

WISPA



# National Broadband Presentation

Wireless Internet Service Providers Association

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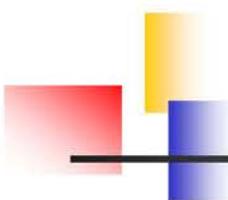
January 13, 2010



# Introduction

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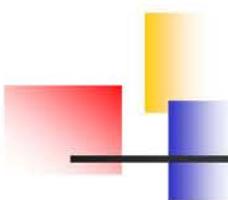
- Tom DeReggi – D.C. Area WISP – 15 years of ISP and WISP industry experience
- Jack Unger – 18 years of WISP industry experience
- Stephen Coran – 23 years of communications law experience
- WISPA – Since 2004 – Represents over 300 WISPs and WISP-industry companies
- 12 NBP Filings since June 2009



# Why WISPs are Important

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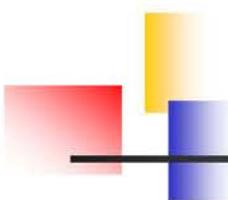
- In many communities, WISPs are the sole source of broadband
  - Would otherwise be unserved
  - Too expensive for DSL and cable to go there
- Many WISPs offer competitive alternatives to DSL and cable in urban, suburban and rural communities
  - Increases competition
  - Results in innovation
  - Increases consumer welfare
- Broadband is vital to rural communities to help stem the “rural brain drain”



# What is Important to WISPs and Their Communities

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- More fixed-use spectrum to be available via “licensed lite” or affordable licensed allocation schemes
- More effective rules for existing fixed spectrum allocations
- Better access to affordable middle mile and second mile facilities
- Better access to towers, utility poles and other facilities
- Better access to private sector financing
- More funding through government grants, loans and loan guarantees, direct end-user subsidies and universal service support

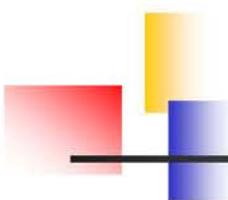


# 24 Million Households Have No Broadband (NBP PN #26)

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“Evolving Metrics: New Levels of Accuracy Reveal Increased Take Rates” by Brian Webster Consulting and The Gadberry Group

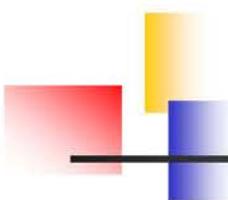
- People can't . . .
  - Bank from home
  - Pay bills from home
  - Search for a job from home
  - Study, learn or attend a class from home
  - Operate a home business
- Rural businesses can't use the Internet to conduct business
- Action to allocate clean spectrum and implement useable operating rules for Fixed Wireless Broadband can help bridge this “Digital Divide”



# Lack of Broadband is “Hollowing Out” Rural America (NBP PN #18)

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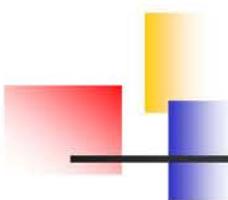
- Small communities experience first-hand the dramatic effects of lacking broadband
  - Small businesses fold; new businesses never come to town
  - Young adults and young families leave rural areas for larger cities
  - Rural areas experience “brain drain” as young people leave
  - New home businesses can’t get started
  - Rural residents can’t participate in the global market
  - Rural areas decline and never recover
- Adopting WISPA’s proposals in the Middle Mile/Second Mile and Spectrum for Broadband proceedings will improve the economic viability of needy communities



# Fixed Wireless Broadband and Mobile Broadband are Different and Distinct

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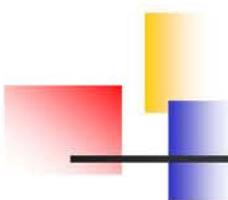
	Market Served	Bandwidth
<b>Fixed</b> Wireless Broadband	Fixed <b>group</b> locations - Families and Businesses	High (10 X higher)
<b>Mobile</b> Broadband	Mobile <b>Individuals</b>	Low



# Fixed Wireless Broadband Requires Spectrum (NBP PN #6)

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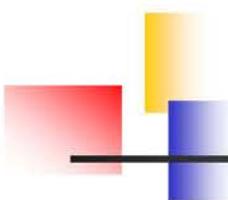
- Wireless spectrum can only deliver a fixed amount of bandwidth
- The vast majority of WISPs must use unlicensed spectrum which is prone to noise, interference, Ongoing reliability concerns and attenuation from trees, buildings and terrain
- Not all spectrum is equal; sub 1-GHz spectrum is needed.
- Fixed wireless broadband providers need access to the TV White Space spectrum with more practical operating rules
  - Eliminate unproven and insecure spectrum sensing requirements
  - Eliminate RECEIVE antenna restrictions
  - Increase permissible base station height
  - Adopt “licensed-lite” cooperation requirements
- Repacking TV spectrum (and presumably white space spectrum) poses a substantial threat



# Fixed Wireless Broadband Needs Better Operating Rules (NBP PN #6)

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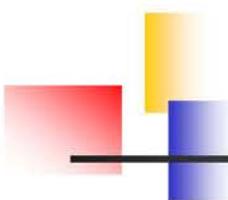
- Fixed wireless broadband providers need better rules in the 3650–3700 MHz band
  - “Restricted protocols” need to be allowable in the entire 50 MHz band and not just in the lower 25 MHz
  - Fixed satellite service (FSS) “exclusion zones” need to be reduced in size, or coordination requirements need to be modified
  - The FSS coordination process needs to be streamlined
  - The end-user registration process needs to be simplified



# Use of “Licensed-Lite” Needs to be Expanded (NBP PN #6)

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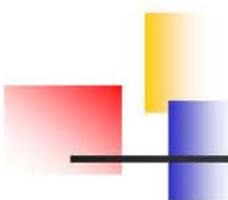
- Spectrum auctions have failed to serve the unserved
- Licensed-lite is only available today in 50 MHz of spectrum
- Licensed-lite must be made available in more spectrum bands, for example, in TV White Space spectrum and in new, un-auctioned spectrum
- Licensed-lite operators that meet accelerated build-out and service schedules should have their licenses ripen into an exclusive license (“spectrum homesteading”)
- 300 MHz of additional fixed wireless broadband spectrum is needed to provide sufficient, sustainable and high-quality fixed wireless broadband access for new high-bandwidth applications
- Spectrum auctions, if and when mandated, must be for small **affordable** coverage areas



# Middle Mile and Second Mile Bottlenecks (NBP PN #11)

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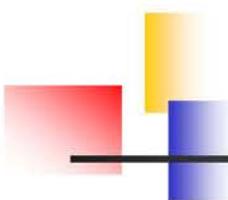
- Middle mile and second mile facilities connect rural broadband providers (including WISPs) to the Internet backbone
- Rural areas are largely unserved because middle mile and second mile costs are too high for the following reasons:
  - One carrier dominates and no competition exists for middle mile transport
  - Rural broadband providers lack the volume to attract discounted pricing
  - Tariff structures maintain high middle mile costs
  - Fiber providers refuse to provide competitive access
  - Sufficient wireless backhaul spectrum is not available in some areas for WISPs to self-provision



# Middle Mile and Second Mile Solutions (NBP PN #11)

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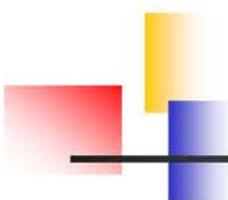
- Provide additional 3-10 GHz spectrum for point-point links
- Provide additional federal funding to build shared State and regional fiber facilities
- Provide better access to government-owned towers and facilities
- Specify the locations and conditions by which fiber providers must provide non-discriminatory access to fiber
- Re-examine the tariff structure to make rates in non-competitive markets the same as in competitive markets



# Access to Public Assets (Towers, Rooftops, Fiber Ducts) is Needed (NBP PN #7)

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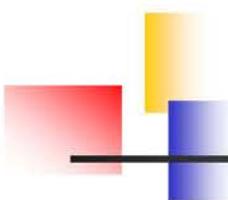
- Successfully deploying broadband fixed wireless requires affordable access to government towers, building rooftops and fiber ducts
- Expanding broadband to the unserved requires the government to facilitate access to government-owned assets and rights-of-way by:
  - Consolidating all its leasable assets under one agency, or
  - Establishing an accessible online national database identifying responsible agency
  - Updating the FCC's Antenna Survey Branch registry to identify all tower and rooftop assets
  - Extending pole attachment rights and non-discriminatory pricing to broadband providers



# Funding of Fixed Wireless Broadband (NBP PN #28)

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- Successful funding for FWB has two prerequisites:
  - Practical and affordable funding options, *and*
  - Adequate spectrum combined with practical spectrum policies
- Grants are the most successful existing funding option
- SBA (Small Business Administration) loans are effective
- Loans and loan guarantee conditions (including RUS and ARRA loans) are usually too burdensome for small businesses
- Customer-side incentives (vouchers) would be effective
- Loans and grants should be prioritized to companies with demonstrated broadband experience
- State funding of grants and loans can be effective alternative and supplemental funding mechanisms



# Universal Broadband Funding (NBP PN #19)

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- USF (Universal Service Funds) are misdirected and wasted today
- USF is no longer needed to promote voice telephony
- A better use is for Universal Broadband Funding