

SPX Communication Technology division, SPX Corporation

Before The
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Preparation for Update to the) GN Docket No. 11-16
Rural Broadband Report)

Comments
on Behalf of
SPX Communication Technology division
SPX Corporation

EXHIBIT B

Rural Wireless Connectivity: Design Concepts for
Ubiquitous Coverage in Low Density Population Areas
Additional Information for Meeting at FCC February 9, 2011



Rural Wireless Connectivity: Design Concepts for Ubiquitous Coverage in Low Density Population Areas

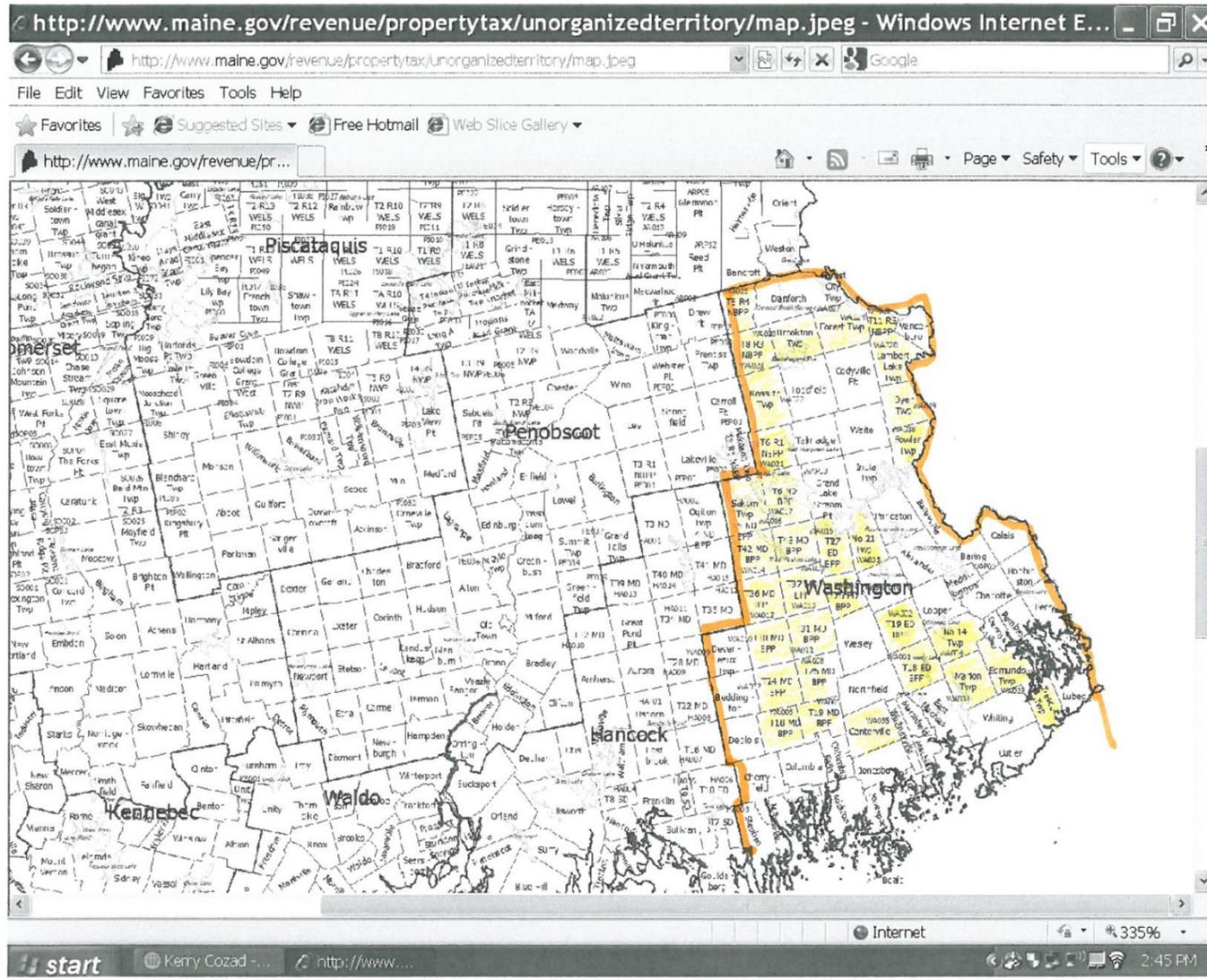
Additional Information for Meeting at FCC February 9, 2011

Kerry W. Cozad, Dielectric Communications/SPX Corporation

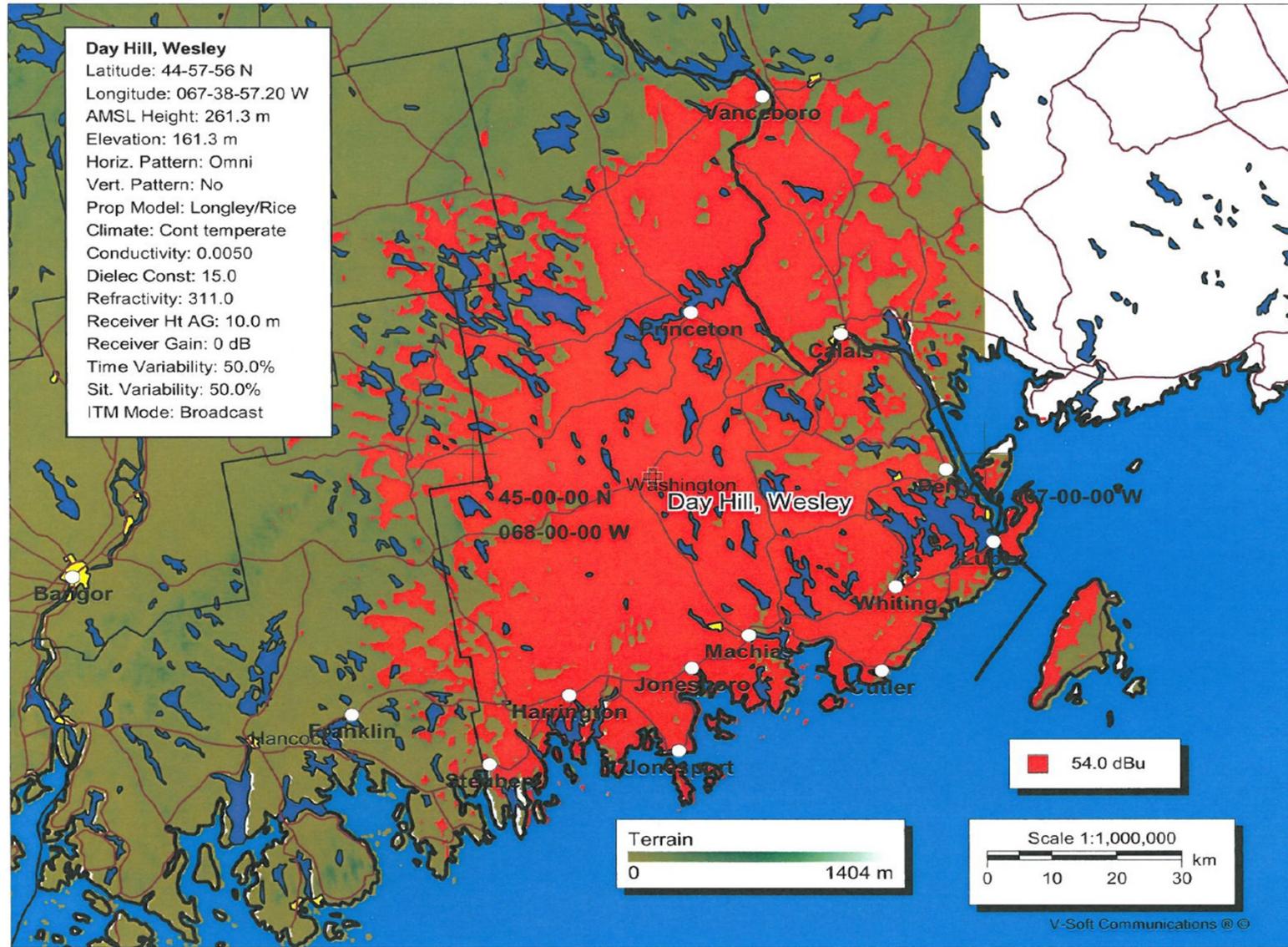
Washington County, ME Outline

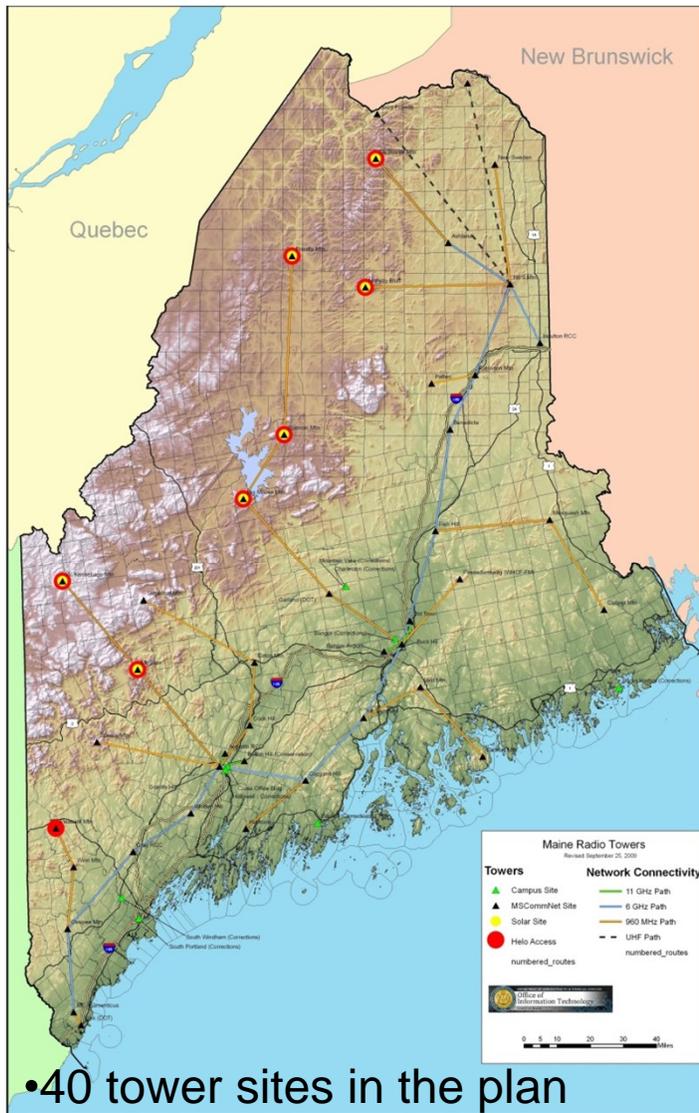


Washington County UTs



LOS Review





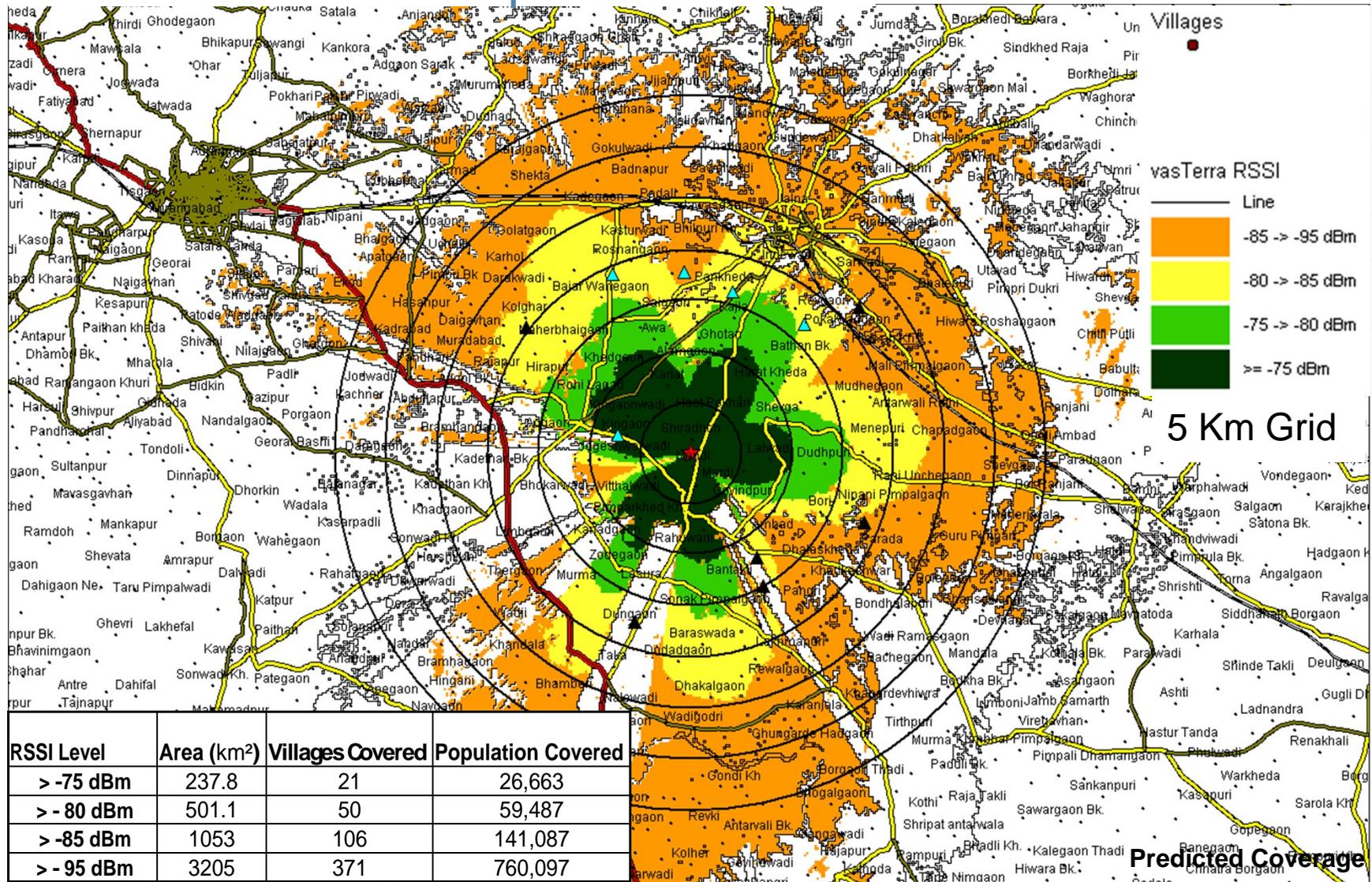
Alternative Economic Value Proposition

Using UHF Frequencies

- Also reduces number of sites (10X)
- Speeds deployment
- Reduces capital requirements
- Reduces operational costs
- Increases subscriber base
- Improves voice quality performance
- Frequency and protocol agnostic (GSM, CDMA, WiMAX, LTE, Land Mobile Radio, etc.)

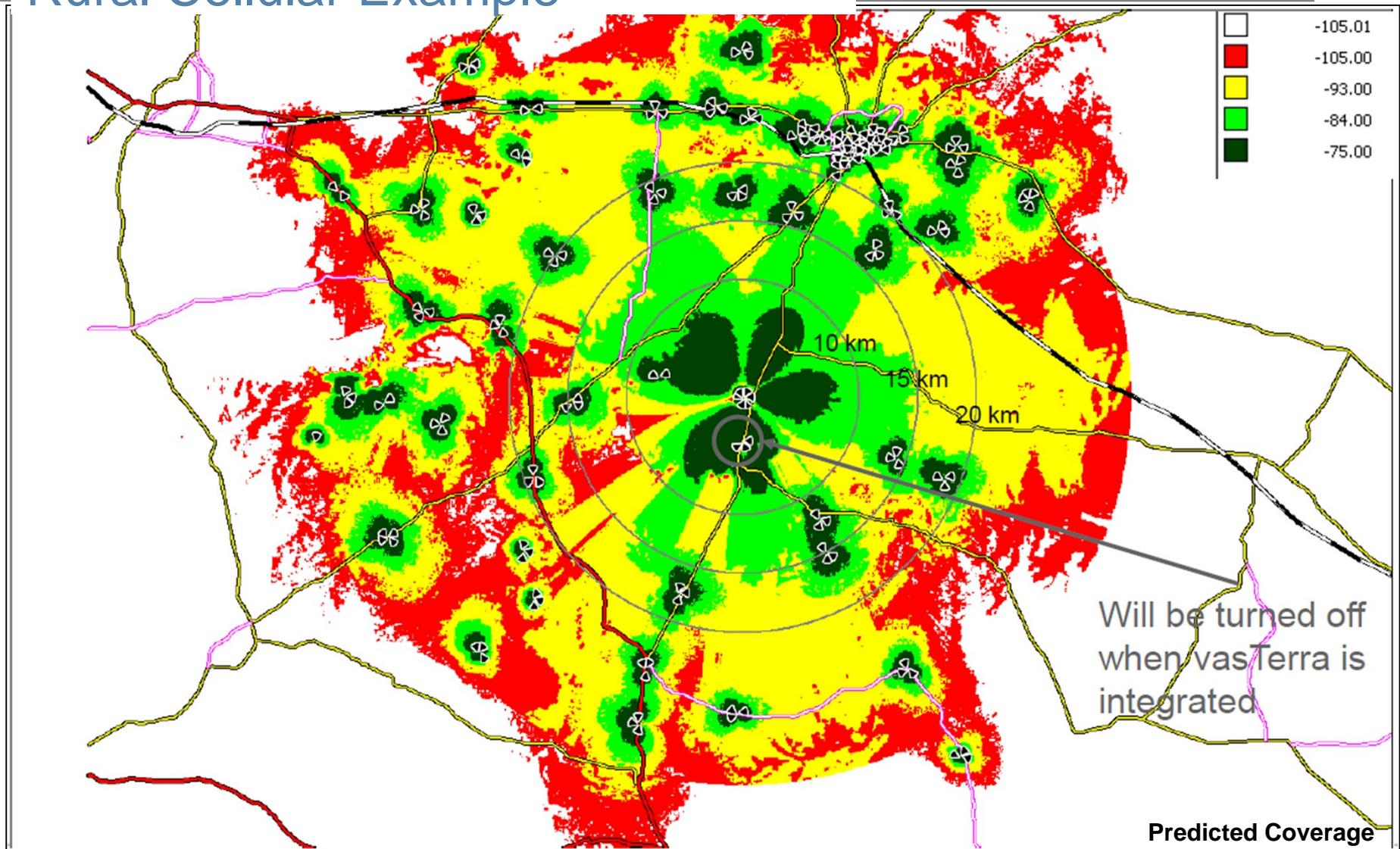
VHF Frequencies Used vs UHF to Extend Coverage and reduce # of Sites

vasTerra Coverage – 1800 MHz Rural Cellular Example



vasTerra Deployment for Custom Coverage Requirement

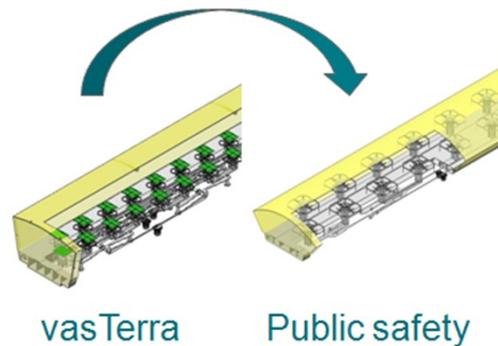
vasTerra Coverage – 1800 MHz Rural Cellular Example



Vasterra site coverage vs standard sites

- vasTerra

- A high efficiency antenna system that reduces the number of base stations required in a network by a factor of 10



- Circular polarization

- Reduces the spatial dependency of the receiver. Fills in the holes and gaps in coverage



- Combines broadcast and wireless engineering expertise



‘Life critical applications’ must provide 99.9% uptime

900 MHz Installed System



Modular Design for Assembly



Additional Benefits of vasTerra System



Key Differentiators

- 1** | Fewer dropped calls & faster data rates
- 2** | Simplified network structure
- 3** | Improved voice quality & in-building penetration
- 4** | Increased handset battery life means more billable usage
- 5** | Cumulative effect of improved customer experience decreasing churn
- 6** | Improves utility of the service by enabling continuous coverage (fields and roads in between villages)
- 7** | Faster deployments give competitive advantage in customer acquisition and revenue capture
- 8** | Increased tower capacity gives opportunity for increased revenues and improved ROIC



Benefits will increase revenues for wireless operators

