



DATE: March 5, 2014

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TO: Federal Communications Commission (FCC) Staff

SUBJECT: Expression of Interest – Rural Experiment
Docket No. 10-90

Background and Nature of Submitting Entity

Garrett County Community Action Committee (GCCAC) is a private nonprofit corporation organized under section 501(c)(3) of the IRS code. It has been operating in Garrett County, Maryland since 1965 and has been recognized by state and national entities for its work in community development and rural programming.

GCCAC works with partners to build a stronger community and to provide services that improve the quality of life for residents in Garrett County. Its activities and projects focus on strategies that assist low-income persons to be more self-sufficient. The agency provides a variety of services for individuals, families and older adults—from health and nutrition programs to education and transportation services. It also owns a number of housing developments and community facilities located throughout Garrett County.

Like most of rural America and the Appalachian region, Garrett County, Maryland faces a challenging broadband ecosystem in which private sector investment has largely overlooked many residents and businesses. This is especially true for the low-income and often geographically isolated residents whom GCCAC serves.

GCCAC submits this expression of interest in partnership with the government of Garrett County, Maryland, which has actively sought to improve the broadband ecosystem through a range of strategies

intended to expand broadband availability and use, and to make the County a more attractive economic prospect for private sector broadband investment.

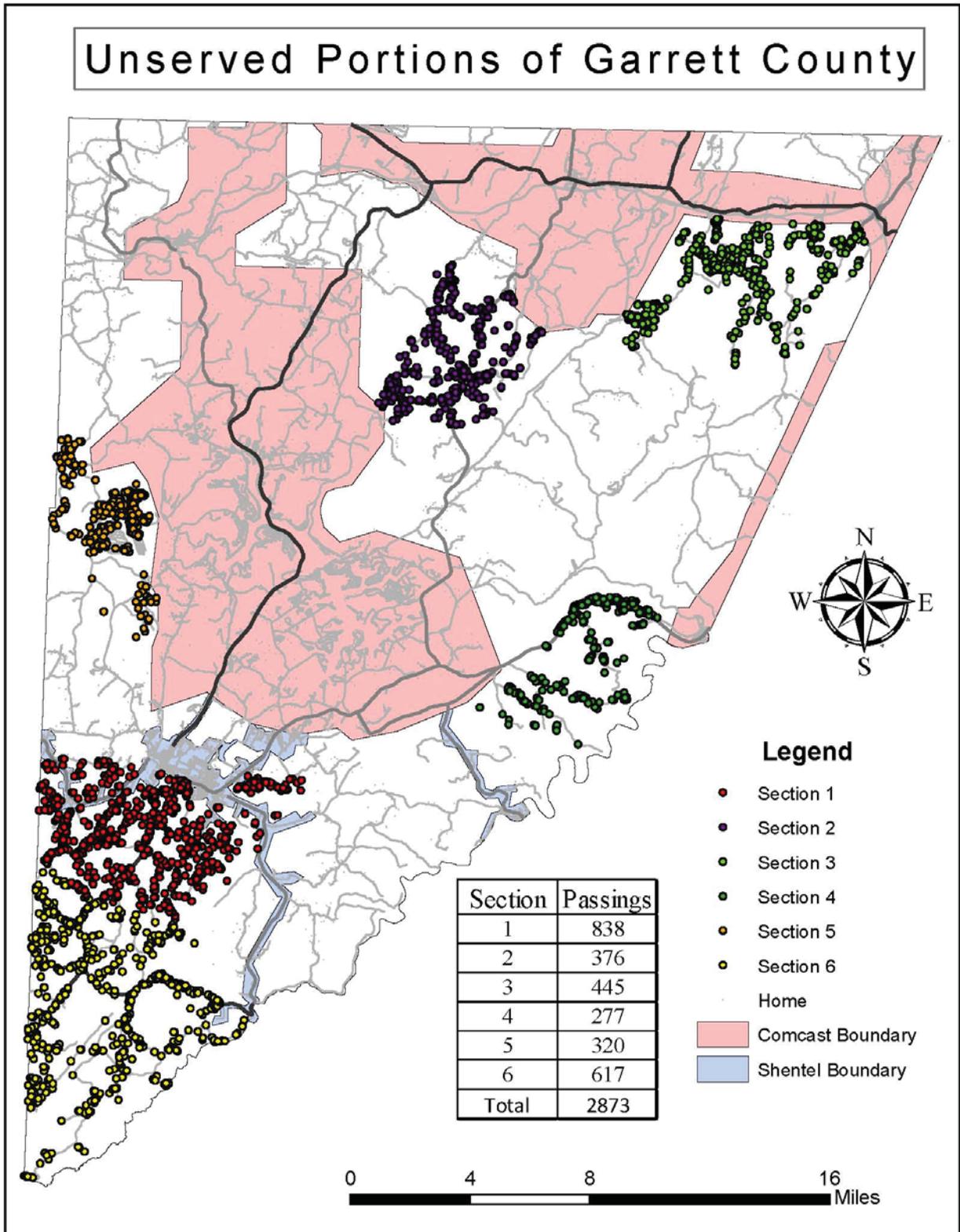
The technical background for this EOI has been derived from a feasibility study, network design, and related planning tasks conducted by the government of Garrett County in support of its strategic broadband planning. Capitalizing on the state’s BTOP-funded construction of 50 miles of open access middle-mile fiber and connections to community anchor institutions, the County commissioned a feasibility study and design for a last-mile TV White Spaces (TVWS) network to connect unserved communities. The County then allocated funds (supplemented by grant funding from the Appalachian Regional Commission) to pilot the TVWS network and issued a request for information to identify potential private partners to build and operate the network.

Geographic Territory and Anchor Institutions

GCCAC’s proposed experiment would provide coverage in Garrett County, Maryland—which is included in its entirety in the Commission’s list of eligible areas. Specifically, we propose to provide coverage to residences and small businesses in 96 Census blocks—listed in detail in Attachment 1, and identified on the map below as “Section 2” and “Section 3.”

Section 2 includes 376 passings; Section 3 includes 445 passings. We note, too, that the proposed experiment would provide broadband service to the off-campus residences of many Garrett College students; these students have access to high-speed broadband when they are on campus, but most lack those robust Internet connections at home—meaning that they are missing out on potential educational benefits.

Figure 1: Proposed Service Area (Sections 2 and 3)



Proposed Technology

GCCAC proposes to deploy TV White Spaces (TVWS) technology in its experiment.

TVWS technology offers a balance of cost-effectiveness and capabilities for the candidate service area. Based on our network design, users will get typical download speeds greater than 4 Mbps and typical upload speeds greater than 1 Mbps.

Coverage of Section 2 and Section 3 can be obtained through four tower sites with the appropriate number of base station radios and sector antennas to deliver the needed capacity:

Figure 2: TVWS Coverage, Section 2, Tower Site 1

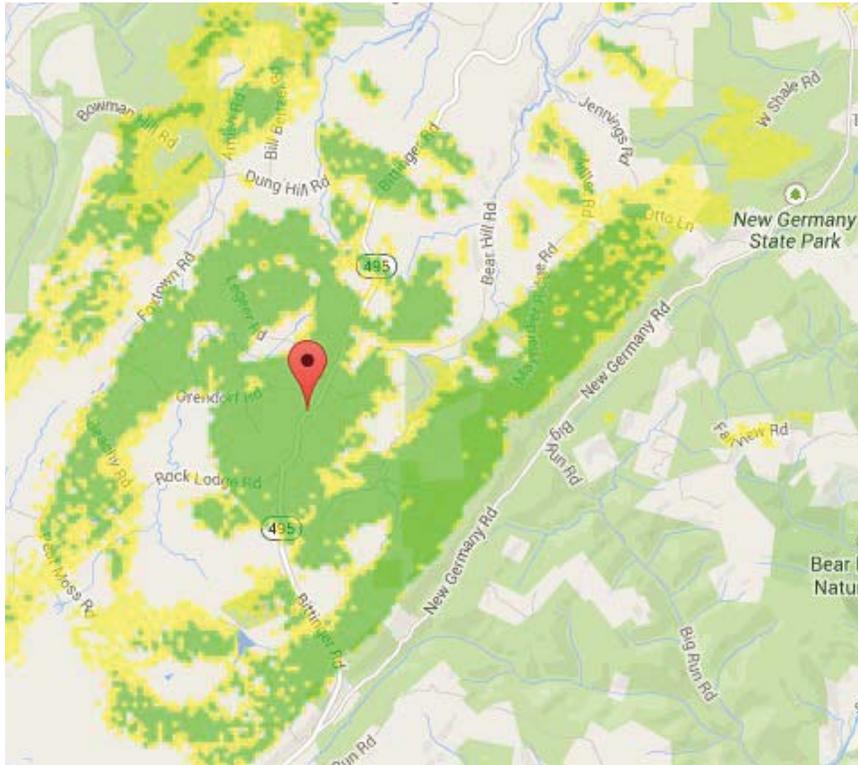


Figure 3: TVWS Coverage, Section 2, Tower Site 2

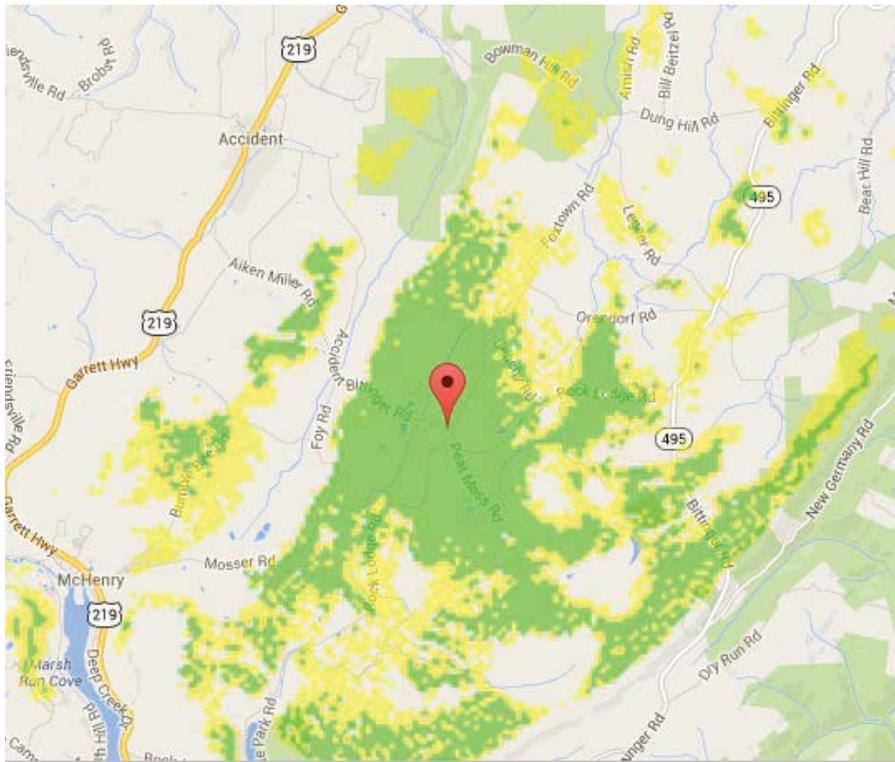


Figure 4: TVWS Coverage, Section 3, Tower Site 1

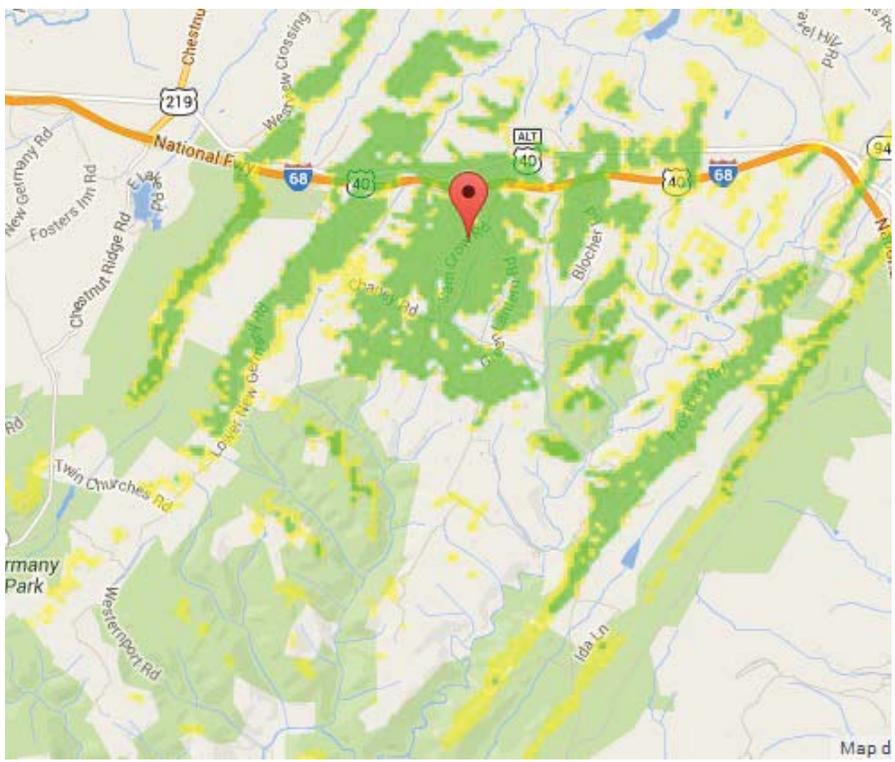
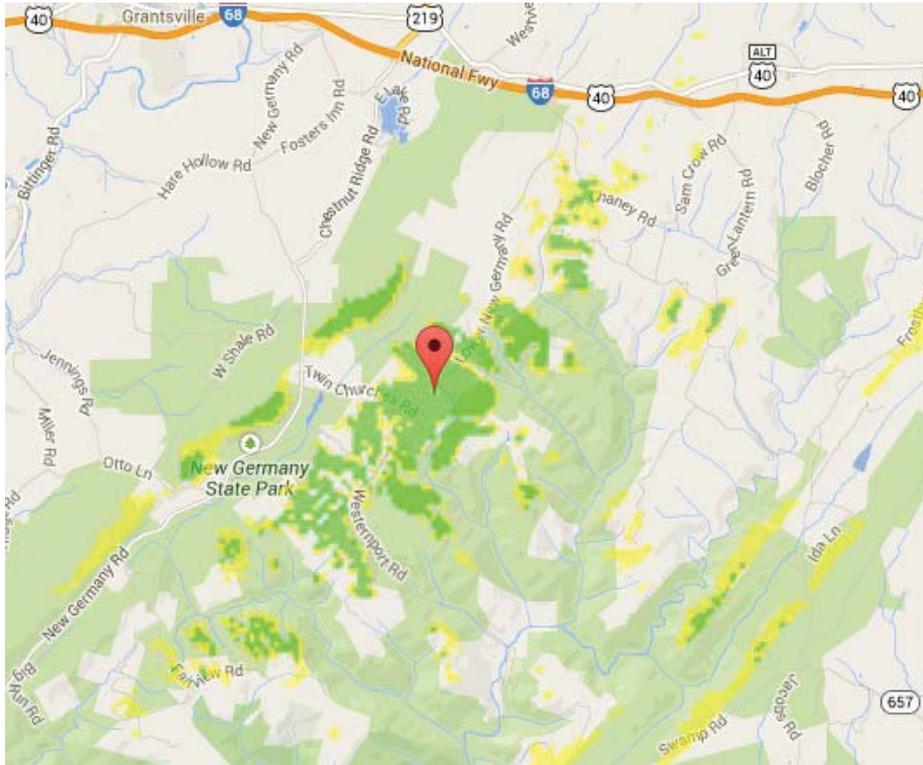


Figure 5: TVWS Coverage, Section 3, Tower Site 2



State and Local Government Support for Project

GCCAC has the committed support of the government of Garrett County, Maryland, which will provide expedited permitting, access to rights-of-way, and other reasonable support throughout the implementation and operational phases of this experiment. In addition, the County has network-related memoranda of understanding (MOU) with the State of Maryland Department of Information Technology (DoIT).

Existing Providers

There currently are no existing wireline or wireless broadband providers in the target service areas who offer services of 3 mbps down/768 kbps up.

Project Timeline

Working with the County government, GCCAC is ready to begin network design and deployment. Preliminary engineering and some fieldwork is already underway. TVWS technology can be deployed within approximately six months after receiving funding.

Scalability

Our proposed experiment is scalable. Scalability in TVWS can be provided by adding sectors to the base station locations and, in the coming years, by upgrading to next-generations TVWS technology.

Total Investment

A TVWS experiment would cost roughly \$500,000 for Section 2 and \$560,000 for Section 3—or roughly \$1.1 million for all 96 proposed Census blocks (assuming 40 percent penetration and associated customer premises equipment and installation costs).

Table 1: TVWS Cost Estimate, Section 2

| Description | Unit Price | Quantity | Total |
|--|------------|----------|------------------|
| 100-foot guyed lightweight tower structure | \$28,000 | 2 | \$56,000 |
| Tower Installation | \$9,800 | 2 | \$19,600 |
| Switching | \$2,800 | 2 | \$5,600 |
| Backup power/site preparation | \$28,000 | 2 | \$56,000 |
| Base station (per 20 clients) | \$6,265 | 8 | \$50,120 |
| Base station site installation | \$3,500 | 8 | \$28,000 |
| 5.8 GHz Microwave Backhaul between Base Station and Fiber Hub at County Landfill | \$10,500 | 4 | \$42,000 |
| Subtotal | | | \$257,320 |
| Engineering/design | | | \$38,500 |
| <i>TOTAL</i> | | | <i>\$295,820</i> |

| | | | |
|---|---------|-----|------------------|
| Customer Premises Equipment (CPE) terminal w/integrated antenna | \$1,275 | 150 | \$191,250 |
| Installation | \$140 | 150 | \$21,000 |
| <i>TOTAL</i> | | | <i>\$212,250</i> |

Table 2: TVWS Cost Estimate, Section 3

| Description | Unit Price | Quantity | Total |
|--|------------|----------|------------------|
| 100-foot guyed lightweight tower structure | \$28,000 | 2 | \$56,000 |
| Tower Installation | \$9,800 | 2 | \$19,600 |
| Switching | \$2,800 | 2 | \$5,600 |
| Backup power/site preparation | \$28,000 | 2 | \$56,000 |
| Base station (per 20 clients) | \$6,265 | 9 | \$56,340 |
| Base station site installation | \$3,500 | 9 | \$31,500 |
| 5.8 GHz Microwave Backhaul between Base Station and Fiber Hub at County Landfill | \$10,500 | 4 | \$42,000 |
| Subtotal | | | \$267,040 |
| Engineering/design | | | \$40,000 |
| TOTAL | | | \$307,040 |

| | | | |
|---|---------|-----|------------------|
| Customer Premises Equipment (CPE) terminal w/integrated antenna | \$1,275 | 178 | \$226,950 |
| Installation | \$140 | 178 | \$24,920 |
| TOTAL | | | \$251,870 |

Attachment 1: Census Blocks to Be Covered

| # | Census Block |
|----|-----------------|
| 1 | 240230003002033 |
| 2 | 240230002002099 |
| 3 | 240230002002140 |
| 4 | 240230002002146 |
| 5 | 240230002002154 |
| 6 | 240230002002138 |
| 7 | 240230003002069 |
| 8 | 240230002002053 |
| 9 | 240230002002139 |
| 10 | 240230003002109 |
| 11 | 240230003002032 |
| 12 | 240230003002087 |
| 13 | 240230003002102 |
| 14 | 240230002002137 |
| 15 | 240230002002063 |
| 16 | 240230002002100 |
| 17 | 240230003002082 |
| 18 | 240230002002107 |
| 19 | 240230002002150 |
| 20 | 240230002002101 |
| 21 | 240230002002133 |
| 22 | 240230003002027 |
| 23 | 240230003002010 |
| 24 | 240230005003002 |
| 25 | 240230003002059 |
| 26 | 240230002002090 |
| 27 | 240230003002074 |
| 28 | 240230002002127 |
| 29 | 240230002002153 |
| 30 | 240230002002151 |
| 31 | 240230002002135 |
| 32 | 240230003002023 |
| 33 | 240230005003011 |
| 34 | 240230003002056 |
| 35 | 240230003002116 |
| 36 | 240230003002060 |

| | |
|----|-----------------|
| 37 | 240230003002114 |
| 38 | 240230002002126 |
| 39 | 240230003002110 |
| 40 | 240230003002007 |
| 41 | 240230002002105 |
| 42 | 240230002002141 |
| 43 | 240230003002085 |
| 44 | 240230003002090 |
| 45 | 240230003002067 |
| 46 | 240230003002115 |
| 47 | 240230002002125 |
| 48 | 240230003002022 |
| 49 | 240230003002001 |
| 50 | 240230002002094 |
| 51 | 240230002002106 |
| 52 | 240230003002105 |
| 53 | 240230003002016 |
| 54 | 240230003002052 |
| 55 | 240230003002108 |
| 56 | 240230003002028 |
| 57 | 240230002002132 |
| 58 | 240230002002038 |
| 59 | 240230002002156 |
| 60 | 240230003002111 |
| 61 | 240230003002025 |
| 62 | 240230003002117 |
| 63 | 240230003002017 |
| 64 | 240230002002147 |
| 65 | 240230002002062 |
| 66 | 240230005003001 |
| 67 | 240230003002076 |
| 68 | 240230005003013 |
| 69 | 240230002002161 |
| 70 | 240230002002149 |
| 71 | 240230002002131 |
| 72 | 240230005003003 |
| 73 | 240230002002092 |
| 74 | 240230003002030 |
| 75 | 240230003002073 |

| | |
|----|-----------------|
| 76 | 240230002002057 |
| 77 | 240230003002066 |
| 78 | 240230002002159 |
| 79 | 240230003002064 |
| 80 | 240230002002095 |
| 81 | 240230003002107 |
| 82 | 240230002002143 |
| 83 | 240230003002031 |
| 84 | 240230003002081 |
| 85 | 240230005003000 |
| 86 | 240230003002062 |
| 87 | 240230002002097 |
| 88 | 240230002002145 |
| 89 | 240230003002009 |
| 90 | 240230003002004 |
| 91 | 240230003002061 |
| 92 | 240230002002155 |
| 93 | 240230002002134 |
| 94 | 240230003002011 |
| 95 | 240230002002142 |
| 96 | 240230002002102 |