Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Establishing the Digital Opportunity	)	WC Docket No. 19-195
Data Collection	)	
	)	
Modernizing the FCC	)	WC Docket No. 11-10
Form 477 Data Program	)	
	)	

COMMENTS OF PRECISION AG CONNECTIVITY ACT STAKEHOLDER ALLIANCE

The Precision Ag Connectivity Act Stakeholder Alliance ("PAgCASA"™) appreciates the opportunity to comment in response to the Commission's Third Further Notice of Proposed Rulemaking ("Third Notice"), adopted July 16, 2020, for Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program.[1]

INTRODUCTION

On behalf of PAgCASA™, Garland T. McCoy and Peter F. Harter are submitting these comments to place into the public record the Accurate Broadband NOW: "The Map to Closing the Gap" proposal. This proposal has been presented to the FCC's Precision Agriculture & Connectivity Task Force (created by the 2018 Farm Bill), the American Broadband Initiative, the USDA, the NTIA, the FCC, Congress, industry, academia and stakeholders at the state, county and local levels of government. Biographies for McCoy and Harter are available at the end of this document as Attachment A.

McCoy and Harter are personally committed to helping the FCC and others address the interrelated problems of accurate broadband maps and the lack of knowledge of what capacity is available where and what it is being used for. We believe that fears of overbuilding can be resolved and that innovation and investment can be unleashed. Also, we believe that there can be a greater return on investment of the taxpayer dollars being spent on broadband now and in the next few years. This ROI can be a showcase in advance of the next Farm Bill in 2022.

McCoy and Harter sincerely appreciate the dynamics of 2020 — pandemic, recession, election year — and see it as proof of the timeliness of the Accurate Broadband NOW: "The Map to Closing the Gap" proposal: a citizen and sensor survey solution to mapping. We have been discussing this concept for 18 months now and to date it has been widely and well received;

---

[1] https://docs.fcc.gov/public/attachments/FCC-20-94A1.pdf; https://www.federalregister.gov/documents/2020/08/18/2020-16356/establishing-the-digital-opportunity-data-collection-modernizing-the-fcc-form-477-data-program

we have yet to come across anyone saying that this approach won't work or that it has been at-tempted before. We anticipate that this public comment to the FCC may expand our understand-ing of constraints and opportunities.

PROPOSAL

Accurate Broadband NOW
"The Map to Closing the Gap"

The time is now for launching "A People Centered, Future Focused, Sensor & Broadband Mapping Campaign" built on the language of the bi-partisan Broadband DATA Act (P.L. No. 116-130). It became law on March 23, 2020 and requires accurate broadband mapping by way of crowdsourcing, common datasets that are standards based, harmonized reporting requirements (*i.e.,* data interoperability & standardized data gathering and posting) for fixed, fixed wireless, mobile and other networks running on both licensed and unlicensed bands and covering data vol-ume and network speeds associated with the sensors and sensor networks enabling the new field of Precision Ag.

Why Now?

FCC Acknowledges Multi-Year Time Frame for New Broadband Mapping Methodology:

The FCC has publicly acknowledged it will take until 2023 to do the accurate mapping required by the Broadband DATA Act, pending Congressional approval of new funding the FCC has requested to create a new team and new IT to determine how to do the accurate mapping. Our initiative is designed to be in the field in months, not years. Our primary focus is on establishing the crowdsourcing component critically important to the challenge process (*i.e.,* ground-truthing) required by the Broadband DATA Act. Our work also enables compliance with other requirements: a single online mechanism site built on an open source platform committed to utilizing only interoperable data standards (*i.e.,* common data sets that "harmonize reporting requirements"); data transparency; and uniform methodology standards pertaining to the collection and timely posting of all data which would be made available to the public for their use to ensure ongoing "user-friendly challenge" of the data.

Immediate Need for Accurate Broadband Mapping Data to Inform Capital Expenditures:

In the next six to eight months rural/Ag communities will see significant investments in the buildout of both fixed broadband infrastructure (landline and wireless) and the provisioning of wireless 5G broadband networks. In the coming months, up to 80% of the already appropriated $16 billion for broadband infrastructure construction intended to bring broadband access to those who currently are unserved will be spent. Additionally, the FCC will be conducting its 5G spectrum auction designed to ensure an abundance of locally provisioned spectrum well suited to provide wireless broadband access. The reason to launch an aggressive crowdsourced data collection campaign now is that decisions will be made in the coming months as to where to invest all of the significant capital resources outlined above based on the current

and inaccurate broadband mapping data. Hence the immediate opportunity for our crowdsourcing initiative!

How Our People Centered Data Collection Campaign Will Be Organized

A 501(c)(3) non-profit, tax exempt educational foundation will anchor our program. Partnerships will be actively pursued with both public and private stakeholder communities (*e.g.,* FCC, NTIA, USDA, USPS, State, Local and Tribal governments, Academic Institutions, and a broadly inclusive spectrum of companies). Specific to the Broadband DATA Act legislative implementations, we would continue our briefings with FCC's senior staff, begun in January 2019 following the signing into law of the Agriculture Improvement Act (Public Law No. 115-334; December 20, 2018), a/k/a the 2018 Farm Bill (which contained the Precision Ag Connectivity Act), and focus as a "collaboration" partner on helping fashion and field test standardized principles governing crowdsourcing initiatives.

Components of this initiative will be off-the-shelf and built on the successful data gathering work done by government agencies, academic institutions and by private sector and citizen stakeholders. Among the many described in our USDA and FCC "Precision Ag Connectivity Task Force Mapping and Analyzing Connectivity on Ag Lands Working Group" presentations attached and positively referenced in public meetings, we would want to highlight the following:

- The just completed statewide broadband mapping work done in Georgia aided by re-sources from the University of Georgia's Center for Geospatial Research
- The resources available, for example, at NTIA, USDA, BLM, FCC, Penn State, Minne-sota Rural Broadband Coalition, the North Carolina Farm Bureau
- Polk County, Oregon Broadband Data Gathering Survey launched by the Sheriff on Face-book that was hugely successful (e.g., 32% response rate from citizens)
- In-kind support from private sector companies like Google and their Google Imaging work, GEO (Geospatial Engineering and Optimization), Microsoft and their suite of Pre-cision Ag products driven by their White Spaces spectrum network

Our "living" Broadband Data site would display data collected by trained volunteers using the same devices (unlocked Android Smart Phones and MLab/Ookla apps as examples), and be uniform regarding the types of data collected including the times data is collected throughout the day, location, data packet delivery speeds, etc.

Of particular importance will be the "living" and "future" focus of our campaign as we will be collecting data from the sensors and sensor networks emerging to facilitate Precision Ag. We feel strongly about the multiple benefits derived from Precision Ag: to the Ag business community at every point in a commodity's life cycle, to consumers, to our environment, as well as providing a new entrant in the rural marketplace for robust broadband demand. Accurate maps are an essential ingredient to build profitable, competitive and sustainable broadband services.

We will be embracing an "All-In" approach to data gathering which would include legacy networks and data coming from such areas as Weather Station sensors, Seismic Monitoring sensors, Air and Water Quality sensors, Forest Management sensors, etc., to ensure the most

granular maps available. Further we would embrace the FCC's BDAC (Broadband Deployment Advisory Committee) principles of collaboration and flexibility in our data gathering campaign.

Volunteers will be recruited from organizations such as: baseball, softball, veterans, census workers, Future Farmers of America, 4-H clubs, recently unemployed restaurant, hotel services, office building, and other dislocated service workers. We would look to utilize USDA's 2,400 Farm Service Agency offices, American Farm Bureau offices, the vast networks of people, trucks and infrastructure of the local Rural Electric Cooperatives, and other rural/Ag related organizations and their facilities as places for meetings/training, the distribution of devices, support equipment, data collection, community awareness and public input.

Depending on funding, we envision providing wages, certified data skills (think of community college credits), and devices that can help reverse the disenfranchisement of so many rural and urban people due to a lack of broadband now exacerbated by the pandemic. We note that working from home (WFH), tele-medicine, schooling from home, etc., actually increases the digital divide as so many people have service jobs that cannot be done remotely and so many people are even more economically challenged and are now even less able to afford broadband (even if it is available), devices or education to obtain the necessary skills to be functionally capable in an increasingly online environment.

How We Will Get the Job Done with Our Partners

Building on the success of related activities and initiatives we can execute on several local pilots to test and refine the training, logistics and data collections from citizens and sensors and then publish a toolkit that others can adopt and deploy in their communities. Our partners serve as financial support but more importantly are the distribution networks for the awareness and for the toolkits.

Why We Know We Can Launch Quickly

Lots of people are sitting around with nothing to do and nowhere to go and our nation is certainly at a moment where people want to do something positive and that fixes what is broken and what divides communities. By tapping into this energy, we see our citizen-based approach as doing now what the Civilian Conservation Corps did to put thousands of Americans to work during the Great Depression and on projects with many enduring benefits.

To Ensure Success, Let the Past Be Your Guide to the Future

Rural Electrification & Telephone Service: Two Successful Networks Built on STANDARDS to Ensure Ubiquitous Public Safety and Collective Public Good

While the FCC wrestles with implementing the Broadband DATA Act, local and statewide campaigns will be launched. As we have consistently pointed out in our presentations, standards are important to ensuring that at the end of the day the whole is greater than the sum of the parts and that all the data is transparent (not locked behind proprietary software) and standardized in the methodology of its collection and presentation. A/C Standards ensured that

our National Grid (electricity network) was reliable and resilient in its service to every citizen. Likewise, our nationwide telephone network standardized switching and signaling protocols and ensured a lifeline dial tone to every citizen.

A patchwork of broadband mapping campaigns built on proprietary software and using different data gathering devices and methodology will not get us where we all know we need to be and will, in point of fact, violate the "harmonize reporting requirements" of the Broadband DATA Act.

Our hope is that there are visionary companies, coalitions, public/private partnerships and alike that will see both the soundness in what we have presented and the need for immediate action to ensure real and accurate broadband is available to every person in America no matter where they live and work. This is the "People Centered, Future Focused Sensor & Broadband Map to Closing the Gap".

<u>CONCLUSION</u>

The Commission should take immediate action to ensure that real and accurate broadband is available to every person in America, no matter where they live and work, and should consider PAgCASA as a "collaboration" partner on helping fashion and field test standardized principles governing crowdsourcing initiatives for broadband mapping data collection.

Respectfully submitted,

By: /s/ Garland T McCoy

Glenn B. Manishin
ParadigmShift Law LLP
6735 Breezy Dr., Suite 101
Warrenton, VA 20187-2716
202.256.4600

Of Counsel

Dated: September 8, 2020

Garland T. McCoy
 Executive Director
Peter F. Harter
Precision Ag Connectivity Act
 Stakeholder Alliance (PAgCASA)
3381 North Buchanan Street
Arlington, VA 22207
202.906.0654

Biographies for Garland McCoy and Peter Harter of the Precision Ag Connectivity Act
Stakeholder Alliance (PAgCASA)

Garland T. McCoy currently serves as President, Technology Education Institute and Co-
Founder and Executive Director of PAgCASA (Precision Ag Connectivity Act Stakeholder
Alliance). He has over three decades of communications network experience spanning the
transition from the Telco's heavily regulated analog 'Nortel" signal switching system to the
digital packet Internet routing/soft switching platform. Highlights of his activities during this
time would include; being a member of the team that brought the first undersea fiber cable to
East Africa, organizing and hosting unique workshops at the annual UN Internet Governance
Forum (IGF) for 12 years and contributing to the UN IGF's "Policy Options for Connecting the
Next Billion" intercessional work, he is a member of Department of State's Advisory Committee
on International Communications and Information Policy (ACICIP), he participated in
workshops and proceedings as part of the FCC's E-Rate Modernization Program for Schools and
Libraries filing Ex Parte Presentations and Comments under the FCC's NOPR specifically
addressing the FCC's prohibition on non-traditional voice telecommunication service companies
participating in broadband buying consortia preventing innovative public/private partnerships
which would allow dual use of private parties leased or owned broadband fiber assets such that
private entities could donation access to schools and libraries in proximity to their fiber cable, he
is also "Father" of BITAG (Broadband Internet Technical Advisory Group), chief organizer of
15 Aspen Summit conferences focusing on Internet policy, the sponsor and organizer of
educational tours for Congressional Staff, Administration Officials, Embassy Officials, etc. for
tours of Visa's NOC (Network Operations Center), Equinix's Global Peering Center, Verizon's
NOC and other data centers, and in recent years he has studied licensed and unlicensed spectrum
technologies and their applications in such areas as managing the sensor data traffic needed for
precision agriculture. As Precision Ag needs robust broadband access to function he has become
involved in broadband mapping methodology with standards, crowdsourcing, ground-truthing,
sensor data, and open source platforms being key elements of his focus.

Peter Farrington Harter bridges the ecosystems of technology, policy, business, law, politics, and
entrepreneurship. As the Founder of The Farrington Group, a privately held consulting firm,
Peter provides advice to management, boards and investors on political, legislative, and
regulatory risk. Areas of focus are patents, cybersecurity, data, and precision agriculture. Peter
co-founded Markup.Law to modernize the workflows of lawmaking. Markup harnesses AI,
machine learning, natural language processing and other data techniques to automate the
analysis, comparison, and collaborative composition of laws and regulations. Peter is a board
member of the Open Source Election Technology (OSET) Institute, a Palo Alto, California based
non-profit working with election officials globally on the specifications and code for a new
election administration and voting technology framework and to develop solutions. Peter's career
began in 1993 as an Internet lawyer in his home town of Bethlehem, Pennsylvania where he
helped to build a community Internet service provider. He broadened in Silicon Valley as head
of global government affairs for Netscape and EMusic.com and in business development and
sales for Securify (McAfee), investors, and startups. While at Netscape testified and provided

comments on the FCC's VoIP issues proceeding known as the ACTA Petition. He deepened in Washington, DC, lobbying on patent reform for Intellectual Ventures. Peter is a graduate of Lehigh University and Villanova University School of Law. Peter's wife Shelby is a grape grower and winemaker in the Eola-Amity AVA of the Willamette Valley of Oregon. Peter is also a co-founder of PAgCASA (Precision Ag Connectivity Act Stakeholder Alliance). As a farmer living in a rural community Peter daily experiences the challenges posed by a lack of accurate broadband mapping. He conducts his business via a connection to OnlineNW, a local WISP, and relies on Verizon Wireless and AT&T Wireless for backup connectivity. There is no wireline, cable or competing WISP option.