

*Comment on Docket Number: RUS-20-TELECOM-0022; RIN No. 0572-AC50; Special Authority To Enable Funding of Broadband and Smart Utility Facilities Across Select Rural Development Programs: A Rule by the Rural Utilities Service, the Rural Housing Service, the Rural Business-Cooperative Service, and the Farm Service Agency on 09/15/2020).*

*Note: Because your Rule requires participants to provide a service area map and because this submitted information will be publicly provided in a map database then the map information should be accurate. We have a solution that can help.*

## **AmAgNET**

*A multi-year project of PAgCASA  
(Precision Ag Connectivity Act Stakeholder Alliance)  
November 16, 2020*

### **State of Play**

A bi-partisan consensus of law makers spurred on by their disappointed rural/Ag constituents drafted and passed the Broadband DATA Act in March of this year. This new law directs the FCC's ongoing efforts to update and reform its Form 477 Data Program or "Broadband Mapping Methodology" which has in recent years come under heavy criticism for its inaccurate and incomplete data. Accurate broadband maps are critically important to inform wise infrastructure investments, while serving as a guard against overbuilding. By the FCC's own timeline, they are not expected to be in the field with new Broadband Mapping Methodology until 2023 at the earliest. After reviewing the comments and reply comments recently filed with the FCC pertaining to the FCC's implementation of the Broadband DATA Act's language into a new mapping regime, it seems clear that the 2023 date will likely slip to 2025 considering the realities of the FCC rulemaking schedule and potential litigation. Allowing the Broadband Mapping field to lay fallow for the next five years will create significant problems in the deployment of much needed broadband access in rural and Ag America.

### **Project Components**

#### **Ground Game**

*(Built in compliance with the Broadband DATA Act)*

In light of the expected timeline for FCC's mapping methodology, it is imperative that efforts begin now to lay the foundation for the Broadband DATA Act's call for crowdsourcing to improve data and map accuracy (Section 804). As such, we will design, build and field test a standardized "ground truthing" campaign to capture and validate granular data on spectrum and landline locational availability, signal strength and speeds to include legacy and Precision

Ag deployed networked sensors/devices. Data gathering methodology will be built on the Broadband DATA Act principles of: data transparency and interoperability (open source) with standardized equipment/devices, software, and training for the army of citizens who understand that broadband access is a quality of life or “life line” necessity on par with electricity and traditional telephone service.

Our objective is to field test a standardized “turn-key” tool kit and network with Ag and rural groups with deep grassroots membership and facilities to recruit volunteers who understand how critically important broadband access is for their family, business and community.

Benefits of our real-time bottom-up granular broadband mapping methodology are substantial and include, but are not limited to: reduced overbuilding, better public and private sector investment decisions, better use of existing infrastructure assets and ensuring real factual knowledge that the dollars for broadband access goes to where it is needed the most. Our campaign will capture licensed and unlicensed spectrum used at every frequency and partner with recognized and respected third party platforms for speed testing and latency of wire/fiber and fixed wireless access delivery service.

To gather specific spectrum use data we anticipate using monitoring, detection and analyzing devices from ThinkRF (<https://thinkrf.com/>) or from similar companies and unlocked Android Smart Phones. This will be important in capturing unlicensed spectrum use in areas outside the traditional Wi-Fi frequencies used by Bluetooth, Zigbee and others which will be captured on the unlocked Android phone. We would be capturing LoRaWAN, White Spaces, and others including new entrants using the 6GHz unlicensed spectrum recently repurposed from that used by the Electric Utilities.

## **What Can be Accomplished Now?**

In light of the bi-partisan and broad support of the Broadband DATA Act and the need for accurate broadband data, there is already general agreement around a common set of principles. These include a “ground truthing” crowdsourced bottom up real-time granular broadband mapping initiative built on a standards-based mapping methodology anchored on open sourced (*not proprietary*) software with data transparency and interoperability. Likewise, a data gathering campaign should not only comply with the Broadband DATA Act, but also deliver the trust needed to drive wise and informed public/private broadband infrastructure investment and deployment.

This campaign can launch within the next year and be fully operational and delivering great value during the next 3-5 years while the FCC works through their rulemaking process, hires staff and fields their new Broadband Mapping program. This important component, specifically called for in the Broadband DATA Act, will have been field tested under the supervision of a multi-stakeholder alliance and be ready to be integrated into the FCC’s new Broadband Mapping program. Our campaign will actively enlist the partnership of all interested

stakeholders in both the public and private sector (FCC, NTIA, USDA, Academia, Carriers, Device manufacturers, Ag-related non-profits, Public Policy and Think Tanks, etc.).

## **Taking on the “Challenge” with a proven multi-stakeholder model**

Another important component of any Broadband Mapping initiative is the “Challenge” platform which, if constructed properly, will provide both ease of use, transparency, and the critical element of *trust* in the entire campaign. The model for our “Challenge” component will be the successful multi-stakeholder entity BITAG (Broadband Internet Technical Advisory Group) <https://www.bitag.org/index.php> designed by this author to address the problems associated with the early deployment of broadband and its ascension as the replacement for the heavily regulated analog telephone network, as well as the broadcast and cable content delivery networks.

BITAG was born out of a series of roundtable discussions hosted by the Silicon Flatirons Center at the University of Colorado School of Law. In those sessions, it became clear that a broad cross-section of the Internet community saw the need for, and value of, a technical advisory group to discuss and opine on technical issues pertaining to the operation of the Internet, as a means of bringing transparency and clarity to network management processes as well as the interaction among networks, applications, devices and content. Our “Challenge” platform will be similarly built and supervised through a multi-stakeholder process designed to ensure understandable rules leading to ease of use, transparency of data/information, and trusted third parties to validate the data posted.

## **Grass Roots Education and Advocacy**

*(From the fields to Washington DC, the road to the 2022 Farm Bill or what to do with an army of educated, vocal activists)*

By December 2022 Congress will pass the next “Farm Bill” and between now and then the FCC’s Precision Ag Connectivity Task Force created by the 2018 Farm Bill will have produced recommendations that require Congress to decide how to move forward. For the next two years a new Congressional Caucus and supporting non-profit foundation (PAGCASA) can efficiently convene and sustain the conversations between the stakeholders. This effort avoids the silos of partisanship and agency and committee jurisdiction, and instead ensures that the voices of citizens help inform the thinking of Congress on solving and seeing change happen.

There are many kinds of Congressional Caucuses, of course, and some enjoy the institutional support of a non-profit organization that can thoughtfully, openly and fairly convene stakeholder conversations that are of the quality that Congress can trust and rely upon. Walking back from December 2022 to December 2020 one can imagine that a new Caucus can commence by welcoming the new Members of the House and Senate Ag, Commerce and other relevant committees and brief new Members and new staff on the issues. The Caucus can also

meet with leadership of the committees of jurisdiction and with the relevant executive branch agencies to start the clock on what must be done, what is nice to have and what is on the wish list between now and December 2022. The Caucus can help the committees and agencies not get bogged down in conflicts or inefficient sequences of activities.

The Caucus, for example, can focus the first half of 2021 on confirmation hearings for any agency officials and providing briefs to committee staff on what has happened since the 2018 Farm Bill and what Congressional mandates require action or updates. Q3 2021 can focus on the FY22 budget. In parallel the Caucus can showcase actual proof of the bottom up approach of PAgCASA literally working in the field and bring forward citizens involved in those pilot projects from counties around the country as witnesses and experts. This presumes that the Caucus will obtain funding from supporters (companies, foundations, individuals) in Q4 2020 and Q1 2021 to launch several pilots at the county level and over the course of 2021 add more pilots, especially in counties located in states and Congressional districts that map to the Members of Congress that are members of the Caucus.

Proof of the value of the nonprofit PAgCASA's work on creating and running the new Caucus will be in the language placed into the FY22 budget and what funding is made available to take the PAgCASA county level pilot schema to scale. From October 2021 to September 2022, dozens to hundreds of ground truthing projects will be running around the entire country – rural, suburban and urban (don't forget urban farming) – and that scaling will enable the data modeling to grow from the farms and their edges upward and over into the supply chain. By September 2022 language for the 2022 Farm Bill can be finalized so that this kind of ground truthing is available to any and all counties on an ongoing basis and happening constantly. If business owners, crops, livestock, weather, equipment, markets, supply chain participants and other components of Ag are subject to regular diagnostics then why not the data that all increasingly generate, consume and interdependent upon?

Expenses of the Caucus will not surprisingly focus on a small, virtual staff, website and social media support, and a policy research budget. Events will be driven by event specific sponsors. Given the pandemic the focus of the new Caucus and of the supporting nonprofit PAgCASA will be on virtual events. But at some point during 2021 in person and hybrid activities will become common place and as such expenses will increase. Also, if we have more county-based ground truthing pilots in early 2021 then there will be more citizens and more stories to bring forward into the conversation in Washington, DC.

## **What it Will Take**

A multi-year commitment will be required to sustain this level of work. A detailed budget will be generated for serious inquiries. The work will be conducted out of an IRS 501c3 not-for-profit tax-exempt Educational Foundation set up specifically for this campaign. Funding will be modest at first principally covering the costs associated with setting up the Foundation, field testing all the "took kit" components, provisioning the website, building a distinguished

advisory board representing the key officials in our stakeholder community, etc. As the campaign rolls out into the states and other elements of the program, like the “Challenge” and Congressional Caucus components, are added the budget will begin to grow as will the number of financial supporters.

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