

US Telecommunications: Policy & Fantasy in the 21st Century

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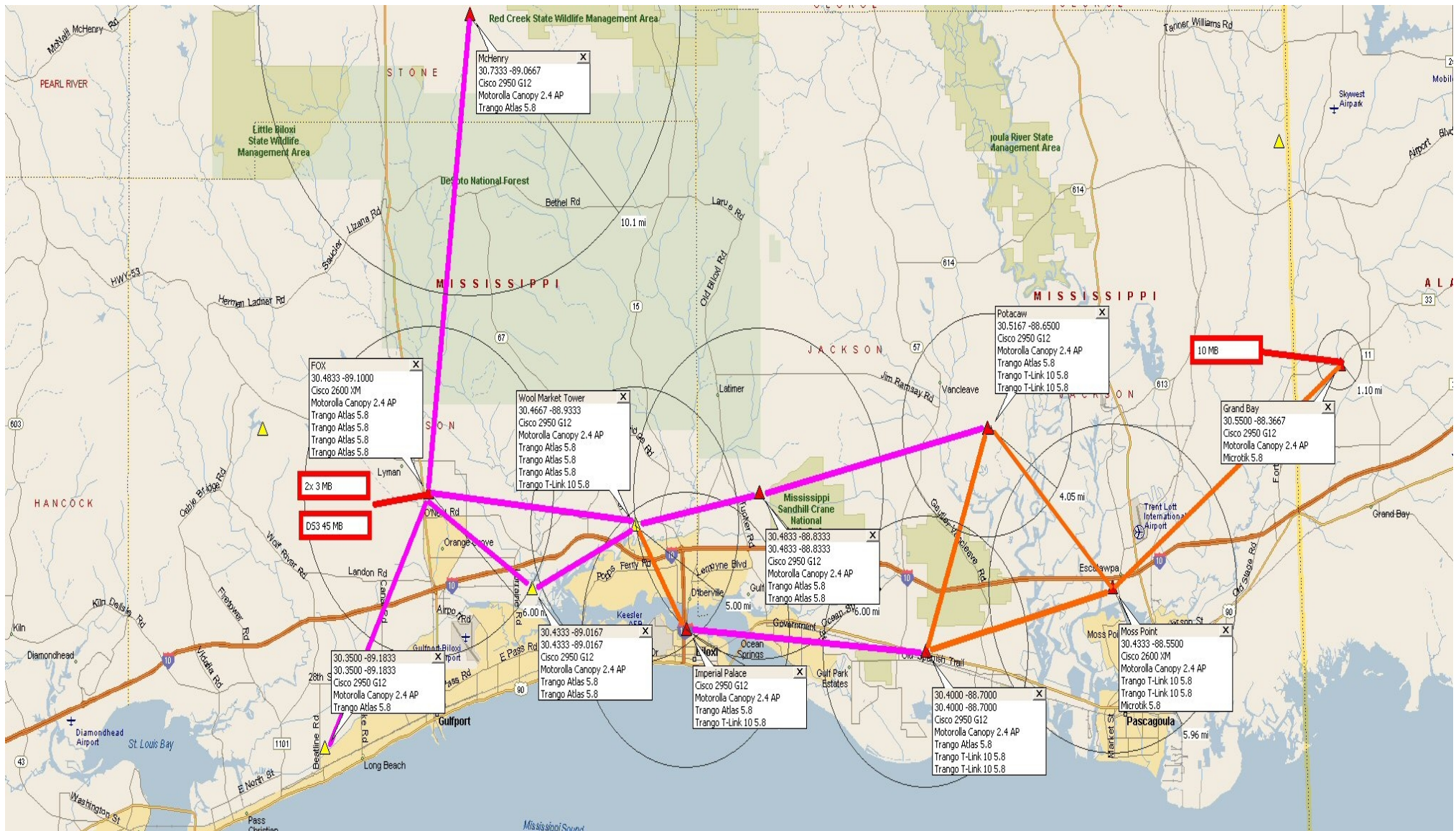
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What I'm not talking about (today):

- CUWiN: CUWiN.net
- COMMONS: caida.org/projects/commons
- Open Source Wireless Coalition: OSWC.net
- Wireless Summit: WirelessSummit.org
- FreeNets: FreeNetworks.org
- The Ethos Group: EthosWireless.com
- Community Webhosting: Chambana.net
- Acorn Active Media: AcornActiveMedia.com
- Community Technology Centers: CTCnet.org

Katrina Disaster Response



?

Four Policy Initiatives That Will:

- Disrupt the status quo.
- Foster interconnectivity.
- Increase broadband capacity.
- Lower broadband pricing.
- Change the future of civil society worldwide.

1

Economic Realities

1 Mbps symmetric costs:

- \$10/month: San Francisco, CA
- \$80-90/month: Chicago, IL
- \$320/month: Urbana, IL
- \$1300/month: Greenup, IL

Broadband Census of America Act

- Mandates better data collection, including:
 - “The actual number of residential subscribers, small business subscribers, and large business subscribers”
 - “The advertised data transmission speeds of broadband service capability offered”
 - “NTIA shall develop and maintain a broadband inventory map of the United States that identifies and depicts the geographic extent to which broadband service capability is deployed and available from a commercial provider or public provider throughout each State”

Broadband Census of America Act

- Mandates a consumer survey that determines:
 - “The type of technology used to provide the broadband service capability to which the consumer subscribes”
 - “The amount the consumer pays per month for such capability”
 - “The actual data transmission speeds of such capability”
 - “The types of applications and services the consumer most frequently uses in conjunction with such capability”

2

Anti-Muni State Laws in the US

Arkansas (Ark. Code § 23-17-409), **Florida** (Fla. Stat. Ch. XXI, § 166.047), **Iowa** (Iowa Statue § 388.10), **Minnesota** (Minn. Stat. Ann § 237.19), **Missouri** (Revised Statutes of Missouri § 392.410-7), **Nebraska** (Neb. Rev. Stat § 86-2304), **Nevada** (Nevada Statutes § 268.086), **Pennsylvania** (House Bill 30), **South Carolina** (S.C. Code § 58-9-2600), **Tennessee** (Tenn. Stat. Ann. § 7-52-601), **Texas** (Texas Pub. Util. Code § 54.202 et seq), **Utah** (Utah Code § 10-18), **Virginia** (Va. Code § 15.2-2160Va. Code § 56-265.4:4), **Washington State** (Revised Code of Washington § 54.16.330), **Wisconsin** (Act 278)

Community Broadband Act

- “No State or local government statute, regulation, or other State or local government legal requirement may prohibit, or have the effect of prohibiting, any public provider from providing advanced telecommunications capability, or services using advanced telecommunications capability, to any person or any public or private entity.”

3

OpenMoko Mesh



Photo Credit: gadgetblog.it

700 Mhz Open Platform Band

- “The licensees of the Upper 700 MHz Band C Block of spectrum will be required to provide a platform that is more open to devices and applications. This would allow consumers to use the handset of their choice and download and use the applications of their choice in this spectrum block, subject to certain reasonable network management conditions that allow the licensee to protect the network from harm.”

4

WSDs – White Space Devices

- Reuses unused TV frequencies.
- Contains scanner/receiver & transmitter.
- Must successfully identify used channels.
- Cannot cause harmful interference.
- Has far better propagation than WiFi.

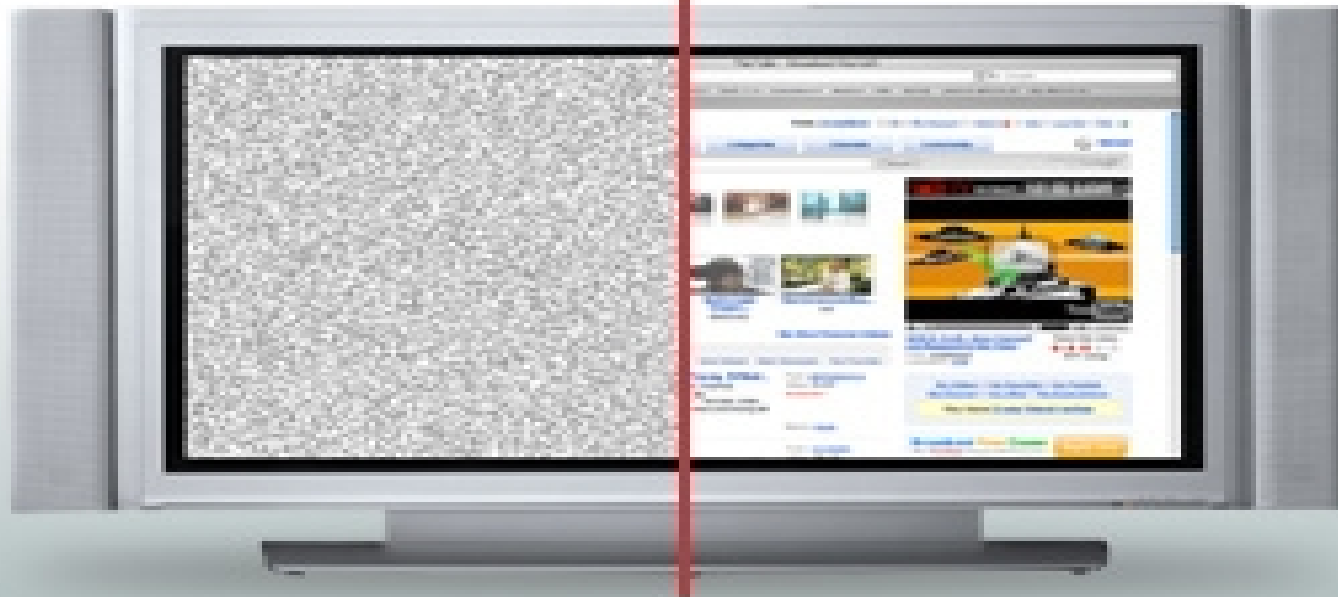
The Real Question:

Would you rather have:

NOTHING?

or

**HIGH-SPEED
INTERNET?**



Tell the FCC: Put empty channels to good use »

OLPC Mesh



Photo Credit: techfreep.com

The WSD Battle:

- The Public Interest
 - Consumers Union, New America Foundation, Public Knowledge, Consumer Federation of America
- High Tech Industry
 - Google, Dell, Philips, Samsung, Microsoft
- National Association of Broadcasters
- Shure (wireless microphone manufacturer)
- Voldemort

The Ammunition

On our side:

- Public support
- Research and working prototypes
- Physics

On their side:

- Money
- Lobbying
- HUGE Public Relations & Misinformation Campaign

Example of this Battle:

“Moreover, as the FCC’s own tests confirmed, the proponents of unlicensed devices in the digital television spectrum have not shown that their “sensing” technology is at a stage where it would effectively prevent interference in the television band. Therefore, the FCC should not allow these portable devices to enter the TV band at this time.” -- Disney, News Corporation, CBS, NBC

“Currently, feasibility testing is being done and documentation collected on the viability of WSD technologies. Prototype testing has demonstrated that WSDs can and do work. The next step will be for the FCC to determine the necessary technical specifications for WSDs based upon empirical data collected during feasibility testing and regulatory precedent.” – Public Interest Spectrum Coalition

The FCC Test (NAB View):

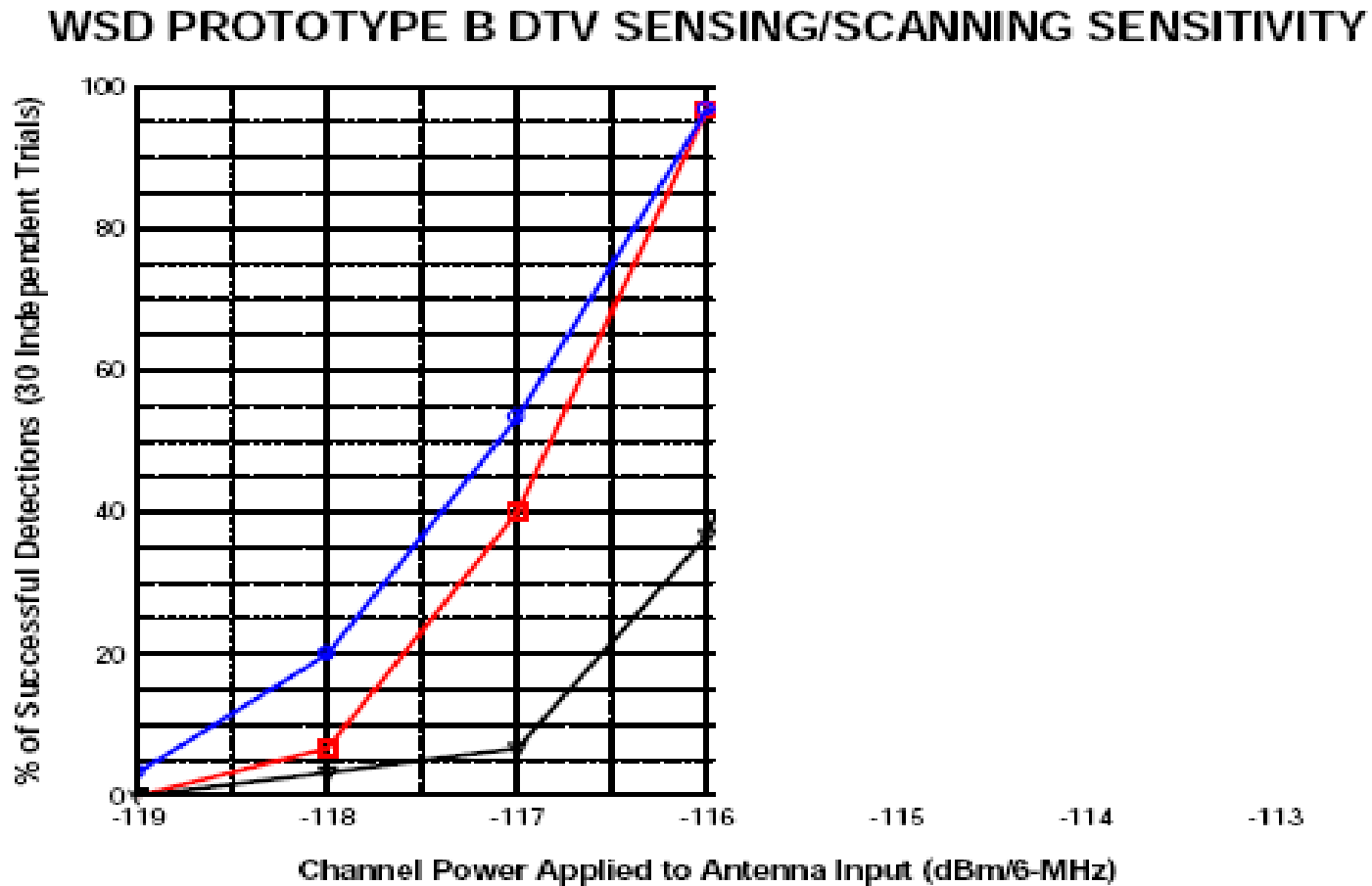


Figure 3-4. Baseline Detection Threshold Results for Prototype B.

The FCC Test (PISC View):

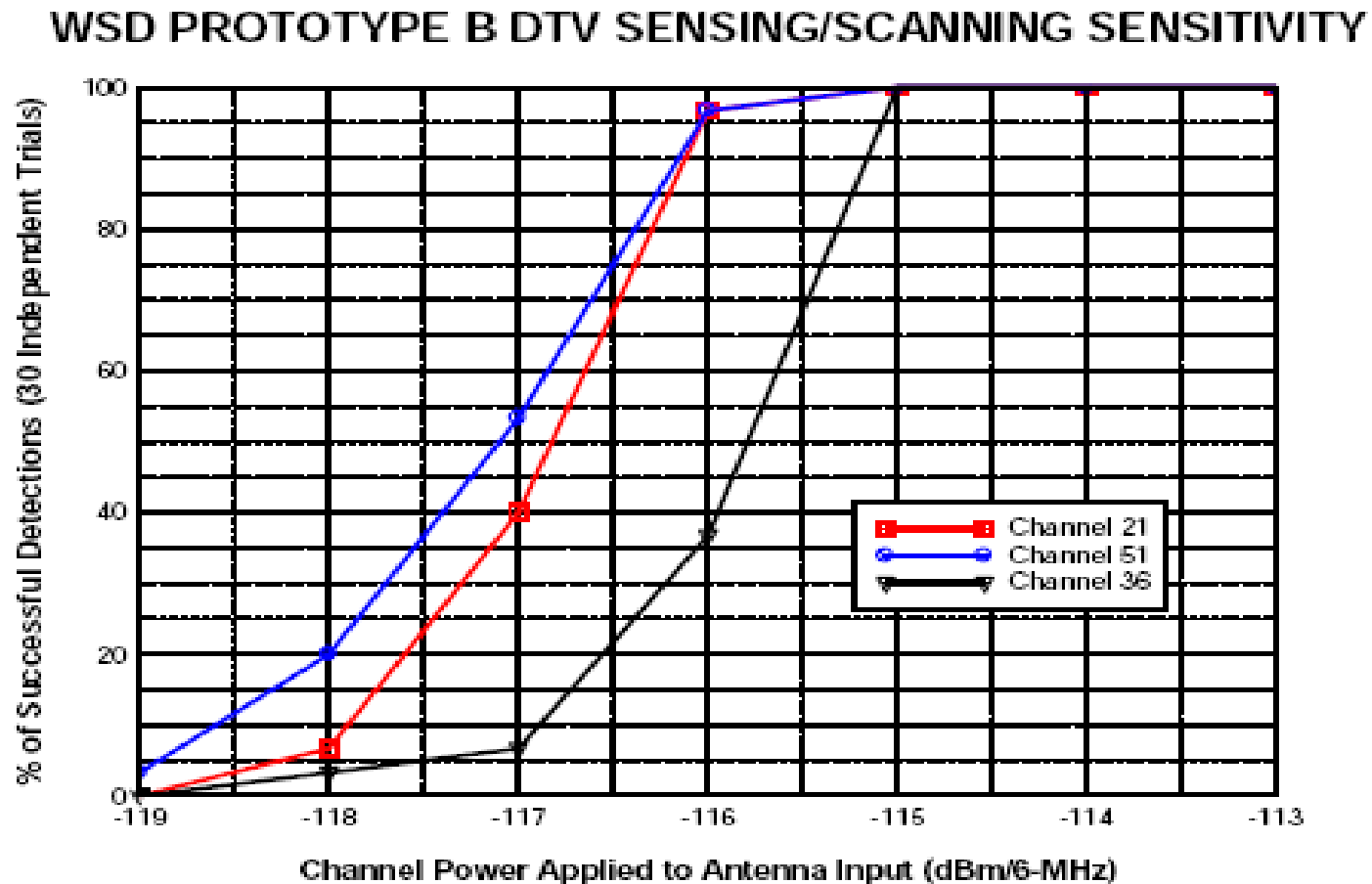


Figure 3-4. Baseline Detection Threshold Results for Prototype B.

The Take-Home Message

- The battle lines are drawn.
- Policy & reality have little correlation.
- The public interest is organized and beginning to flex its muscle.
- “Small” wins matter.
- These highlighted battles are all win-able.
- This wins will change the future of human communications.

More Information

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