Governor's Broadband Development Council Meeting

September 24, 2020

AGENDA
Governor's Broadband Development Council

September 24, 2020
1:30 PM

VIDEOCONFERENCE MEETING

Governor's Broadband Development Council ("Council" or "GBDC") members will be meeting via videoconference. Members of the public who would like to attend the meeting may join by videoconference using the following information:

Free Web Link for Videoconference:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_YjZjYzlhNDAtZWQxZi00ZjcxLWExNTktMDNmYjZhMzI3ZDVj%40thread.v2/0?context=%7b%22Tid%22%3a%2254cb5da6-c734-4242-bbc2-5c947e85fb2c%22%2c%22Oid%22%3a%22cdb0f7cb-fec3-45b3-bee8-c349e50e5cb2%22%7d

Members of the public attending the meeting via the videoconference information provided will be able to hear audio of the meeting and can provide comments during the Public Comment portion of the meeting. The Council will also record the meeting, which will be made available to members of the public.

All agenda items are subject to possible discussion, questions, consideration, and action by the Council. Agenda item numbers are assigned for ease of reference only and do not necessarily reflect the order of their consideration by the Council. Presentations may be made by the identified staff or Council member or others as needed.

ITEM

I. Call to Order

II. Chair welcome, remarks and roll call

III. Discussion and Possible Action on Approval of Minutes from the Council meeting on August 27, 2020 (Tab 1).

IV. Comments by Texas Senator Charles Perry and/or his staff providing information relating to Council's areas of research, identification, study, and analysis under Tex. Gov't Code § 490H.006, including information relating to distribution of broadband in unserved areas of Texas, and council review, discussion, consideration and/or possible action regarding same.

V. Comments by Texas Representative Ken King and/or his staff providing information relating to Council's areas of research, identification, study, and analysis under Tex. Gov't Code § 490H.006,

including information relating to distribution of broadband in unserved areas of Texas, and Council review, discussion, consideration and/or possible action regarding same.

VI. Comments by Texas Education Agency staff providing information relating to Council's areas of research, identification, study, and analysis under Tex. Gov't Code § 490H.006, including information relating to distribution of broadband in unserved areas of Texas, and Council review, discussion, consideration and/or possible action regarding same (Tab 2).

VII. Comments by Murray State University staff providing information relating to Council's areas of research, identification, study, and analysis under Tex. Gov't Code § 490H.006, including information relating to distribution of broadband in unserved areas of Texas, and Council review, discussion, consideration and/or possible action regarding same (Tab 3).

VIII. Discussion and review of broadband recommendations of individual Council members (Tab 4).

IX. Update from Council subcommittee focused on researching the progress of broadband development in unserved areas, regarding information gathered and observations made to date, and Council review, discussion, consideration and/or possible action regarding same.

X. Update from Council subcommittee focused on identifying barriers to residential and commercial broadband deployment in unserved areas, regarding information gathered and observations made to date, and Council review, discussion, consideration and/or possible action regarding same.

XI. Update from Council subcommittee focused on studying technology-neutral solutions to overcome barriers to residential and commercial broadband deployment in unserved areas, regarding information gathered and observations made to date, and Council review, discussion, consideration and/or possible action regarding same.

XII. Update from Council subcommittee focused on analyzing how statewide access to broadband would benefit: (A) economic development; (B) the delivery of educational opportunities in higher education and public education; (C) state and local law enforcement; (D) state emergency preparedness; and (E) the delivery of health care services, including telemedicine and telehealth, regarding information gathered and observations made to date, and Council review, discussion, consideration and/or possible action regarding same.

XIII. Review, Discussion, Consideration and/or Possible Action on Council Next Steps for Following Meeting(s) - Chairman Sproull.

XIV. Comments without Deliberation:

Public comment may be received on any matter under the Council's jurisdiction without regard to whether the item was posted on the agenda.

XV. Adjournment

Link to September 24, 2020 Council meeting documents:

https://gov.texas.gov/business/page/governors-broadband-development-council

Persons with disabilities who plan to attend this meeting, who may need auxiliary aids or services, or who need assistance in having English translated into Spanish, should contact Philip Rocha at 512-936-0246 at least two days before the meeting so that appropriate arrangements can be made.

Personas con discapacidades que asistirán a esta reunión y requieren servicios o instrumentos especiales, o necesitaran traducción al español, por favor de comunicarse con Philip Rocha al 512- 936-0246 por lo menos 2 días antes de la reunión para hacer los arreglos necesarios.

Tab 1

GOVERNOR'S BROADBAND DEVELOPMENT COUNCIL

Minutes of August 27, 2020 Meeting

Videoconference Meeting

1:30 PM

VIDEOCONFERENCE MEETING

GOVERNOR'S BROADBAND DEVELOPMENT COUNCIL MEMBERS IN ATTENDANCE:

William "Bill" Sproull (Chair), Juli Blanda, Frank Moreno, Lindsey Lee, Marshall Harrison, Marty Lucke, Kirk Petty, Thomas Kim, M.D., Greg Pittman, Jennifer K. Harris, Kenny Scudder, Mike Easley, Edward Smith, Steven Johnson, Ph.D., Saurin Patel, M.D., Kirk Petty

STAFF IN ATTENDANCE:

Lindsey Aston, Philip Rocha, Annie Calandruccio, Abby Austin, Mary York , Fauye Bennett, Michael Treyger, Joe Magruder, Larry McManus, Kim LeBlanc

The Governor's Broadband Development Council ("Council") proceeded on posted agenda items in the order as follows:

Agenda Item I. CALL TO ORDER

Bill Sproull, Chairman of the Governor's Broadband Development Council, called the meeting to order at 1:34 PM. A quorum was present online.

Agenda Item II. CHAIR WELCOME, REMARKS, AND ROLL CALL

Chairman Sproull welcomed the Council for their fourth meeting and briefly outlined the agenda for the meeting.

Agenda Item III. DISCUSSION AND POSSIBLE ACTION ON APPROVAL OF MINUTES FROM THE COUNCIL MEETING ON JULY 22, 2020

The Council reviewed minutes from the meeting held on July 22, 2020.

ACTION: Motion to approve the July 22 meeting minutes by Marty Lucke, second by Greg Pittman. Motion to approve the minutes carried unanimously.

Agenda Item IV. **COMMENTS BY TEXAS REPRESENTATIVE DOC ANDERSON AND/OR HIS STAFF PROVIDING INFORMATION RELATING TO THE COUNCIL'S AREAS OF RESEARCH, IDENTIFICATION, STUDY, AND ANALYSIS UNDER TEX. GOV'T CODE 490H.006, INCLUDING BARRIERS TO RESIDENTIAL AND COMMERCIAL BROADBAND DEPOLYMENT IN UNSERVED AREAS, AND COUNCIL REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION REGARDING SAME**

Representative Doc Anderson spoke on the complexity of some of the issues that face broadband development in Texas. Representative Anderson discussed some of his experiences in dealing with broadband issues. Rep. Anderson proceeded to make a few suggestions regarding broadband offices and inclusion of Texas A&M University and fielded several questions from the council.

Agenda Item V. **COMMENTS BY FEDERAL COMMUNICATIONS COMMISSION STAFF PROVIDING INFORMATION RELATING TO COUNCIL'S AREAS OF RESEARCH, IDENTIFICATION, STUDY, AND ANALYSIS UNDER TEX. GOV'T CODE 490H.006, INCLUDING BARRIERS TO RESIDENTIAL AND COMMERCIAL BROADBAND DEPLOYMENT IN UNSERVED AREAS, AND COUNCIL REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION REGARDING SAME**

Lauren Garry of the Federal Communications Commission presented slides to the council relating tothe Universal Service Fund ("USF"), a federal fund with the goal of establishing affordable, reliable telecommunications service throughout the nation. Ms. Garry outlined certain authorized USF programs and their details.

Members of the council asked Ms. Garry several questions regarding the coverage, funding, and program specifics.

Agenda Item VI. **COMMENTS BY THE PEW CHARITABLE TRUSTS STAFF PROVIDING INFORMATION RELATING TO COUNCIL'S AREAS OF RESEARCH, IDENTIFICATION, STUDY, AND ANALYSIS UNDER TEX. GOV'T CODE 490H.006, INCLUDING INFORMATION RELATING TO DISTRIBUTION OF BROADBAND IN UNSERVED AREAS OF TEXAS, AND COUNCIL REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION REGARDING SAME**

Katherine De Wit of the Pew Charitable Trusts discussed the findings of her organization's research on broadband development in many different states. Ms. De Wit outlined keys that she has seen in successful broadband deployment in other states. Ms. De Wit discussed how state policy shapes deployment processes.

Council Member Thomas Kim discussed an observation of a lack of collaboration between stakeholders who have a similar mission as it pertains to broadband. Ms. De Wit responded by suggesting a mandate for collaboration of state broadband efforts.

Agenda Item VII. **UPDATE FROM COUNCIL SUBCOMMITTEE FOCUSED ON RESEARCHING THE PROGRESS OF BROADBAND DEVELOPMENT IN UNSERVED AREAS, REGARDING INFORMATION GATHERED AND OBSERVATIONS MADE TO DATE, AND COUNCIL REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION REGARDING SAME**

Jennifer Harris shared broadband maps from across the state that included data such as speed, households served, and rural household data. Ms. Harris shared county by county data and examined interactive connectivity maps. Ms. Harris shared data which she stated demonstrated that nearly 1 million Texans do not have broadband available at adequate speed. Council members thanked Ms. Harris for providing an interactive resource.

Agenda Item VIII. **UPDATE FROM COUNCIL SUBCOMMITTEE FOCUSED ON IDENTIFYING BARRIERS TO RESIDENTIAL AND COMMERCIAL BROADBAND DEPLOYMENT IN UNSERVED AREAS, REGARDING INFORMATION GATHERED AND OBSERVATIONS MADE TO DATE, AND COUNCIL REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION REGARDING SAME**

Greg Pittman updated the committee on the progress of his subcommittee and shared plans to aggregate and reference existing reports to aid in generating a portion of the legislative report.

Agenda Item IX. **UPDATE FROM COUNCIL SUBCOMMITTEE FOCUSED ON STUDYING TECHNOLOGY-NEUTRAL SOLUTIONS TO OVERCOME BARRIERS TO RESIDENTIAL AND COMMERCIAL BROADBAND DEPLOYMENT IN UNSERVED AREAS, REGARDING INFORMATION GATHERED AND OBSERVATIONS MADE TO DATE, AND COUNCIL REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION REGARDING SAME.**

Dr. Steven Johnson shared the subcommittee's discussion on technology solutions and how they may vary in different areas of the state. Dr. Johnson said that he and his subcommittee plan to include general observations in their portion of the legislative report.

Agenda Item X. **UPDATE FROM COUNCIL SUBCOMMITTEE FOCUSED ON ANALYZING HOW STATEWIDE ACCESS TO BROADBAND WOULD BENEFIT: (A) ECONOMIC DEVELOPMENT; (B) THE DELIVERY OF EDUCATIONAL OPPORTUNITIES IN HIGHER EDUCATION AND PUBLIC EDUCATION; (C) STATE AND LOCAL LAW ENFORCEMENT; (D) STATE EMERGENCY PREPAREDNESS; AND (E) THE**

DELIVERY OF HEALTH CARE SERVICES, INCLUDING TELEMEDICINE AND TELEHEALTH, REGARDING INFORMATION GATHERED AND OBSERVATIONS MADE TO DATE, AND COUNCIL REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION REGARDING SAME.

Marty Lucke provided an update to the committee, stating that his subcommittee would be meeting more frequently in the next month to finalize their report.

Agenda Item XI. DISCUSS PROPOSED DRAFT OUTLINE FOR THE GBDC REPORT

The committee discussed the format and structure for the upcoming legislative report and engaged in discussion regarding what would need to be included.

Marshall Harrison gave comments regarding budget shortfalls and how that will effect school districts going forward. Mr. Harrison suggested that the committee to take the shortfalls into account when creating the legislative report.

Agenda Item XII. REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION ON COUNCIL NEXT STEPS FOR FOLLOWING MEETING(S) - CHAIRMAN SPROULL

Chairman Sproull asked for suggestions for next steps and discussions for the next meeting.

Chairman Sproull tentatively proposed Thursday, September 24th, from 1:30 PM to 3:30 PM as the next meeting time.

Agenda Item XIII. COMMENTS WITHOUT DELIBERATION:

Public comment may be received on any matter under the Council's jurisdiction without regard to whether the item was posted on the agenda.

No public comment

Agenda Item XIV. ADJOURNMENT

Chairman Sproull called the meeting to a close at 3:46 PM

_____ _____ Bill Sproull, Chair

Date

Tab 2

Operation Connectivity Update

September 14, 2020

Update on Bulk Purchase & Supply Chain

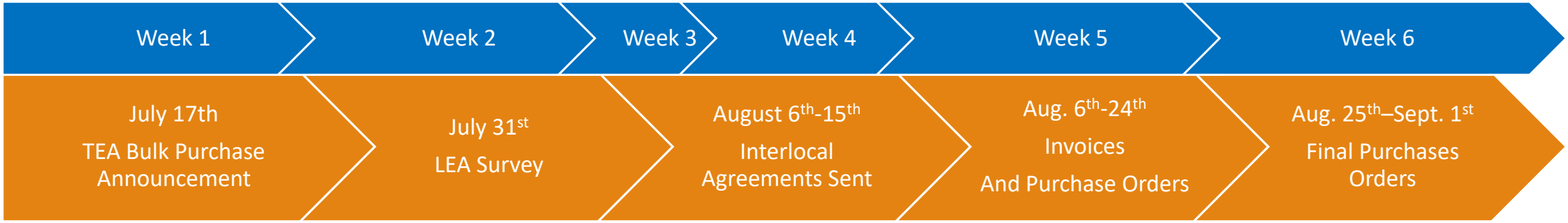
- **766,288** Keyboarded Devices and **480,968*** Hotspots have been acquired
- **$139** million in TEA matching funds committed to Bulk Purchase of equipment
- **140,000+** iPads and **49,000+** hotspots have already shipped as of 9/3
- All **178,904** iPads to be delivered to LEAs by September 21st
- All AT&T Hotspots, T-Mobile and Verizon Hotspots to be delivered by September 28th, projecting that **45.4%** of total devices will be in students' hands by October 1st . The first HP and Dell Windows devices to begin arriving the Week of September 28th
- All of Dell's **273,492** devices, including Chromebooks, to be delivered by early December

**includes 171,000 Project 10 Million Hotspots*

Project Timeline

Operation Connectivity| Project Timeline From Procurement through Delivery

Procurement Timeline



Shipping and Delivery Timeline

Local CRF Matching Program Update

Update 9/10/2020 | Activity Since Application Launched on Monday 9/7

Number of Applications Requested	Number of Completed Applications	Total Match $s Requested in Submitted Applications	Total Potential Match if All LEAs Requesting Applications Qualify for full 25%
222	66	$19.7 Million	$33.5 Million

All ESCs have LEAs that have applied as of Day 3

Tab 3

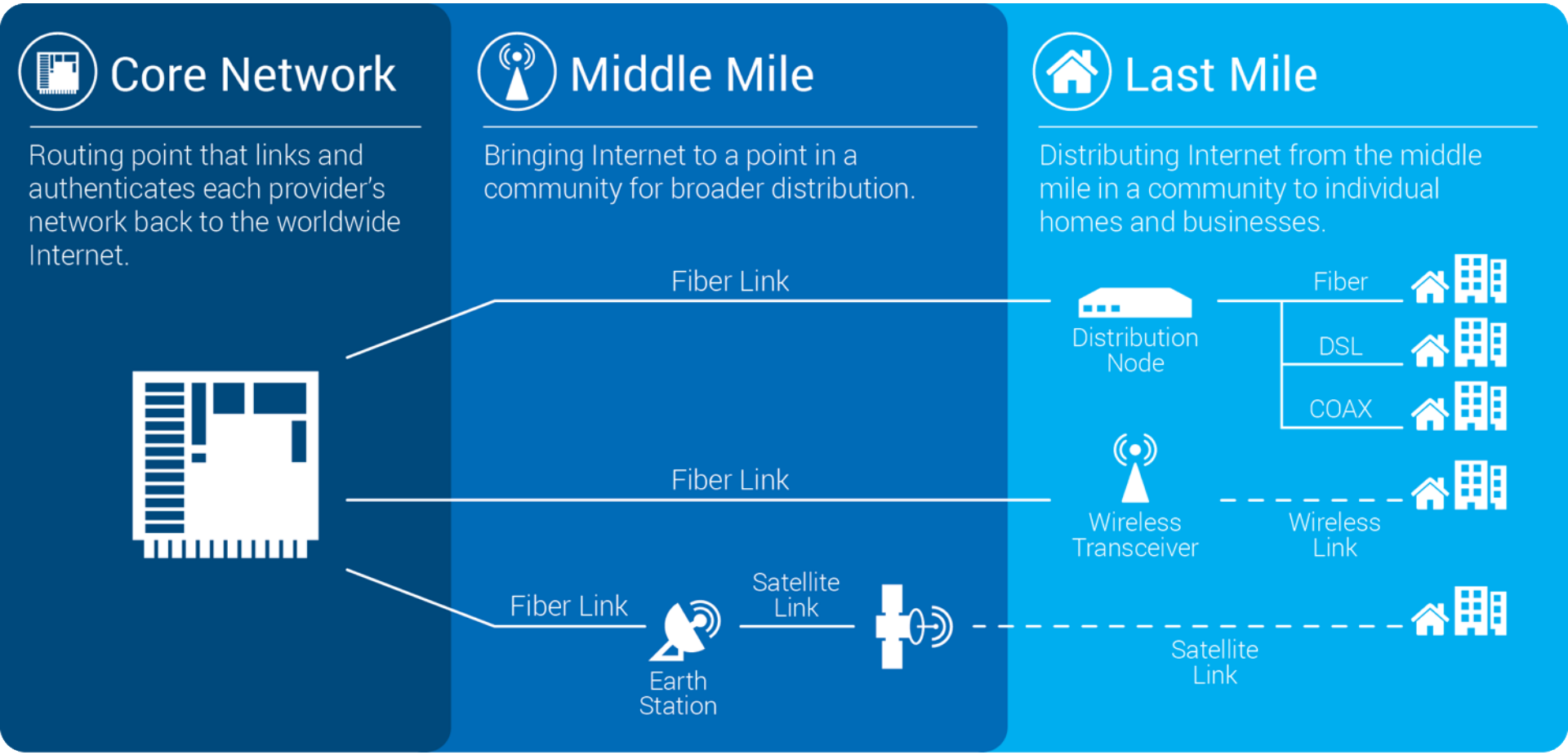
Texas Governor's Broadband Development Council

Michael Ramage, PhD
mramage@murraystate.edu
270.809.3987

There is no silver bullet for broadband buildout in rural communities.

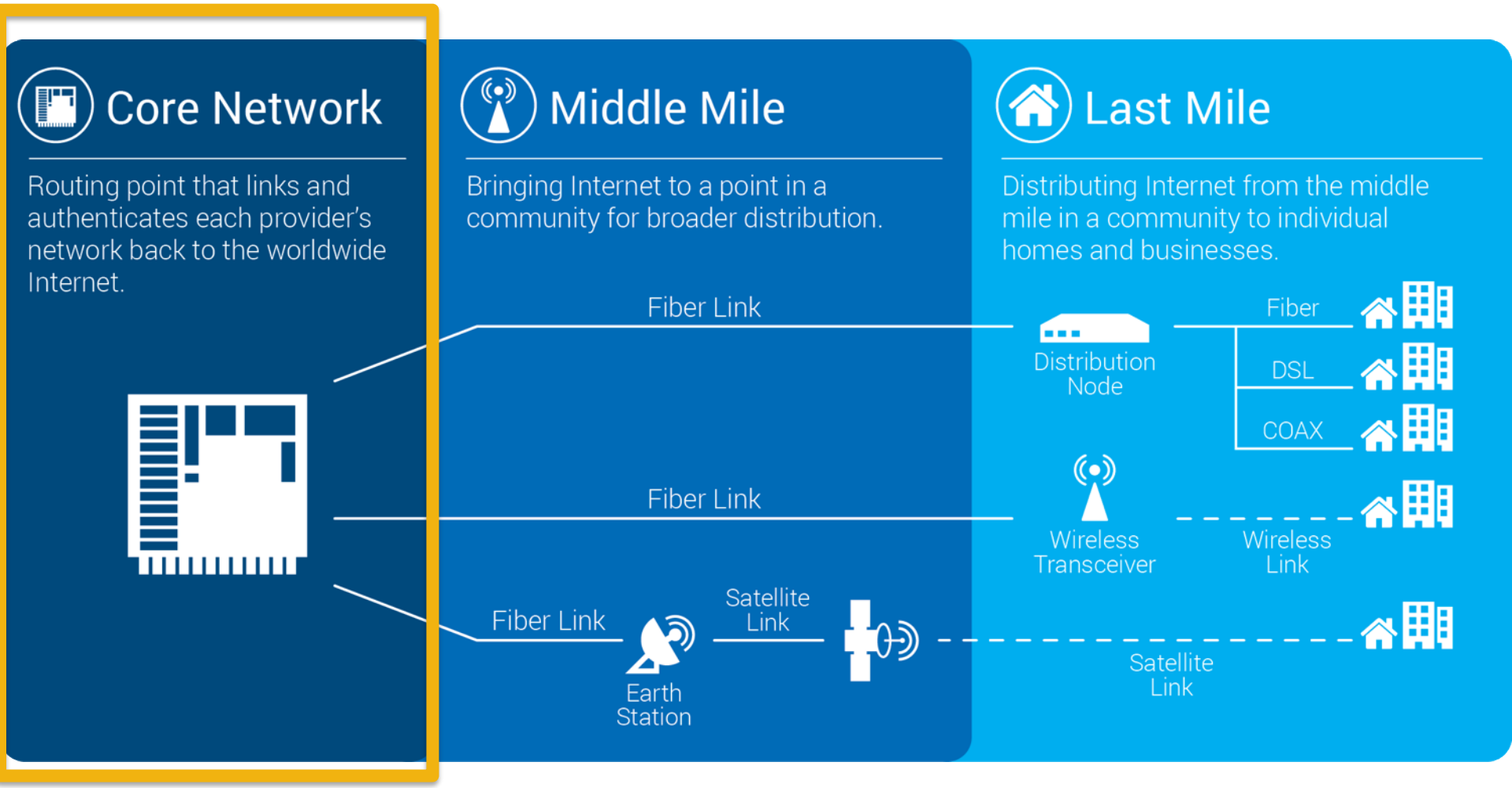
No single technology fits all communities.

Miles of Broadband



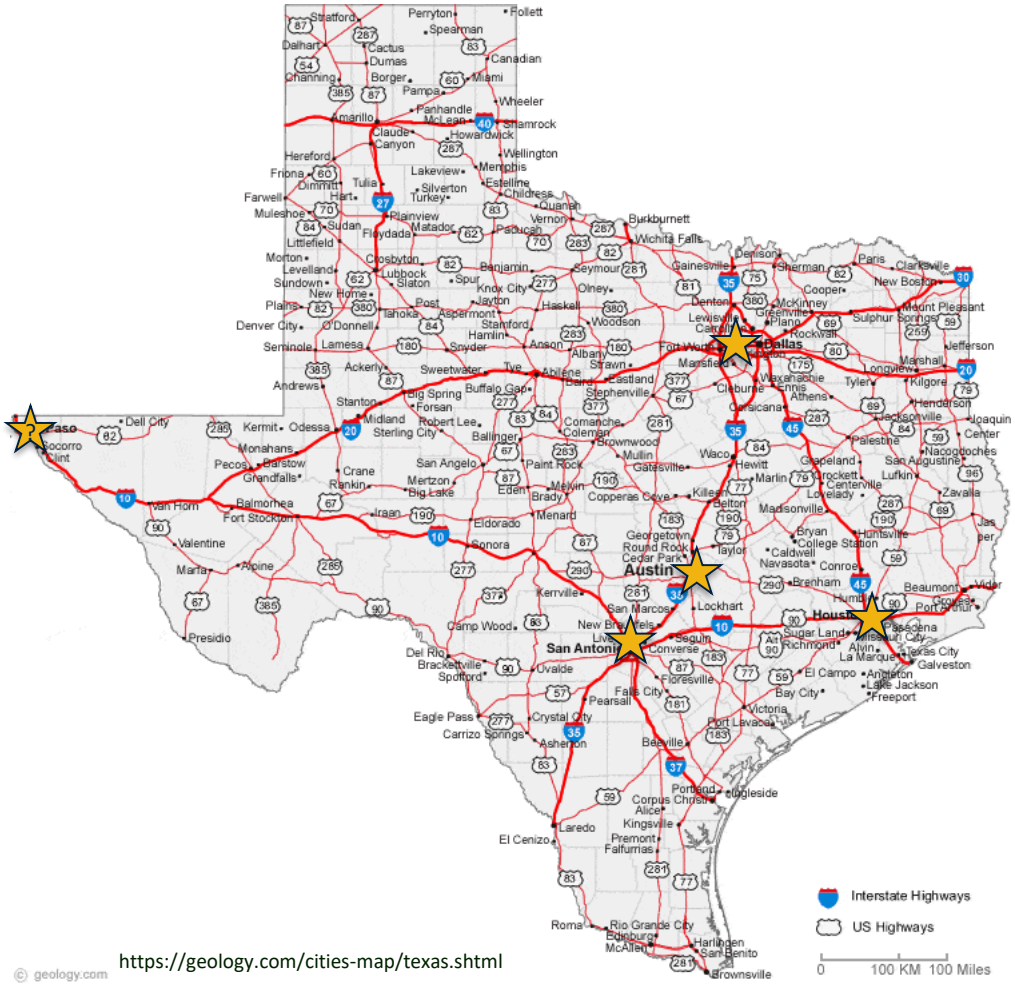
https://novascotia.ca/business/internet/

Miles of Broadband



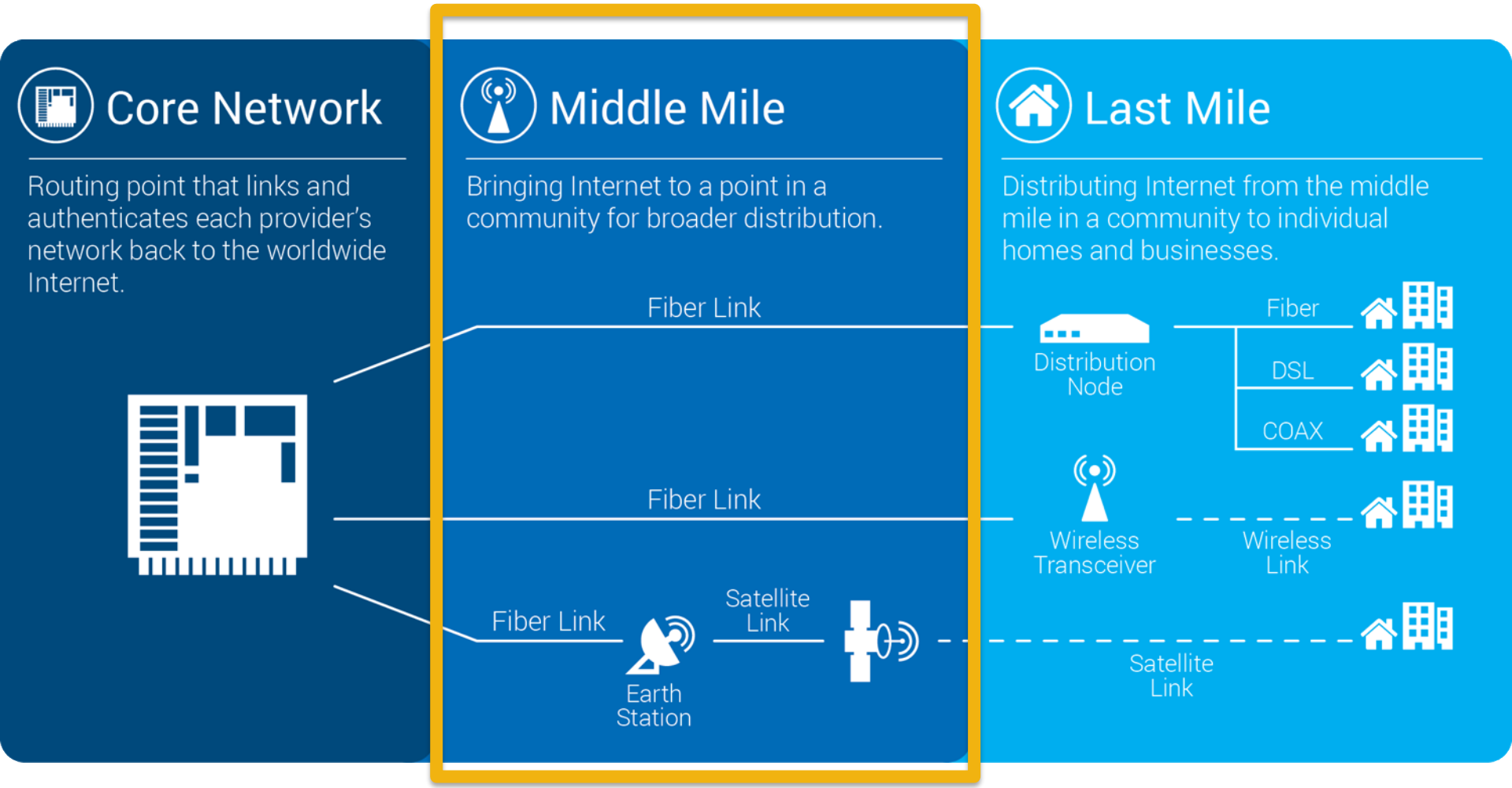
https://novascotia.ca/business/internet/

Miles of Broadband
Core Network Access



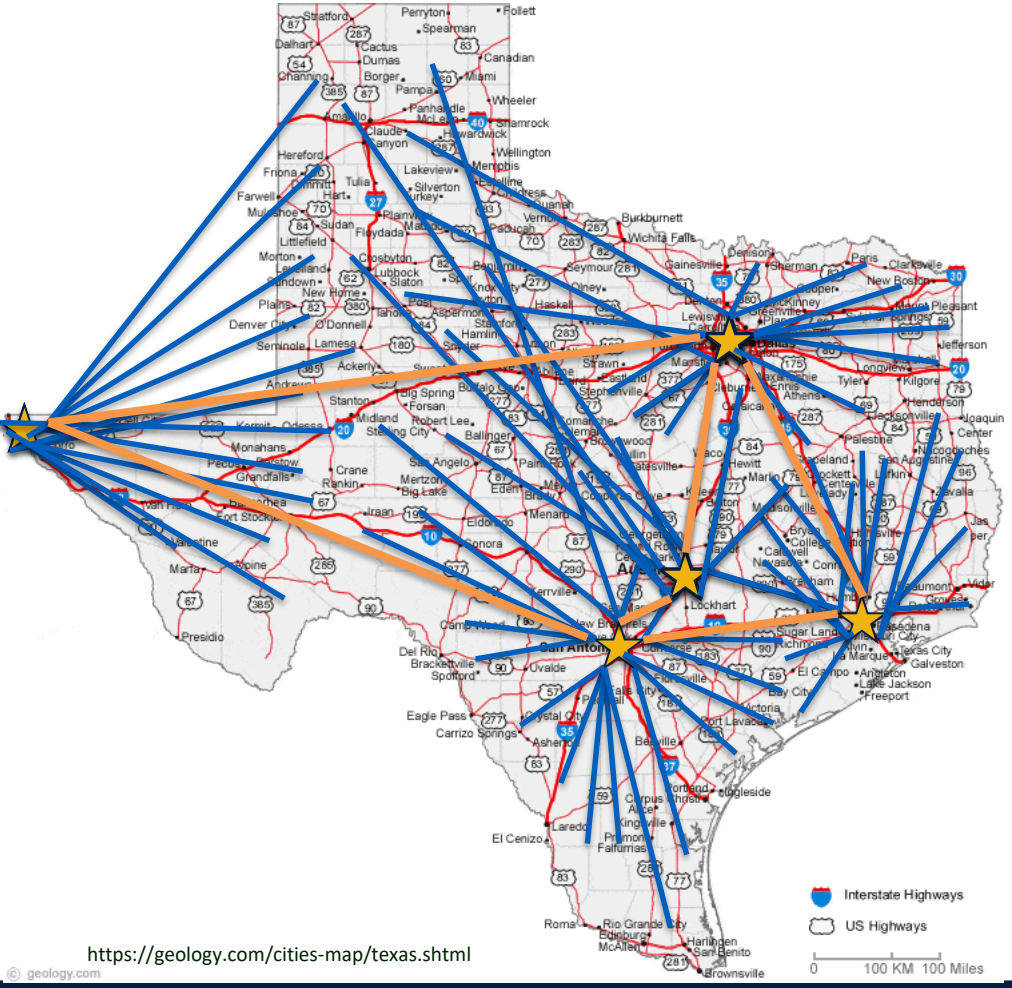
https://geology.com/cities-map/texas.shtml

Miles of Broadband



https://novascotia.ca/business/internet/

Miles of Broadband
Middle Mile



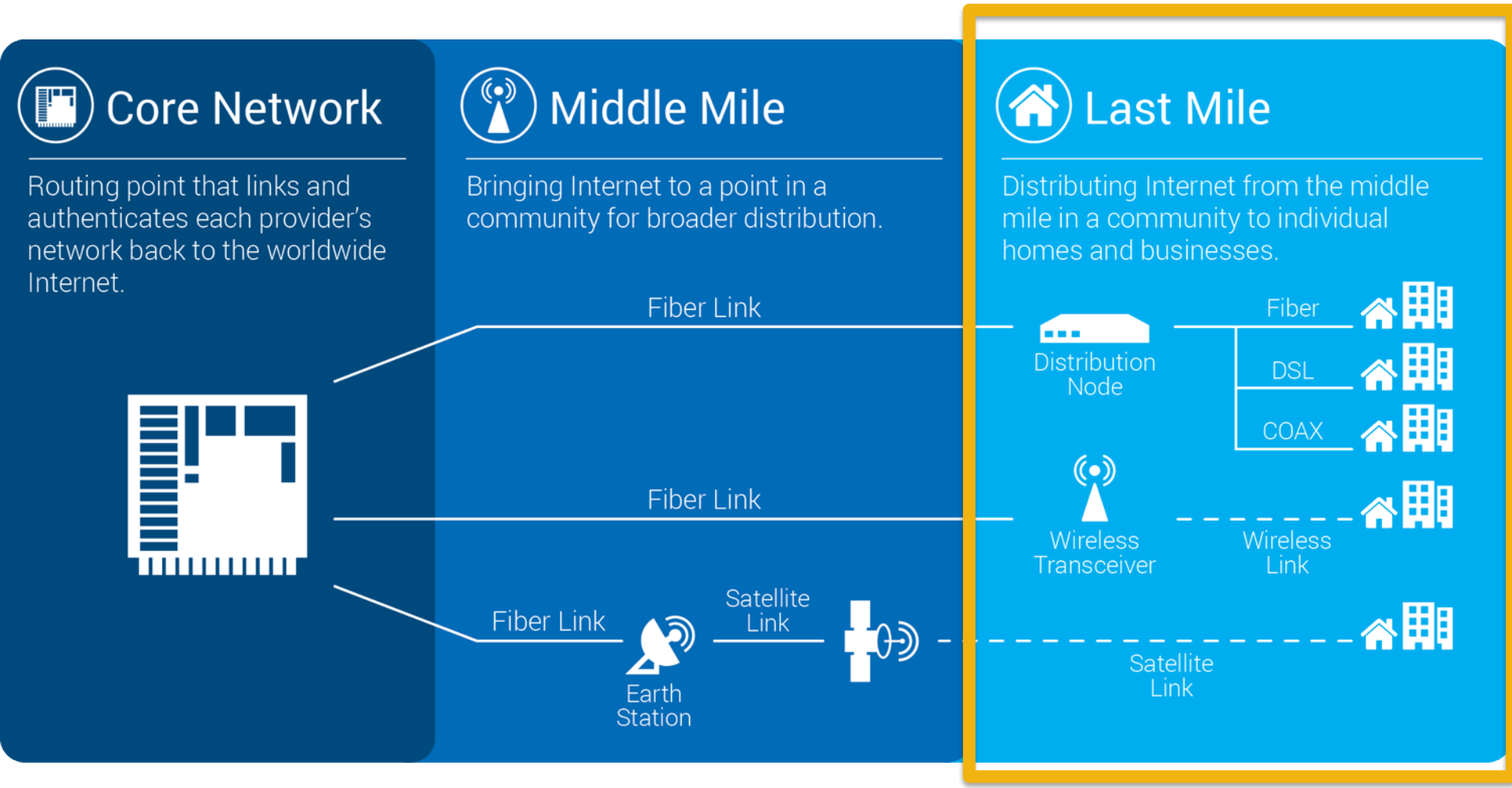
https://geology.com/cities-map/texas.shtml

© geology.com

Questions to consider:

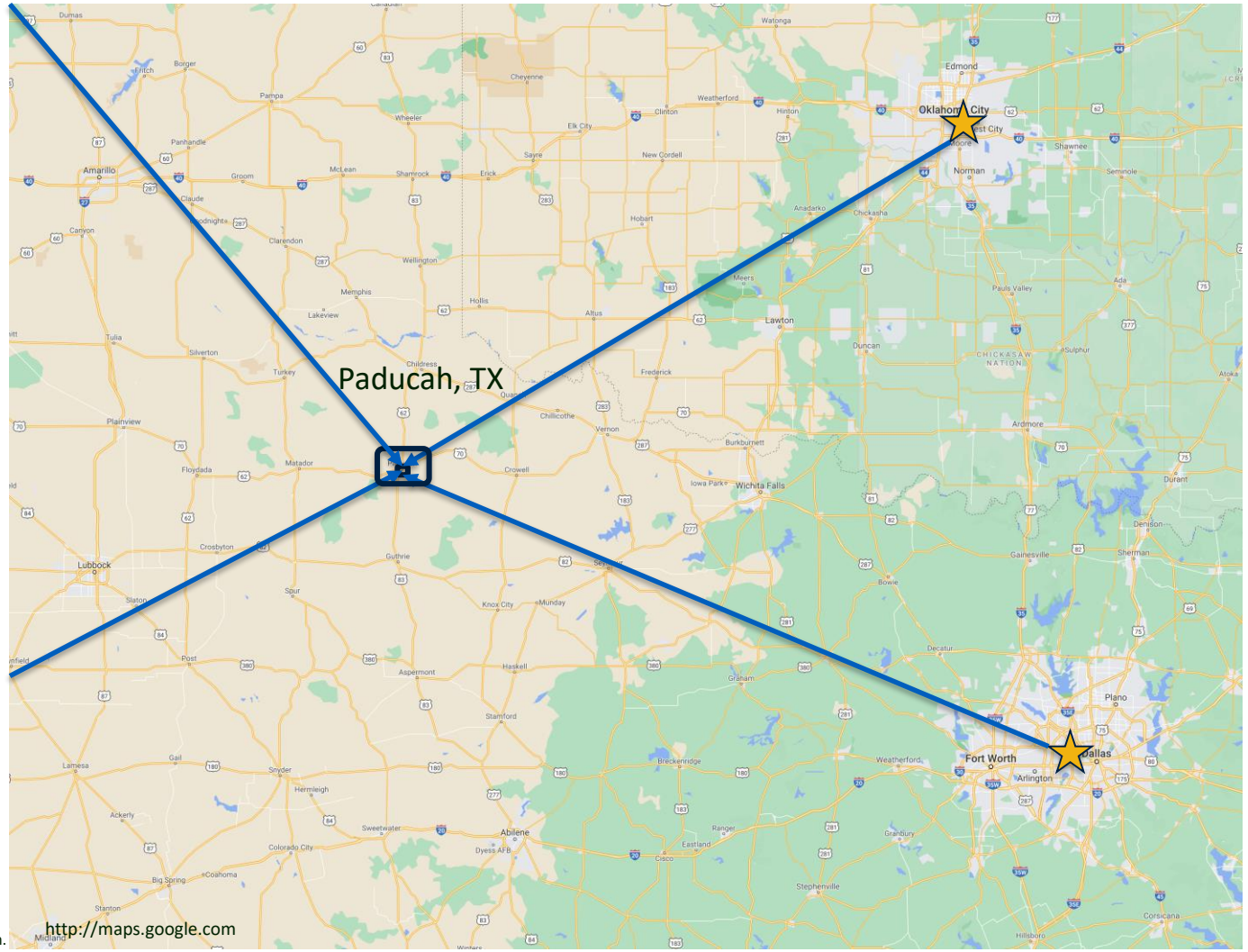
1. Is there sufficient access/bandwidth in each community?
2. Is it accessible by local providers?
3. Is it affordable?

Miles of Broadband



https://novascotia.ca/business/internet/

Middle Mile Links



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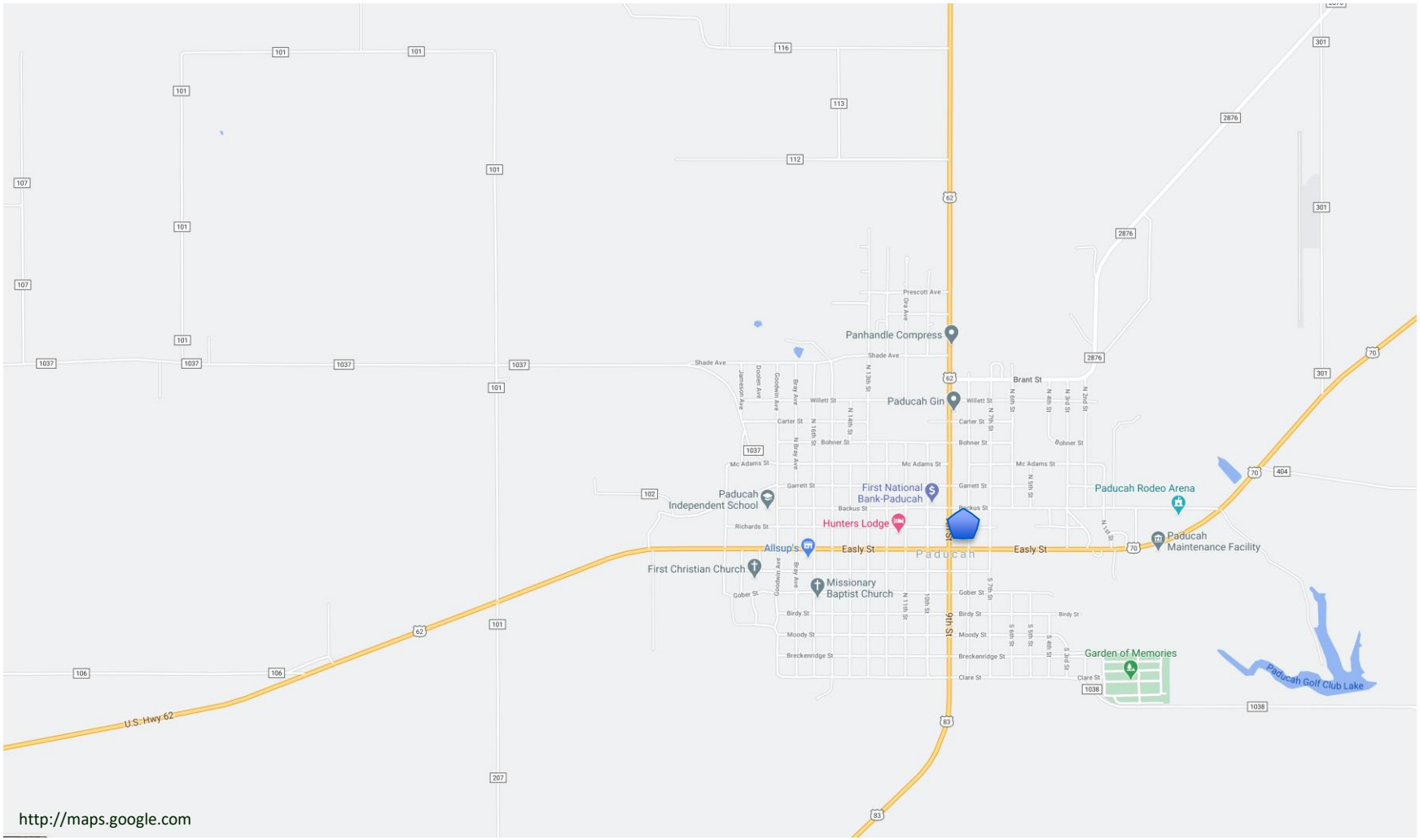
Last Mile Challenge



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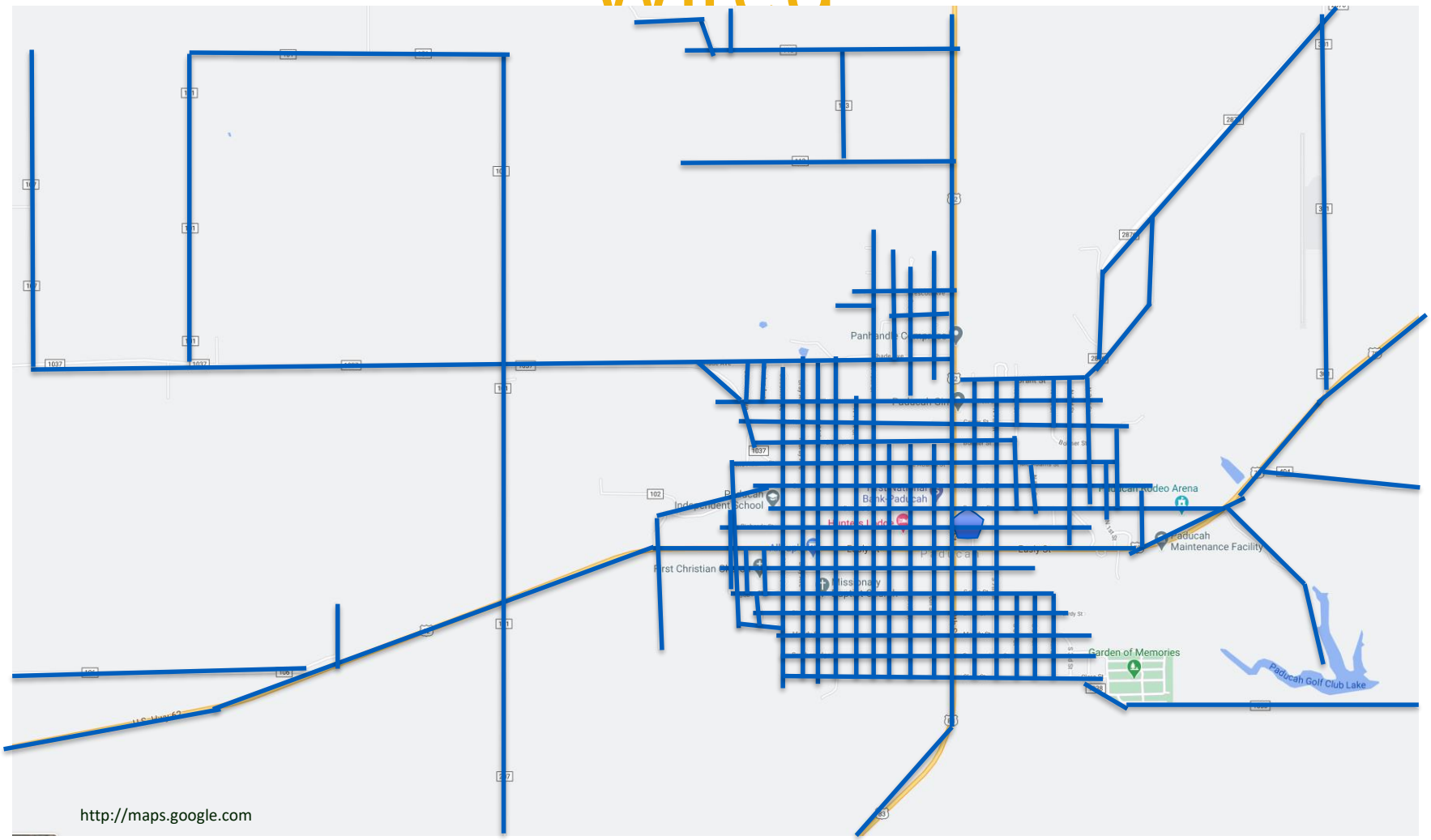
Last Mile Challenge: Legacy Wired



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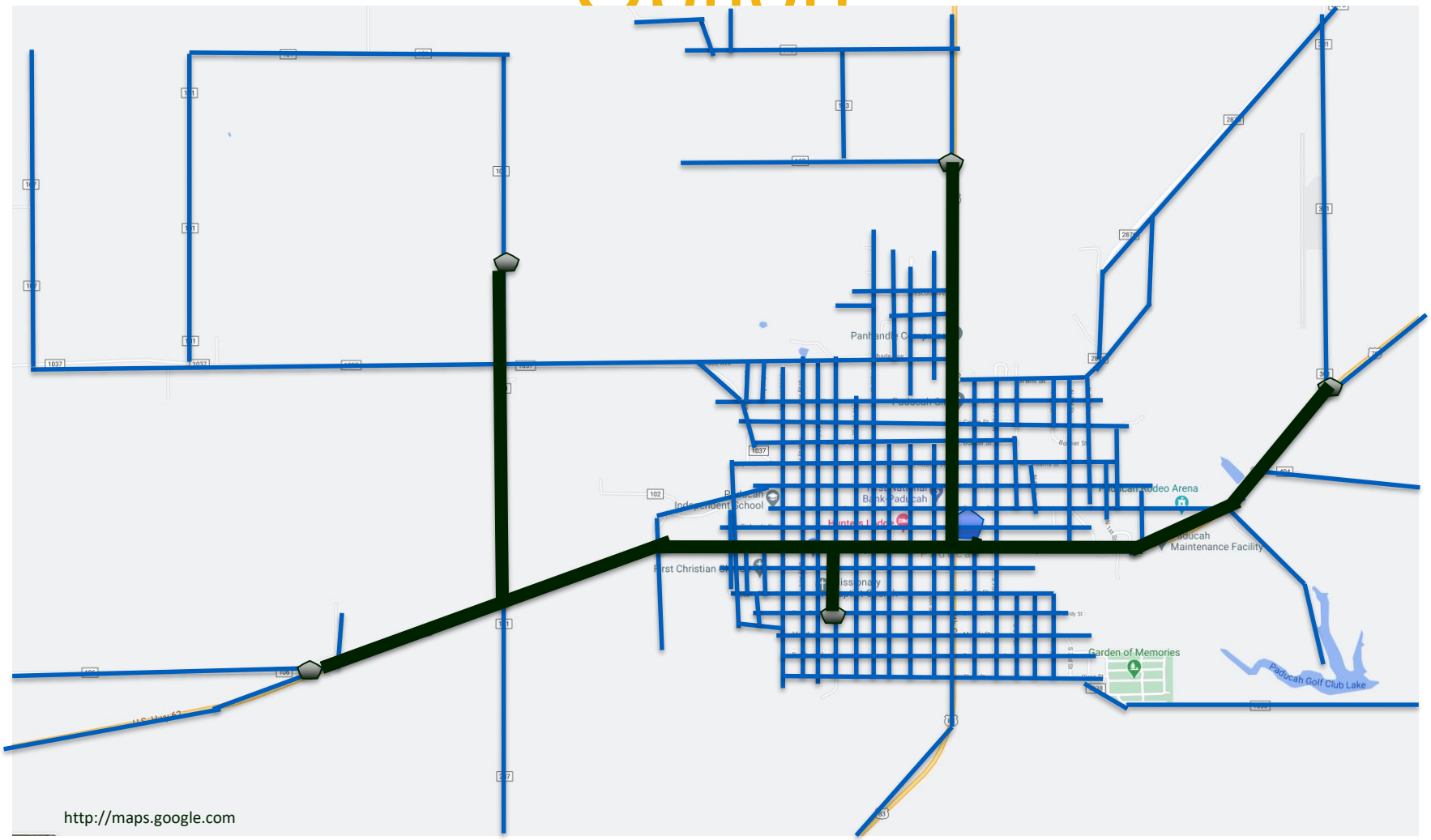
Last Mile Challenge: Wired Option



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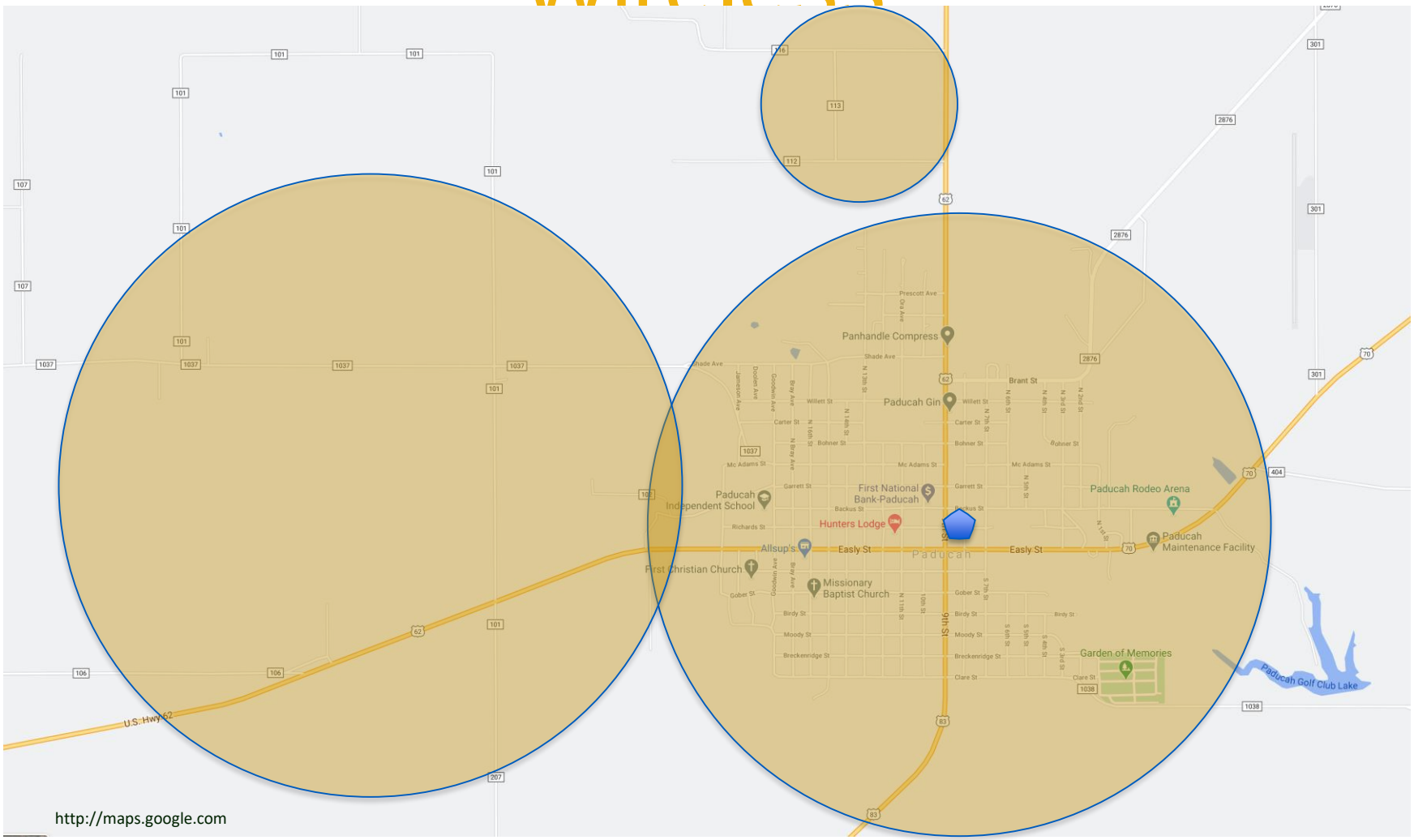
Last Mile Challenge: Fixed Wireless



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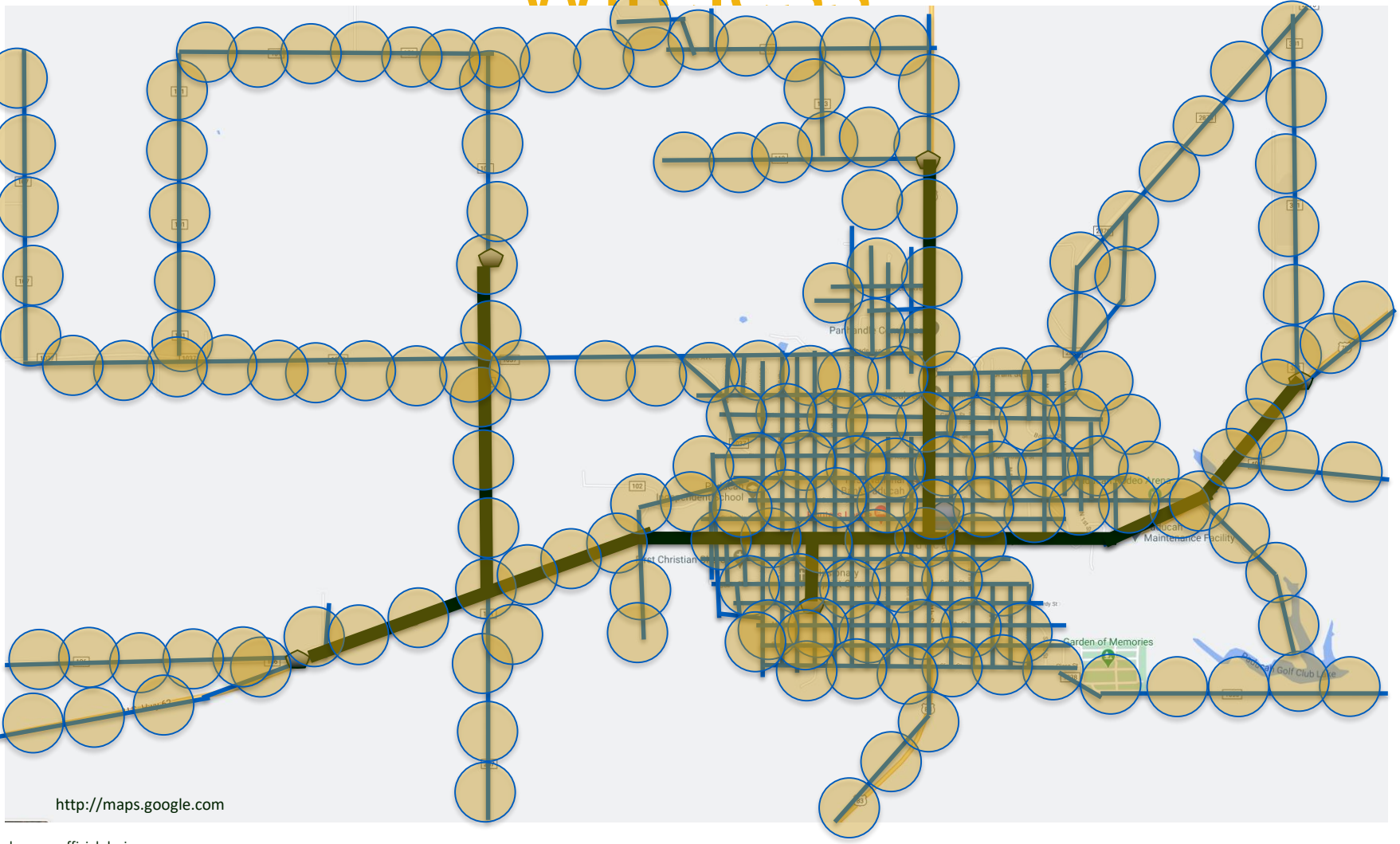
Last Mile Challenge: 5G Wireless



Not to scale or an official design.

Which Option makes sense?

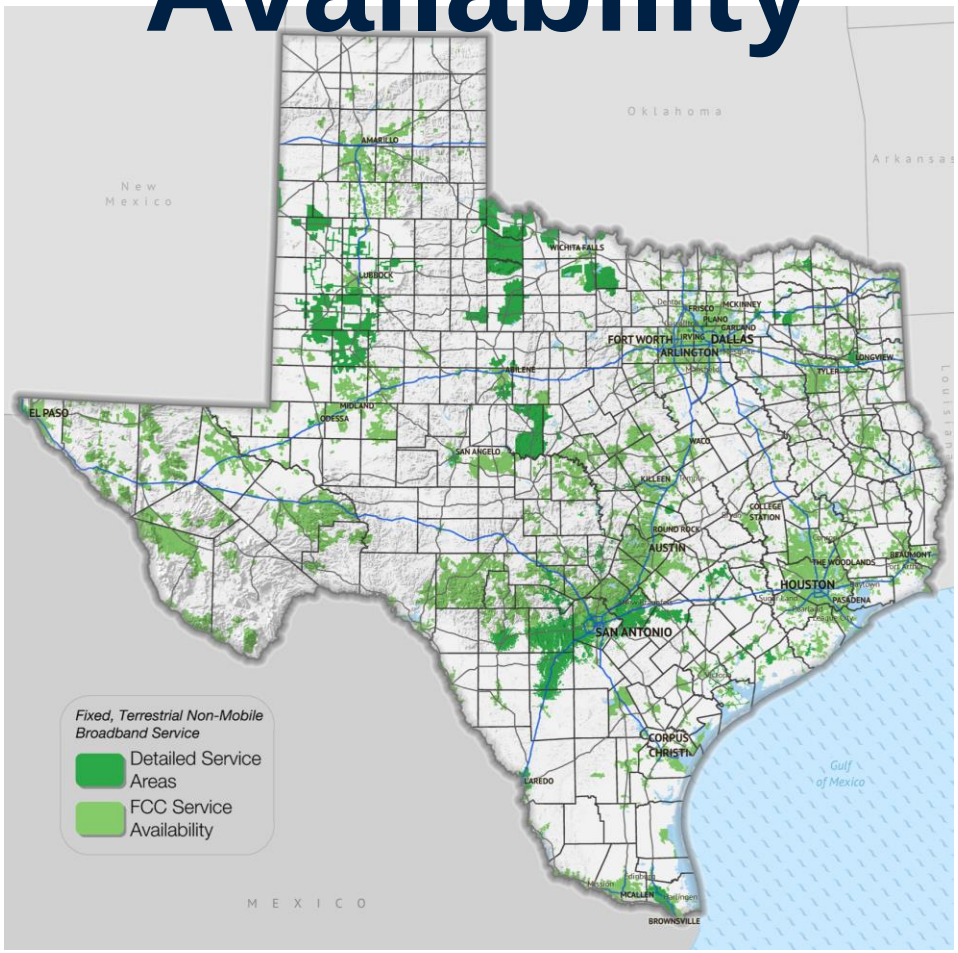
IT DEPENDS!!!

1. Who owns the poles?
2. Are towers available for your use?
3. Are there pole attachment agreements?
4. Can you get the right of way for buried cable?
5. What infrastructure exists in the community?
6. Can you make a business case for expansion?
7. Is public funding available for expansion?

Residential Broadband Availability

Current Landscape

CONNECTED NATION℠ Texas



https://connectednation.org/texas/wp-content/uploads/sites/19/2020/08/TX_Broadband_100x10Mbps_2020_07_31.jpg

Final Thoughts ….

How do you get broadband to the extremely rural areas?

How much bandwidth do you need? 1, 3, 10, 25, 100, 1000….

How many ISPs do you need in your community?

5G may be part of the solution, but probably not the only answer.

Wireless technologies still need fiber for backhaul.

No one technology will not fit every community.

MURRAY STATE
UNIVERSITY

Tab 4

- Legislature should create a properly resourced and staffed Texas Broadband Development office (location TBD) that has authority and responsibility to create a statewide and regional broadband plans, and to coordinate efforts by entities in the state to access federal broadband funding
- The legislature should considering amending the governing legislation over the TX USF to allow for expenditures to deploy broadband in unserved and underserved areas of TX
- The legislature should pass a law to establish a TX Broadband Development Fund. It can choose when and how monies will be deposited in the Fund. The control of the fund should rest with a gubernatorial appointed board staffed by the TX Broadband Development Office. Any use the fund by entities in Texas should require local coordination on broadband deployment between all stakeholders, and the expenditure of those funds must adhere to the statewide and regional broadband plans. Primary use of the fund should be to leverage federal and private monies to Texas

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Measure:

- State broadband mapping programs collect and validate granular data providing states with improved research capabilities and clear understanding of the needs for unserved or underserved communities in a timely fashion.
- Regular collection, analysis, and promotion of granular broadband data is critical for the creation and evaluation of public policies and private investments.

Plan:

- A state broadband plan would:
  - define goals and objectives
  - identify steps to achieve them
  - optimize future federal investments
  - provide a baseline against which to measure progress
  - provide a framework for local planning efforts

Coordinate:

- State broadband offices provide coordination, expertise, visibility, responsiveness, and resources to ALL stakeholders including ISPs.
- Suggested location: Comptroller's Office

The following items are my recommendations as part of what might be included in our report to the Legislature:

1. Determine needs of the Senior 50 yrs+ population and ensure needs are being addressed Similar to what the TEA is doing for Public Schools- internet service, devices and instruction. Federal Agencies or Pew Research Center may have information that could prove useful.
2. Establish an office in the PUC or other agency to handle Broadband affairs.
3. Formally acknowledge that Broadband service is a public utility (if this has not been done).
4. Gather information from California or other states regarding Broadband deployment and oversight. Determine what works and what doesn't.
5. Sustain the Texas USF and continue to support Rural Telephone Cooperatives encouraging build out into rural/underserved areas.

My recommended section of the report would read as follows:

The Council understands it has been the policy of Federal and State Legislatures that Universal Service in telephony is a fundamental tenet of all telecommunications regulatory structure. As facilities constructed for telephony are also used to connect homes with broadband, continued and uninterrupted funding for Universal Service Assistance to Telecommunications companies should continue uninterrupted, and the Legislature should consider ways to increase the funding and access to that funding in a technology neutral manner so that companies serving high cost areas may continue to do so.

My recommendation for the report to the Legislature and Leadership is the establishment of a Statewide Broadband office, the addition to legislation by adding broadband to the TX fund. I would also like to see some of the other state implementation Broadband plans and if possible have a breakdown of pro's and con's of how they were implemented and if we could do something similar in Texas.

Recommendation: To provide adequate support for this essential commodity, broadband, Texas should establish a well-staffed Statewide Broadband Office located in the Texas Office of the Governor or the Texas Department of Agriculture. The purpose of this Office should be development of a statewide broadband plan that is to be approved by the Legislature every biennium. In this report, the Office must:

- Determine how much broadband is being provided by Small and Rural Incumbent Local Exchange Companies (SRILEC), what is the technology being used and maximum upload and maximum downloads speeds and number and type of subscribers;
- Determine what is an acceptable speed for the definition of broadband in Texas;
- Develop and document insights as to why communities are undersubscribing and under-applying for funds and resources that can be used for broadband technology projects;
- Develop and share a state resource guide that could be used to identify funding and resources for broadband technology projects;
- Provide technical assistance to local entities seeking to access or improve access to broadband in underserved areas; and
- Gather insights on broadband-related issues and possible solutions from local community leaders

Two concepts are important.

- First, Texas Universal Service Fund should be seen as an investment in networks and services. It should be the commitment to a cost-effective network which assures that all parties enjoy competitive rates and services.
- Second, Texas Universal Service Fund should not result a windfall to specific companies, but instead is an offset for high costs that might otherwise result in inferior or no services in regions that cannot be served economically.

Recommendation: The purpose of the Texas Universal Service should be expanded so it can support the expansion of high-speed broadband and help rural healthcare providers access high-speed broadband as well as fund the Statewide Broadband Council.

My only recommendation is that we re purpose the USF to include broadband funding….Also the assessment fee paid by the customers should be matched with GR funds

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Broadband Recommendations:

1. Create Broadband Office within the Public Utility Commission to develop strategies for unserved areas of the state, promote public and private broadband service goals, assist in local and regional broadband planning, develop statewide goals for unserved or underserved areas, and serve as an information clearinghouse for federal, state, and private programs that offer broadband assistance.
2. Create and fund a Broadband Grant Program for the state that is housed in the Broadband Office to provide services and planning grants to unserved or underserved areas.
3. Create a voluntary program that promotes coordination through the laying of water pipelines with the laying of broadband fiber with the Texas Water Development Board since digging trenches is usually one of the most expensive parts of providing broadband to any area.
4. Develop a Statewide Broadband Plan that promotes coordination through all political subdivisions (city, county, schools, hospital districts, etc…) and civic organizations to ensure coordinated broadband efforts through grants or other means are taking place. This will also help ensure that waste (such as laying fiber on top of already placed fiber) is not taking place in order to maximize limited broadband funding.

RE: Recommendations….I imagine most of my suggestions are already considered, but here are my thoughts.

Clarifying the difference between access and adoption is critical to understanding the challenges ahead.

This leads to a better understanding of historic maps showing “access available” by census block even if only 1 entity has access is less than helpful.

This also highlights that there is no clear business model for ISPs to improve access to rural Texas as cost is still greater than return.

This also emphasizes that many urban/ suburban people may have theoretical access, but cannot afford to access services.

Any potential strategies moving forward should be to support a viable business model to engage ISP vendors to build out infrastructure and make offerings more affordable. While it’s unlikely that ISPs will simply lose money on development or offer services cheaper for no reason….focusing on building out more robust infrastructure to “city centers” like schools, libraries, public facilities would be a step forward.

The USF is also a helpful template moving forward not necessarily to make solvent again, but as a template for a public/ private obligation to devote some portion of the monies generated into infrastructure development in the places that need it most (not just rural).

The amazing awareness/ utility from the GIS maps is also something to be touted with the caveat that the data in is not perfect.

What would be even better would be to overlap infrastructure investment across domains to better understand historic investment.

i.e. – knowing that $X was spent on healthcare buildout and $Y on education, etc. will identify redundant investment and potential areas to collaborate on (e.g. school based telehealth programs) or offering a public meeting space to assist with virtual learning (rather than under a tree).

Said another way, emphasizing that we should all see a shared "yard" rather than fencing off our specific portions is a more impactful way to use limited and inadequate funds.

Not sure spending more to "study" the problem is a useful use of funds with the exception of the GIS maps as they show exactly how we're doing.

RE: schools, Hotspot distribution should not be described as a "win". It's a stop gap measure that will ultimately lead to additional and unsustainable cost that the families will ultimately bear.

Have other comments, but do not want to muddy the message.

_____