

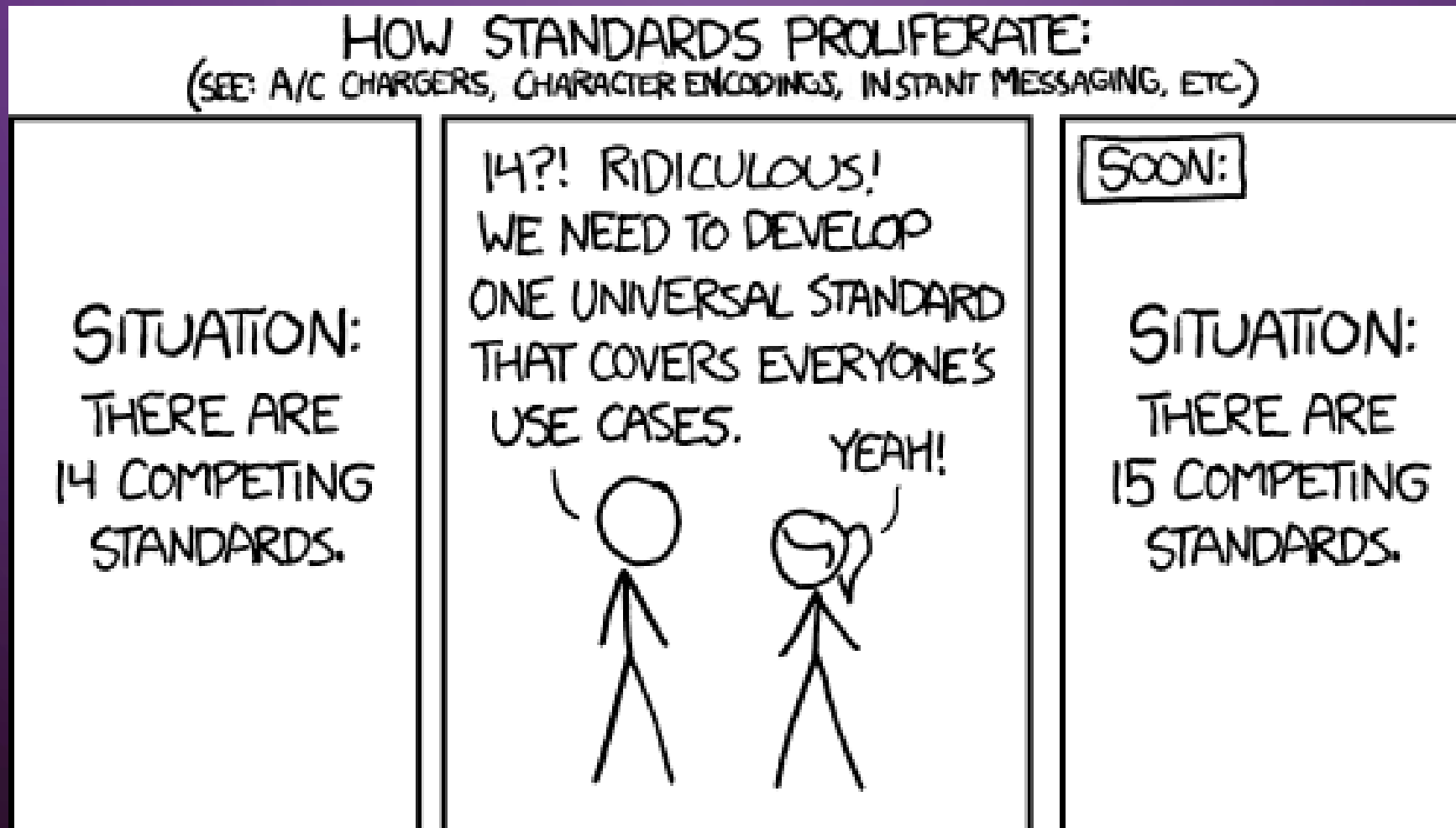


HOTSPOTS

KØNGA MIKE

ROCKY MOUNTAIN HAM RADIO

OBLIGATORY – XKCD 927





DISCLAIMER

I am not affiliated with any of the companies listed in this presentation nor am I being paid to promote any of the products (hardware or software) or services mentioned herein.



WHAT IS A HOTSPOT?

A small, portable device which connects over the internet to one of a selection of networked repeater systems allowing communication via digital radios



WHY DO I WANT ONE?

- Coverage issues
 - No repeater in your area
 - Drive around in dead spots a lot
 - Repeaters in your area too busy
 - Repeater owners blocking TGs you want to talk on (Brandmeister)
- For the fun of it

A decorative graphic on the left side of the slide, consisting of white lines and circles on a dark background, resembling a circuit board or a network diagram.

TYPICAL RADIO PROTOCOLS SUPPORTED

- DMR
- D-Star
- C4FM (System Fusion)
- NXDN
- P25
- POCSAG (DAPNET)
- M17*



NETWORKS SUPPORTED

- DMR
 - Brandmeister
 - TGIF
 - DMR+ /FreeDMR/Hblink
 - SystemX
 - XLX
- D-Star reflectors
 - DCS/XLX
 - REF/XRF
- System Fusion
 - FCS
 - YSFReflector
 - XLX
- Protocol Specific Reflectors
 - NXDN
 - P25
 - M17*



HOTSPOT TYPES

- Proprietary
 - SharkRF openSPOT
 - HW & SW by a single vendor
 - Current version is openSPOT4
- Build Your Own
 - Raspberry Pi-based (and a few others)
 - Modem Board (provides radio RX/TX function)
 - Assembly required
 - Pi-Star/WPSPD software
- In Between – Turn-Key Kit
 - Zumspot
 - Bridgecom Skybridge
 - TGIF Spot
 - Many others



HOTSPOT SETUP

Preparation

- For BYO: build the hotspot, image the disk.
- Networking: Wi-Fi mostly, but some support Ethernet. Know your SSID and Password, and what Wi-Fi types your device supports (some only support 2 GHz)
- Power: Especially for BYO, know the power requirements of your device.

Connect to Internet

- Some hotspots allow users to specify network info via a file written to the disk
- Most offer a temporary access point users can connect to to configure a Wi-Fi connection

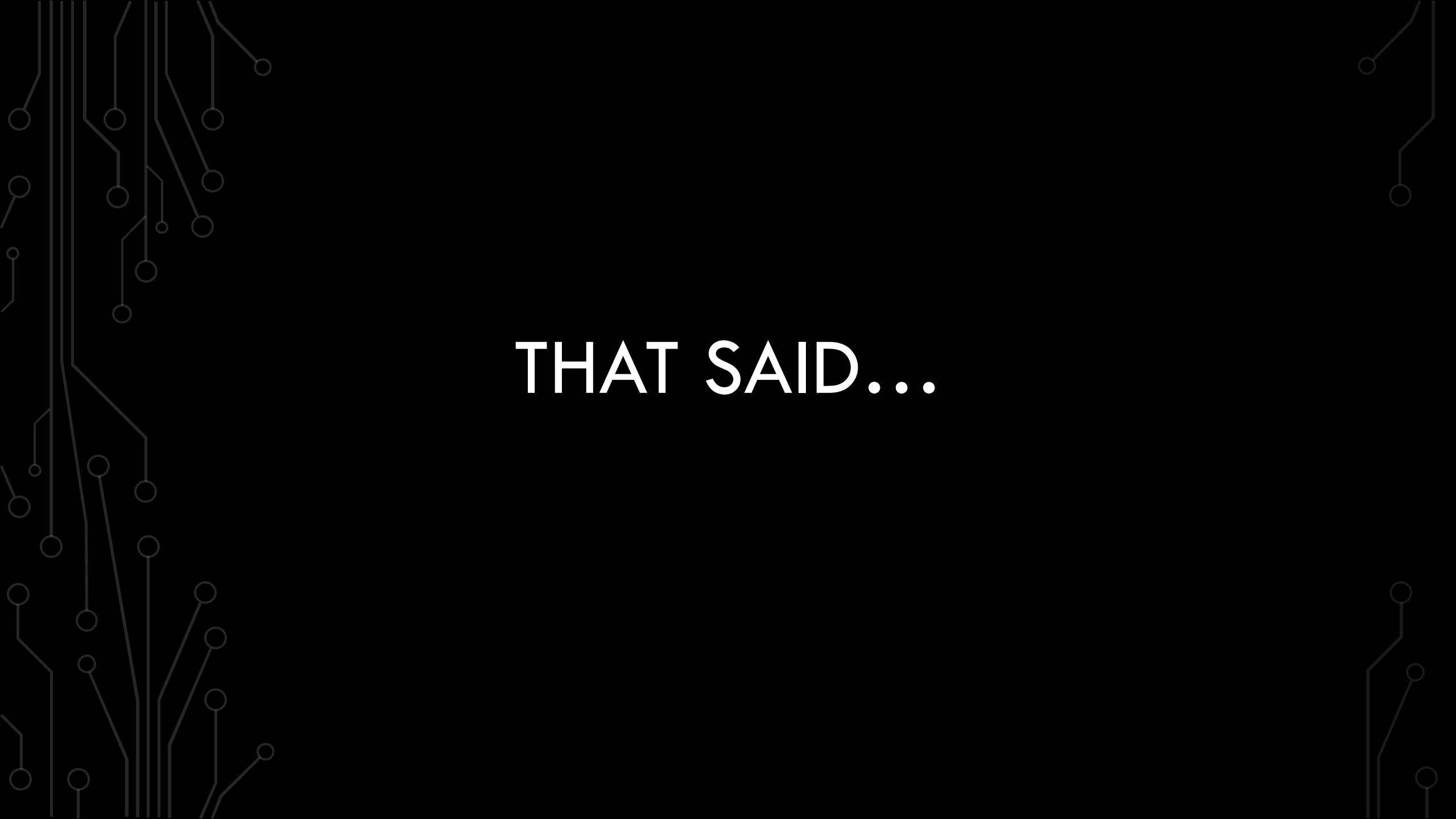
Set up your Radio Protocol and Radio Network Connection

- Dependent on hotspot software
- Not all hotspots support all modes



WHICH ONE IS BETTER? WHICH ONE SHOULD I CHOOSE?

- This is my own opinion
- If you don't want to fiddle around with it, want something that's as plug and play as possible, and you have the money, get an openSPOT or turn-key kit
- If you want to get hands on, like building kits, have some extra time, don't mind doing a little research and want to control options, build your own

An abstract graphic design featuring a black background with a light gray circuit-like pattern. The pattern consists of thin, vertical and horizontal lines that branch out and connect to small circles, resembling a stylized circuit board or a network diagram. The pattern is most dense on the left side and fades out towards the right.

THAT SAID...

CROSS-MODES

PI-STAR / WPSD

Radio	Network
YSF	DMR
YSF	NXDN
YSF	P25
DMR	YSF
DMR	NXDN

OPENSLOT 4

Radio	Network
YSF	DMR
YSF	NXDN
YSF	P25
DMR	YSF
DMR	NXDN
NXDN	DMR
NXDN	YSF
P25	YSF

CROSS-MODES – D-STAR

OPENSLOT 4 PRO

Radio	Network
D-Star	DMR
D-Star	YSF
D-Star	NXDN
YSF	D-Star
NXDN	D-Star
DMR	D-Star

An abstract graphic design featuring a dark background with a light gray circuit-like pattern. The pattern consists of thin, vertical and horizontal lines that branch out and connect to small circles, resembling a stylized circuit board or a network diagram. The pattern is most dense on the left side and fades out towards the right.

ONE MORE THING...



ELEPHANT IN THE ROOM

- Do you even still need a radio?
 - Echolink
 - AMBE Server
 - Droidstar/Dudestar/Peanut
 - openSPOT4 Pro / SharkRF Link App
- How far are vendors willing to take this?





STUFF AND THINGS

- RMHAM Website – <https://www.rmham.org>
- SharkRF (openSpot) – <https://www.sharkrf.com>
- PiShop – <https://www.pishop.us>
- BI7JTA – <https://www.bi7jta.org/>
 - Where I get my hotspot hats (China)
- PiStar – <https://www.pistar.uk>
- WPSD – <https://w0chp.radio/wpsd/>
- Contact Me: K0NGA@arrl.net