What Could Schools and Libraries Do With $7 Billion?

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March 31, 2021
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SPEAKERS

- **Moderator:** John Windhausen Jr., executive director, SHLB Coalition
- **Laura Cole,** BiblioTech director, BiblioTech Public Library
- **Selvon Smith,** vice president, information technology and CIO, Brooklyn Public Library
- **Rajesh Adusumilli,** CIO and assistant superintendent for information services, Arlington Public Schools
AMERICAN RESCUE PLAN ACT

- Enacted March 11, 2021 ([view here](#))
- Appropriates $7.17B in funding for the Emergency Connectivity Fund (ECF)
  - “to eligible schools and libraries for the purchase of eligible equipment and advanced telecommunications and information services for use by students, school staff, and library patrons at locations other than a school or library.”

- “Eligible equipment” means:
  1. Wi-Fi hotspots;
  2. Modems;
  3. Routers;
  4. Devices that combine a modem and router; and
  5. Connected devices.
• Public notice issued March 17, 2021 (view here)
  – Comments due April 5, reply comments due April 23
  – FCC must issue rules by May 10 (60 days after legislation enacted)

• Specific language:

“We propose that the Commission provide funding only for equipment and services that are needed to provide the connectivity required to enable and support remote learning for students, school staff, and library patrons.”

“we seek comment on . . . the underlying assumption that the construction of new networks is not supported by the statutory text...”
Laura Cole
BilioTech Director,
BilioTech Public Library
lcole@bexar.org
Objective

- Provide digital access for up to 100 disadvantaged and/or rural area students within Southwest Independent School District

- Create proof of concept for digital connectivity expansion in Bexar County, Texas
No Access to Broadband
City Average – 19%
Pilot Area – 32%
-13%
Design Overview

- Residential Gateway
- Home Unit
- LTE Receiver
- CBRS 3.5GHz
- CBRS MiFi
- CPE Fastmile
- LTE eNB / Small Cell
- Microwave Link (SH)
- BACKHAUL
- LAN Switch
- Router / Firewall
- Edge Core
- LTE Core
- Customer Portal
- Network Portal / SWISD P-LTE network

End Nodes
- Houses, Residentials, Students/campus

Cell Site
- Water Tower
- Near Elm Creek Elementary School

McNair MS
- NDAC Hosting
Elm Creek Water Tower

Nokia Small Cell and Short Haul Microwave
### Project Cost

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Labor</strong></td>
<td>Requirements and Design, Test Plan, Demonstration, Hardware, Tier 1 Maintenance, Final Report, Programmatics</td>
<td>$379,819</td>
</tr>
<tr>
<td><strong>Hardware +</strong></td>
<td>Small Cell, SH Microwaves x2, 100 ODUs and Beacons, NDAC/CORE, Installations, Hardware/Software Maintenance, Surveys and Licensing</td>
<td>$521,719</td>
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<tr>
<td><strong>Total Project</strong></td>
<td></td>
<td>$901,538</td>
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<tr>
<td>Address</td>
<td>No of Students in Home</td>
<td>Per Week Speed Test Download (MB/sec)</td>
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<tr>
<td>---------------------------------</td>
<td>------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>44178 B C Oliver Rd</td>
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<td>15506 Shenfield Rd Res 4</td>
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<td>40.50</td>
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<tr>
<td>Number of Homes: 30</td>
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**Notes:**
1. Means were reported as the median data points. Those means are likely unweighted or weighted exceptionally.
2. Specifics completed at 127 of 314 sites. Sites in yellow were those historical values shown when available.
3. Broadband usage is a combination of upload and download traffic.
4. The broadband usage is available but we are not able to identify the Student ID for usage amount.
Challenges

• Human Factor
  • Students as Conveyors of Information
  • Technology Dis-Ease

• Economics
  • Communication
  • Substandard Housing

• Pandemic

• Storm
## Current State – Student Participation

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<tr>
<th>Categories</th>
<th># Households</th>
<th># Students Totals</th>
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<tbody>
<tr>
<td>Households Installed to Date</td>
<td>22</td>
<td>62</td>
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<tr>
<td># Pending Installations</td>
<td>6</td>
<td>16</td>
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<tr>
<td>Alternate List</td>
<td>13</td>
<td>23</td>
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<tr>
<td>Target</td>
<td>101</td>
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Looking Forward Next 30 days:
• Schedule another round of student installations
• Begin Outreach to students on the Alternative lists
• Continue to monitor and maintain the capability
• Evaluated and optimize DN as possible
• Support Student Survey discussions with SA Texas A&M program

Looking Forward Next 60 days:
• Complete the final report
• Maintain and monitor the network
• Evaluation and optimization of network as possible

Beyond
• Extend pilot through December 31, 2021
Selvon Smith
President, Information Technology and Chief Information Officer, Brooklyn Public Library
ssmith@bklynlibrary.org
Collaborative program by New York Public Library, Brooklyn Public Library, Queens Public Library and the New York City Department of Education. Provided thousands of free Hot Spot devices for the entire school year.
BOOKMOBILE WIFI

- 3 transit vans with exterior service windows and 1 large truck with laptops and outdoor seating) all outfitted with wifi antennas

- Working with community and city partners to bring services to areas more than a half mile away from a library branch
BKLYN REACH

• Adding outdoor wireless access points to 44 branches

• Around 23,000 residents live within 300 feet of one of these BPL branches

• Priority on branches near NYCHA housing
Raj Adusumilli
Chief Information Officer and Assistant Superintendent for Information Services, Arlington Public Schools
rajesh.Adusumilli@apsva.us
Arlington Public Schools

- Challenge
- Approach
- Initiatives
- Results and Next steps
Technology and Access

**FIVE strategies to address Student Connectivity Needs**

- Comcast InternetEssentials Program – Sponsorship
- Mi-Fi Services/Devices for Students
- Wireless Access Hotspots at APS Schools
- Pop Up Wi-Fi Hotspots in the County
- 1-2-3 Connect Me (CBRS Technology) Pilots
Technology and Access

COMCAST InternetEssentials Program

- County Sponsored Service to families
- More than 4,000 codes assigned to families
- 500+ Accounts Approved and sponsored by APS
- 1000+ Students Supported in this program
If your child is enrolled in Arlington Public Schools, we are here to help!
Technology and Access

Mi-Fi Services/Devices to Students

- More than 1,300 Mi-Fi devices assigned
- 500+ Unlimited MiFi Data Plans in use for Students
- Service Provider: Kajeet
Technology and Access

Pop Up Wi-Fi
-Hotspots
Arlington County
Wireless Access at APS Public Schools

- All Arlington Public Schools setup with Wireless access around the buildings.
This initiative financed by the Governor's Fasttrack Broadband Funding program, is an extension of broadband services off of the APS & County owned fiber network using a new wireless technology call CBRS (Citizen’s Broadband Radio Service).

This technology allows for the set up of a private network solely for student use, to connect to the APS network from home, to continue distance learning instruction and access APS resources, but does not require the County to build additional fiber to create the extension.
1-2-3 Connect me is estimated to cover an area roughly 2.3 miles between the intersections of S. Monroe St. and S. Greenbriar along Columbia Pike.

*Intended coverage:*
Technology and Access

- 99.2% of all APS students participated successfully in Synchronous learning activities.

- 95.4% of all APS student devices are active on our network daily.

- APS students spending an average of 4 hours per day in synchronous learning activities.

- 94.32% students spending more than average time in synchronous learning activities (Follow up on the 5.68%).
Q & A

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Arlington Public Schools
@RajAdusumilli
• https://www.linkedin.com/in/rajeshadusumilli/
MODERATED Q&A

• *Moderator*: John Windhausen Jr., executive director, SHLB Coalition
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