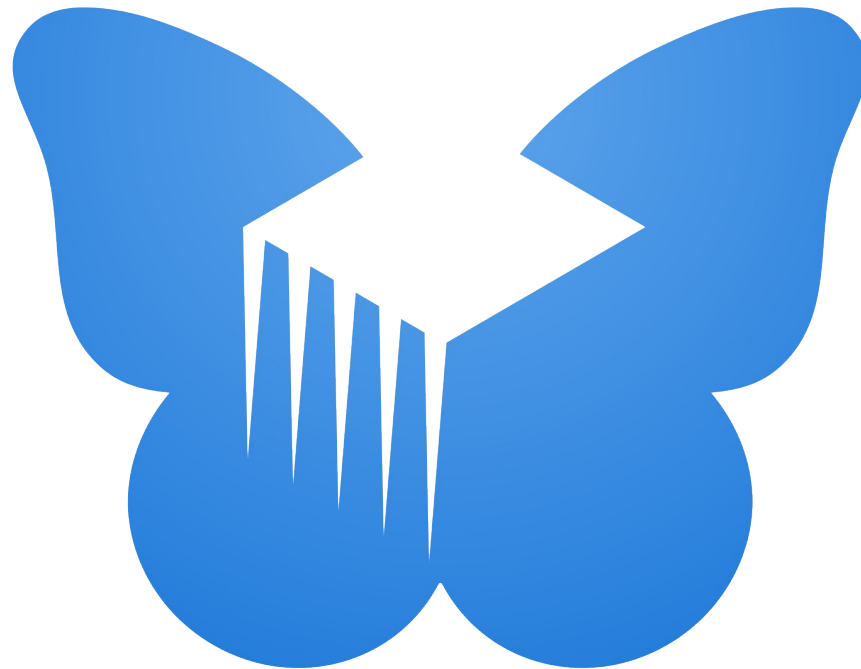


# FreedomBox BOF

Bdale Garbee



# Who is Bdale?

- First contribution to Free Software circa 1979
- Retired as HP Open Source & Linux Chief Technologist Aug, 2012
- Contributor to Debian GNU/Linux since October 1994, including service as Debian Project Leader, early design of infrastructure, porting to several new architectures, maintaining many packages. Currently serve as chairman of the Debian Technical Committee.
- 2008 FNILL Lutece d'Or as “FLOSS Personality of the Year”
- President, Software in the Public Interest
- Board member of Linux Foundation, Freedombox Foundation
- Amateur satellite and high-power model rocket builder ...



# What's the Problem?

- We willingly hand personal data to companies to manage on our behalf, with little real thought given to consequences.  
... our lives are under increasing scrutiny
- For-profit companies, *no matter how noble the intentions stated in their terms of service*, **must** operate within the rules of jurisdictions in which they operate...

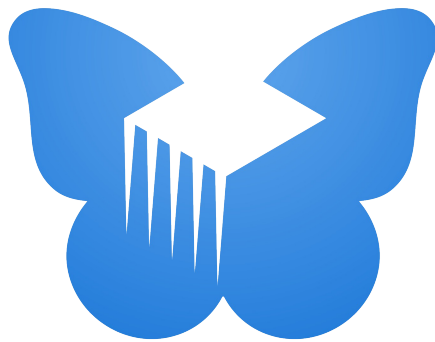


# Freedombox Vision

- A FreedomBox is a personal server running a free software operating system and applications designed to create and preserve personal privacy.
- Running on cheap, power-efficient plug computer servers that individuals can install in their own homes.
- Contribute to building privacy-respecting federated alternatives to contemporary social networks
- Mesh networking to augment or replace existing infrastructure.
- Will facilitate collaborating safely and securely with others in building social networks supporting protest, demonstration, and mobilization for political change.



# Hardware



**FreedomBox**

# Hardware Targets

- Anything that can run Debian...
- DreamPlug from GlobalScale Technologies
- Raspberry Pi
- Novena



# DreamPlug

- Marvell Kirkwood @ 1.2Ghz
- 512 MB RAM and 2 MB SPI NOR Flash for bootloader
- 2 GB internal microSD for kernel, root filesystem
- 2 x Gigabit Ethernet
- WIFI 802.11 b/g using Marvell uAP
- Bluetooth 2.1 + EDR
- 2 x USB 2.0, 1 x eSATA 2.0, 1 x SD socket
- Audio Interfaces







# Raspberry Pi

- Just too cheap to ignore... \$35 US
- Runs a Debian derivative by default
- Completely plausible as a personal server
- Use as a router implies adding at least one additional USB network interface
- Some commercial interest in this platform

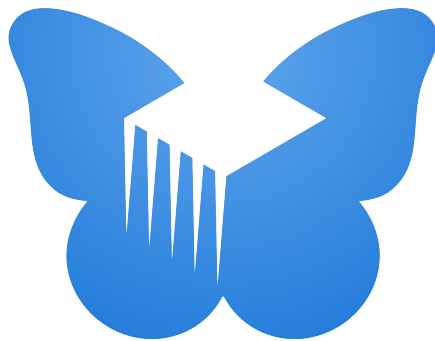


# Novena

- Andrew “bunnie” Huang's open design laptop project, which can be run 100% “NDA-free” with no binary blobs!
- Freescale i.MX6 quad-core 1.5 Ghz Cortex A9
- 4 GB SDRAM
- Boots from microSD, includes SATA-II for storage
- Gigabit Ethernet and 100Mbit Ethernet interfaces
- Mini PCI Express slot for WIFI, etc
- UIM slot for mPCIx mobile data cards
- Great gobs of other features to play with!
- Very much a work in progress .. but exciting for the future!



# Software



# FreedomBox

# Objectives for 1.0

- Accessible to the “less geeky”
- Broaden hardware targets
- Establish OpenPGP key based trust model
  
- Plinth user interface
- Content structured via Debian metapackages
- Monkeysphere



# Plinth

- Web front-end user interface for FreedomBox
- Pluggable forms and menus
- Written in Python using CherryPy
- Uses exmachina for privilege separation
  
- Not originally designed with packaging in mind, restructuring for Debian use underway



# OpenPGP Key Identity Model

- Pros
  - Best existing distributed web of trust
  - High correlation between early adopters and OpenPGP key-using community
- Cons
  - Most existing apps assume CA model of the world, conceptual disconnect, harder than it seems to fix
  - Key/signature/cert content comes in many forms
  - People qualified to get this right are always busy!



# Monkeysphere

- Originally developed for use with ssh
- dkg working on mod\_gnutls for Apache
  - Interacts with monkeysphere validation agent so that we can validate a client X.509 certificate against an OpenPGP identity
  - a “work in progress”



# Services Planned for 1.0

- Privoxy with a rich set of rules
- VPN support for client connections
- FreedomBuddy for service negotiation
- ssh & https working with OpenPGP keys
- Opportunistic inclusion of additional apps?





# How to Help?

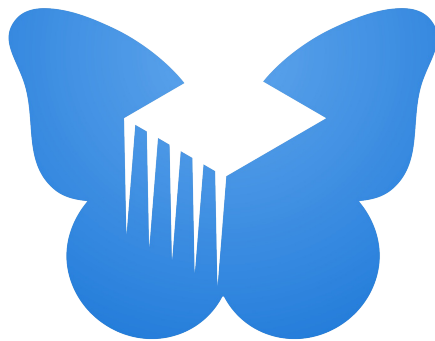
- Be conscious about privacy and other freedoms in all that you do! (Do you have a gpg key yet?)
- Help create Plinth modules
- Help us select Debian packages and determine configuration specifics to deliver on our vision
- Financial contributions to the Foundation are always welcome!



# To Learn More...

<http://freedomboxfoundation.org>

<http://wiki.debian.org/FreedomBox>



**FreedomBox**