BROADBAND ADVISORY COUNCIL
AGENDA

- Call to Order
- Introductory Remarks from the Chair
- Approval of Minutes
- Remote Learning – Illinois State Board of Education
  Erich Grauke, Principal Consultant
  Curriculum and Instruction Department
- Office of Broadband Updates
  o Connect Illinois Grant Program
  o Illinois Connected Communities Grant Program
  o Broadband Mapping
  o Digital Equity
  o Broadband Affordability Study
- Approaches to Broadband Affordability Research
  Dr. Colin Rhinesmith, Associate Professor
  Director | Community Informatics Lab
  iSchool @ Simmons University
- Public Comment
- Next Meeting – December 16, 2020
ISBE Response to COVID-19

Illinois Broadband Advisory Council
September 15, 2020

Equity ● Quality ● Collaboration ● Community
Covid-19 Webpage

- All of ISBE’s COVID-19 information is posted on our webpage at www.isbe.net/covid19
Learning Recommendations

• Learning Recommendation Guides
  • Remote, hybrid, and in-person recommendations to support district/school administrators and teachers

• Illinois Priority Learning Standards
  • The most foundational/essential learning standards for *all* students
  • Most critical standards for continued learning success at subsequent grade levels
  • Are best suited for interdisciplinary and/or project based learning
  • Depict the knowledge, skills, and dispositions we want all students to possess to successfully complete in a given grade level or stage of their education.
Continuing Education Resources

- A listing of curated online resources to assist districts, teachers, and parents
- [www.isbe.net/keepelearning](http://www.isbe.net/keepelearning)
The Illinois Learning Technology Center

• Supports all public K-12 districts through technology initiatives, services and professional learning opportunities focusing on:
  • Digital teaching, learning, and leadership
  • Network and technology infrastructure planning and support
  • Student data security and safety
  • Equity and access

• www.ltcillinois.org
Wi-Fi Hotspot Map

- Wi-Fi Hotspot map developed in partnership with IBHE, ICCB, DoIT, and the Office of Broadband.
Grant Programs

• Two grant programs currently available to assist districts:
  • Digital Equity Formula Grant: for technology devices and connectivity
  • Digital Professional Learning Grant: for training of teachers and parents
Digital Equity Grant

- $80,092,677 is available from both ESSER and GEER funds to school districts for tech devices and connectivity needs
- Available to any district or state authorized charter school at or below 70% of adequacy in FY20 or FY21 Evidence Based Funding (EBF) Calculations
- Base Grant Amount - $28,975 + Per Pupil Allocation - $56.80 per student
Digital Equity Grant

• Districts must complete a technology survey from the Learning Technology Center of Illinois
  • Collect data on district’s instructional technology program and its infrastructure to support that program
    • Devices, internet connections at school and at homes

• Grant Applications due November 1
Digital Professional Learning Grant

• Funds available to assist districts with professional development needs for staff and parents
  • Effective use of technology
  • Teaching in a remote learning environment
  • Strategies to help students for both teachers and parents

• $13,954,909 available

• Grant Applications due September 18.
Evolving Response

• ISBE is working in partnership with the Illinois Department of Public Health to provide the most current resources and guidance to support our educational communities in these times.

• Latest updates are posted to www.isbe.net/covid19
Connect Illinois

Governor Pritzker is committed to establishing Illinois as a leader when it comes to technology and innovation. Access to broadband is a critical component of staying ahead of the curve and will improve the lives of families, entrepreneurs, farmers and other Illinoisans who rely on high-speed broadband for everything from healthcare to education.

Governor Pritzker recently launched a statewide initiative, Connect Illinois, to expand broadband access across the entire state. Connect Illinois includes a capital investment from Rebuild Illinois, the creation of a Broadband Advisory Council and Broadband Office, and a new program that will provide all Illinois public K-12 students access to high-speed broadband at no charge. The initiative also includes a $400 million broadband grant program and a $20 million capital program for the Illinois Century Network, a high-speed broadband network serving K-12 and higher education institutions, among others.

For more information on the Connect Illinois launch, click here.
$50M state + $65M nonstate match = $115M investment

26,000+ new/improved connections to homes, farms, biz, community anchors

28 projects, 18 different grantees (17 providers + one local government)

39 applications; 37 applications were complete and/or responsive to NOFO

Strong cross-section of provider representation
Illinois Connected Communities

- Partnership among the Illinois Office of Broadband, the Benton Institute for Broadband & Society, and local philanthropy. Designed to engage a first-year cohort of communities through best practice curriculum and expert consultation.

- The initial cohort includes four school districts, two community-based organizations, two local governments, two county-level organizations, and two economic development groups:
  - Brown County School District 1
  - City of Harvey
  - Housing Authority of Champaign County
  - Leadership Council Southwestern Illinois
  - Mattoon School District 2
  - McKinley Park Development Council
  - Mercer County Better Together
  - Neighborhood Network Alliance
  - Palatine School District 15
  - Park Forest-Chicago Heights School District 163
  - Region 1 Planning Council
  - Village of Flanagan

- Each Illinois Connected Community will have completed a community-driven, broadband strategic plan that articulates the community’s broadband vision and identifies an action plan for progress toward improved broadband access in the areas of community and economic development, education, civic engagement, healthcare, agriculture, and more.
To use this app:
Enter an address in the search bar to zoom in to the area of interest. Click on the map to view broadband provider information.


Three Fixed Wireline (e.g. DSL, cable) speed tiers have been calculated:

- Unserved (Less than 25 Mbps downstream or 3 Mbps upstream or no service available)
- Minimum 25 Mbps downstream and 3 Mbps upstream and less than 100 Mbps downstream and 20 Mbps upstream
- Minimum 100 Mbps downstream and 20 Mbps upstream
DRIVE-UP WI-FI HOTSPOTS
Digital Equity

- PCs for People
  - Computer Refurbishing
  - Mobile Devices/Hotspots
  - Digital Literacy Programming
- Digital Divide Elimination Fund
  - Competitive Grants
  - Community Focus
- Other Partnerships
CONNECT ILLINOIS
BROADBAND AFFORDABILITY STUDY

- Illinois General Assembly (SB 2135), May 2020
- In pursuit of universal broadband access goal, study:
  - Free access to all residents through grant program expansion
  - Affordable access to all residents
- Study must include analysis of universal access in areas of poverty and areas where existing broadband infrastructure is insufficient for high-speed access
  - Should include discussion of Broadband Strategic Plan initiatives
  - Identify new streams of state, federal, and P3 revenue
  - Recommended schedule for implementation
- Report on findings and recommendations due Jan 1, 2021
Broadband Access and Affordability Research

Colin Rhinesmith, Ph.D.
School of Library and Information Science
September 14, 2020
Colin Rhinesmith, Ph.D.

- Associate Professor and Director, Community Informatics Lab, Simmons University in Boston, MA

- Ph.D. (‘14), University of Illinois at Urbana-Champaign, School of Information Sciences

- 2015-2017 Faculty Research Fellow, Benton Institute for Broadband & Society
Research Areas

• Broadband adoption and affordability
• Broadband measurement in public libraries
• Wireless hotspot lending
• Digital equity ecosystems
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Broadband Access and Affordability

### Literature on the Affordability of Broadband

<table>
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<th>Factors</th>
<th>Characteristics</th>
<th>Major references</th>
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<tr>
<td>Geographical disparities</td>
<td>Low population density and high deployment costs discourage private investments, creating little or no commitment to connecting areas that include smaller towns and rural areas. Even in remote locations where the broadband is available, the monthly cost can be higher because building telecommunications networks in rural areas is costly.</td>
<td>(Riddlesden &amp; Singleton, 2014), (Rendon Schneir &amp; Xiong, 2016), (Pereira, 2016), (Oyana, 2011), (Mingliu &amp; Wolff, 2004), (Grubesic, 2004).</td>
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<td>Competition</td>
<td>Competition in the telecommunications sector helps make broadband more affordable to its citizens. However, there is low competition in rural areas, therefore, increasing service costs (deployment, operation, and maintenance of wireless broadband access networks are taken into consideration) that leads to the issue of affordability.</td>
<td>(Krizanovic et al., 2014), (Yates et al., 2010), (Priefer &amp; Hu, 2008), (Priefer, 2013).</td>
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<td>Profit based discrimination</td>
<td>Minority households may have lower demand for broadband service. In this case, carriers do not enter because they expect profit to be too low to support entry. To foster further broadband implementation in rural areas, the cost-benefit is a key factor affecting rural broadband affordability that needs to be addressed.</td>
<td>(Priefer, 2003), (Oyana, 2011), (Krizanovic et al., 2014), (Liu et al., 2018).</td>
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<td>Technology deployment cost</td>
<td>Deployment of broadband technology can be expensive. Offering broadband services in a local area requires investment; local areas are only enabled for broadband when the expected stream of future profits. However, this expectation results in unaffordable service.</td>
<td>(Liu et al., 2018), (Rhinesmith et al., 2019), (Lyons, 2014).</td>
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<td>Socio-economic factors: income, education, race, and age</td>
<td>The poor, the less educated, and non-whites are on the disconnected side of the divide. High monthly costs are a limiting factor to broadband subscriptions, followed by the cost of a digital device. Age is another factor, consumers below 24 years are either studying or just beginning employment and may not be able to afford the current price plan. Low-income Americans participate in a cycle of “un-adoption,” in which they adopt broadband connectivity at home, and then drop it for financial or other reasons, only to re-subscribe again when conditions warrant.</td>
<td>(Townsend et al., 2013), (Flamm &amp; Chaudhuri, 2007), (Glass &amp; Stefanova, 2010), (Choudrie &amp; Dwivedi, 2006), (Powell et al., 2010), (West, 2015).</td>
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Affordability: Five Major Factors

- Geographical disparities
- Competition
- Profit based discrimination
- Technology deployment cost
- Socio-economic factors: income, education, race, and age

- Reddick, Enriquez, Harris, & Sharma (2020)
Geographical Disparities

• “Low population density and high deployment costs discourage private investments, creating little or no commitment to connecting areas that include smaller towns and rural areas.

• Even in remote locations where the broadband is available, the monthly cost can be higher because building telecommunications networks in rural areas is costly.” (p. 3)
Competition

• “Competition in the telecommunications sector helps make broadband more affordable to its citizens.

• However, there is low competition in rural areas, therefore, increasing service costs (deployment, operation, and maintenance of wireless broadband access networks are taken into consideration) that leads to the issue of affordability.” (p. 3)
Profit Based Discrimination

• “Minority households may have lower demand for broadband service. In this case, carriers do not enter because they expect profit to be too low to support entry.

• To foster further broadband implementation in rural areas, the cost-benefit is a key factor affecting rural broadband affordability that needs to be addressed.” (p. 3)
Technology Deployment Costs

• “Deployment of broadband technology can be expensive. Offering broadband services in a local area requires investment; local areas are only enabled for broadband when the expected stream of future profits. However, this expectation results in unaffordable service.” (p. 3)
Socio-Economic Factors

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Socio-Economic Factors

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The Ability to Pay for Broadband

• “Through the Mobile Beacon and Mobile Citizen programs, low-income people were able to receive broadband at home for about $10 per month. When asked in interviews about this price, many community members stated that even increasing the cost to $20 per month would be difficult within their budgets.”

- Rhinesmith (2016, p. 16)
Affordability Study

Review Existing Data

• FCC Form 477 broadband deployment data

• American Community Survey data on socio-economic factors: income, race, and age
Future Research

Universal Broadband Access

• Conduct surveys and case studies to determine the impacts of free access to all residents
Contact Information

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• email: crhinesmith@simmons.edu
QUESTIONS?

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Department of Commerce & Economic Opportunity
Illinois Office of Broadband | broadband@Illinois.gov
NEXT MEETING
DECEMBER 16, 2020
ADJOURNMENT