

NIUNet- Moving Northern Illinois into a new Technology Era

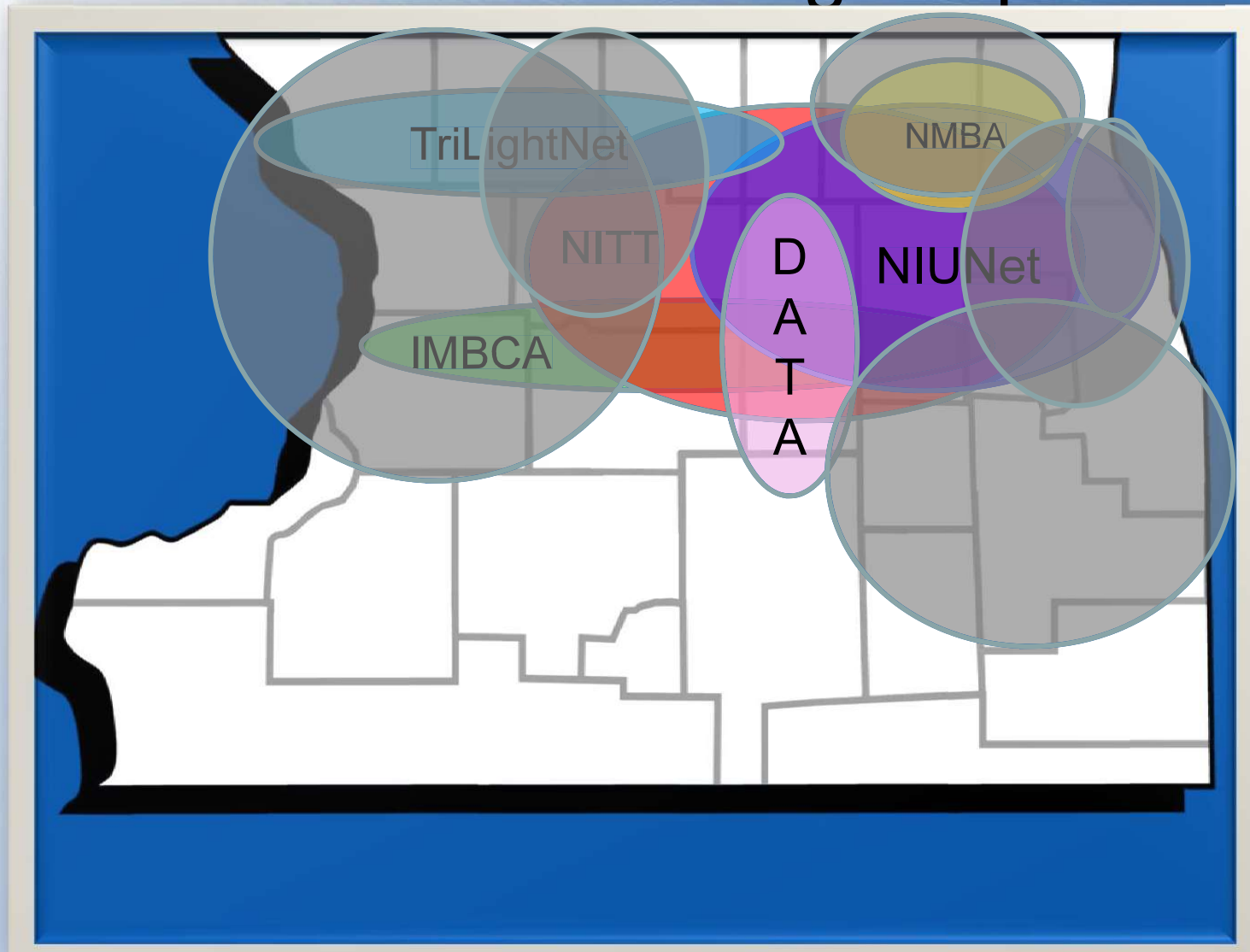


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HISTORY

NIU Stimulus Funding Proposals



HISTORY

NIU has assisted in writing over \$400M in proposals for Northern Illinois

- **Blackhawk RC&D - \$72M**
- **Greater Rockford Area - \$74M**
- **DATA - \$14.8M**
- **SSMMA - \$55M**
- **NCSC - \$12M**
- **City of Chicago - \$96M**
- **Cook County - \$30M**

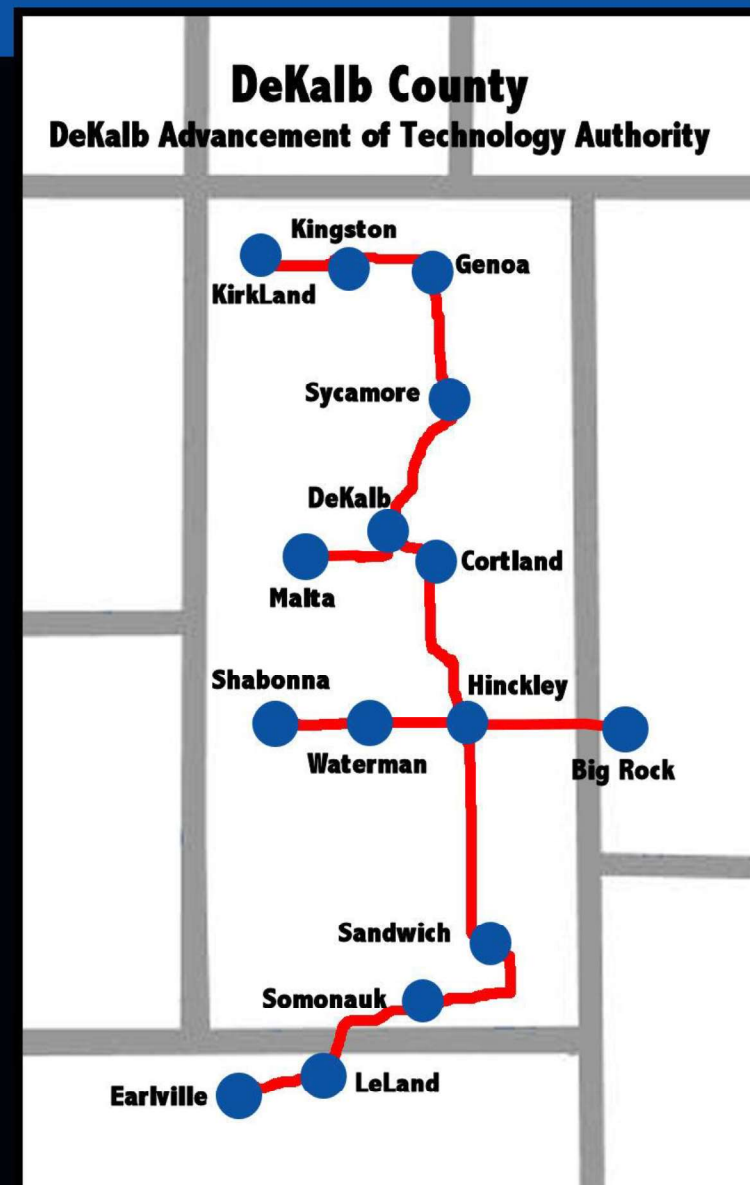
The DeKalb Advancement of Technology Authority



A fiber optic network that is a \$14.8M federally funded grant using ARRA through the Round 1 NTIA - BTOP Funding in DeKalb County

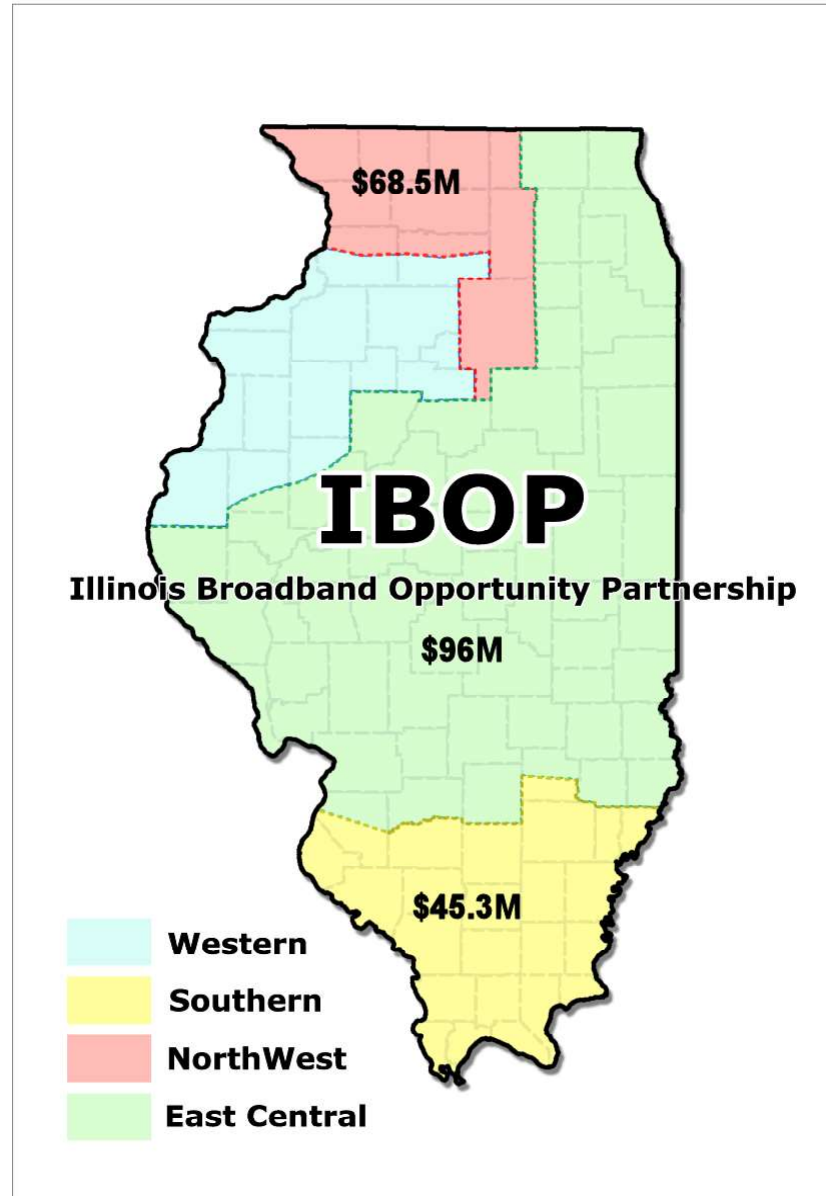
DATA Project Schedule

- Completed Environmental Assessment in August 2010.
- Passed DeKalb County Ordinance to move forward with contract September 2010.
- Genoa, Kingston and Kirkland will have connectivity by December 2010.
- DeKalb County south of the City of DeKalb will have connections located between buildings within city limits.
- Over the winter December 2010- March 2011, the crews will bore under streets and intersections.
- Order of connections will be Hinckley, Big Rock, Waterman, Shabonna, Sandwich, Somonauk, Leland and Earlville.



Round 2 BTOP Funding

- In order to maximize federal dollars Illinois combined efforts.
- Divided the State into four regions.
- Each region was assigned a Program Manager.
- The effort was named The Illinois Broadband Opportunity Partnership IBOP.



Total in funding for BTOP projects in the State of Illinois is \$351M

Infrastructure

- U of I \$31.2M
- DeKalb County \$14.8M
- ICN \$96.3M
- Clearwave \$45.3M
- NIU \$68.5M

Sustainable Adoption/Public Computer Centers

- City of Chicago \$8.6M
- City of Chicago \$12.9M
- MyWay Village \$6.8M

Wireless/Last Mile

- Cellular One \$24.5M
- Utopian Wireless \$1.3M
- Shawnee Telephone \$8.3M
- Convergence Tech \$12.1M
- Norlight \$11.8M

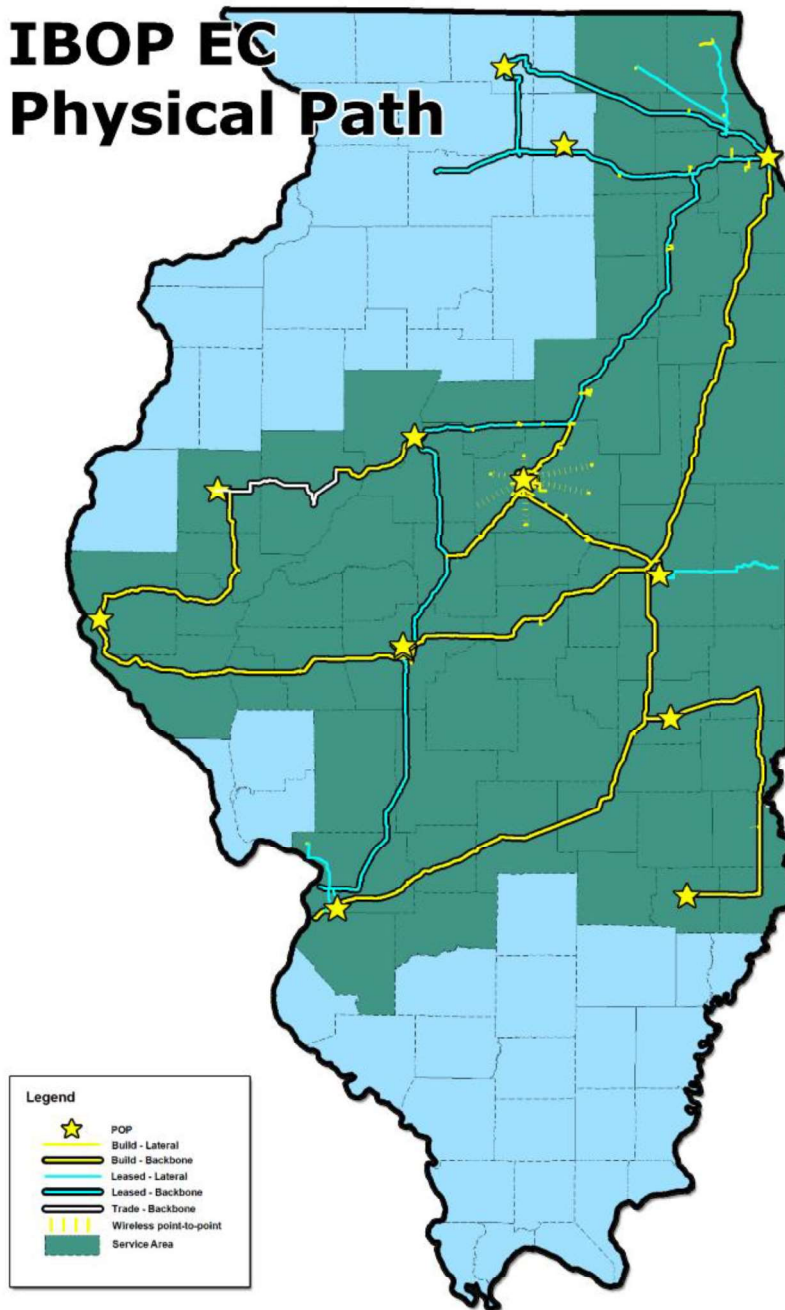
State Broadband and Development

- PCI \$8.2M

Others Awards/Partial

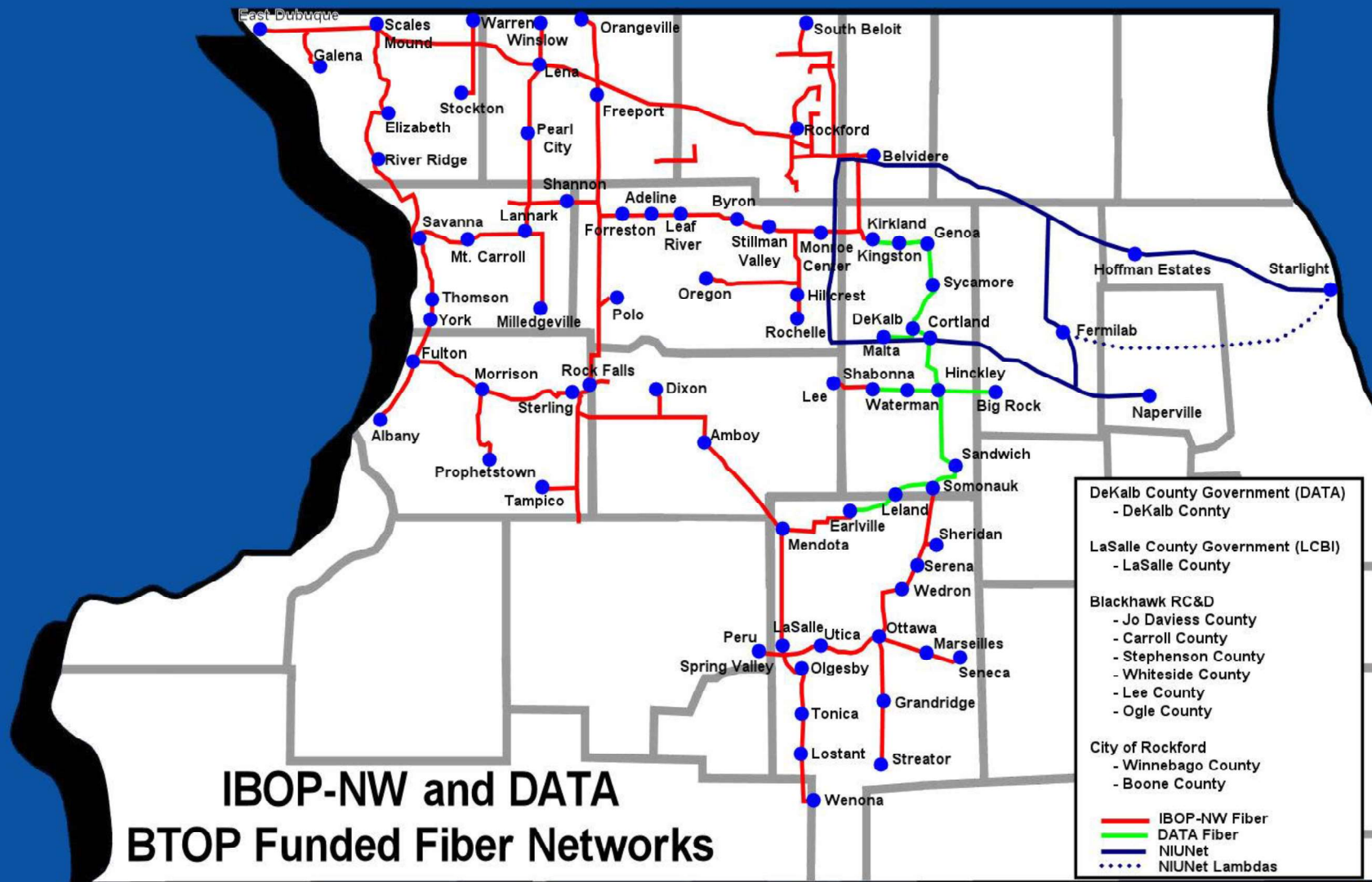
- One Economy, UCAI,CSD \$2.8M

IBOP EC Physical Path

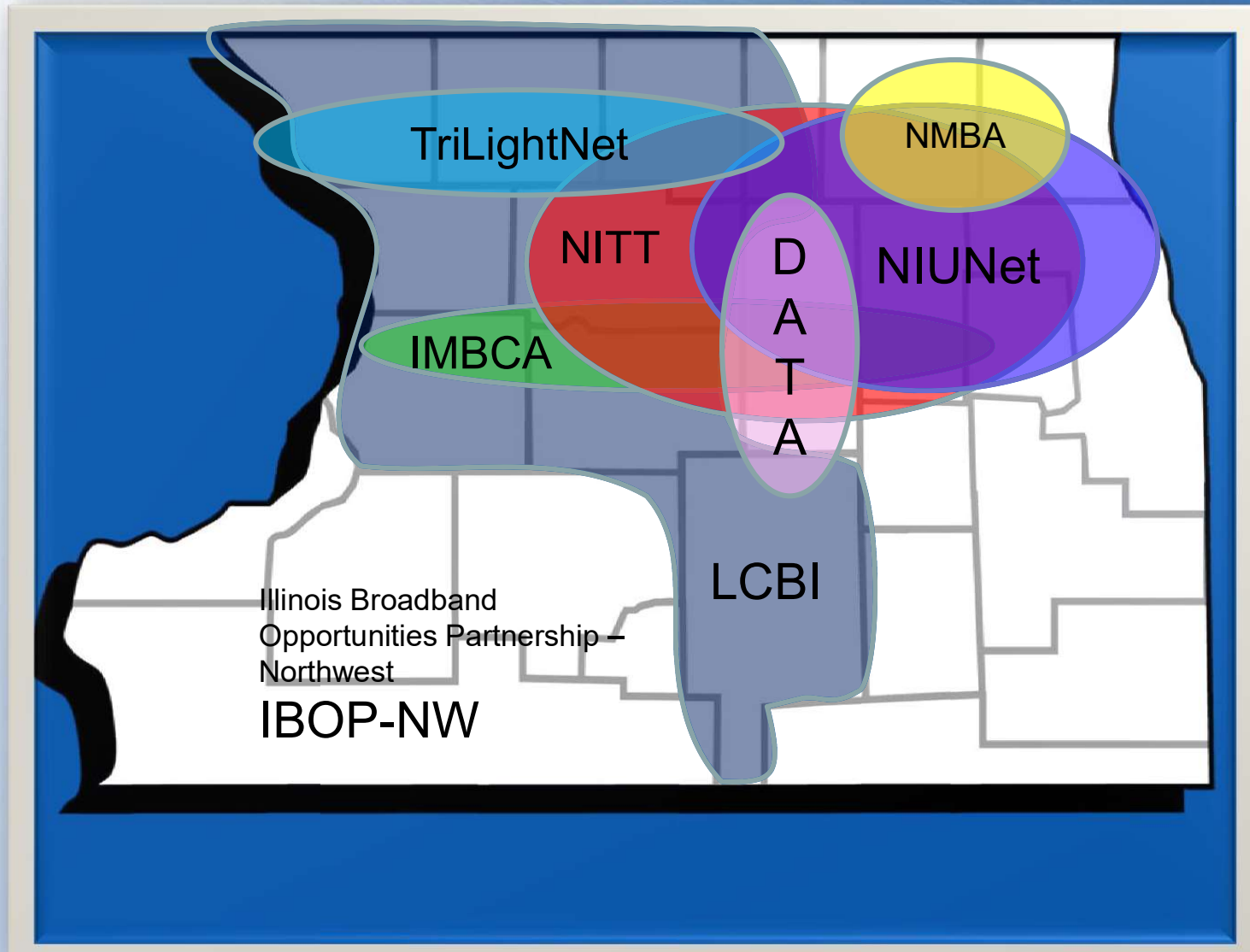


IBOP-NW

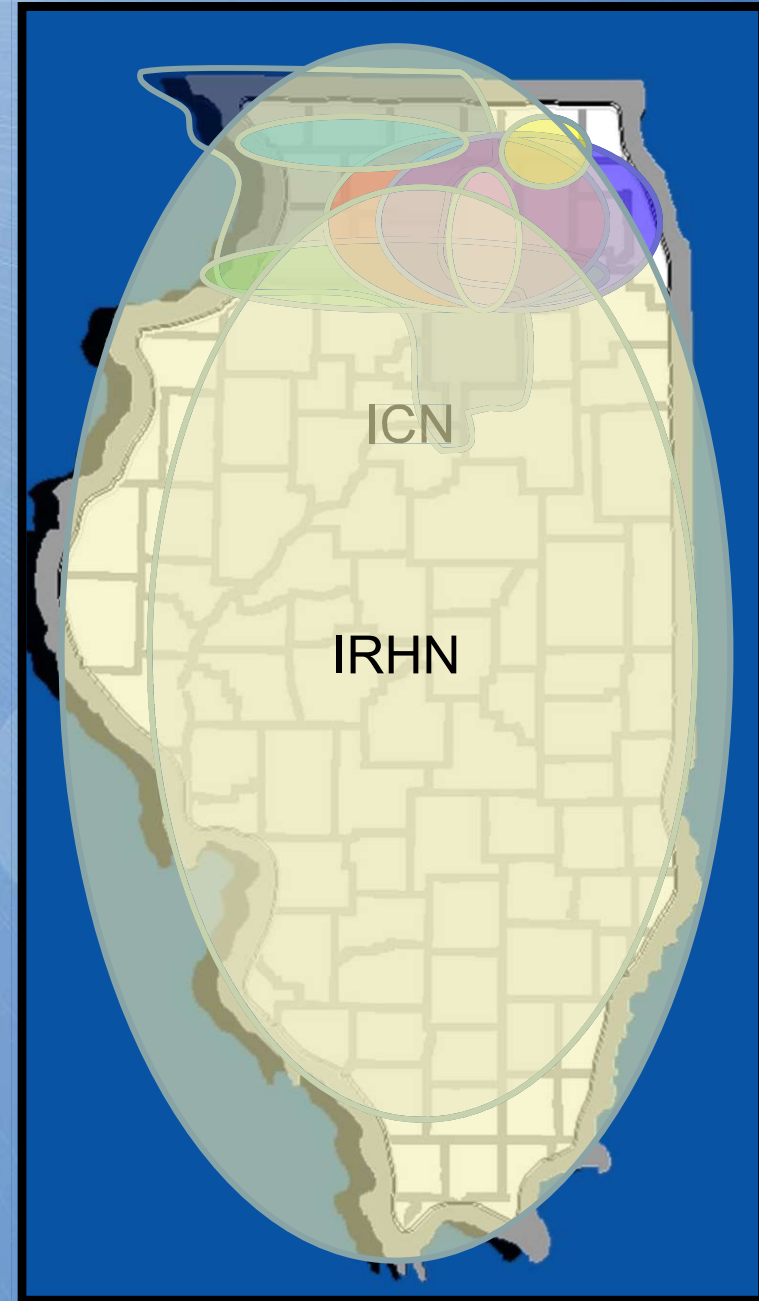
- Combined three previous grant regions
 - Rockford Greater Area
 - Blackhawk Hills RC&D
 - LaSalle County
- Require a budget reduction from \$170M to \$70M
- Required a 30% grant match in round 2.
- Original Proposal was \$71M, after due-diligence proposal was cut again and funded for \$68.5M



Broadband Initiatives in Illinois



Northern Illinois Connecting into Statewide Broadband Initiatives

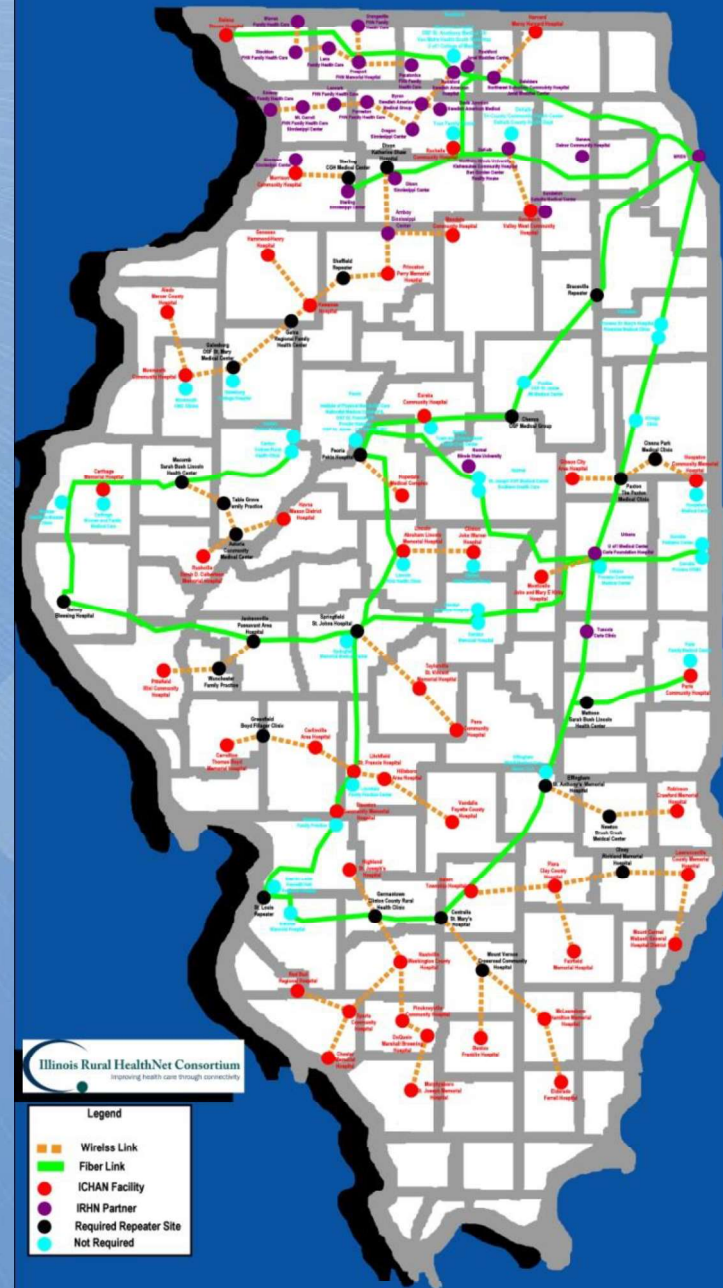


Illinois Rural HealthNet (IRHN)

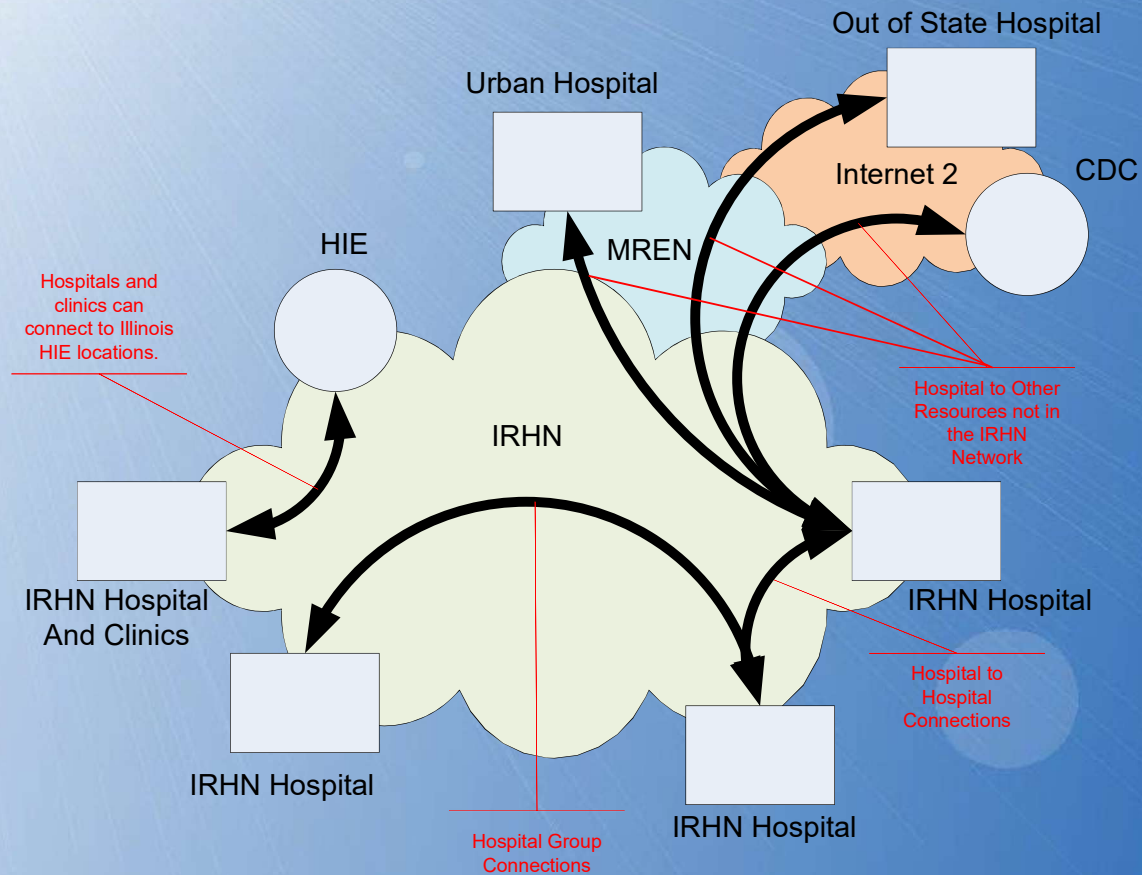
Connecting over 150 HealthCare Facilities in Illinois

\$22M Grant awarded to create the IRHN modeling NIUNet.

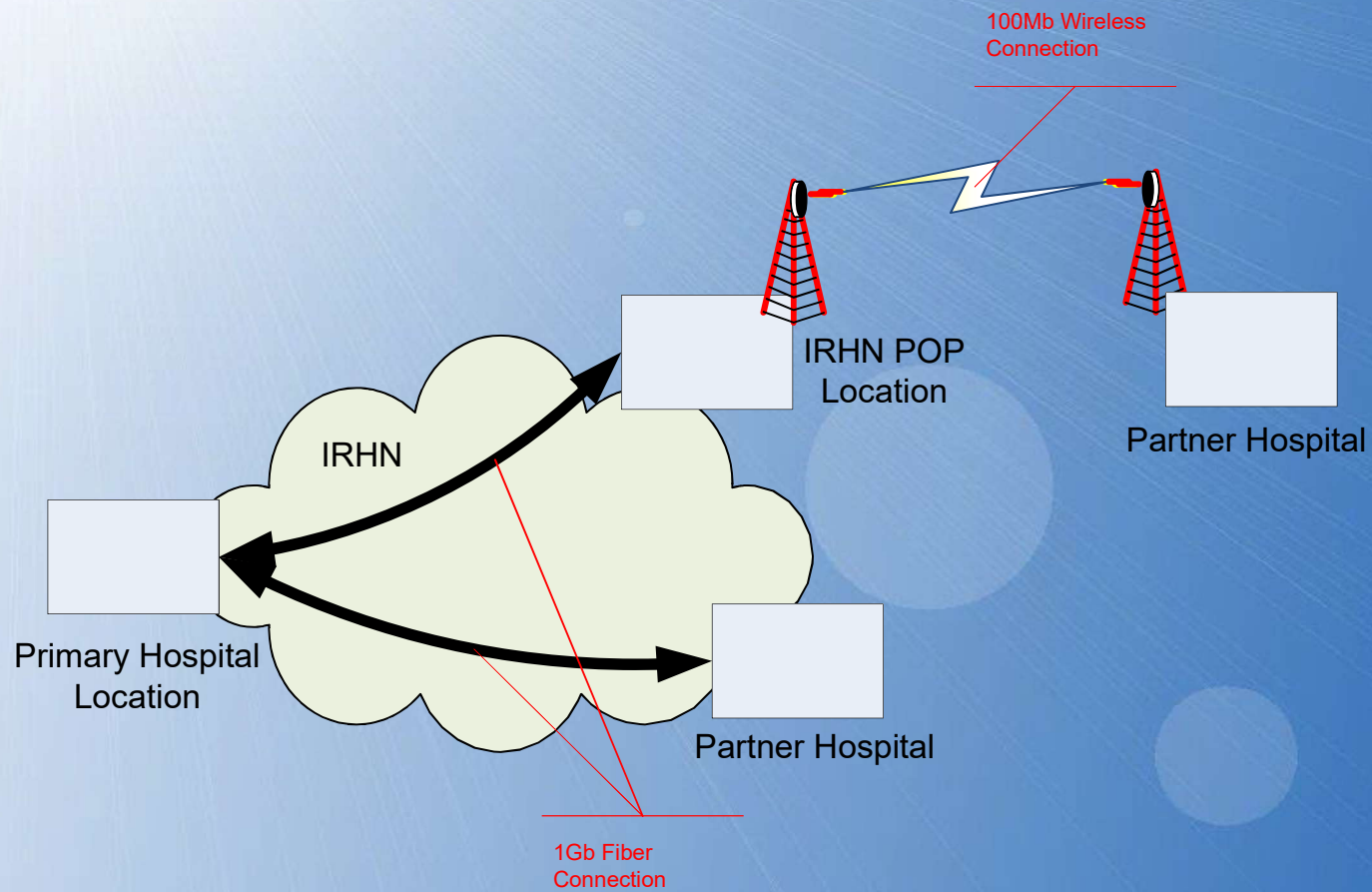
Used primarily for Health Information Exchange (HIE), Telemedicine and Telehealth.



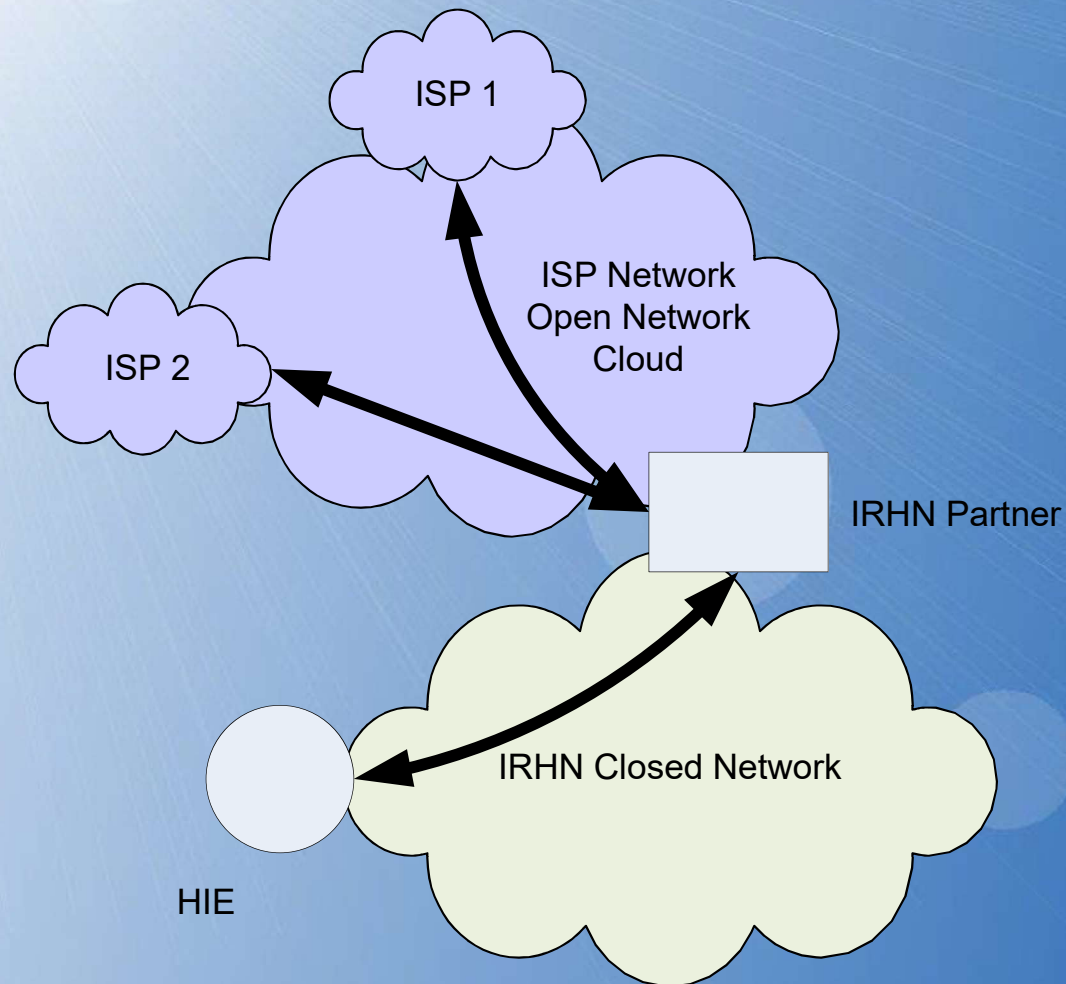
IRHN Closed Network



Hospital Groups



ISP Open Network for Healthcare



What are the Advantages of Broadband?



Cost Avoidance(Public)

- Local schools, Municipals, E-911 and County will have un-restricted communications for the future.
- Consolidation of servers in buildings reducing hardware and software costs up to 50%.
- Ability to share/combine services or licensing for reducing costs by collaborating with other institutions (Ilini Cloud for Schools, GIS for Government, Data Centers Exchanges for Healthcare, United Streaming).
- Reduction of phone costs and increasing capacity of coverage for phone services. (District 428 High School reduced from over \$2,000/Month to \$480/Month, District 427 from over 8,0000/Month to \$2,000/Month)

Tax Base Increase (Private Sector)

- Support our local Internet Service Providers (ISP) and reduce the costs for transport for connections to the internet.
 - Help providers to expand services for faster speeds to business and home owners.
 - Give the providers a reliable backhaul connection over current options.
- Provide a new level of service for local businesses.
 - Connect facilities together (Banks, Car Dealership, Factory to Warehouse, Business to Supplier).
 - Provide high speed communications for business sustainability.
- Tools for attracting new business to the area.
 - NITT
 - Dark Fiber Options
 - Ultra High Speed Connections into Chicago

Further Analysis of Cost Avoidance



Securing the Future for our Community Anchor Institutions (CAI's)

- Broadband annual growth needed for a public entity is 45%
- Average cost for transport in Northern Illinois is \$168/Mb/Month
- Average cost for a T-1 in Northern Illinois is about \$450/Month.
- The best cost for ISP services without transport is \$48/Mb/Month.
- IBOP-NW is estimated to be \$600/Month for Gigabit Transport or dark fiber.
- IBOP-NW is estimated to be \$25/Mb/Month for ISP Services.

Trend Analysis 45% growth vs. 1 Gig Connection through IBOP-NW

	Year 1	Year 2	Year 3	Year 4	Year 5	Total 5 Years
Average Transport Costs with 45% Increase	\$3M	\$5M	\$7M	\$10M	\$15M	\$41M
Transport Costs for 1Gb with IBOP-NW	\$4M	\$4M	\$4M	\$4M	\$4M	\$20M
Savings to Illinois Tax Payers	(1M)	\$1M	\$3M	\$6M	\$11M	\$21M
Bandwidth Base Increase 45%/Year in Mb	3.0Mbs	4.4Mbs	6.3Mbs	9.1Mbs	13.3Mbs	

Desired CAI Broadband Speeds

CAI Category	Egress Speeds	Transport Speeds
K-12 Schools	100Mb	1Gb
Hospitals	1Gb	1Gb
Community Colleges	1Gb	1Gb
Municipals, Local Gov	100Mb	1Gb
Libraries	100Mb	100Mb
Emergency services	100Mb	1Gb
Other CAI	100Mb	1Gb

Current Best Case in Illinois

- Best Egress rate was at \$48/Mb/Month with 100Mb minimum.
- Best transport regional rate was \$23/Mb/Month with Gigabit Service.

Being Considerate

Assuming that not all CAI's require high speed egress but rather a central location with transport extensions, the IBOP-NW looked like:

- 81 School Districts
- 40 Major Population Centers
- 12 Hospital Groups

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Cost Saving on Centralized Services

Adoption Rate

	Total Units	Year 1	Year 2	Year 3	Year 4	Year 5
Number of Schools Districts	81	12	24	36	49	61
Number of Larger Population Centers	40	6	12	18	24	30
Adoption Rate Totals Combined	121	18	36	54	73	91

Total Savings

	Year 1	Year 2	Year 3	Year 4	Year 5	Total Savings
Savings from Centralized Services	\$0.3M	\$0.5M	\$0.8M	\$1.0M	\$1.3M	\$3.9M

Other methods for saving on high speed broadband networks

- Consolidation of phone services using VOIP.
- Consolidation of video surveillance systems.
- Distance Learning for professionals.
- Streaming Video Services.

Questions?

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