

The network is down?!?

brought to you by:

Docwho & Council of the Internet  
Wizards

# Who am I?

- I'm Batman!
- Ok, not really...
- Keyholder at Nullspace Labs
- Been working on networks since 1995
- Owner of awesome fezzes
- Recently started learning circuit design

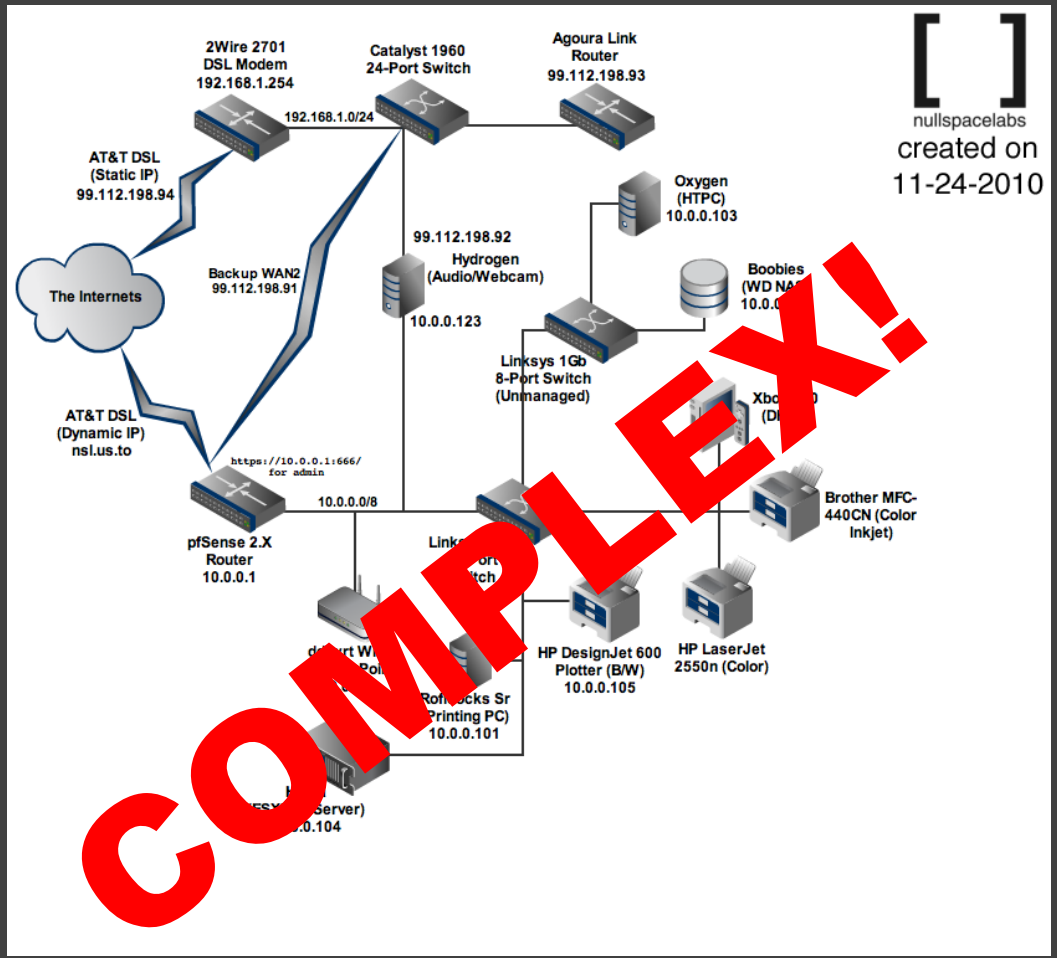
# Nullspace Labs: May 2010



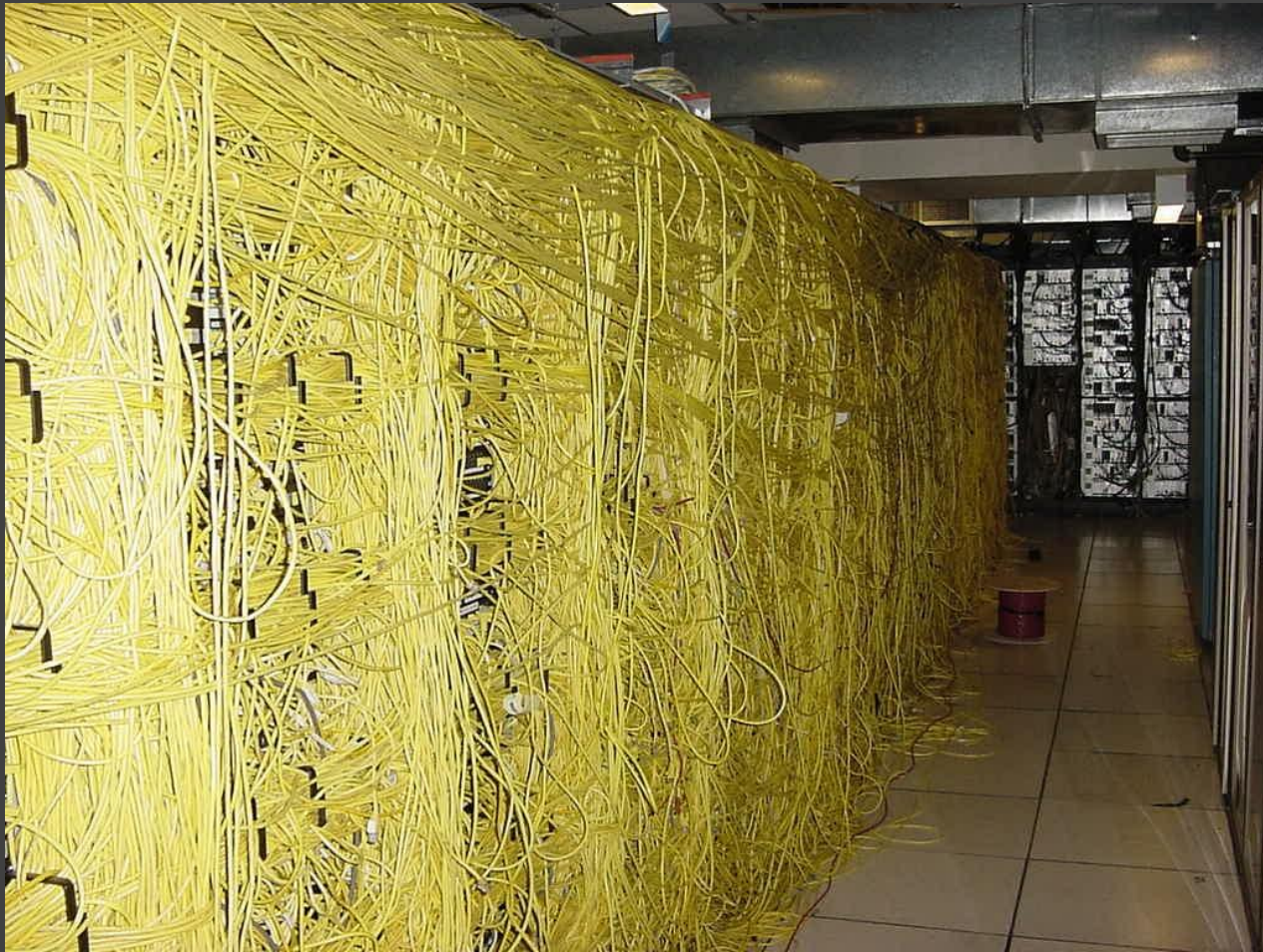
# Nullspace Labs: 1 year old now!



# So what's the problem, dude?



Can't you just trace it?



What else is there?



Result:

**HATERS GONNA HATE**





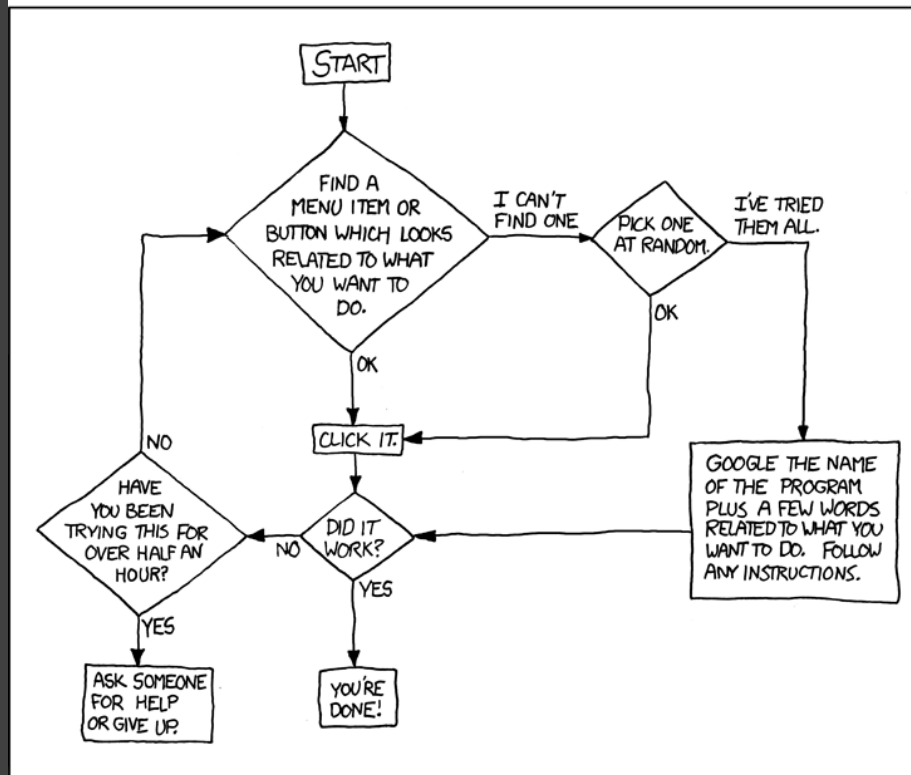
# Result (Cont'd):

**IT  
ONLY  
DOES  
OFFLINE™**

# Our Goal: Teach thyself

DEAR VARIOUS PARENTS, GRANDPARENTS, CO-WORKERS,  
AND OTHER "NOT COMPUTER PEOPLE."

WE DON'T MAGICALLY KNOW HOW TO DO EVERYTHING IN EVERY  
PROGRAM. WHEN WE HELP YOU, WE'RE USUALLY JUST DOING THIS:

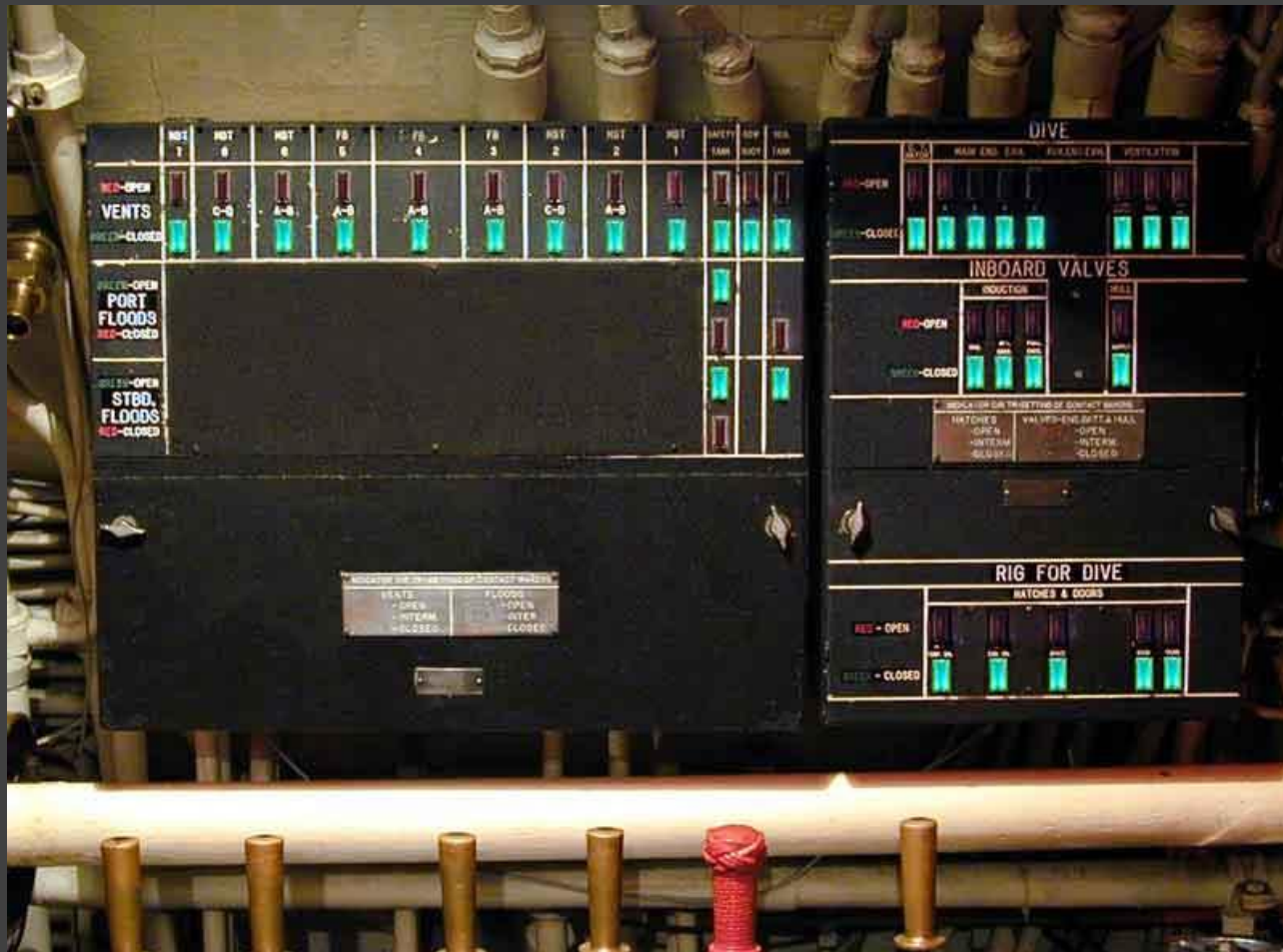


PLEASE PRINT THIS FLOWCHART OUT AND TAPE IT NEAR YOUR SCREEN.  
CONGRATULATIONS; YOU'RE NOW THE LOCAL COMPUTER EXPERT!

# How do we do this?

- Learn from submarine design
- Make it fucking cool looking
- Give users ability to see important info at a glance
- Help users quickly isolate trouble area(s)

# Submarine design: WTF you talkin about Willis?



# MOAR Greenboards




# Early Design notes

- Device will be attached to both wired and wireless networks to test both domains.
- DNS resolution - Time Since Outage/Uptime in Days/Hrs/Min/Uptime as a percentage
- PfSense LAN ping - Time Since Outage/Uptime in Days/Hrs/Min/Uptime as a percentage
- Wifi Network(s) ping - Time Since Outage/Uptime in Days/Hrs/Min/Uptime as a percentage
- Internet ping - Time Since Outage/Uptime in Days/Hrs/Min/Uptime as a percentage
- Bandwidth instantaneous usage in kbits/sec

# Parts is parts, right?

## LM3S9B96 Status: ACTIVE

Stellaris Microcontroller

 [Alert me about changes to this product](#)

### Datasheet



**Stellaris LM3S9B96 Microcontroller Data Sheet (Rev. K)** (PDF 7893 KB)  
23 Mar 2011

**Stellaris LM3S9B96 Rev C3/C5 Errata (Rev. G)** (PDF 393 KB)  
28 Mar 2011

**Stellaris LM3S9B96 Rev B1 Errata (Rev. P)** (PDF 413 KB)  
22 Mar 2011

**Stellaris LM3S9B96 Rev C1 Errata (Rev. L)** (PDF 845 KB)  
27 Jan 2011

**ARM Cortex-M3 Errata (r1p1 and r2p0)** (PDF 89 KB)  
12 Nov 2008

> [View all technical documents](#) (49)




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Other pin/package combinations may be available.

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### Featured Software/Development Tools

[Cortex Microcontroller Software Interface Standard \(CMSIS\) for Stellaris® MCUs Application Software](#)

[LM3S9B92 Ethernet+OTG Evaluation Kits Development Boards/EVMs](#)

[LM3S9B96 Development Kit Development Boards/EVMs](#)

# Challenges

- This shit is hard
- Only recently started designing electronic circuits
- Have to learn to code for Stellaris
- Wifi integration
- Determining right amount of drinking to do to enhance project coding



# Contact info and URLs

- [http://wiki.032.la/nsl/Network\\_Status\\_Sign](http://wiki.032.la/nsl/Network_Status_Sign)
- [timelord@gmail.com](mailto:timelord@gmail.com)
- Docwho76 / docwho76H on efnet

# THANK YOU!

