Office of the Governor
Economic Development & Tourism

Governor's Broadband Development Council Meeting

April 15, 2021

AGENDA
Governor's Broadband Development Council

April 15, 2021
1:30 PM

VIDEOCONFERENCE MEETING

Governor's Broadband Development Council (" Council ") 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_ZjNmN2FjYWMtOGVjMy00ZjJjLThkNjAtZGZmMjQ4MjFlZWFh%40thread.v2/0?context=%7b%22Tid%22%3a%2254cb5da6-c734-4242-bbc2-5c947e85fb2c%22%2c%22Oid%22%3a%22bc6eb630-bc65-4377-b472-df8f2396b720%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 March 18, 2021 (Tab 1).

IV. Comments by Texas legislator 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 – Rep. Charles “Doc” Anderson, *Member*, Texas House of Representatives

V. Comments by UT Austin 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) – Sharon Strover, *Professor*, UT Austin; Kenneth Flam, *Professor and Dean Rusk Chair*, The Lyndon B. Johnson School of Public Affairs, UT Austin

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

VII. 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.

VIII. Adjournment

Link to April 15, 2021 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 2 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 March 18, 2021 Meeting

Videoconference Meeting

1:30 PM

VIDEOCONFERENCE MEETING

GOVERNOR'S BROADBAND DEVELOPMENT COUNCIL MEMBERS IN ATTENDANCE:

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

STAFF IN ATTENDANCE:

Adriana Cruz, Philip Rocha, Fauye Bennett, Michael Treyger, Joe Magruder, Larry McManus, Joseph Benke/Lindsey Aston

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 10:00 AM. A quorum was present online.

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

Chairman Sproull welcomed the Council and mentioned that the Governor's EDT Conference Room would be open and available for some members of the council to attend the meeting in person, with social distancing in mind.

Agenda Item III. DISCUSSION AND POSSIBLE ACTION ON APPROVAL OF MINUTES FROM THE COUNCIL MEETING ON JANUARY 28, 2020

The Council reviewed minutes from the meeting held January 28th, 2021.

ACTION: Motion to approve the January 28th meeting minutes by Greg Pittman, seconded by Frank Moreno. Motion to approve the minutes carried unanimously.

Agenda Item IV. **COMMENTS BY REPRESENTATIVE ASHBY 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 INFORMATION RELATING TO DISTRIBUTION OF BROADBAND IN UNSERVED AREAS OF TEXAS, AND COUNCIL REVIEW, DISCUSSION, CONSIDERATION, AND/OR POSSIBLE ACTION REGARDING SAME**

Representative Ashby provided comments in support of the efforts of the council and expressed the legislature's emphasis on expanding broadband in Texas. Representative spoke on the process of HB 5 and the impact the Governor's Broadband Development Council had on the drafting of the bill.

Agenda Item V. **COMMENTS BY PEW CHARITABLE TRUST STAFF PROVIDING INFORMATION RELATING TO COUCIL'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**

Anna Reid from the Pew Charitable Trust shared information to the council regarding practices from other states' broadband expansion efforts that have been effective. Ms. Reid focused on last mile infrastructure and related grants. Ms. Reid discussed specific examples from other state and federal programs that have been effective in the past and answered questions from council members.

Agenda Item VI. **COMMENTS BY CHAIRMAN SPROULL RELATING TO PROSPECTIVE COUNCIL MEETING SCHEDULE FOR THE REMAINDER OF THE CALENDAR YEAR, AND COUNCIL REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION REGARDING SAME**

Chairman Sproull laid out a plan to meet every third Thursday of each month, with an exception. Chairman Sproull suggested April 15th for the next meeting and proposed that the council not meet in October, November or December.

Agenda Item VII. **REVIEW, DISCUSSION, CONSIDERATION AND/OR POSSIBLE ACTION ON COMMITTEE NEXT STEPS FOR FOLLOWING MEETINGS – CHARIMAN SPROULL**

Suggestion from Chairman Sproull that the council members propose speakers for future meetings and suggest meeting topics.

Agenda Item VIII. **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.

-Comment from Mr. Paul Donovan expressing support and offering his assistance to the council.

-Comment from Mr. Andreas Saldana from T-Mobile offering to support the council.

Agenda Item IX. ADJOURNMENT

Chairman Sproull called the meeting to a close at 2:46 PM

_____ _____

Bill Sproull, Chair Date

Tab 2

APRIL 2021

TEXAS
The University of Texas at Austin

THE STATE OF DIGITAL INCLUSION IN TEXAS

The University of Texas at Austin
Technology & Information Policy Institute
Moody College of Communication

SHARON STROVER
Professor, The University of Texas at Austin
Texastipi.org

Issues – the Agenda

- Rural and metro digital inclusion data –wireline connections & devices
- Quality of Service issues – especially for economic development
- Moving toward policy initiatives
  - Targeting sector (health, education, libraries)
  - Targeting populations (inner city; rural)
  - Cultivating digital literacy
  - Creating long-lasting infrastructure-based solutions

Data & Definitions

- **Data**: American Community Survey (ACS) 5-Year Public Use Microdata Area (PUMA) Data (2015-2019), released in January 2021.
  - ACS: A nationwide survey conducted by the U.S. Census Bureau that helps analysis at the state level and geographies within a state. 5-year estimates combines 5 consecutive years of ACS data to produce multiyear estimates for geographic areas with fewer than 65,000 residents.
  - PUMAs: Non-overlapping, statistical geographic areas that partition each state or equivalent entity into geographic areas containing no fewer than 100,000 people each.
  - Household-level analysis (with merged age and race factors from person-level data).
- **Rural and Urban Classification**: Based on metro population shares for each PUMA. A metro flag (=1) for PUMAs that are majority metro (> 50%) or a rural flag (=0) otherwise.
  - As defined by Economic Research Service (ERS) at the U.S. Department of Agriculture.
- **Lower Income Households**: Texas households whose annual incomes are $60,000 or less, below the calculated state median of $63,600 from the data.
- **Metropolitan Areas**: The five aggregated metropolitan centers that the 2015-2019 ACS PUMAs data allows, joining the criteria set by the Missouri Census Data Center (MCDC).

Sample Demographics

- Racial distribution: 77.5% of the sample were Whites; 9.7% African Americans; 4.6% Asian Americans; 0.6% Native Americans; 7.6% of some other races or two or more races. Hispanics (of any race) were 33.6% of the sample.
- Age: 78.2% of the sample is age 18 and 64, 13% is age between 64 and 74, and 8.9% is aged 75 and older.
- Median annual household income of $63,600 (Mean income of $90,700).
- Metropolitan areas (counties) included for the analysis: Dallas, Tarrant, Harris, Travis, and Bexar.

Adoption of Broadband and Digital Devices in Texas

	Computer (desktop or laptop)	Wireline Broadband	Tablet Computer	Smartphone	Households
Metro, lower income	63.60%	72.4%	46.4%	72.8%	199,169
Metro, upper income	91.40%	85.7%	75.5%	91.8%	233,866
Rural, lower income	55.20%	58.8%	38.5%	63.8%	36,858
Rural, upper income	84.00%	66.1%	66.6%	87.3%	27,922
All Texas					
State of Texas	77.20%	78.3%	60.6%	81.8%	497,815

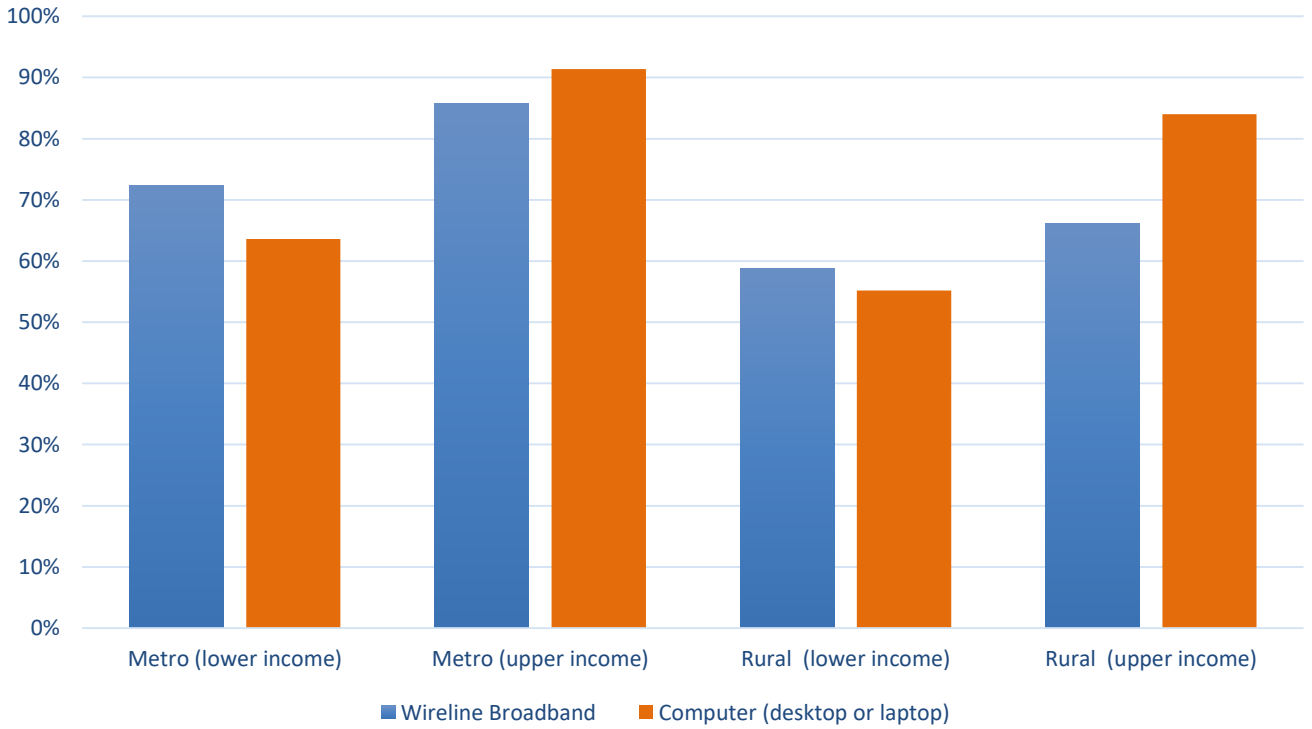
Lack of Adoption of Broadband and Digital Devices in Texas

	Computer (desktop or laptop)	Wireline Broadband	Tablet Computer	Smartphone	Households
Metro, lower income	72,433	40,017	106,764	54,269	199,169
Metro, upper income	20,153	31,498	57,252	19,261	233,866
Rural, lower income	16,521	9,921	22,656	13,327	36,858
Rural, upper income	4,475	8,383	9,326	3,549	27,922
All Texas					
State of Texas	113,582	89,819	195,998	90,406	497,815

Broadband and Computer Adoption by Income

	Less than $25K	Between $25K and $50K	Between $50K and $75K	Between $75K and $125K	Greater than $125K
Metro					
Wireline Broadband	67.5%	73.5%	79.4%	83.9%	89.5%
Computer	50.8%	68.9%	81.9%	89.9%	96.1%
Rural					
Wireline Broadband	54.4%	60.0%	63.6%	65.8%	68.1%
Computer	42.2%	61.8%	74.8%	83.5%	90.0%
All Texas					
State of Texas					
Wireline Broadband	65.6%	71.6%	77.4%	81.8%	87.8%
Computer	49.4%	67.8%	81.0%	89.2%	95.6%

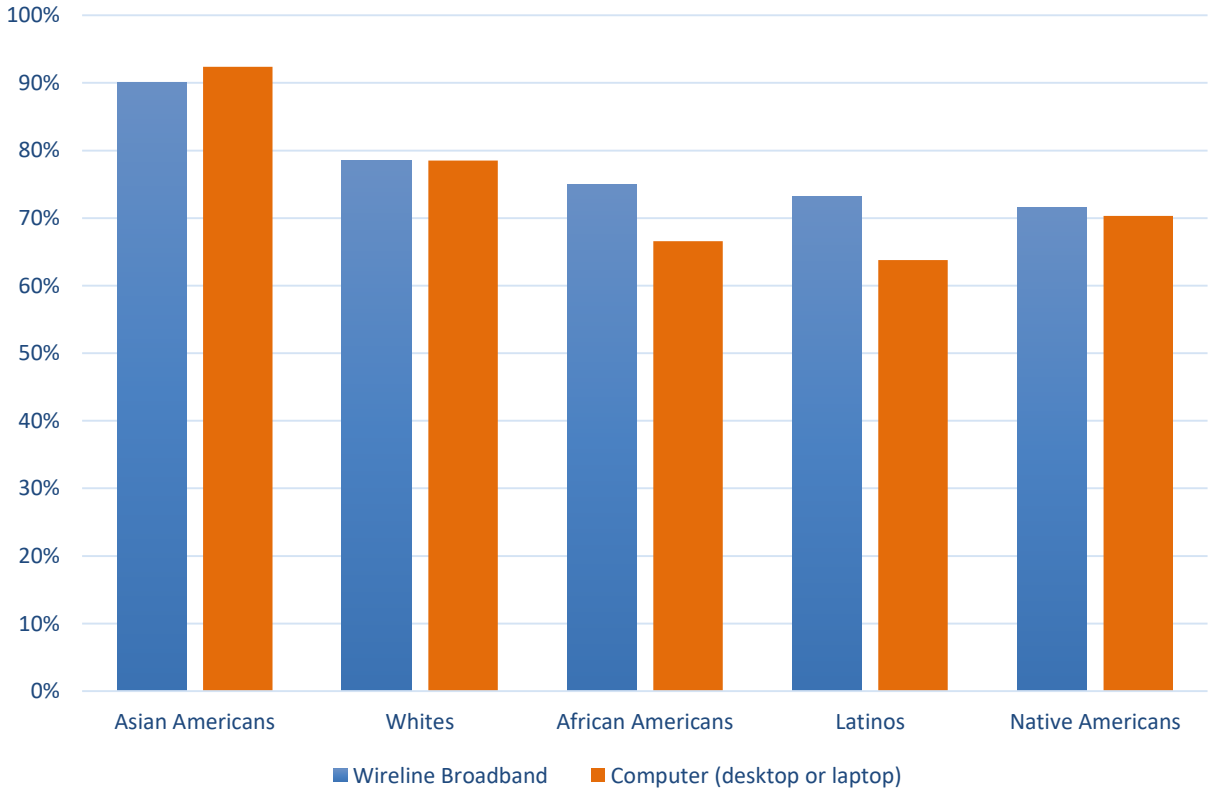
Region by Income Broadband and Computer Adoption



Digital Adoption by Race and Ethnicity

	Asian Americans	Non-Hispanic Caucasian	African Americans	Latinos	Native Americans
Wireline Broadband	90.0%	78.5%	75.0%	73.2%	71.6%
Desktop or Laptop	92.4%	78.5%	66.6%	63.8%	70.3%
Tablet	74.8%	61.4%	52.3%	53.9%	59.3%
Tablet or Laptop	94.7%	83.7%	73.4%	72.4%	78.2%
Smartphone	92.3%	82.0%	76.3%	80.4%	80.4%

Broadband and Computer Adoption by Race and Ethnicity



Digital Adoption by Age

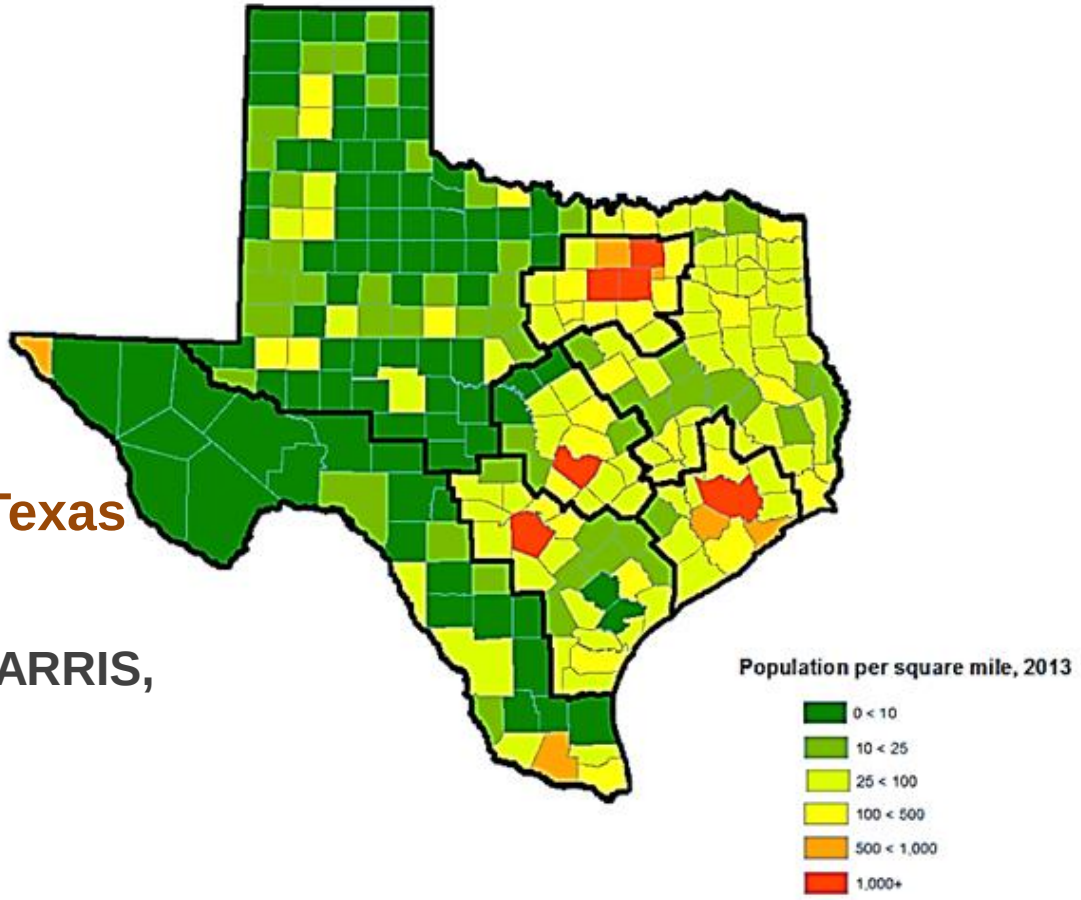
	Age 18 to 64	Age 65 to 74	Age 75 and over
Wireline Broadband	79.3%	75.6%	74.5%
Desktop or Laptop	80.8%	74.3%	58.0%
Tablet	66.5%	52.5%	33.7%
Tablet or Laptop	86.4%	78.9%	62.6%
Smartphone	89.2%	71.9%	47.6%

Digital Adoption by Households with Children Under 18

	Households with children under 18	Low-income households with children under 18	African American households with children under 18	Hispanic households with children under 18
Wireline Broadband	79.3%	69.0%	77.0%	73.5%
Desktop or Laptop	81.9%	66.0%	75.6%	70.1%
Tablet	73.1%	59.1%	65.6%	64.1%
Tablet or Laptop	88.8%	77.8%	84.2%	81.0%
Smartphone	92.1%	86.9%	88.4%	89.0%

Digital Inclusion of Texas Metropolitan Areas

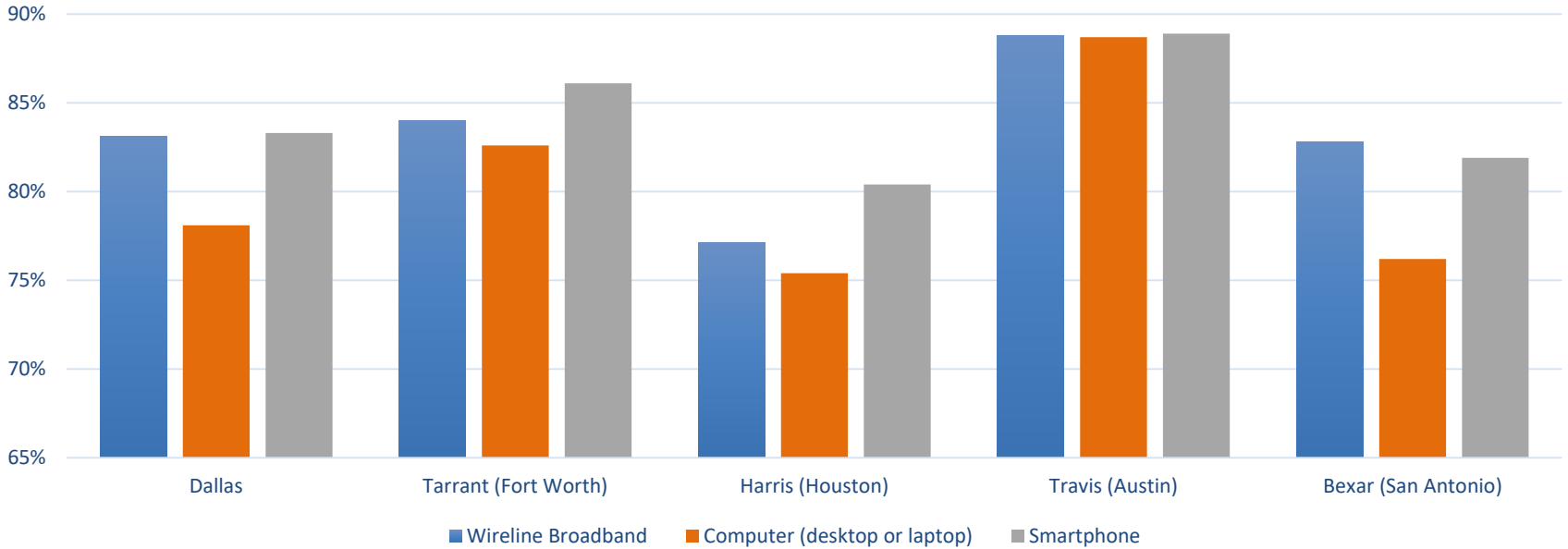
DALLAS, TARRANT, HARRIS, TRAVIS, AND BEXAR



Adoption of Broadband and Digital Devices Across Texas Metropolitan Areas

	Computer (desktop or laptop)	Wireline Broadband	Tablet Computer	Smartphone	Households
Dallas	78.1%	83.1%	60.8%	83.3%	46,782
Tarrant (Fort Worth)	82.6%	84.0%	65.7%	86.1%	35,436
Harris (Houston)	75.4%	77.1%	58.8%	80.4%	150,619
Travis (Austin)	88.7%	88.8%	69.0%	88.9%	22,830
Bexar (San Antonio)	76.2%	82.8%	61.1%	81.9%	33,606
State of Texas	77.20%	78.3%	60.6%	81.8%	497,815

Adoption of Broadband and Computer Across Texas Metropolitan Areas



Broadband and Computer Adoption by Income

	Less than $25K	Between $25K and $50K	Between $50K and $75K	Between $75K and $125K	Greater than $125K
Dallas					
Wireline Broadband	70.3%	75.2%	82.1%	87.8%	92.5%
Computer	51.7%	67.4%	80.9%	89.9%	96.4%
Tarrant					
Wireline Broadband	68.6%	76.4%	83.7%	88.0%	92.1%
Computer	56.9%	71.9%	84.8%	92.1%	96.5%
Harris					
Wireline Broadband	64.7%	70.9%	76.7%	81.1%	87.1%
Computer	49.0%	67.0%	80.2%	88.2%	94.9%
Travis					
Wireline Broadband	79.4%	82.1%	86.6%	91.1%	94.5%
Computer	70.6%	79.3%	88.5%	94.0%	97.7%
Bexar					
Wireline Broadband	69.6%	77.1%	82.8%	87.5%	91.8%
Computer	47.3%	68.2%	80.5%	89.7%	96.3%
State of Texas					
Wireline Broadband	65.6%	71.6%	77.4%	81.8%	87.8%
Computer	49.4%	67.8%	81.0%	89.2%	95.6%

Digital Adoption of Households with Children by Income

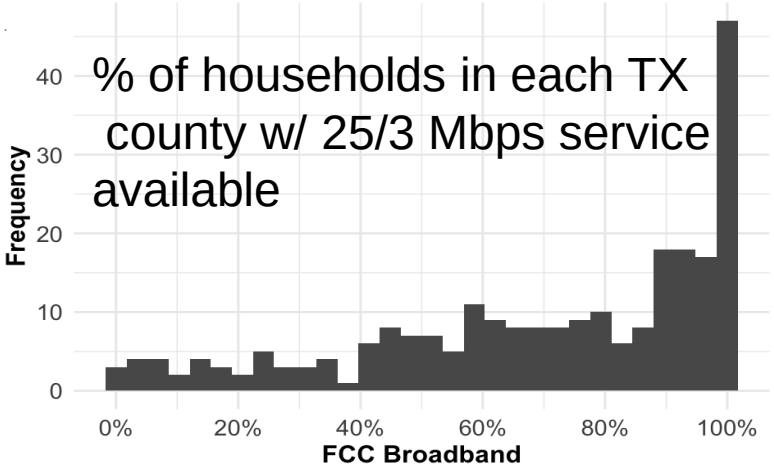
	Computer (desktop or laptop)	Wireline Broadband	Tablet Computer	Tablet or Laptop	Smartphone
Dallas					
Lower income	63.5%	71.1%	55.4%	75.0%	85.3%
Upper income	91.4%	88.9%	80.7%	95.0%	94.8%
Tarrant (Fort Worth)					
Lower income	70.2%	73.3%	62.5%	81.2%	90.4%
Upper income	94.0%	90.6%	84.3%	96.9%	96.2%
Harris (Houston)					
Lower income	66.2%	68.4%	58.5%	77.7%	85.9%
Upper income	84.0%	84.0%	81.3%	95.5%	95.0%
Travis (Austin)					
Lower income	67.9%	75.5%	63.7%	80.8%	86.8%
Upper income	95.4%	93.1%	85.4%	97.7%	96.4%
Bexar (San Antonio)					
Lower income	67.6%	75.8%	62.0%	79.9%	88.5%
Upper income	93.1%	89.5%	83.7%	96.6%	95.9%
State of Texas					
Lower income	66.0%	69.6%	59.1%	77.8%	86.9%
Upper income	92.2%	85.0%	82.2%	95.9%	95.5%

Digital Adoption by Race and Ethnicity

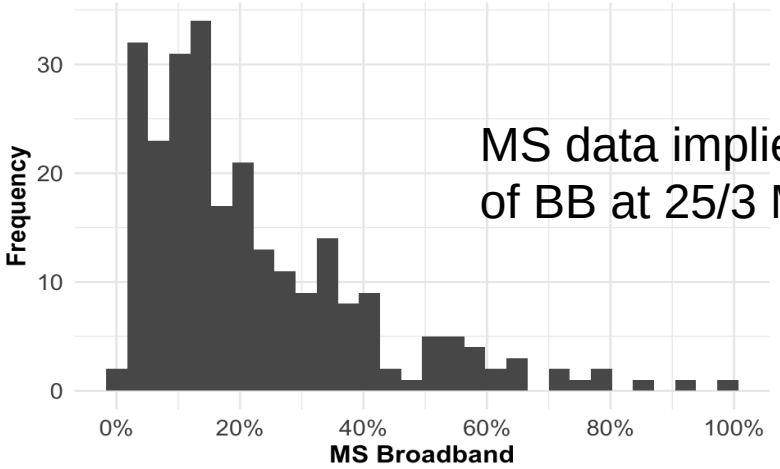
	Asian Americans	Whites	African Americans	Latinos	Native Americans
Dallas					
Wireline Broadband	89.1%	85.0%	75.8%	74.1%	77.0%
Computer	92.3%	81.2%	66.2%	64.0%	72.1%
Tarrant					
Wireline Broadband	88.1%	85.7%	75.7%	75.0%	75.6%
Computer	90.8%	95.3%	70.8%	68.9%	80.7%
Harris					
Wireline Broadband	88.3%	77.5%	73.3%	72.9%	70.1%
Computer	90.2%	77.5%	64.0%	64.5%	66.0%
Travis					
Wireline Broadband	92.6%	90.0%	79.2%	80.5%	84.4%
Computer	95.8%	90.8%	73.4%	73.8%	73.0%
Bexar					
Wireline Broadband	85.6%	83.5%	80.9%	78.9%	74.6%
Computer	88.4%	76.9%	72.5%	67.0%	67.6%
State of Texas					
Wireline Broadband	90.0%	78.5%	75.0%	73.2%	71.6%
Computer	92.4%	78.5%	66.6%	63.8%	70.3%

Comparing FCC, Microsoft, M-Lab and ACS Data

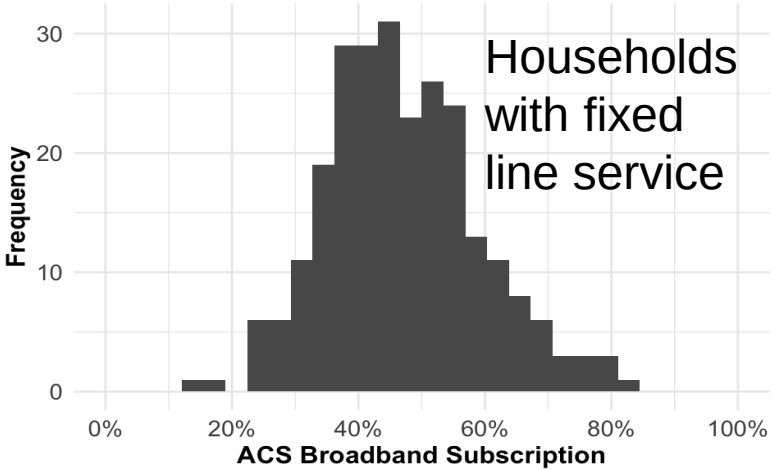
Broadband Measure Distribution



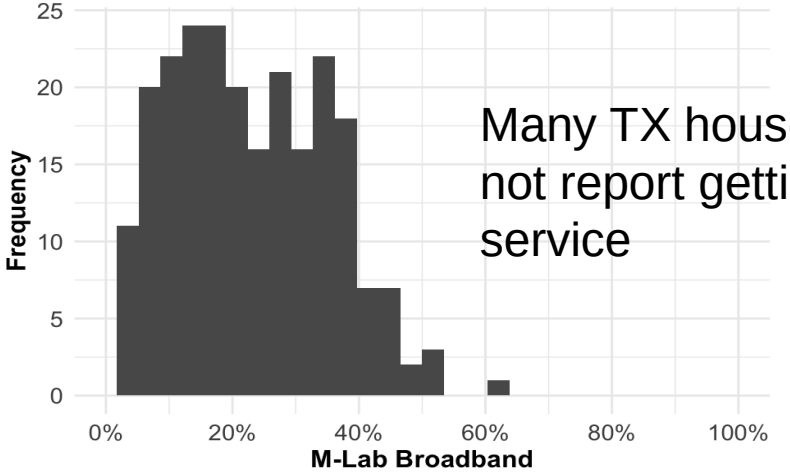
% of households in each TX county w/ 25/3 Mbps service available



MS data implies actual *use* of BB at 25/3 Mbps

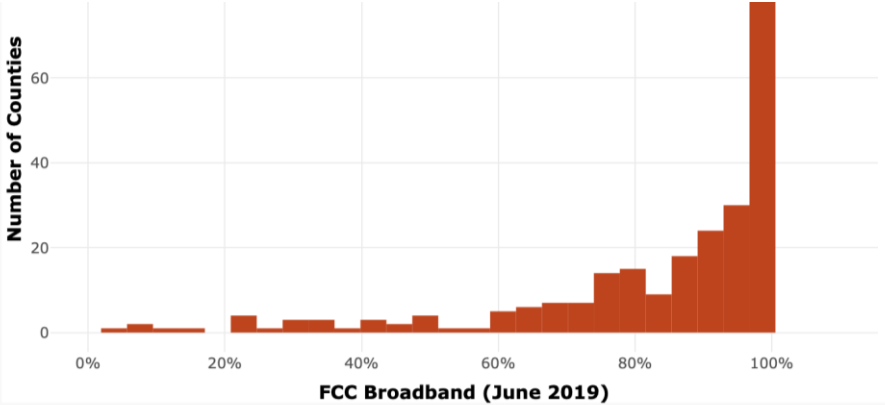


Households with fixed line service



Many TX households do not report getting 25/3 service

FCC Broadband Availability v. Microsoft Broadband QoS in Texas

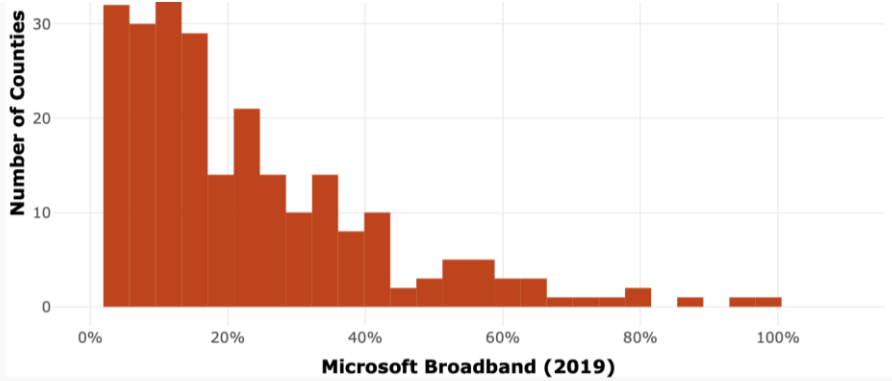


26

Counties out of 254 had less than 50% broadband availability

1%

of Texas population live in counties with less than 50% broadband availability



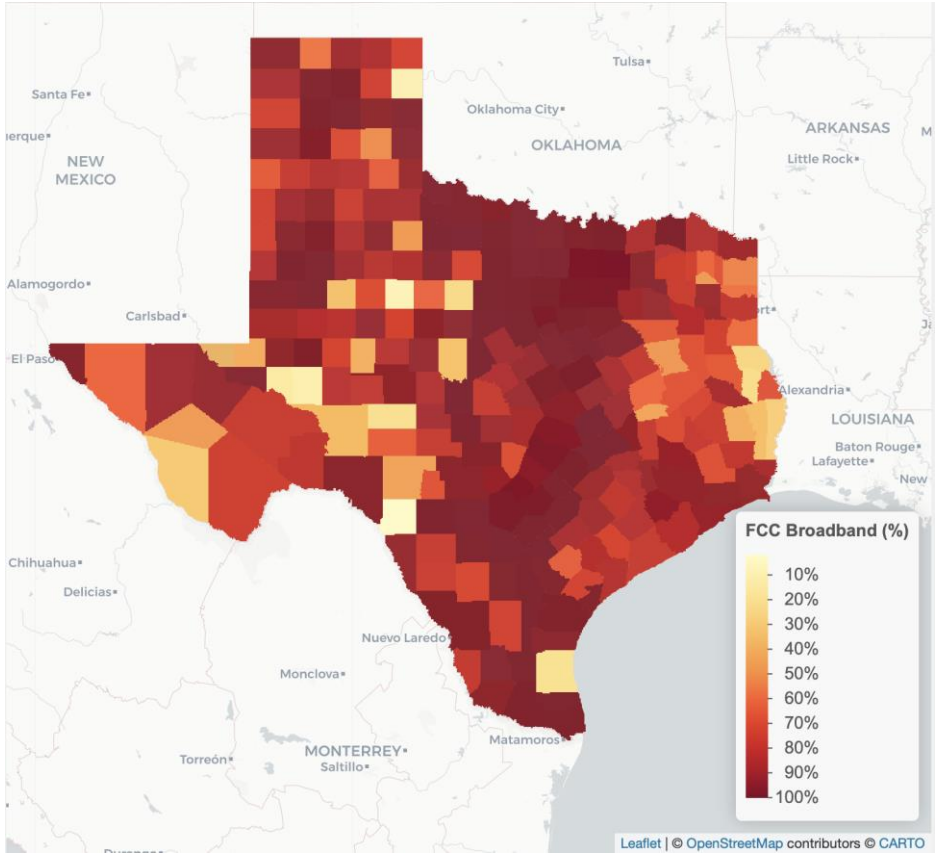
229

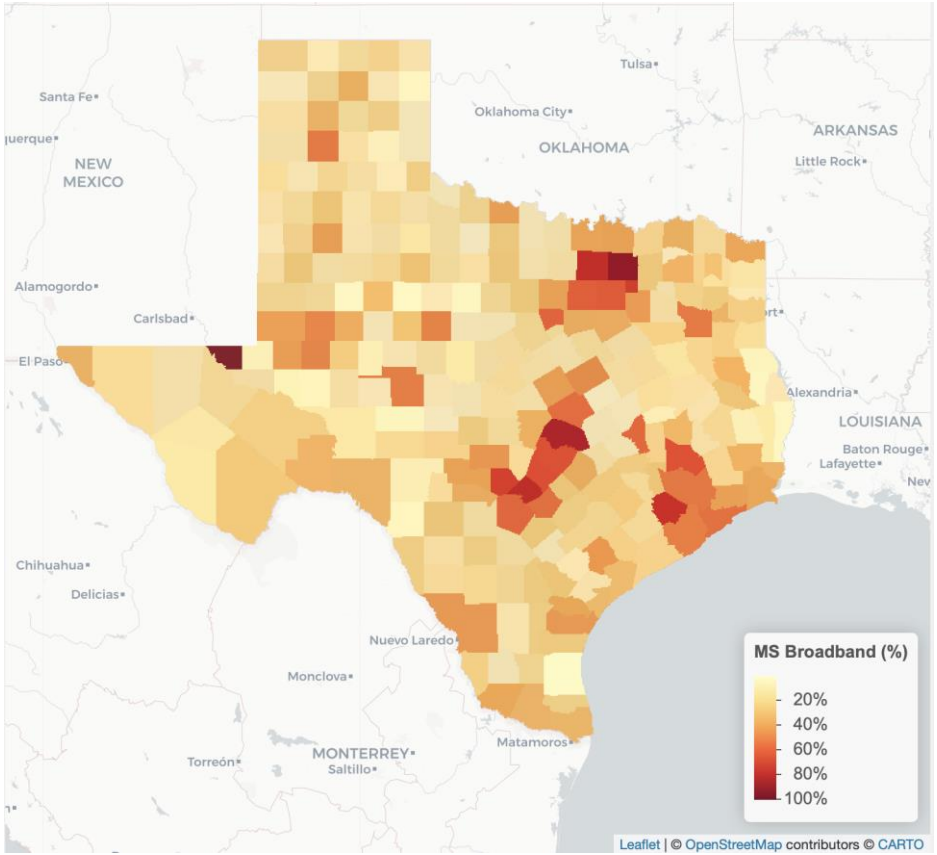
Counties out of 254 had less than 50% of population use broadbandat 25/3Mbps

33%

of Texas population live in counties where less than 50% of its population use broadband at 25/3Mbps

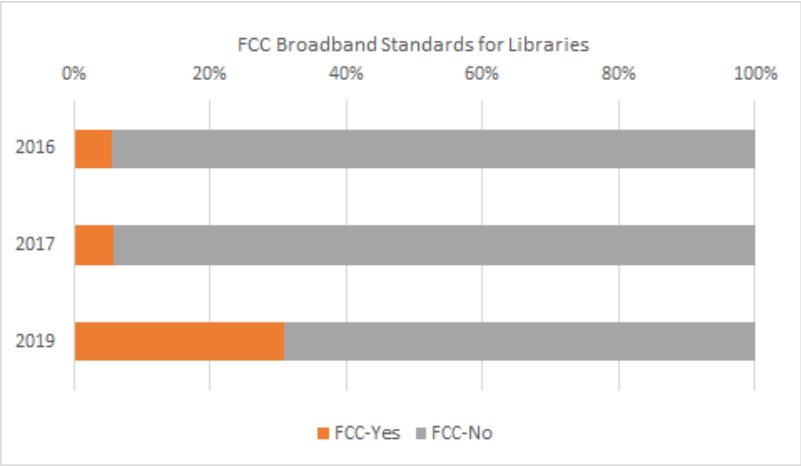
FCC Broadband Availability v. Microsoft Broadband QoS in Texas





Libraries, Schools are Public Spaces
"Social Infrastructure"

Speed tests for TX libraries, 2020
Source: TSLAC



- ✓ Better library broadband is needed!
- ✓ Smaller wifi use decreases during COVID in rural libraries even if speeds are slower (Source: WhoFi 2020)

People use libraries for
- ✓ Computer access
- ✓ Wifi
- ✓ Help with forms, email & all things digital
- ✓ Obtain reliable information

<u>FCC standard for libraries is 100 Mbps service for libraries serving <50,000, and 1 Gbps for >50,000</u>

Issues

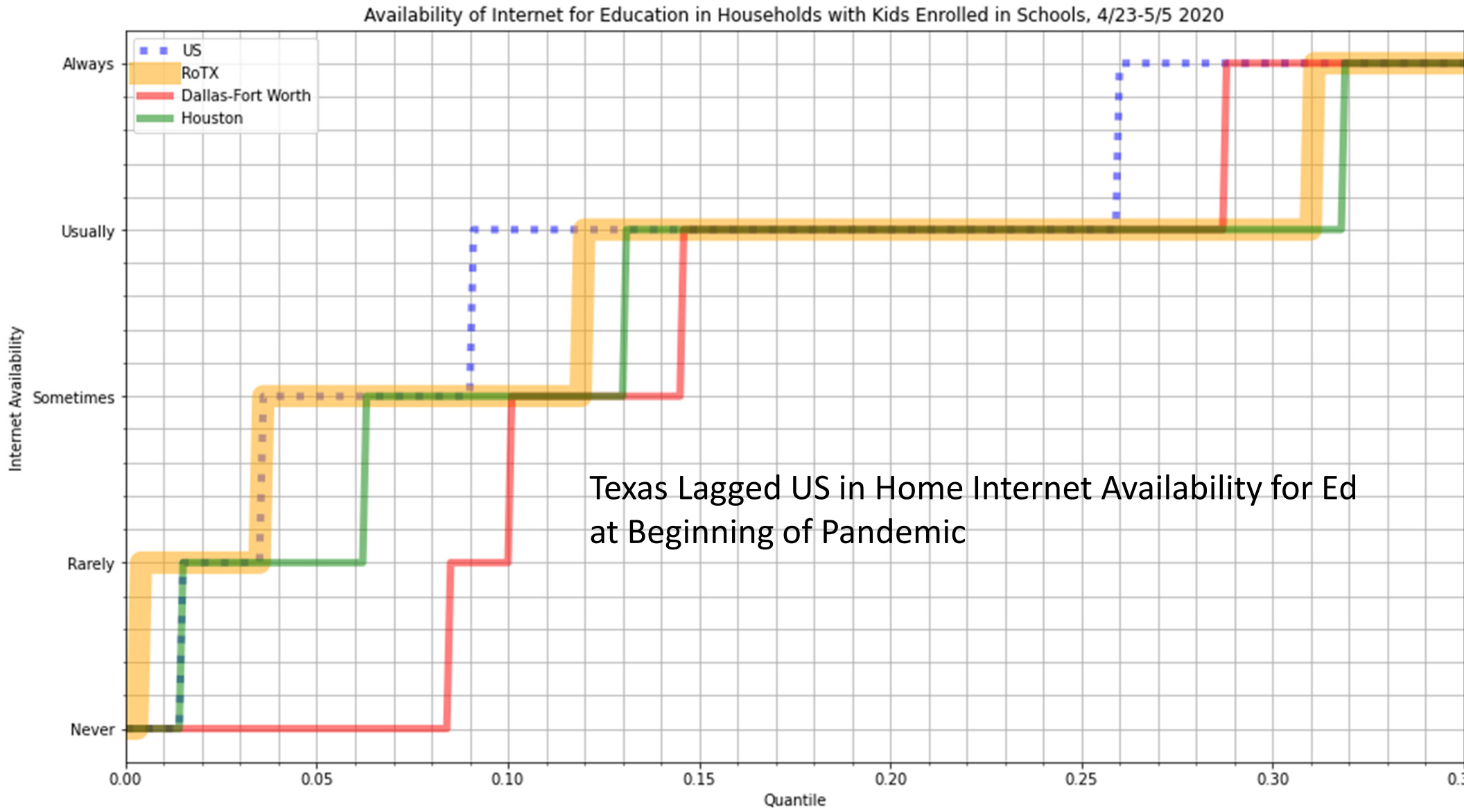
- Rural and metro digital inclusion data
- Quality of Service issues – especially for economic development
- **Moving toward policy initiatives**
  - **Targeting sector (health, education, libraries, small and medium-sized business)**
  - **Targeting populations (inner city; rural)**
  - **Cultivating digital literacy**
  - **Creating long-lasting infrastructure-based solutions**
  - **Linking information resources, Internet-based transactions and community resiliency, especially for disaster events**

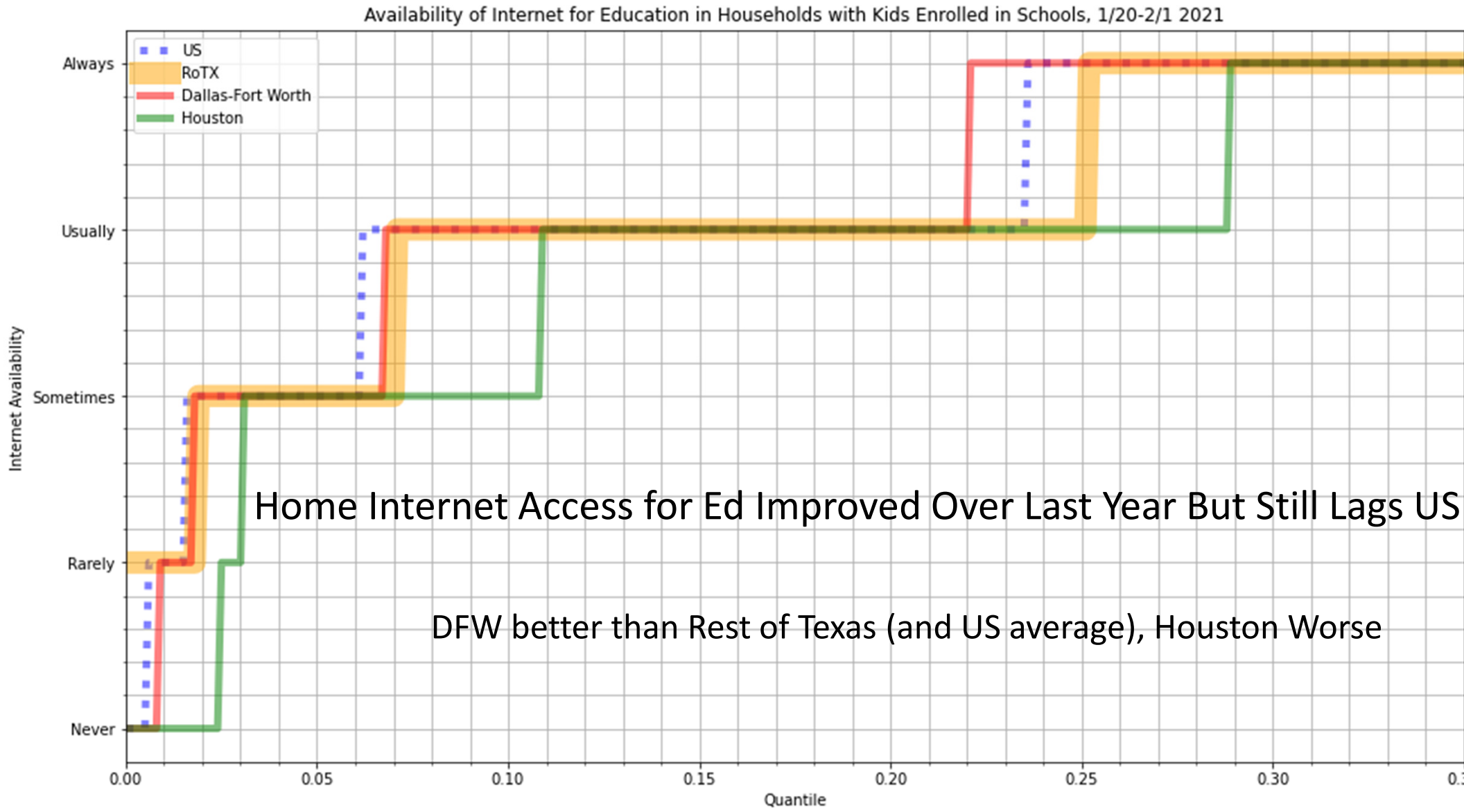
Home Internet Use for Education in Texas

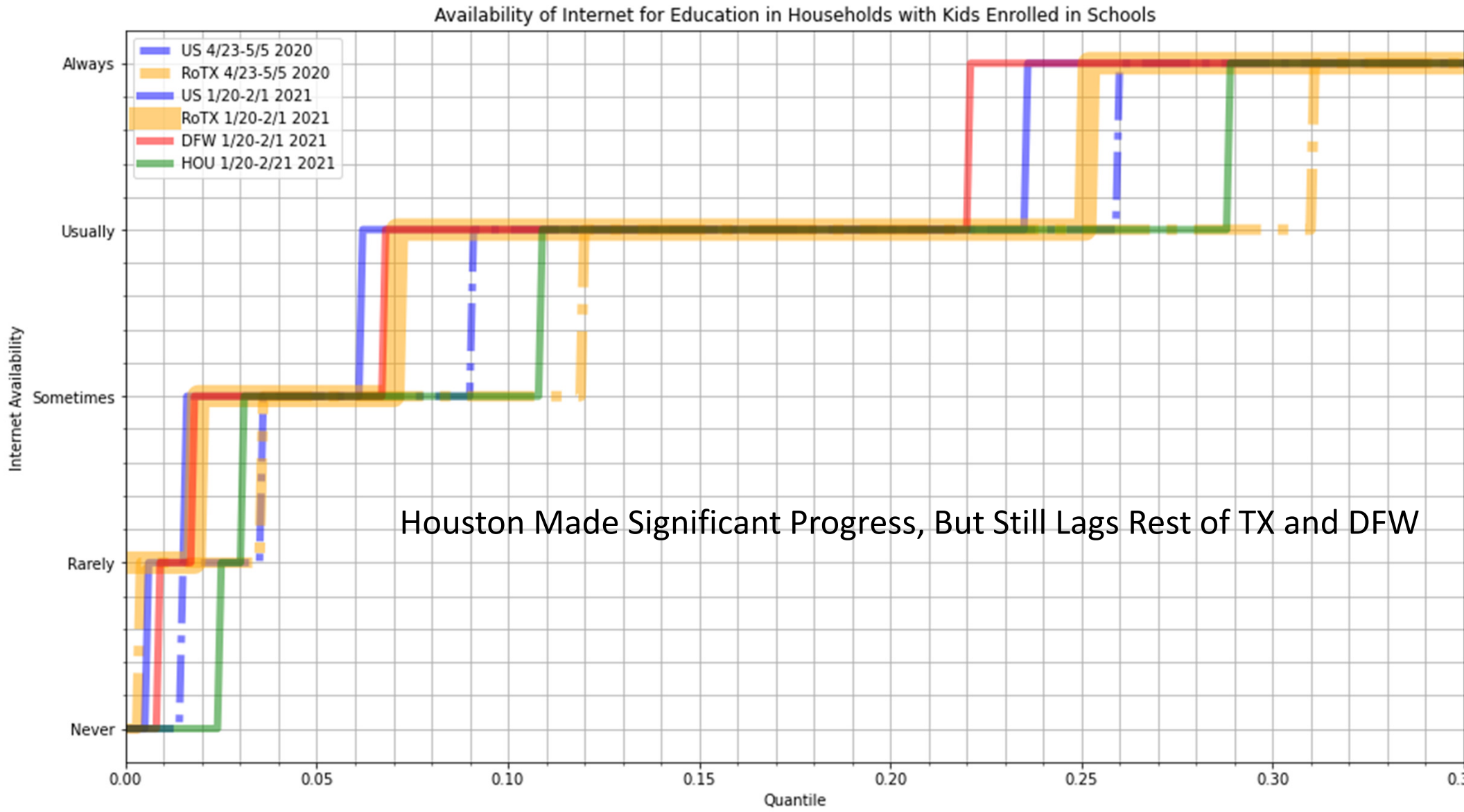
Kenneth Flamm

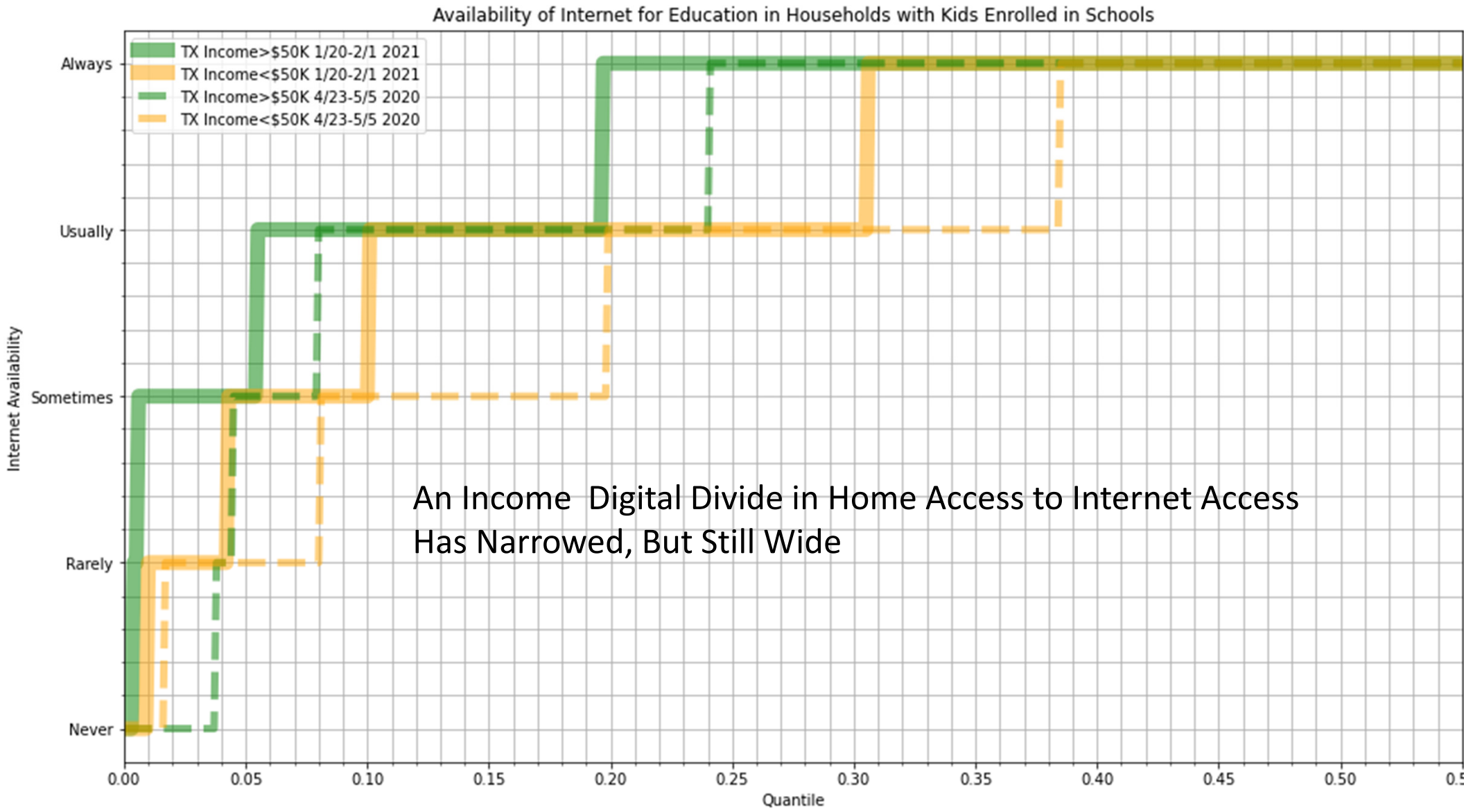
University of Texas at Austin

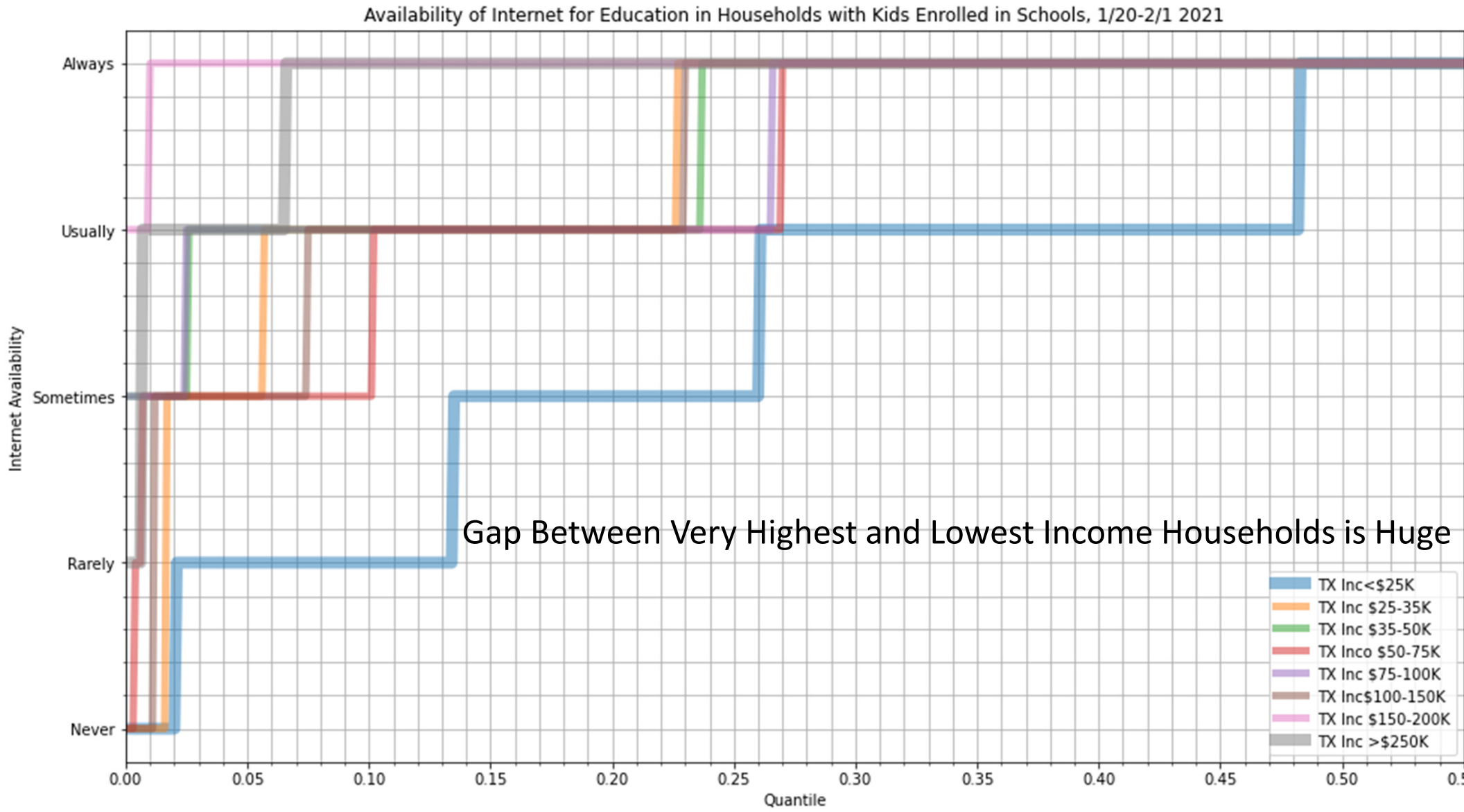
April 2021


Availability of Internet for Education in Households with Kids Enrolled in Schools, 4/23-5/5 2020
US
RoTX
Dallas-Fort Worth
Houston
Always
Usually
Sometimes
Rarely
Never
Internet Availability
0.00
0.05
0.10
0.15
0.20
0.25
0.30
Quantile
Texas Lagged US in Home Internet Availability for Ed
at Beginning of Pandemic


Availability of Internet for Education in Households with Kids Enrolled in Schools, 1/20-2/1 2021
US
RoTX
Dallas-Fort Worth
Houston
Always
Usually
Sometimes
Rarely
Never
Internet Availability
0.00
0.05
0.10
0.15
0.20
0.25
0.30
Quantile
Home Internet Access for Ed Improved Over Last Year But Still Lags US
DFW better than Rest of Texas (and US average), Houston Worse


Availability of Internet for Education in Households with Kids Enrolled in Schools
US 4/23-5/5 2020
RoTX 4/23-5/5 2020
US 1/20-2/1 2021
RoTX 1/20-2/1 2021
DFW 1/20-2/1 2021
HOU 1/20-2/21 2021
Always
Usually
Sometimes
Rarely
Never
Internet Availability
0.00
0.05
0.10
0.15
0.20
0.25
0.30
Quantile
Houston Made Significant Progress, But Still Lags Rest of TX and DFW


Availability of Internet for Education in Households with Kids Enrolled in Schools
TX Income>$50K 1/20-2/1 2021
TX Income<$50K 1/20-2/1 2021
TX Income>$50K 4/23-5/5 2020
TX Income<$50K 4/23-5/5 2020
Always
Usually
Sometimes
Rarely
Never
Internet Availability
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
0.45
0.50
Quantile
An Income Digital Divide in Home Access to Internet Access
Has Narrowed, But Still Wide


Availability of Internet for Education in Households with Kids Enrolled in Schools, 1/20-2/1 2021
Always
Usually
Sometimes
Rarely
Never
Internet Availability
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
0.45
0.50
Quantile
Gap Between Very Highest and Lowest Income Households is Huge
TX Inc<$25K
TX Inc $25-35K
TX Inc $35-50K
TX Inco $50-75K
TX Inc $75-100K
TX Inc$100-150K
TX Inc $150-200K
TX Inc >$250K