

RURAL **HEALTH** WORKSHOP

The Digital Divide: Challenges for Rural Communities in Assessing Broadband Access and Equity, an Overview of the Telehealth Broadband Pilot Project



Speaker

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The Digital Divide: Challenges for rural communities in assessing broadband access and equity

**AN OVERVIEW OF THE TELEHEALTH
BROADBAND PILOT PROJECT**

- The F. Marie Hall Institute for Rural and Community Health at Texas Tech University Health Sciences Center is partnered with Well-Ahead Louisiana with the Louisiana Department of Health to form the TexLa Telehealth Resource Center (TRC).



- The TexLa Telehealth Resource Center is a federally-funded program designed to provide technical assistance and resources to new and existing Telehealth programs throughout Texas and Louisiana.

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U1UTH42526, the TexLa Telehealth Resource Center. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS, or the U.S. Government.

Portions of the information in these slides have been provided in part by other regional Telehealth Resource Centers located throughout the country. This information is used with permission from each of these TRCs.



Disclosures/Disclaimers





- ▶ Any information provided in today's talk is not to be regarded as legal advice. Today's talk is purely for informational purposes. Always consult with legal counsel.
- ▶ TexLa TRC and this Speaker has no relevant financial interest, arrangement, or affiliation with any organizations related to commercial products or services discussed in this program.
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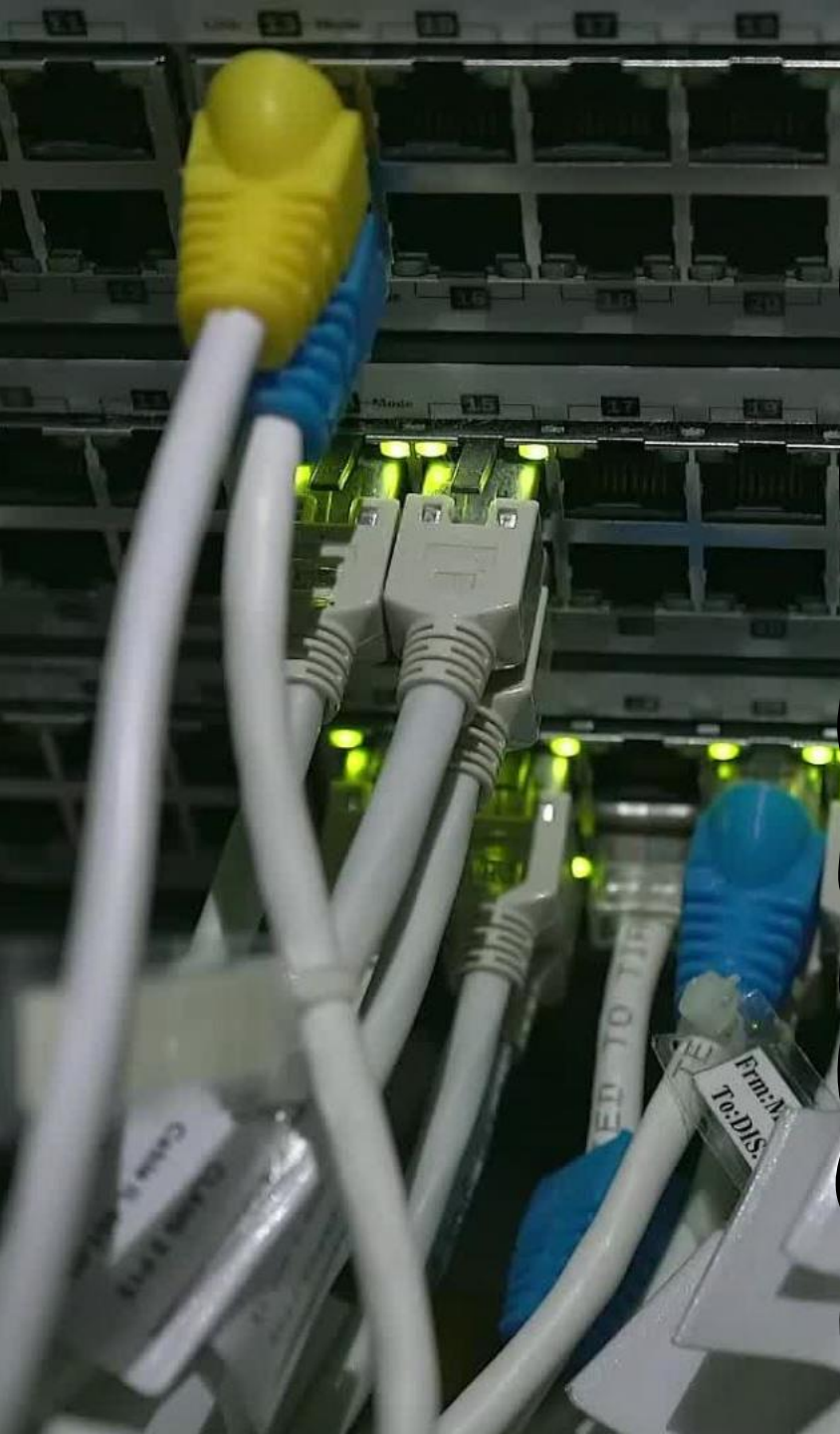


What is Telemedicine?

- ▶ Telemedicine medical service a health care service delivered by a physician licensed in this state, or a health professional acting under the delegation and supervision of a physician licensed in this state and acting within the scope of the physician's or health professional's license to a patient at a different physical location than the physician or health professional using telecommunications or information technology.
- ▶ Telehealth is all other services outside the definition of a telemedicine medical service.
- ▶ Remote patient monitoring is often classified as telemedicine or telehealth but is treated as a separate service by payors.

		Real-time "Synchronous"	Store and Forward "Asynchronous"
Visits (Provider to Patient)	Consults (Provider to Provider)	Virtual Visits  <i>Real-time video interaction between MD and patient</i> Follow up visits to patient in a home or outpatient office	eVisits  <i>Online exchange of medical information between MD & patient</i> A tool generally used for chronic care management and medication adjustments
		Virtual Consults  <i>Real-time interaction between MD to patient's MD</i> New or follow up consult for a patient located in a facility (ED, ICU, post-acute care)	eConsults & Second Opinions  <div> <i>eConsults: Online exchange of medical information between MDs</i> Lower complexity medical opinion </div> <div> <i>Second Opinions: Online exchange of medical information between MDs</i> High complexity medical opinion with extensive record review </div>

Modalities



What is Broadband Internet?

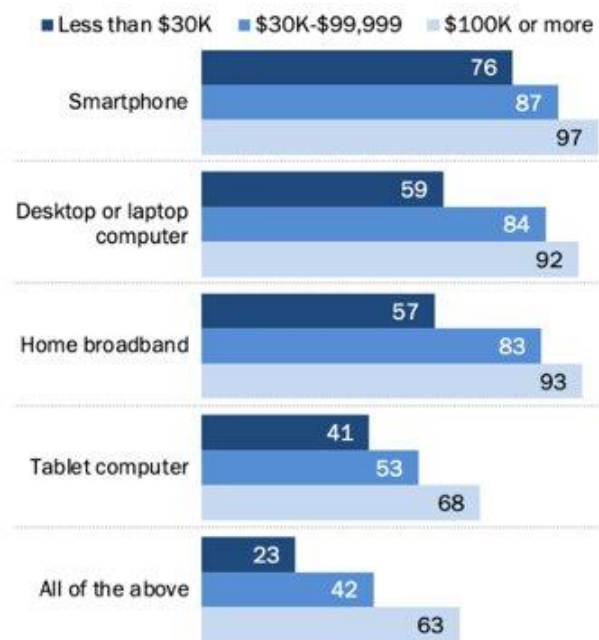
- ▶ The Federal Communications Commission (FCC) broadband capability requires consumers to have access to actual download speeds of at least 25 Mbps and actual upload speeds of at least 3 Mbps.

Source: <https://www.fcc.gov/consumers/guides/broadband-speed-guide>

Equity in Technology

Americans with lower incomes have lower levels of technology adoption

% of U.S. adults who say they have each of the following, by household income

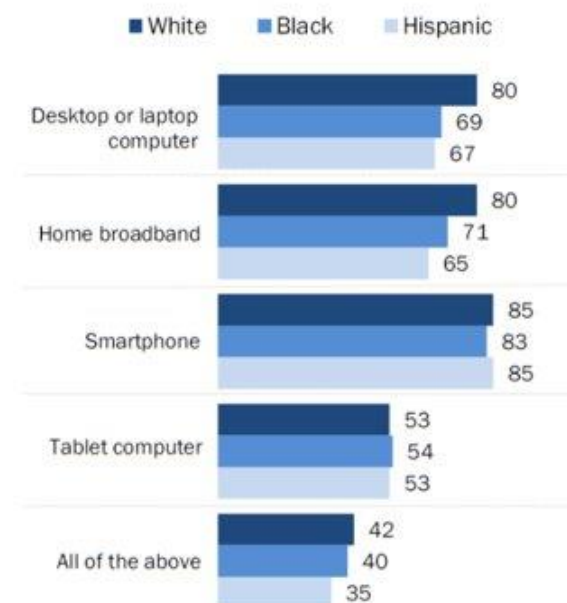


Note: Respondents who did not give an answer are not shown.
Source: Survey of U.S. adults conducted Jan. 25-Feb. 8, 2021.

PEW RESEARCH CENTER

Black and Hispanic adults in U.S. are less likely than White adults to have a traditional computer, home broadband

% of U.S. adults who say they have the following



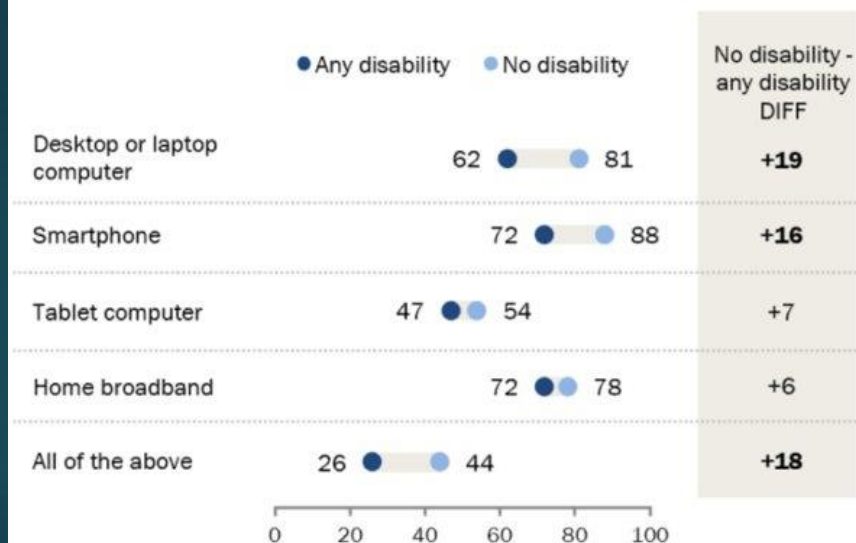
Note: Respondents who did not give an answer are not shown.
White and Black adults include those who report being only one race and are not Hispanic. Hispanics are of any race.
Source: Survey of U.S. adults conducted Jan. 25-Feb. 8, 2021.

PEW RESEARCH CENTER

Disability Access

Americans with a disability are less likely than those without one to have traditional computer, smartphone

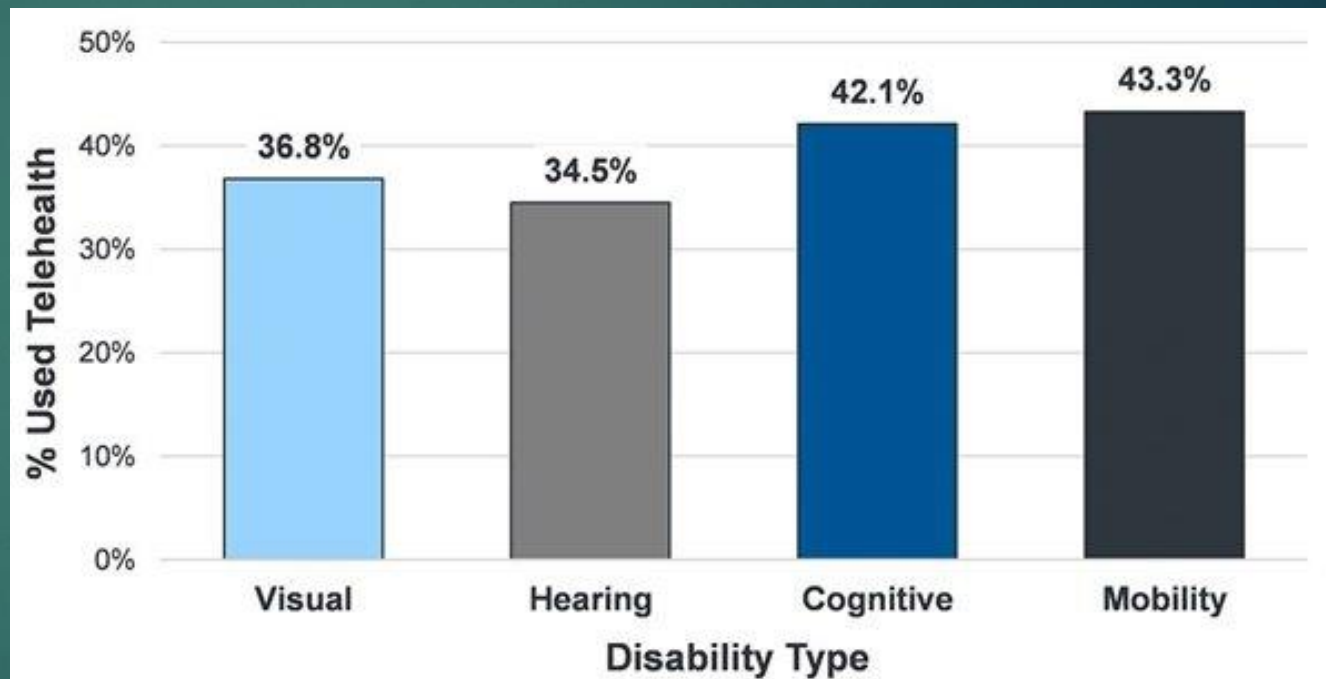
% of U.S. adults who say they have the following



Note: Statistically significant differences in **bold**. The difference values shown are based on subtracting the rounded values in the chart. Respondents who did not give an answer are not shown.

Source: Survey of U.S. adults conducted Jan. 25-Feb. 8, 2021.

PEW RESEARCH CENTER



Usage of Telehealth Services during pandemic

<http://telerehab.pitt.edu/ojs/Telerehab/article/view/6402/7004>

Rural Texas

RURAL Texas Statewide Broadband Availability Estimates by Speed Tier

Among Fixed Technologies: Cable, DSL, Fiber, Fixed Wireless

Speeds	Unserved Rural Households	Served Rural Households	Percent of Rural Households Served
10 Mbps Download x 1 Mbps Upload	64,781	2,841,842	97.77%
25 Mbps Download x 3 Mbps Upload	246,997	2,659,626	91.50%
50 Mbps Download x 5 Mbps Upload	458,883	2,447,740	84.21%
100 Mbps Download x 10 Mbps Upload	613,188	2,293,435	78.90%

The current FCC definition of broadband is a minimum speed of 25 Mbps download and 3 Mbps upload.

Help improve the maps: <https://connectednation.org/texas/feedback>

Source: *Connected Nation Texas*, July 2021.



Rural Populations

Rural Populations utilize telehealth services less often due to lack of broadband access.

- ▶ <https://journals.sagepub.com/doi/full/10.1177/1357633X231166026>
- ▶ <https://www.liebertpub.com/doi/full/10.1089/tmj.2022.0058>
- ▶ <https://onlinelibrary.wiley.com/doi/full/10.1111/jrh.12738>

FCC vs Microsoft

Maps showing FCC fixed broadband availability and broadband usage based on Microsoft data
Texas

FCC indicates broadband is not available to 1.8M people

Microsoft data indicates 14.6M people do not use the internet at broadband speeds



* FCC fixed broadband has or "could" provide greater than or equal to 25Mbps / 3Mbps

Broadband speed greater than or equal to 25Mbps

Data sources: FCC 2018 Broadband Report based on Form 477 data from December 2016 and Microsoft data from September 2018
Form 477 sample data format: 0000000000000000.DBAName.0.0.0.0.0.0

Maps showing FCC fixed broadband availability and broadband usage based on Microsoft data updated as of November 2019

FCC indicates broadband is not available to 21.3M people

Previous FCC 2018 report indicated broadband was not available to 24.7M people

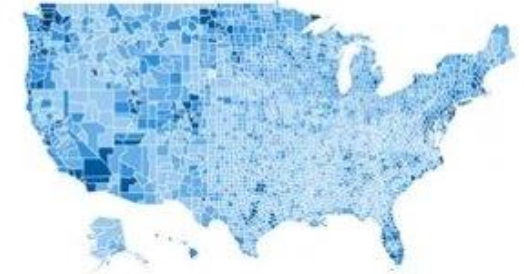


FCC broadband has or "could" provide greater than or equal to 25Mbps / 3Mbps

Sources: FCC 2019 Broadband report based on form 477 from December 2017 and Microsoft data from November 2019
Form 477 sample data format: 0000000000000000.DBAName.0.0.0.0.0.0
To assist with additional broadband mapping analysis, [click here](#) to request an Excel version of this chart

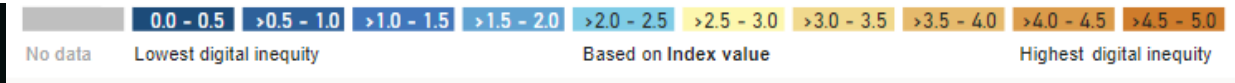
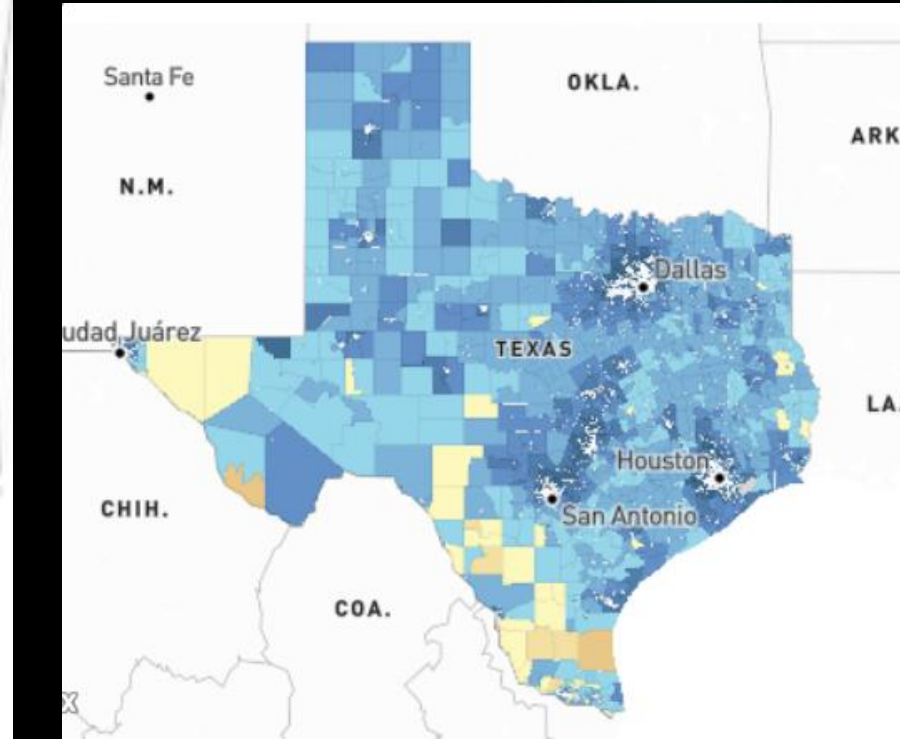
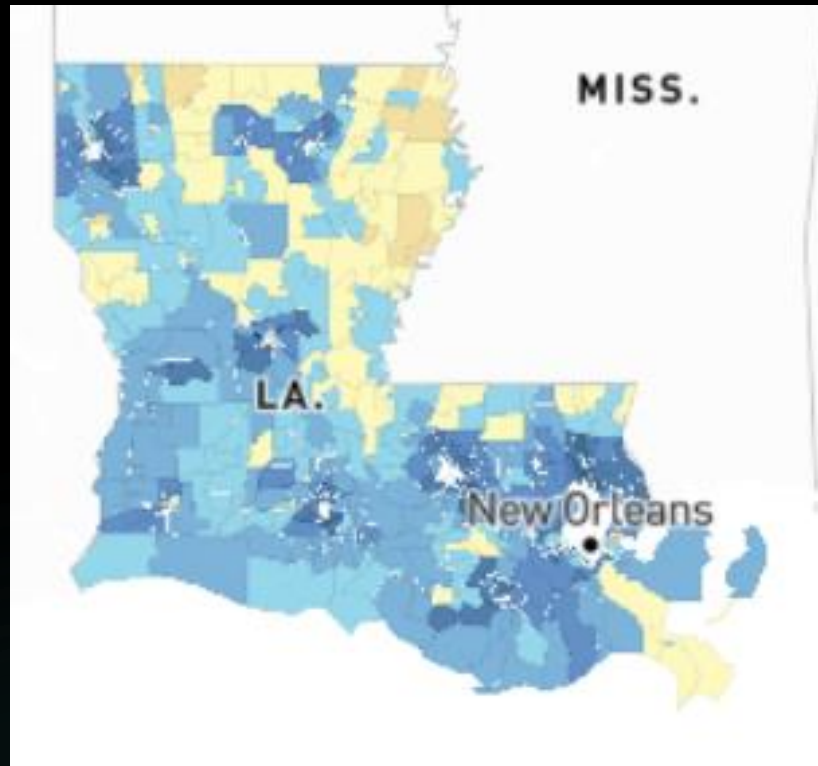
Microsoft data indicates ~157.3M people do not use the internet at broadband speeds

Previous data from September 2018 indicated ~162.8M people did not use the internet at broadband speeds



Broadband speed greater than or equal to 25Mbps

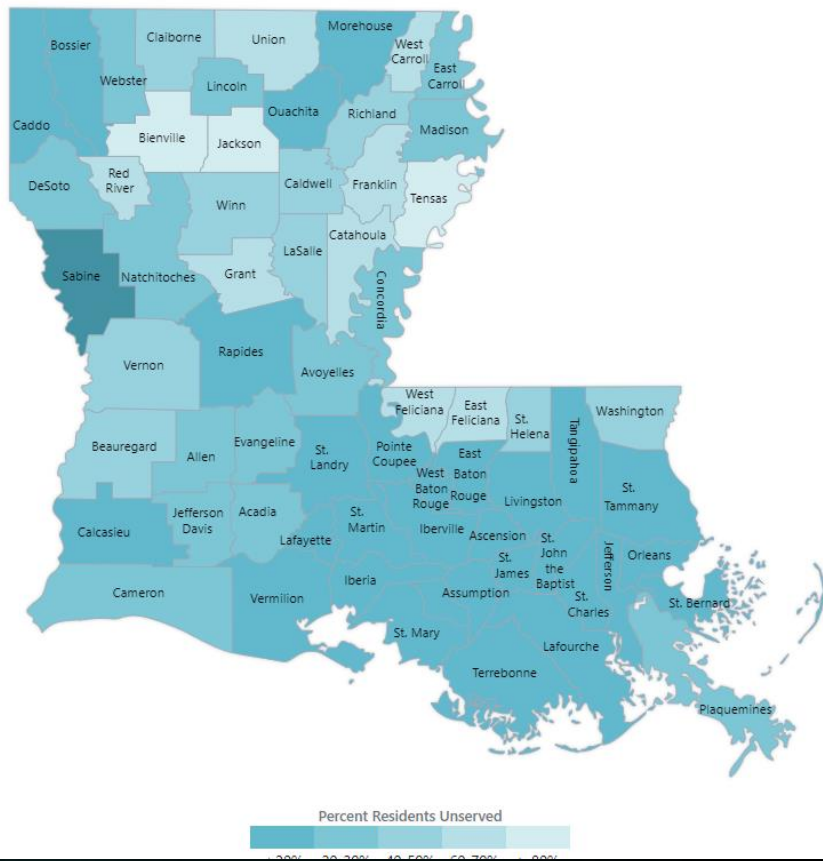
Microsoft Data Science and Analytics



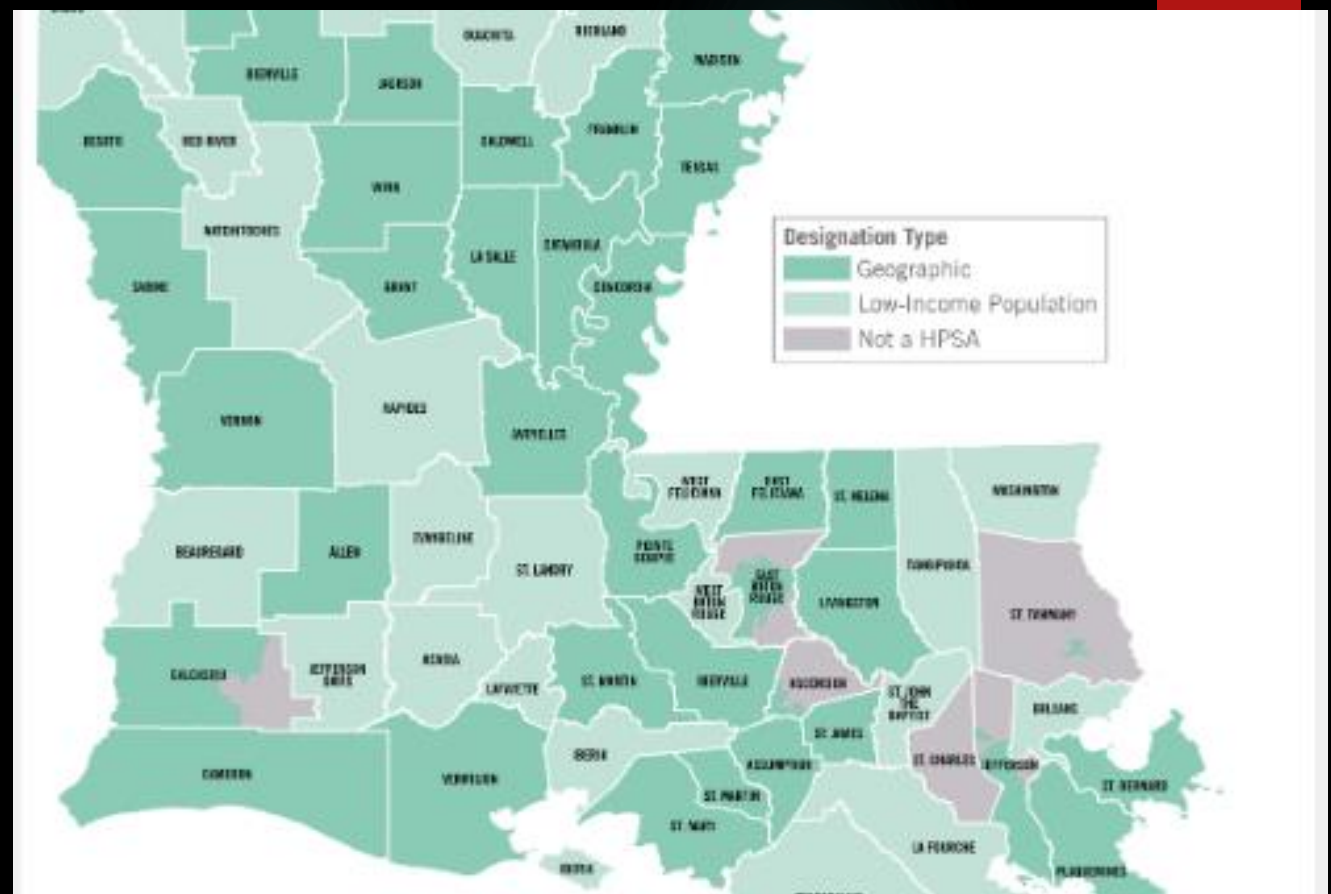
Source:

<https://app.powerbi.com/view?r=eyJrIjojImM2JmM2QxZjEiYWZzZj00MDI5LThtZDMtODMzMjhkZTY2Y2Q2liwidCI6ImMxMzI3ZWwLWZlOTItNDVIMC1iZWFLTQ2OTg0OTczTlzMlslmMiOjF9>

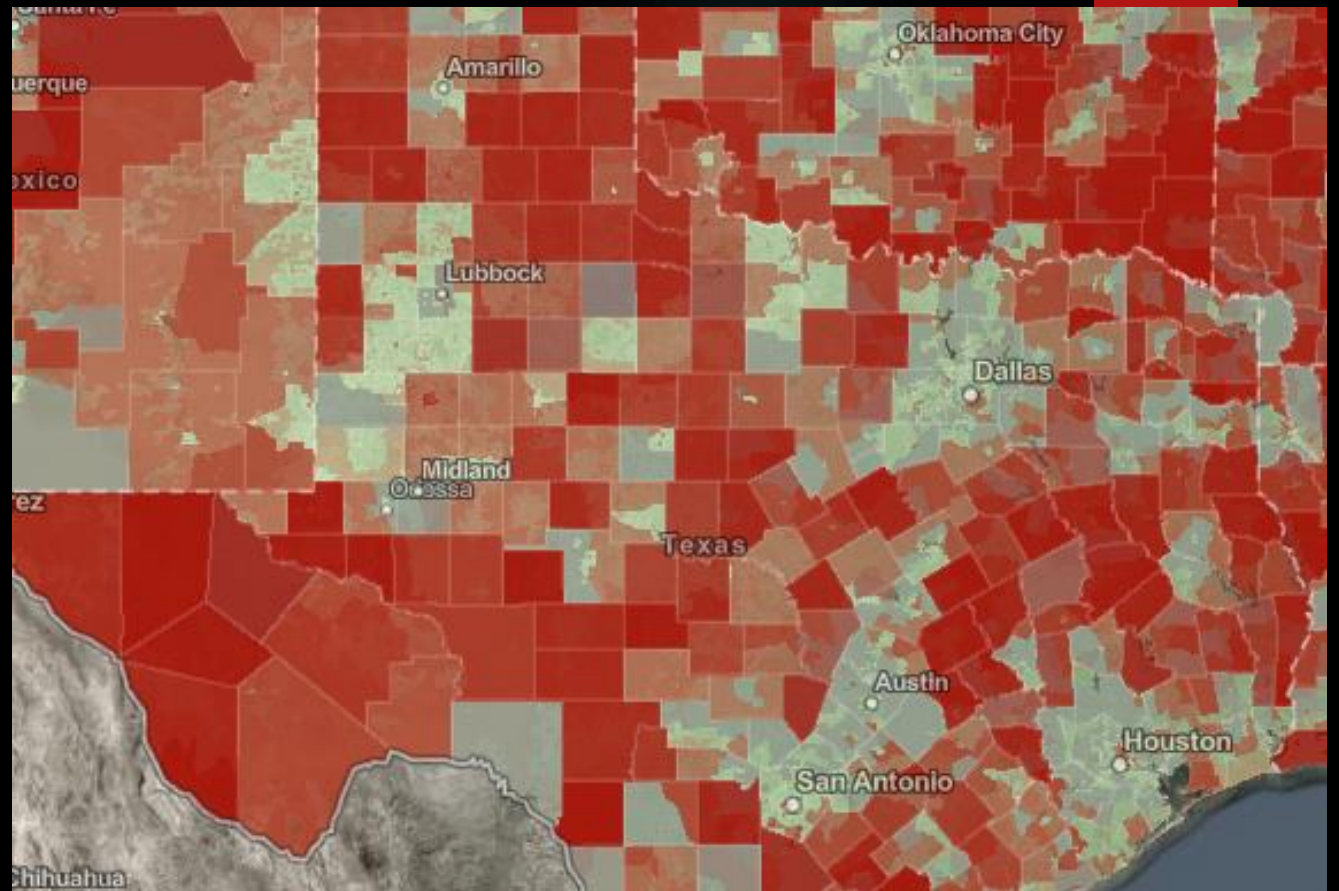
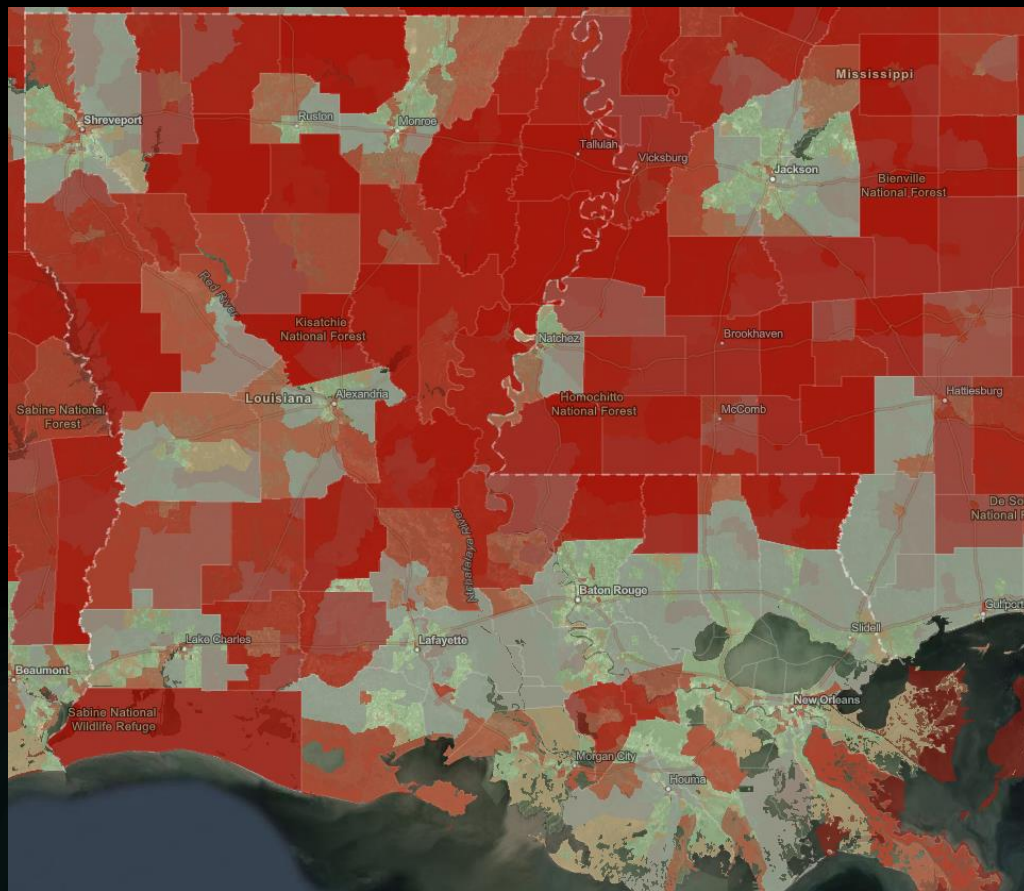
Digital Equity



Underserved vs HPSA



Source: <https://connect.la.gov/get-started/parish-profiles/parish-profiles-with-map/>



Indicators of Broadband Need

Source: <https://broadbandusa.maps.arcgis.com/apps/webappviewer/index.html?id=50c64e2c028d46a58247125e4bcdcdc8>

Telehealth Broadband Pilot Project

The Telehealth Broadband Pilot Program is a grant-funded initiative to measure broadband performance and Internet availability in Texas, with an emphasis on evaluating how connectivity affects telemedicine access.

The goal of the project is to collect accurate data to support future broadband deployment efforts. Texas Tech Health Sciences Center provides the necessary hardware, software, and training to partnering institutions for no cost to them.

The initial phase of the project involves measuring broadband in healthcare facilities and anchor institutions by using a small hardware device that plugs into network connection.

This project is funded through Health Resources and Services Administration grant number GA5RH40183, awarded to the Alaska Native Tribal Health Consortium. Texas Tech Health Sciences Center is one of three sub-awardees supporting this grant.

The TBP Program is the result of a joint effort between the Federal Communications Commission (FCC), HHS, and U.S. Department of Agriculture (USDA). This created the Rural Telehealth Initiative that works to expand broadband and increase telehealth access.

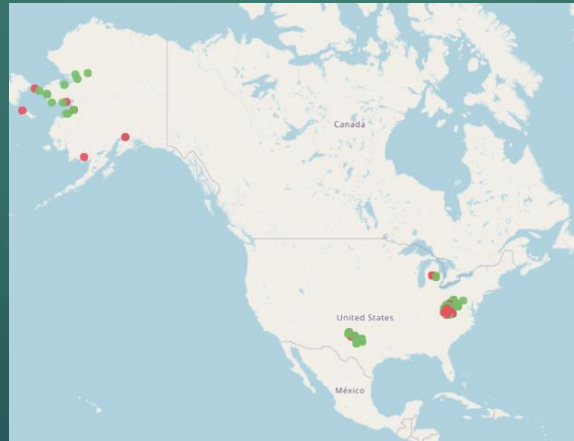
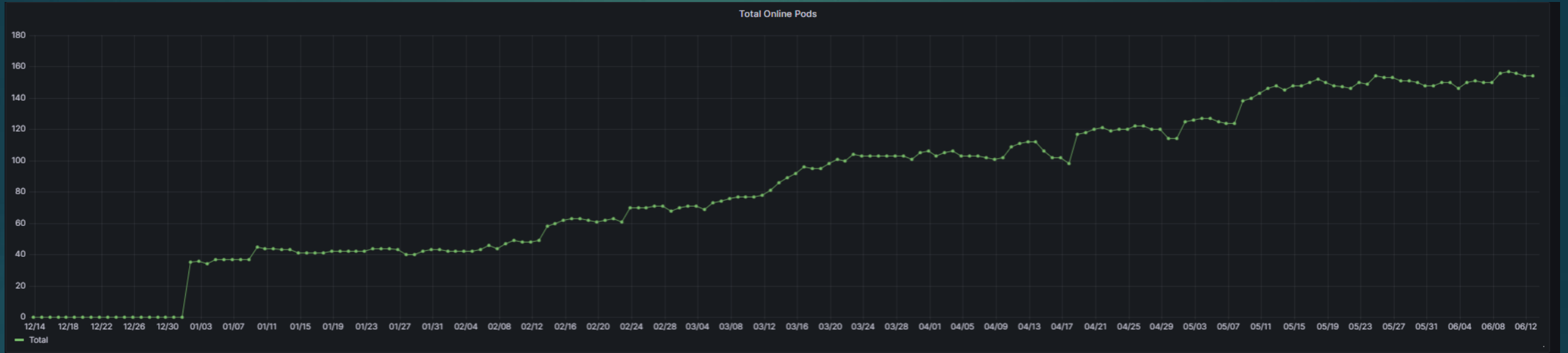
<https://www.ttuhsc.edu/rural-health/tbp.aspx>

The Pod



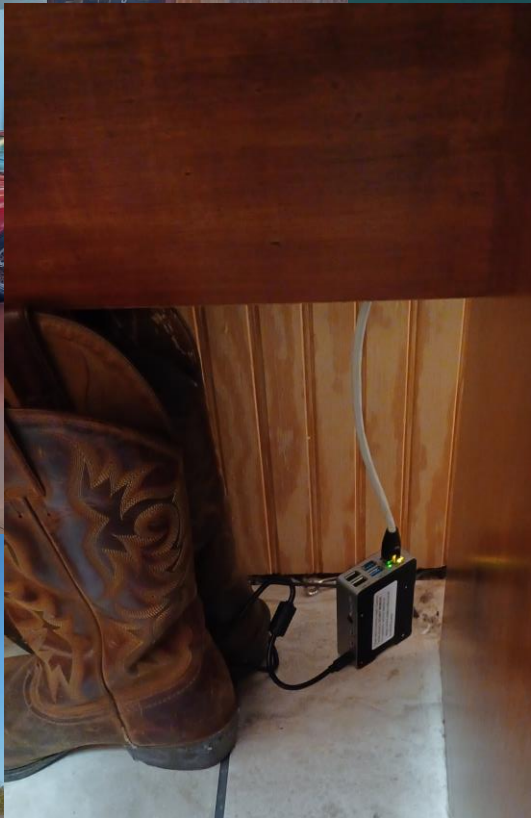
- ▶ A small computer called a “Raspberry Pi” is the primary tool used for measuring broadband speeds in healthcare facilities and anchor institutions within each community. This device runs a secure version of the Linux operating system and executes proprietary software that manages the Measurement Lab NDT7 and Ookla Speedtest CLI network tests. Details on the tests are provided below.
- ▶ This device requires power and a wired network connection with outbound access to the Internet. These devices are provided with a unique identifying number, and will need to be configured with address information and latitude and longitude coordinates to provide accurate location information for mapping purposes.

Deployed Pods



On the Road





Example Pods Deployed

Overview

Haskell County Clinic Business Office-HMH annex

506 S 2nd St, Haskell, TX 79521

Add Pod

Edit

View Measurements

Category

Hospital related

Avg./Exp. Download

51.517 Mbps

Avg./Exp. Upload

5.14 Mbps

Latitude

33.15563

Longitude

-99.73417650041118

Current Pods

1

Haskell

1st Street

US 380

East Avenue

Leaflet | © OpenStreetMap contributors

Overview

Roby-City Hall

205 W South 1st St, Roby, TX 79543

Add Pod

Edit

View Measurements

Category

Business

Avg./Exp. Download

15.238 Mbps

Avg./Exp. Upload

0.949 Mbps

Latitude

32.7449357

Longitude

-100.37958208006063

Current Pods

1

Roby

South 1st Street

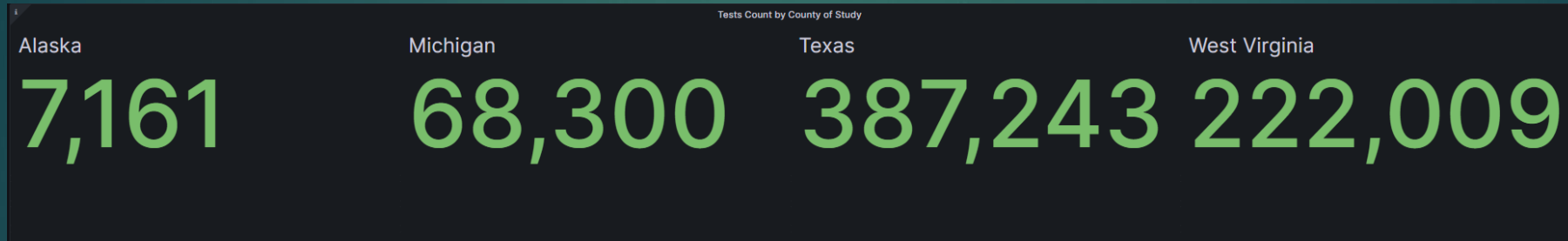
US 180

TX 70

US Highway 180 E

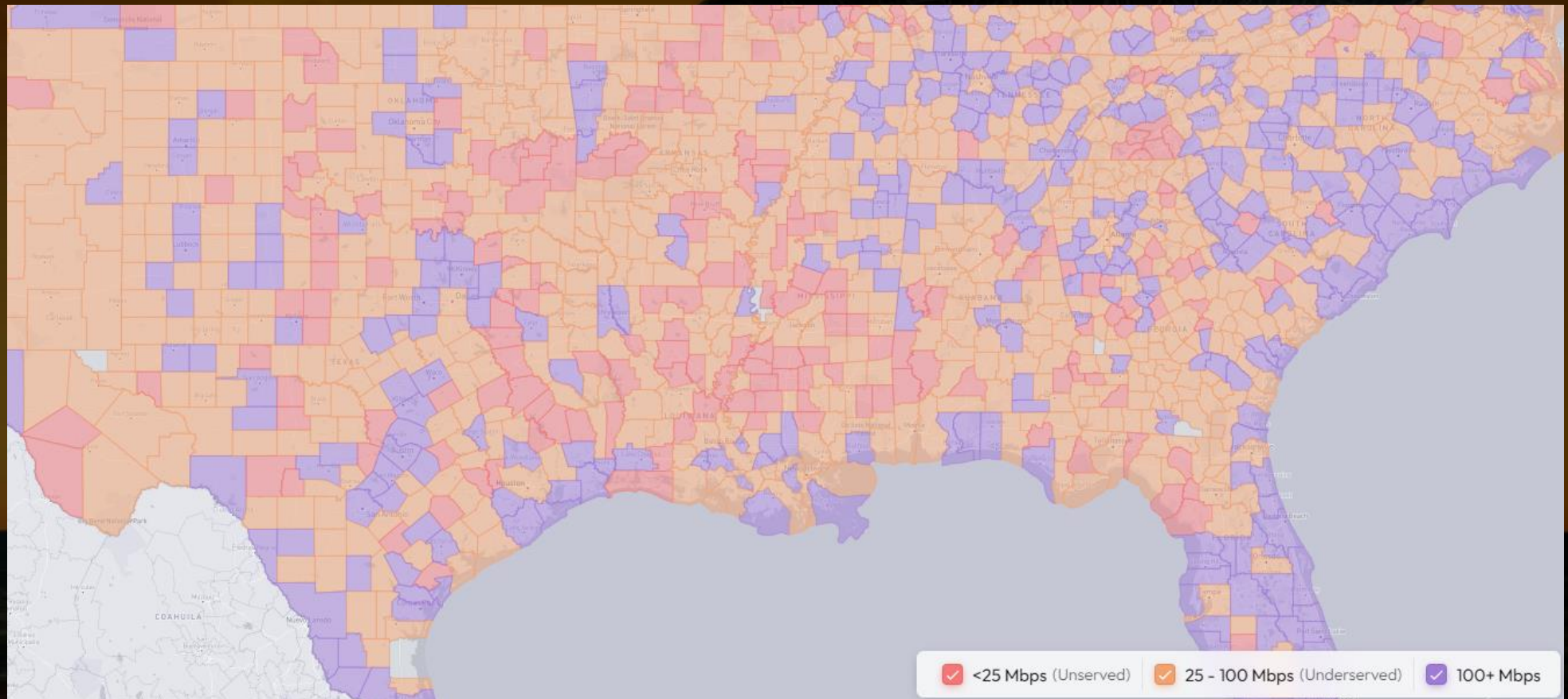
Leaflet | © OpenStreetMap contributors

Tests Run



Radar Speed Test

► <https://speed.radartoolkit.com/>





Derrick Ramsey

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<https://texlatrc.org/>

<https://www.ttuhsc.edu/rural-health/tbp.aspx>



Questions?

We want to hear from you!

<https://www.surveymonkey.com/r/BW59S9F>



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Breakout Sessions: 10:45 – 11:45 a.m.

