Elise Gallant for the Spring/Summer 2013 issue of "Purple Magazine". More about the FNF in the press can be found [5]here.

[6]

Winter Summit 2013
The FNF held our biannual [7]summit for winter 2013 in Austin, TX, during late January. We discussed the FNF's operating procedures and plans for 2013, worked on our technical systems, strategized our upcoming efforts in publicity and fundraising, and talked about how to launch a community network on the guifi.net model. Attending the Summit was our core team: Charles Wyble, Isaac Wilder, Tyrone Greenfield, and James Yox; artist/activist Sean McIntyre and journalist Whitney Terrell.

Board of Directors Meets
The Board of Directors decided this January to begin meeting monthly rather than twice per year, and so far in 2013 they've held two Board meetings, in [8]late January and in [9]early March. The Board strategized on how to build guifi.us and integrate it with guifi.net and with FNF's mission. They also discussed how the Board can exercise more effective oversight of the FNF, and how to move toward making the Board more democratic by having dues-paying members elect new directors.

[10]

FNF Moves into New Office

In January, the FNF moved into our first office, in the West Bottoms neighborhood of Kansas City, MO. We are very excited to have a dedicated space where we can plan, work and build. Additionally, the core team made significant efforts to improve their own workstations for better productivity and flow.

Financial Report

This quarter, the FNF took in $1411.50 in revenue, and spent $4037.08, ending with $2831.43 cash in hand. All of the income came from individual donations, while the greatest portions of expenses went towards electronic equipment, colocation/hosting/backhaul costs, and travel, in that order. A more detailed report can be found on the [11]Commons.
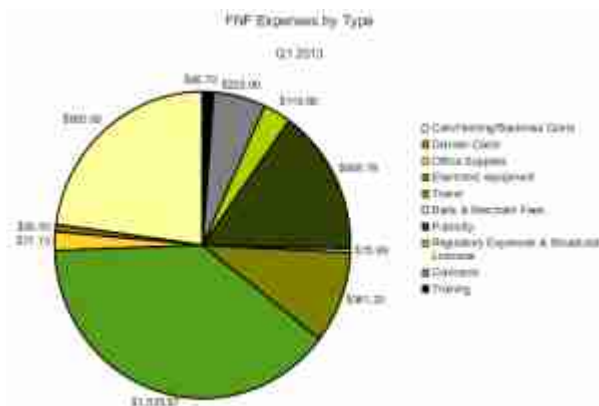
[12]

Join the FNF

The FNF relies on individual donors like you to keep bringing people online and developing tools to truly make the Internet a commons for all of humanity. You can help us bring about our vision of a world where networks are owned and run by all. Please consider signing up today as a monthly donor, or give a one-time contribution, on our [13]website.

1. http://www.connectingforgood.org/
2. https://thefnf.org/wp-content/uploads/2013/03/isaacsxsw.jpeg
3. https://commons.thefnf.org/index.php/Guifi.us
4. http://www.guifi.net/
5. http://commons.thefnf.org/index.php/Clippings
6. https://thefnf.org/wp-content/uploads/2013/04/boxysean.jpg
7. http://thefnf.org/winter-summit-report-part/
8. https://thefnf.org/winter-summit-report-part-2/
9. https://commons.thefnf.org/index.php/BoardMinutes03/10/2013
10. https://thefnf.org/wp-content/uploads/2013/04/annaoffice.jpg

11. `https://commons.thefnf.org/index.php/Financial_Report,_Q1_2013`
12. `file://localhost/2013-q1-review/q12013finances1/`
13. `https://thefnf.org/donate/`

3.5   July

The Trap (2013-07-01 18:34)

I'd say the future we can see today is rarely the future that comes about – not
in the long run. The technological clock *can't* be turned back. Like time's
arrow itself, it only moves in one direction. That's why it is important, as
many have said before me, to invent the future. If we souls of conscience can
focus our energies, learn to cooperate with one another, letting go of our fear
that someone else will get the credit, then we can surely reclaim our future.

It's easy to fall into the moneytrap – a mode of thinking that says it is
liquid capital, for lack of a better term, that moves the world. This is not the
case – the world is moved also by raw ingenuity, genius, and truth. Money is
just an amplifier, and at present, it is amplifying a weak and noisy signal –
the result is a distorted mess. Play beautiful music, even softly, and people
will listen over the noise. It is easy to think that unplugging from the
amplifier will mean that you don't get heard: why resign from Harvard Law? Why
take leave of the beltway? Why stop getting paid to work on 'big data'? Why quit
Google?

Because original thought rarely occurs under the hungry eyeballs of a myopic
horde. Ideas that take the long view, in this age, are rare and reviled –
they're too chunky to be pulverized and 'fed' to people. Yet in the end, it is
these ideas – the ones that take the long arc as their frame of reference –
which will win out. This is precisely because they are built to last.

We can reclaim the EM spectrum, if we have better, more efficient ways of usage.
We can reclaim, or claim, the commons that is Internet (the idea), if we are
ingenuitive enough to anticipate and create future technology. We can make it
difficult for the surveillance state, if we stop engineering infotraps, and
start engineering tools that help people: distributed social networks,
freedombox, user-friendly crypto, material peer-to-peer, cooperative autonomous
systems, new currency, new machinery, new social frameworks.

At this moment, there's no real excuse to be making technology that's not politically
progressive – not in my book. Too much hangs in the balance – and the linkage
between what we engineer, and what our society will become is just too strong.