



Internet2 Community Anchor Program (CAP) Update

The Quilt
Minneapolis, MN



Stephanie Stenberg
Director
@StephanieS_CAP

CAP's Mission

- **Connect** community anchor institutions to advanced R&E networks.
- **Convene** the formal and informal education community nationwide.
- **Catalyze** effective uses of advanced networks to serve education.
- **Communicate** impactful stories of learning and transformation.

Connectivity Stats (2016 survey):

- **84,146** K–12 Schools (60%)
- **4,203** Public Libraries (25%)
- **1,491** Colleges and Universities
- **799** Community or Vocational Colleges (50%)
- **2,237** Health Care Organizations
- **200** Museums, Science Centers, Zoo, and Aquaria



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INTERNET2
community
anchor PROGRAM



@Internet2CAP



@PresidentialPSP

Welcome Therese Perlowski, CAP's New Program Manager



- Former 6th-8th grade science and technology teacher
- Former regional director of Metro Detroit YMCA summer and after school programs
- Bachelor's Degree in Anthropology & Sociology with minors in Public Policy and Urban Affairs from Kalamazoo College

2019 CAP Objectives

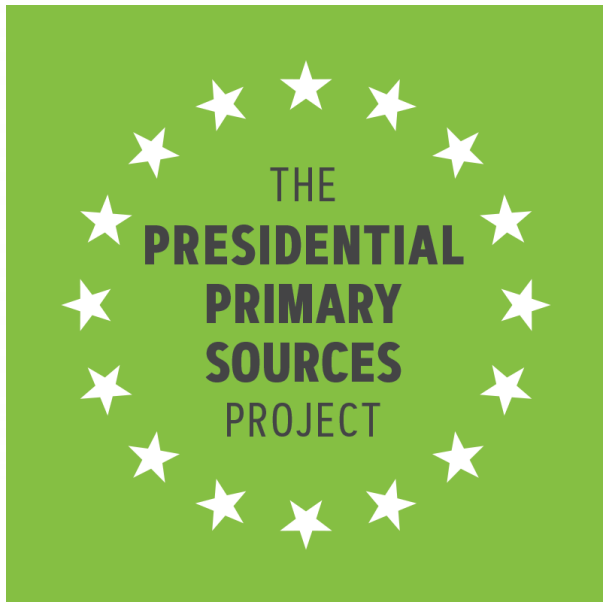
1. Demonstrate the value of advanced networking to community anchor institutions
2. Develop regional network marketing and outreach materials for schools and libraries
3. Execute on grant activities



Demonstrate the value of advanced networking to community anchor institutions

- Running the Presidential Primary Sources Project (PPSP)
- Facilitating monthly LoLa for All working group
- Creating monthly Regional Network Spotlight profiles
- Presenting on the Community Anchor Program and advanced networking
- Conducting 2019 Connectivity Survey

Presidential Primary Sources Project



2019 Presentation Schedule: 10-10:50am and 1-1:50pm CT

January 17: Presidential Powers with Documents from the National Archives

January 23: Slavery at the Hermitage

January 30: Forging Greatness: Lincoln in Indiana

February 7: Assassination & Commemoration: JFK, Dallas, and The Sixth Floor Museum at Dealey Plaza

February 12: Exploring Lincoln in Washington

February 14: The Mystery of William Jones

February 28: Lincoln's Kentucky

March 6: Herbert Hoover and the Hoover Dam

March 7: The Roosevelt Presidential Library: Records of a Precise Era and Time

March 12: Lincoln's Home for Brave Ideas

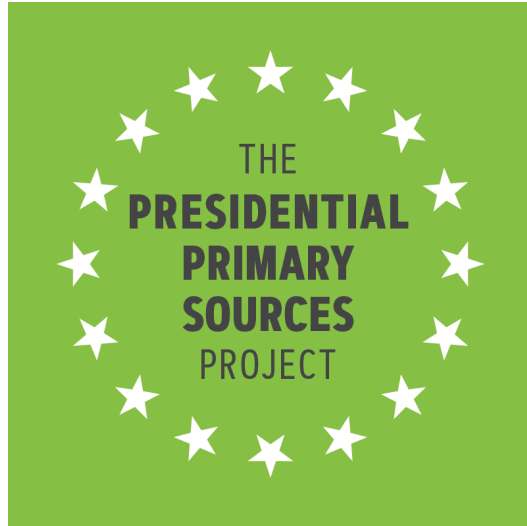
March 13: Theodore Roosevelt, Adventure and the Outdoors, Theodore Roosevelt Birthplace National Historic Site

March 20: Theodore Roosevelt: Places in the World; Place in History, Theodore Roosevelt Center, Dickinson State University

March 27: Harry S. Truman and Independence, Missouri

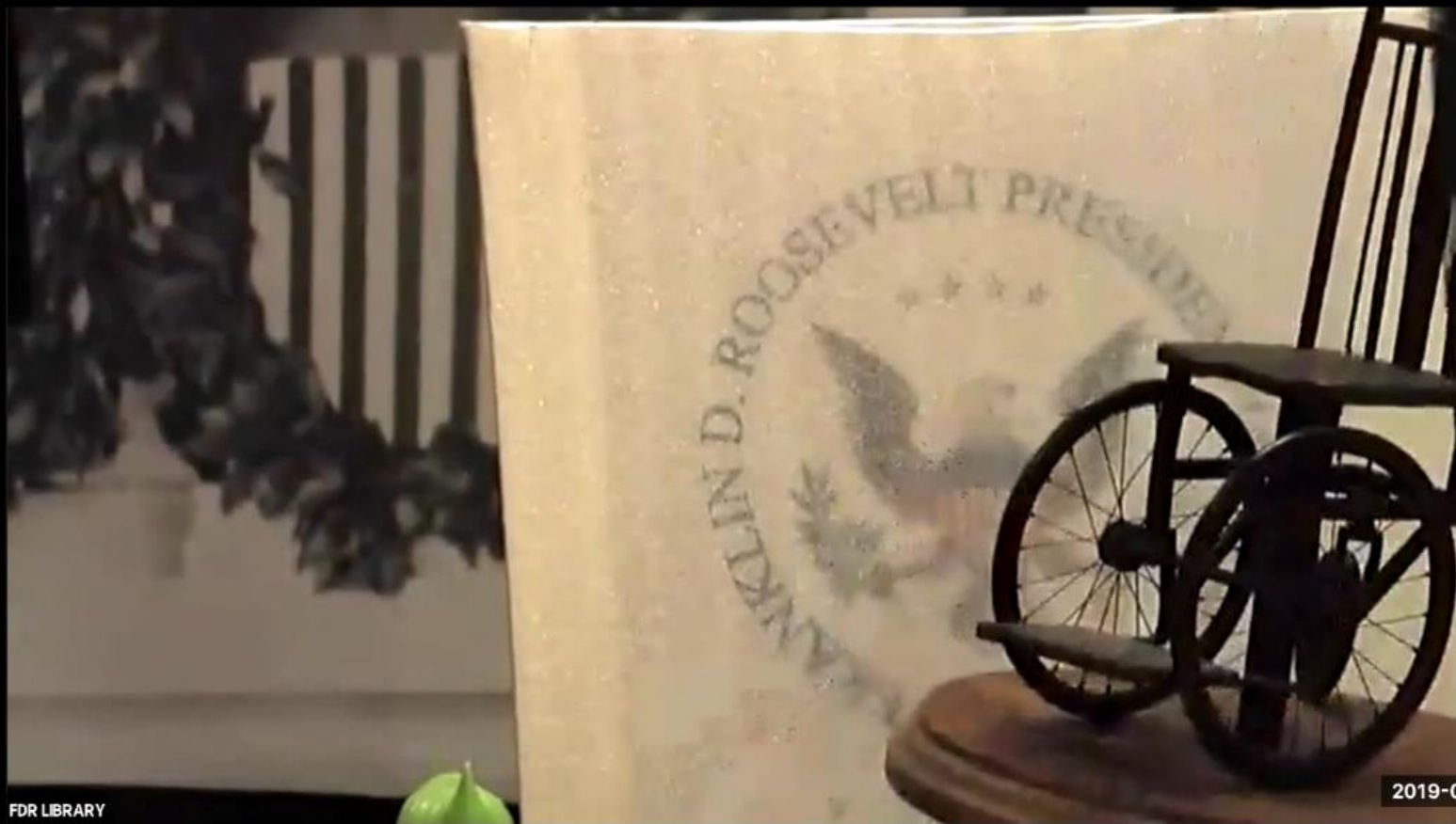
March 28: George Washington and the Nation's New Capital, Mount Vernon

Presidential Primary Sources Project



www.internet2.edu/ppsp





FDR LIBRARY

2019-03-07 14:26:02

LoLa for All



LoLa for All Working Group

www.internet2.edu/lola



LoLa stands for LOW LATency audio and video conferencing. Using LoLa, teachers and students can duplicate the in-person, hands-on performance learning experience in real time, since LoLa's delay is so small it is undetectable to the human ear. Using LoLa, people in different cities can perform with each other with no discernible delay, opening up a whole new world of opportunities for collaboration and distance learning.

The Internet2 Community Anchor Program (CAP) maintains a LoLa for All working group to share best practices, identify and promote LoLa collaboration opportunities, and share resources to increase the use of LoLa in K-12 schools, libraries, music conservatories, performing arts centers, and other community anchor institutions.

To join the LoLa for All working group, contact Stephanie Stenberg at sstenberg@internet2.edu.

Email: sstenberg@internet2.edu
Status: Active
Start Date: July 27, 2016
Tags: K20 Education Performing Arts LOLA CAP

About LoLa



Official LoLa website (includes LoLa manual and hardware list)
[Map of LoLa installations throughout the world](#)

LoLa "Get Started" Guide

K-12 and Libraries LoLa "Get Started" Guide

LoLa for All Working Group

LoLa for All Working Group Meeting Minutes
Working Group Member Contact Information
To join the working group monthly meetings and email list, contact Stephanie Stenberg at sstenberg@internet2.edu.

Upcoming Events

State and Regional Network Spotlight

OSHEAN Helps Deployed Parents Watch High School Graduation

Posted on May 30, 2019 by [Stephanie Stenberg](#)

Tags: CAP, Regional Networks, State and Regional Network Spotlight



When two deployed military parents could not attend their children's high school graduation, Rhode Island's research and education network, **OSHEAN**, brought the graduation to them. Donna Ortiz is a Command Sergeant Major in the U.S. Army Reserves and is the mom of Alejandra Ortiz. Carlos Barbiero is a Sergeant First Class in the Rhode Island Army National Guard, and is the dad of Damian Barbiero. Ortiz was

Florida LambdaRail helps bring vital software back on line in aftermath of Hurricane Michael

Posted on Aug 01, 2019 by [Stephanie Stenberg](#)

Tags: CAP, Regional Networks, State and Regional Network Spotlight



Hurricane Michael damage in Panama City

When Hurricane Michael came ashore at Mexico Beach, Florida on October 10, 2018 it was a monster, having rapidly intensified to major hurricane status from a tropical depression in just three short days. At landfall it was the first Category 5 storm to hit the continental United States since Hurricane Andrew hit Miami in 1992. In its wake, communities were left stunned and shattered by the destruction that arose seemingly from nothing.

Internet2 NET+ Services Available to CAP Member Higher Education Institutions and K12 Schools

For more information about Internet2's NET+ services, visit www.internet2.edu/netplus.

Service	Contact Name	Contact Email	Available to CAP Member Higher Education Institutions?	Available to K12 schools?
Cloudlock	Nick Lewis	netplus@internet2.edu	Y	
Code42	Sean O'Brien	netplus@internet2.edu	Y	
Dropbox	Sean O'Brien	netplus@internet2.edu	Y	
Duo Security	Nick Lewis	netplus@internet2.edu	Y	
LabArchives	Dana Voss	dvoss@internet2.edu	Y	
LastPass	Nick Lewis	netplus@internet2.edu	Y	
Mitel SIP Service	Sean O'Brien	netplus@internet2.edu	Y	Y
OneCampus	Matthew Buss	netplus@internet2.edu	Y	
Panopto	Matthew Buss	netplus@internet2.edu	Y	
ServiceNow	Matthew Buss	netplus@internet2.edu	Y	
Splunk	Nick Lewis	netplus@internet2.edu	Y	Y
Vidyo	Sean O'Brien	netplus@internet2.edu	Y	Y
Voyance	Matthew Buss	netplus@internet2.edu	Y	Y
Zoom	Sean O'Brien	netplus@internet2.edu	Y	Y

Remote Instrumentation

Remote Instrumentation Resources for K20 Schools

Sep 03, 2019, by [Stephanie Stenberg](#)

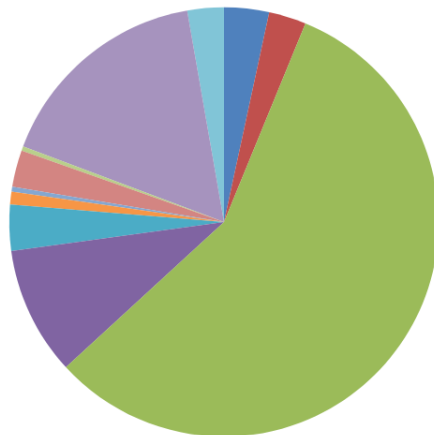
Tags: CAP, K20 Education

Utilizing advanced networking, students can conduct original research using the same instruments as the nation's premier scientists. These remote instruments let your students control a microscope or telescope hundreds of miles away to view everything from comets to mosquitos to microchips.



2019 Connectivity Survey Data

Number of CAI's Served by Type

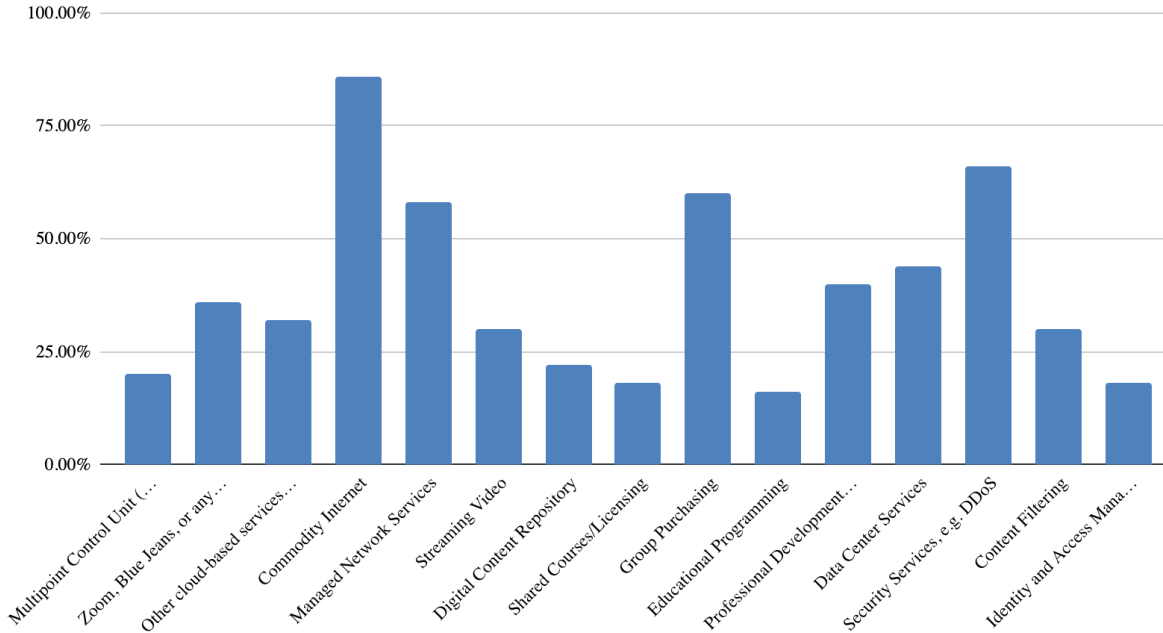


- Four-year Colleges & Universities
- Community/Vocational Colleges
- K-12 Schools (school buildings, public/private charters, and intermediate service agencies)
- Public Libraries
- Healthcare Institutions
- Museums, Science Centers, Aquariums, Zoos, etc.
- Public Media Stations (PBS, NPR)
- Public Safety Agencies
- Federal Government Buildings
- State Government Buildings
- Local Government Buildings

CAI Type	Already connect this sector
Four-year Colleges & Universities	86%
Community/Vocational Colleges	74%
K-12 Schools (school buildings, public/private charters, and intermediate service agencies)	50%
Public Libraries	40%
Healthcare Institutions	38%
Museums, Science Centers, Aquariums, Zoos, etc.	30%
Public Media Stations (PBS, NPR)	44%
Public Safety Agencies	30%
Federal Government Buildings	24%
State Government Buildings	40%
Local Government Buildings	36%

2019 Connectivity Survey Data

Services Currently Offered to CAIs



Future Growth Priorities:

- Security Services
- Cloud Storage & Connectivity
- eduroam
- Identity Management & Trust
- Hosted VDI
- Additional Group Purchasing
- Private Peering

Develop marketing and outreach materials for schools and libraries

- Developing 5-8 case studies demonstrating how innovative K-12 teachers and librarians are using advanced networking
- Producing a one-page document outlining Internet2's benefits for K12 schools and libraries
- Producing a one-page document outlining Internet2's benefits to non-member universities and community colleges



TEACHER PROFILE



Wendy Blankley

Brecknock Elementary School
Denver, PA

K-6 School Population:
600 students in the elementary school

Wendy Blankley's goal as a teacher is to connect her learners with every continent. Blankley recently won the 2019 Keystone Innovator Technology Award for embracing the effective integration of educational technology and innovating with new technology tools and resources in the ever-changing landscape of today's educational environment.

"I didn't see a spark within my kids with them learning in a traditional classroom model. I wanted to be the type of teacher who kindled my kids excitement and desire in a classroom setting while experiencing the fun of education."

Mystery Skype in the Classroom

Blankley has some advice for teachers who want to start connecting with other classes. "Start with social media. I have found numerous connections by using Twitter and Facebook. I'm in a Facebook group, ["Mystery Skype in the Classroom."](#)

Her class did a "Mystery Skype" with a classroom in Wales. In "Mystery Skype," each classroom connects via a videoconferencing app like Skype or Zoom and tries to guess the location of the other classroom by asking yes or no questions. Blankley saw a "million different" changes in her students' engagement level. The kids collaborated and used higher-order thinking skills to come up with questions for the other class. They ask questions like, "Is your country located in Asia?" or "Are you north of the equator?" to find the other classroom's location. Blankley has even used Mystery Skype in math class, asking the kids to estimate the distance between the locations and calculate the cost of flights.

After Mystery Skyping with the classroom in Wales, Blankley again connected with the class to read books by the same author and compare plot, setting, and theme. "What I've found in connecting with other teachers is that educators are so generous with their time; they want to help."

Take the Videoconferencing Leap

Blankley made the video connections without heavy IT staff involvement. "The first couple of times I did make connections, I was so nervous." I thought, "What if something goes wrong? Well, you know what? It might go wrong. It will be worth it though for my learners." When she invited her superintendent to witness the Mystery Skype, it wouldn't connect at first, but she kept at it, and eventually connected. She advises having a backup plan just in case anything goes awry.



Blankley is glad she took the leap to videoconference with other classes around the world. Since then, she's connected her kids to a butterfly expert via the [Center for Interactive Learning and Collaboration \(CILC\)](#) and with a classroom in Ghana to share cultural dances. "I want my kids to realize they can do anything. When they see a scientist in Antarctica, or connect with a class in Africa, I want them to understand that they can do whatever they want and go wherever they want. The world is a click and a connection away."

Internet2.edu



Contact Information

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734.352.7002

www.Internet2.edu/cap

Execute on current grant activities

- Toward Gigabit Libraries toolkit still going strong; plans to expand further
- Named sub-recipient on IMLS grant “Measuring Library Broadband Networks (MLBN)” with Simmons University, the Open Technology Institute of New America, and Code for Science & Society

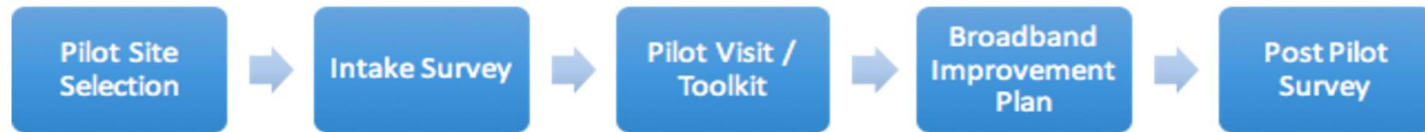
Toward Gigabit Libraries (TGL) Grant

- \$250K grant from IMLS
- Awarded to Internet2 in Spring of 2016
- Three-year grant developing training curriculum and self assessment material (“Toolkit”) for library broadband infrastructure
- Targeted very rural and tribal libraries
- Partners included State Library offices and R&E Networks

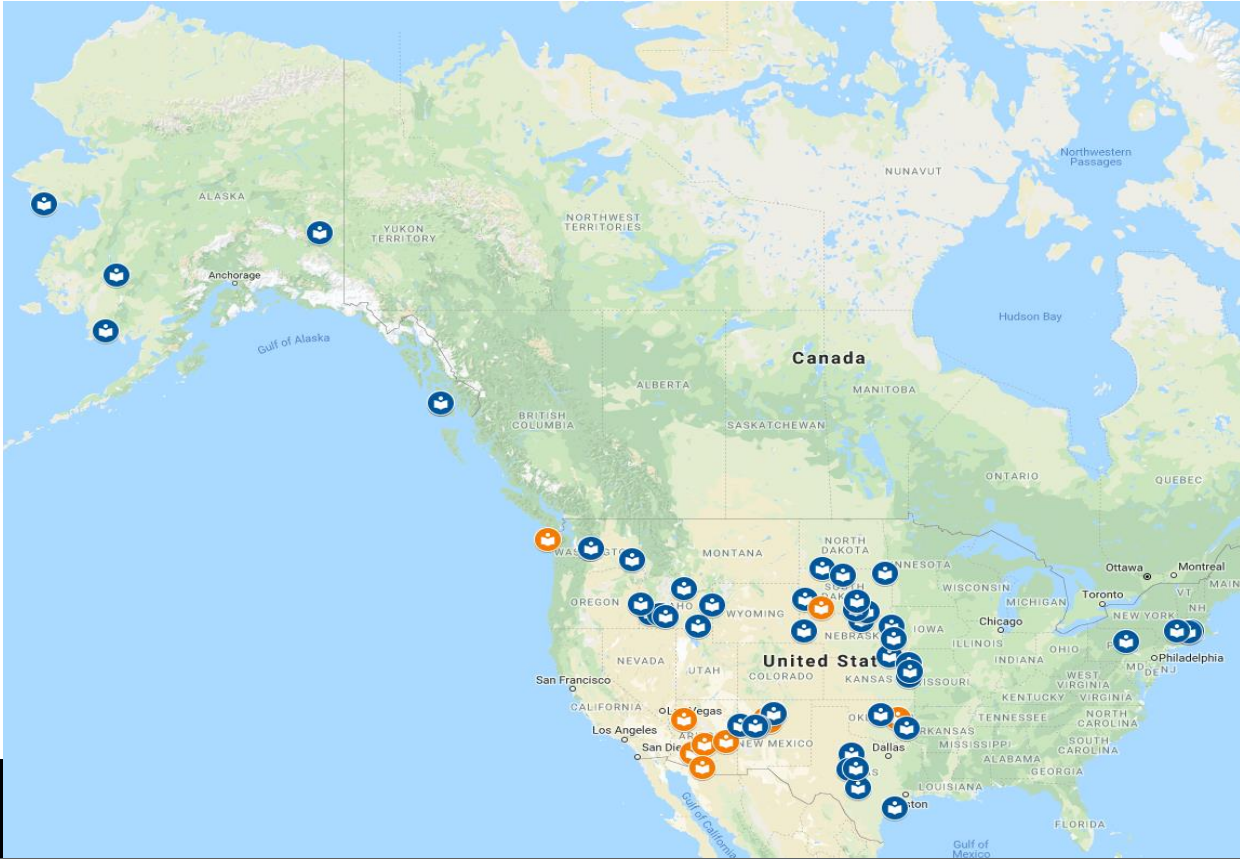
Project Goal: Pilot toolkit in at least 30 libraries; **we were able to reach nearly 60 libraries**

TGL Toolkit Components and Process

- Technology Inventory
- Broadband Connection
- Wired Network
- Network Devices
- Wireless/WiFi Network
- Computer/End User Devices
- Broadband Services and Activities
- Broadband Technology and Operations Support
- Broadband Funding
- Additional Resources and Best Practices



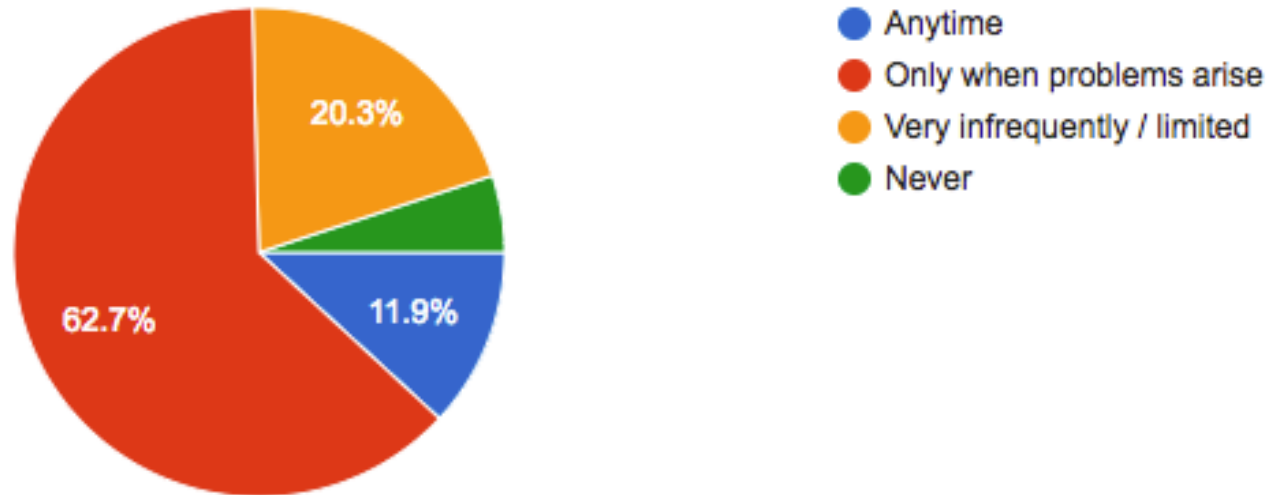
TGL Site Visits (partial listing)



Trends from Library Intake Survey

How frequently is technical/IT support available in the library?

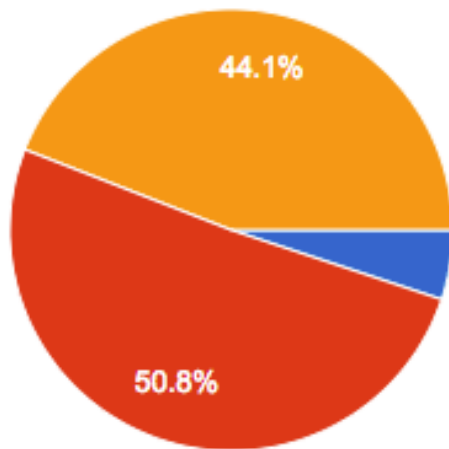
59 responses



Trends from Library Intake Survey

Describe your current level of expertise around procuring and delivering access to broadband as a service in your library.

59 responses

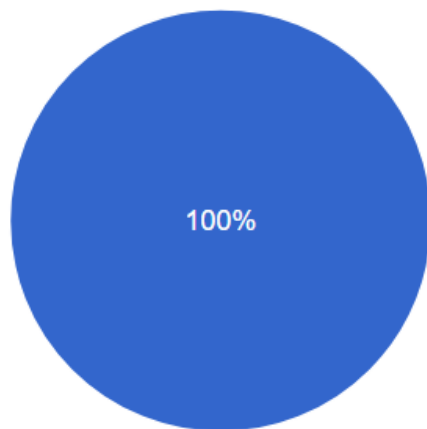


- Very Experienced— I've been responsible for ordering and setting up our Internet connection and feel I have a good understanding of the p...
- Limited Experience— I've had some experience with ordering and setting up our Internet connection, but I don't feel like an expert
- No Experience— I've had no experience in ordering or setting up our Internet connection."

Feedback– Post Pilot Visit Survey

Would you recommend this pilot process to other libraries?

39 responses



- Yes
- Maybe
- No

Expanding the TGL Toolkit's Reach

Drafted preliminary IMLS proposal to scale the Toward Gigabit Libraries Toolkit

WELCOME TO INTERNET2'S **TOWARDS GIGABIT LIBRARIES TOOLKIT**, FUNDED BY THE INSTITUTE FOR MUSEUM AND LIBRARY SERVICES (IMLS). THIS TOOLKIT IS DESIGNED FOR SMALL, RURAL, AND TRIBAL LIBRARIES WITH LIMITED INFORMATION TECHNOLOGY (IT) SUPPORT. THE GOAL IS TO IMPROVE AND EVOLVE LIBRARY STAFF UNDERSTANDING AND INTERACTION WITH THE LIBRARY'S BROADBAND CONNECTION AND SERVICES.

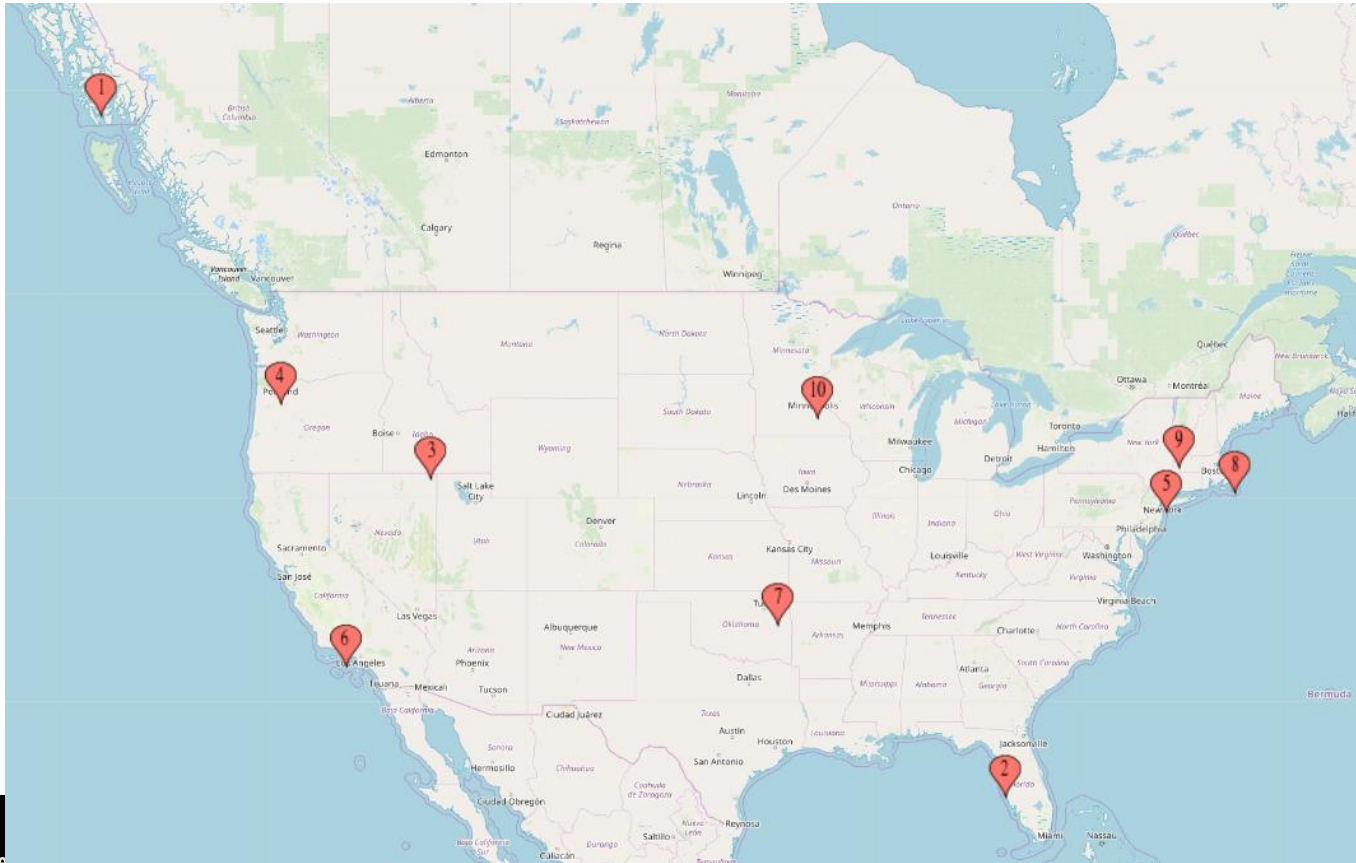
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2. How to Use the Toolkit
3. Library Contact Information
4. TECHNOLOGY INVENTORY
 - A. Broadband Connection
 - B. Network Devices
 - C. Wired Network and Power
 - D. Wireless/WiFi Network
 - E. Computer/End User Devices
5. BROADBAND SERVICES AND ACTIVITIES
6. BROADBAND TECHNOLOGY AND OPERATIONS
7. BROADBAND FUNDING
8. Additional Resources and Best Practices
9. Glossary
10. Acknowledgements

Execute on current grant activities

- Measuring Library Broadband Networks for the National Digital Platform (MLBN)
- 3 deliverables: 1) open-source measurement platform; 2) training manual; and 3) final report
- Findings from our research will be used by the library community to:
 1. Understand the broadband speeds and quality of service that public libraries receive;
 2. Assess how well broadband service and infrastructure are supporting their communities' digital needs;
 3. Understand broadband network usage and capacity, along with additional data that would be useful to public libraries in providing their communities with online software applications and social and technical infrastructure; and
 4. Increase their knowledge of networked services and connectivity needs.

Execute on current grant activities



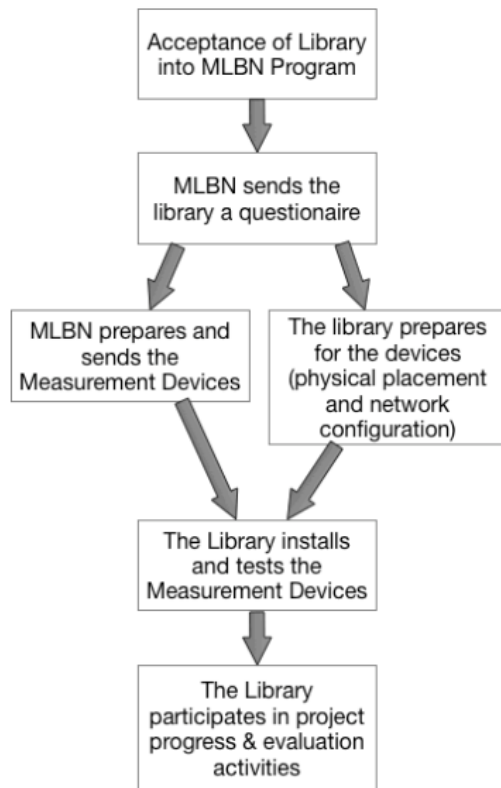
Participating in MLBN

This flowchart illustrates the major steps you'll experience as an MLBN program participant. Further details about the installation process can be found in Section 2 of this training manual.

What is Measuring Library Broadband Networks for the National Digital Platform (MLBN) ?

The purpose of the MLBN Project is to provide public libraries with a way to accurately measure the **speed** and **quality** of their internet connections by taking standardized equipment and measures. This approach provides a [prototype broadband measurement system](#), which includes automated measurement of connection speeds and quality of service metrics using a variety of Internet measurement tests.

The MLBN Project is using participatory design research techniques. This means that each public library that participates plays an important role in helping to ensure that the broadband measurement system is useful and effective for public libraries across the U.S. The prototype broadband measurement system will be refined and expanded over time based on the experiences reported and needs expressed by the library community.



2. Device Location

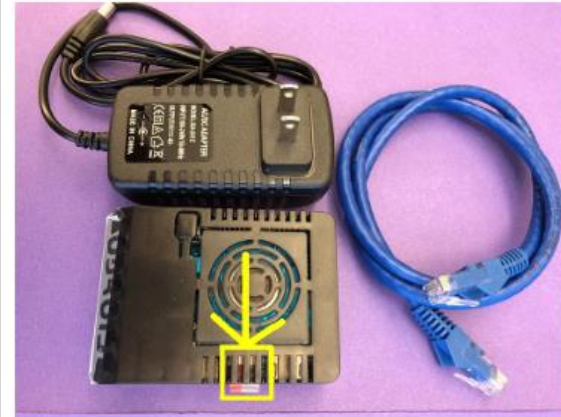
Find a suitable location for the Wired Measurement Computer. A suitable location will include:

- Easy access to a standard power outlet
- Somewhere near the [network switch](#) closest to your connection to the Internet (or for some, the connection to your Wide Area Network)
- An area safe from damage to the Wired Measurement Computer or other equipment



3. Micro SD Card

Ensure the Micro SD card is plugged into its port on the Measurement Computer.



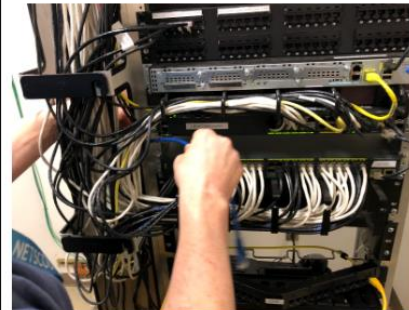
Connect the other end of the Ethernet cable to an appropriate switch port.

If you have a simple or small network, your switch ports may look something like this.



If you have a large or more complex network, your switch ports may look like this.

In this photo, one end of a blue ethernet cable is being plugged in to a spare switch port.



2. Device Location

Find a suitable location for the WiFi Measurement Computer. A suitable location will include:

- Easy access to a standard power outlet
- Excellent Wifi coverage in range of where patrons would access the network (do not place the unit in a dead zone or a place where it will be obstructed by furniture or other objects)
- An area safe from damage or the potential of theft



CAP Summer Workshop in Bozeman, MT

- Louis Fox, CENIC
- Internet2 staff:
 - Community Anchor Program
 - Network Services
 - Community Engagement
 - Marketing
 - Trust & Identity
- Invited guests
 - Rich Fagan (museums), John Delaney (curriculum), Matt Rantanen (tribal community), Jen Leasure (The Quilt), and Susan Hildreth, Ann Ewbank, and Jennie Stapp (libraries)

CAP Summer Workshop Proposals

- Libraries
 - Write a grant to take the TGL toolkit to more rural and tribal libraries
- Tribal Communities
 - Convene tribal communities to see whether it makes sense to have a workshop for R&E networks who serve tribal communities and tribal community representatives discussing current issues and best practices
- Museums
 - Explore hosting a resource-sharing webinar series to highlight institutions CAIs are connected to by virtue of their R&E connection; include the Getty Museum
- Oceans and Human Culture Curriculum
 - Work with Internet2's Marketing and Communications team to ensure there is an interim home for Oceans and Human Culture content
- The Quilt
 - Partner with The Quilt to focus on community anchor institutions
- Internet2
 - Engage interested K12 schools in cloud connect opportunities
 - Explore expansion of eduroam for K12

Fall CAP Retreat



Fall CAP Retreat Proposals

- Conduct needs assessment for regionals to distribute to community anchor institutions (CAIs)
- Website redesign: create a landing page for each CAI
- Convene regionals on quarterly call
- Tell stories about each CAP CAI segment
- Create a communication strategy
- Partner with educational compacts

The logo for Internet 2, featuring the word "INTERNET" in a white, sans-serif font, with a large, stylized red "2" superimposed over it.[illegible]

NEWS

Florida LambdaRail helps bring vital software back on line in aftermath of Hurricane Michael

Posted on Aug 01, 2019 by [Stephanie Stenberg](#)
[\[/people/detail/4632/\]](#)

Tags: CAP, Regional Networks, State and Regional Network Spotlight



Hurricane Michael damage in Panama City

When Hurricane Michael came ashore at Mexico Beach, Florida on October 10, 2018 it was a monster, having rapidly intensified to major hurricane status from a tropical depression in just three short days. At landfall it was the first Category 5 storm to hit the continental United States since Hurricane Andrew hit Miami in 1992. In its wake, communities were left stunned and shattered by the destruction that arose seemingly from nothing.

At the time of landfall, just a few miles up US 98 from Mexico Beach the Panama City Police Department was hosting a vital piece of software utilized by local law

enforcement agencies across the state. The Traffic and Criminal Software (TraCS), managed by FLR partner institution Florida State University (FSU) under a grant from the Florida Department of Transportation, is utilized by 200 law enforcement departments across Florida. While FSU is an Florida LambdaRail (FLR) member, most TraCS users, including Panama City, are not FLR affiliates. TraCS is used to electronically submit around 225,000 crash reports and millions of citations to local county clerks each year. Without the software, citations and reports would have to be written by hand and personally submitted. Understanding the importance TraCS represents to law enforcement operations, in July the decision had been made to engage the City of Clermont, an FLR Affiliate in the Central part of Florida, to serve as a backup location for this service. Plans were put in place to make the connection live by the end of the year.

Then Michael hit.

Due to the extensive damage caused by Hurricane Michael, TraCS was knocked offline and an emergency



“This process highlights the flexibility inherent in the FLR network,” said FLR CEO Joseph Lazor. “Our engineers work hard to mitigate risks, but especially in Florida disasters are going to happen. When the unthinkable does occur, our members and affiliates know FLR is the partner they can count on to go the extra mile to make things right.”

process was started to install backup servers in Clermont ahead of schedule. New equipment was expedited and by Oct 15th at 8am it was on site. 12 hours later, with FLR engineers providing remote assistance to City of Clermont and FSU staff, the TraCS program was completely up and running. As a result of their collective hard work, an important public service was restored with minimal interruption.

Network Statistics

On the web: www.flrnet.org [<http://www.flrnet.org>].

Twitter: [@flrnet](http://www.twitter.com/flrnet) [<http://www.twitter.com/flrnet>].

Community Anchor Program Member since: 2006

Ownership: 12 Equity-Owning Partner Universities

Affiliates:

18 State Colleges

5 Public School Districts

11 Local Governments

5 Hospital Systems

5 Research Institutions

3 Community Foundation/Arts

Previous article:

[University of Maryland: Mellon Foundation Awards \\$2.8M for Research, Digitization in Humanities](#)
[[news/detail/17250/](#)]

Next Article:

[Be Ready for Google's New Peering Requirements](#)
[[blogs/detail/17251](#)]

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NEWS

KyRon: Connecting Rural Kentucky, One Parking Lot at a Time

Posted on Sep 03, 2019 by [Therese Perlowski](#)

[\[/people/detail/5334/\]](#)

Tags: CAP, Regional Networks, State and Regional Network Spotlight



What do you do when the neighborhood gas station has a better wireless connection than the local community college? In parts of Kentucky, you turn your car into your personal computing center.

The [Kentucky Community & Technical College System \(KCTCS\)](https://kctcs.edu) (<https://kctcs.edu>), the Kentucky Post-Secondary Education Network, and the Kentucky Regional Optical Network (KyRON) have banded together to provide a

unique way for their communities to access the internet through their “parking lot initiative.”

Many parts of rural Kentucky do not have access to high-speed internet. In most of these areas, there is no Starbucks nearby, and even libraries may have a poor connection. Commercial providers often don’t reach these areas, leaving entire communities without access. Dr. Jay Box, KCTCS president, immediately saw the need for quality wireless internet after he embarked on a “roadshow” tour to gather community and student feedback.

The scope of KCTCS and its focus on rural communities make it uniquely positioned to provide a solution to the lack of high quality access in its communities. KCTCS serves more than 75,000 students through 16 colleges and more than 70 other locations throughout Kentucky. Campus buildings span as far east in the state as Ashland and as far west as

“In everything we do, our mission is to improve the quality of life and employability of the citizens of the commonwealth.” - Kenneth Burdine, Associate Chief Information Officer for KCTCS.

Paducah. With a mission to improve the quality of life and employability of Kentucky’s citizens, KCTCS took the issue of expanding wireless internet services head on.

KCTCS invested over half a million dollars in refreshing and building out wireless infrastructure. As a result, there are now over 2,000 wireless access points connected via KyRON throughout the community college system. KCTCS focused on providing expanded internet access by creating an open guest wireless network that extends out into the parking lots of each of its locations.

The parking lot initiative has been a huge success for KCTCS, allowing it to expand capacity to serve its students and the local communities. Most students are working adults between the ages of 25-36, and, without home internet access, they need a place to study and interact with the curriculum tools. The parking lots were a perfect solution. Students and other community members come in after work or in the evenings to connect to the network to study, share music, apply for jobs, and register for healthcare. Several campuses also started a specific program designed to increase law enforcement presence

on



campus, reserving parking spaces for local police officers so that they can use the wireless access to complete and access reports from their vehicles.

A true part of the community, KCTCS offers its often underserved communities the incredibly valuable resource of connection. Kenneth Burdine, Associate Chief Information Officer for KCTCS emphasizes, “In everything we do, our mission is to improve the quality of life and employability of the citizens of the commonwealth.”

In a world where internet access is no longer just a want but truly a need, KCTCS provides a creative and effective solution by connecting rural Kentucky communities one parking lot at a time.

Network Statistics

On the web: <https://kctcs.edu> [<https://kctcs.edu>].

Twitter: [@kctcs](http://www.twitter.com/kctcs) [<http://www.twitter.com/kctcs>].

Community Anchor Program Member since: 1997

Ownership: 12 Equity-Owning Partner Universities

Affiliates:

8 State Colleges

129 Public School Districts

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10 Hospital Systems

8 Research Institutions

3 Community Foundation/Arts

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Center Boosts
U.S. Science
with Largest
Academic
Supercomputer
In The World](#)
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Internet2 NET+ Services Available to CAP Member Higher Education Institutions and K12 Schools

For more information about Internet2's NET+ services, visit www.internet2.edu/netplus.

Service	Contact Name	Contact Email	Available to CAP Member Higher Education Institutions?	Available to K12 schools?
Cloudlock	Nick Lewis	netplus@internet2.edu	Y	
Code42	Sean O'Brien	netplus@internet2.edu	Y	
Dropbox	Sean O'Brien	netplus@internet2.edu	Y	
Duo Security	Nick Lewis	netplus@internet2.edu	Y	
LabArchives	Dana Voss	dvoss@internet2.edu	Y	
LastPass	Nick Lewis	netplus@internet2.edu	Y	
Mitel SIP Service	Sean O'Brien	netplus@internet2.edu	Y	Y
OneCampus	Matthew Buss	netplus@internet2.edu	Y	
Panopto	Matthew Buss	netplus@internet2.edu	Y	
ServiceNow	Matthew Buss	netplus@internet2.edu	Y	
Splunk	Nick Lewis	netplus@internet2.edu	Y	Y
Vidyo	Sean O'Brien	netplus@internet2.edu	Y	Y
Voyance	Matthew Buss	netplus@internet2.edu	Y	Y
Zoom	Sean O'Brien	netplus@internet2.edu	Y	Y



TEACHER PROFILE



Wendy Blankley

Brecknock Elementary School
Denver, PA

K-6 School Population:
600 students in the elementary school

Wendy Blankley's goal as a teacher is to connect her learners with every continent. Blankley recently won the 2019 Keystone Innovator Technology Award for embracing the effective integration of educational technology and innovating with new technology tools and resources in the ever-changing landscape of today's educational environment.

“*I didn't see a spark within my kids with them learning in a traditional classroom model. I wanted to be the type of teacher who kindled my kids excitement and desire in a classroom setting while experiencing the fun of education.*”

Mystery Skype in the Classroom

Blankley has some advice for teachers who want to start connecting with other classes. “Start with social media. I have found numerous connections by using Twitter and Facebook. I'm in a Facebook group, [“Mystery Skype in the Classroom.”](#)

Her class did a “Mystery Skype” with a classroom in Wales. In “Mystery Skype,” each classroom connects via a videoconferencing app like Skype or Zoom and tries to guess the location of the other classroom by asking yes or no questions. Blankley saw a “million different” changes in her students' engagement level. The kids collaborated and used higher-order thinking skills to come up with questions for the other class. They ask questions like, “Is your country located in Asia?” or “Are you north of the equator?” to find the other classroom's location. Blankley has even used Mystery Skype in math class, asking the kids to estimate the distance between the locations and calculate the cost of flights.

After Mystery Skyping with the classroom in Wales, Blankley again connected with the class to read books by the same author and compare plot, setting, and theme. “What I've found in connecting with other teachers is that educators are so generous with their time; they want to help.”

Take the Videoconferencing Leap

Blankley made the video connections without heavy IT staff involvement. "The first couple of times I did make connections, I was so nervous." I thought, 'What if something goes wrong?' Well, you know what? It might go wrong. It will be worth it though for my learners" When she invited her superintendant to witness the Mystery Skype, it wouldn't connect at first, but she kept at it, and eventually connected. She advises having a backup plan just in case anything goes awry.



Blankley is glad she took the leap to videoconference with other classes around the world. Since then, she's connected her kids to a butterfly expert via the [Center for Interactive Learning and Collaboration \(CILC\)](#) and with a classroom in Ghana to share cultural dances. "I want my kids to realize they can do anything. When they see a scientist in Antarctica, or connect with a class in Africa, I want them to understand that they can do whatever they want and go wherever they want. The world is a click and a connection away"

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Contact Information

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BLOGS

Remote Instrumentation Resources for K20 Schools

Sep 03, 2019, by [Stephanie Stenberg](#) [\[people/detail/4632/\]](#)

Tags: CAP, K20 Education

Utilizing advanced networking, students can conduct original research using the same instruments as the nation's premier scientists. These remote instruments let your students control a microscope or telescope hundreds of miles away to view everything from comets to mosquitos to microchips.



Internet2's Community Anchor Program is dedicated to helping K20 schools further their educational mission using advanced networking. One way we support schools is by compiling resources schools can use to make the most of their connection.

Below is a list of remote instrumentation resources for connected classrooms. If you know of additional resources to include, please email us at contactcap@internet2.edu [<mailto:contactcap@internet2.edu>].

Bugscope [<https://bugscope.beckman.illinois.edu/>] (scanning electron microscope), from the Beckman Institute's Imaging Technology Group at the University of Illinois. The Bugscope project provides free interactive access to a scanning electron microscope (SEM) so that students anywhere in the world can explore the microscopic world of insects. This educational outreach program from the Beckman Institute's Imaging Technology Group at the University of Illinois supports K-16 classrooms worldwide. Bugscope allows teachers everywhere to provide students with the opportunity to become microscopists themselves — the kids propose experiments, explore insect specimens at high-magnification, and discuss what they see with our scientists. This is a free service.

International Astronomical Search Collaboration (IASC) [<http://iasc.cosmossearch.org/>] (remote telescopes), from the Las Cumbres telescope network (primarily for middle school students). IASC uses data from Pan-STARRS (University of Hawaii) and the Catalina Sky Survey (University of Arizona) that is distributed to the participating schools. The students search through the data to discover and measure original Main Belt asteroid discoveries. Another part of the IASC program includes access to the 0.4-m telescope network of the Las Cumbres Observatory. Students can use these telescopes remotely to image deep sky objects, asteroids, and comets. This is a free service.

iTelescope.net [<https://www.itelescope.net/>] (multiple remote telescopes). iTelescope has 20 publicly accessible telescopes across 4 observatories, located in both the Northern and Southern Hemispheres, that your students can fully control over the Internet. There is a fee associated with this service.

Labsland.com [<https://labsland.com/en/>] (multiple remote instruments). LabsLand connects schools and universities with real laboratories available somewhere else on the Internet. A real laboratory can be a small arduino-powered robot in Spain, a kinematics setup in Brazil, or a radioactivity testing lab in Australia. They are real laboratories, not simulations: the laboratories are physically there, and students from these schools and universities access them. There is a fee associated with this service.

North Dakota State University Electron Microscopy Center

https://www.ndsu.edu/em_lab/instrumentation/jeoljsm_6490lv/remote_sem_use/

(scanning electron microscope). A scientist works with students to control the telescope and look at the specimens. This is a free service.

Skynet Junior Scholars (<https://skynetjuniorscholars.org/>)

(multiple remote telescopes). Students can use the Panchromatic Robotic Optical Monitoring and Polarimetry Telescopes (PROMPT), the Yerkes 41-inch telescope (the largest optical telescope on Skynet), the 20 Meter Radio Telescope, and new telescopes in Australia among others. This is a free service.

Slooh (<https://slooh.com/>) (multiple remote telescopes) (for grades 4-8). Slooh teaches 4th to 8th grade students how to explore space via a network of online telescopes, launching in the fall, with funding support from the National Science Foundation. Slooh makes offering astronomy engaging and affordable for schools without the requisite equipment or expertise on staff. We provide direct access to astronomy educators and real-time viewing and control of robotic telescopes, including seven telescopes situated at one of the world's top observatory sites. There is a fee associated with this service.

University of Wisconsin-Eau Claire

<https://www.uwec.edu/academics/college-arts-sciences/departments-programs/materials-science-engineering/materials-science-engineering-center/k12-community/>

(scanning electron microscope and other instruments). The Materials Science and Engineering Center offers a variety of programs and opportunities for K-12 students to learn about Materials Engineering and Nanotechnology. Each year dozens of presentations are given to school classes and after-school programs. These presentations are typically from 30-45 minutes in length and can be tailored to the age of the students, and are meant to be entertaining as well as educational. The Materials Science and Engineering Center also can provide access to powerful instrumentation for schools to use as part of their curricula. For example, the Scanning Electron Microscope is remotely operable, so the instrument can be used during a class anywhere that has internet access. Videoconferencing with a scientist, students can also learn about X-ray Fluorescence, X-ray Diffractions, X-ray Photoelectron Spectroscopy, and Confocal Microscopy. This is a free service.

Previous Blog:

[Early Reports:
MDQ Proving a
Time-Saver](#)

[\[blogs/detail/17293\]](#)

Next Blog:

[Upcoming
Maturity Model
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