

Illinois Century Network

Policy Committee Meeting Agenda

April 12, 2016
1:00 p.m.



**ILLINOIS CENTURY NETWORK
POLICY COMMITTEE
MEETING AGENDA
APRIL 12, 2016
1:00 P.M.**

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Next Meeting

July 12, 2016
Illinois State Library, Springfield
James R. Thompson Center, Chicago

ILLINOIS CENTURY NETWORK
January 12, 2016 POLICY COMMITTEE MINUTES

Submitted for: Action

Summary: Distribution of the January 12, 2016 minutes for review by the Policy Committee.

Action Requested: Adoption of the January 12, 2016 minutes.

Recommended Motion: *The ICN Policy Committee adopts the January 12, 2016 minutes with any edits as noted.*

**ILLINOIS CENTURY NETWORK
JANUARY 12, 2016 POLICY COMMITTEE MINUTES**

Hardik Bhatt called the meeting to order at 1:02 p.m.

Members Present (Springfield):

Lori Sorenson, Central Management Services	Todd Jorns, Illinois Community College Board
Erich Schroeder, Illinois State Museum	Michael Dickson
Kathleen Bloomberg, Illinois State Library	

Members on Audio Bridge:

Chet Olson	Tom Steele
Hardik Bhatt, Central Management Services	

Members Absent:

Vicki DeWitt	Brent Engelman, State Board of Education
Eric Lichtenberger, Illinois Board of Higher Education	

Staff and Guests:

Essam El-Beik, Central Management Services	Tom Oseland, Central Management Services
Robin Woodsome, Central Management Services	Judy Hessler, Central Management Services
Valerie Bolinger, Central Management Services	Frank Walters, Central Management Services
John Leonard, Central Management Services	Keith Formell, Cook County Sheriff's Office
Bill Buchanan, MTC	

Announcements and Remarks

Hardik Bhatt welcomed board members and guests.

Minutes – October 19, 2015

Hardik introduced the first item on the agenda, approval of the minutes from the October 19, 2015 meeting. A motion was made by Mike Dickson to accept the minutes. The motion was seconded by Todd Jorns. The motion carried.

E-rate Update

Tom Oseland provided this report and referred members to page 8 of the meeting packet. The 2014 E-rate funding year claims are about complete. A total of \$265,069.42 has been claimed via the applicant reimbursement, or "BEAR", process. ICN reimbursement claims via the Service Provider Invoice ("SPI") total \$320,889.60. A total of 368 applications submitted for the 2015 E-rate funding year listed ICN as service provider. A total of 352 of these applications have been approved to receive funding support. Approved applications represent a total of approximately \$3.8 million in ICN services supported by almost \$2.3 million in E-rate funds. Tom stated that we will exceed last year's activity by a significant amount.

The 2016 funding year application cycle will begin later this month. Applicants are currently filing their initial form via the new E-rate Productivity Center portal. ICN/RTC staff is responding to quote requests via the Form 470. USAC recently announced that the filing window for the actual E-rate applications, FCC Form 471, will open "no earlier than January 20, 2016, and will close no close no earlier than March 21, 2016".

Tom informed members that USAC announced that there will be an additional \$1.9 billion in roll-over funds available for the 2016 funding year. This is in addition to the normal funding cap of \$3.9 billion.

Essam El-Beik reported that the RFP for Category 2 (internal connections) deadline was January 11th. We are currently reviewing and processing the responses. Lori Sorenson reminded members that the RFP has been implemented as a vehicle/tool for schools and libraries to purchase products/services through a state contract and encourage them to take advantage of the expanded funding that is available through E-rate.

Robin Woodsome reiterated that ICN/RTC staff is busy responding to Form 470 bid requests. To date, staff has responded to 132 requests. January and February will be extremely busy.

K-12 Broadband Initiative

Essam reported that staff is working with Education Superhighway (ESH), a not-for-profit organization funded by philanthropic organizations to develop and assist schools on receiving high speed broadband access. ESH will provide a state/school connectivity report at the end of February. Following the report, ESH will assist the state in developing a plan of action. Lori conveyed that Beth Purvis, from the Governor's office is the sponsor of this initiative. The team also includes members from the State Board of Education and Learning Technology Centers.

Smarter Illinois

Hardik Bhatt commented that he has worked on several local and global Smart City projects and would consider the United States a super set of a Smart City. We are in a position that allows us to leverage concepts that have been designed for both Smart Cities and Smart Countries. We can become a Smarter Illinois by applying various solutions targeted for transportation, public safety and much more. By using the ICN backbone, we can improve the overall efficiency of government, create jobs and economic growth and assist Illinois citizens to obtain government services more easily. Smarter Illinois will enable and support the clustering of Illinois cities by using broadband technology for shared services. The ICN will be used to connect the cities.

Essam reported that he has been tasked with the creation of a high level plan that focuses on the foundational aspects of Smarter Cities. He will identify the applications and components required to implement and establish the necessary infrastructure. For the 75 day period (11/16/2015 – 01/31/2016) ICN has been researching potential Smarter Illinois projects and the associated strategy and a plan and resources required for implementation. In the subsequent 75 day period (02/01/2016 – 04/15/2016), we will select projects for implementation, flesh out the details, issue any necessary RFP's and initiate the selected Smarter Illinois projects. Discussions have taken place and continue to take place with University researchers, commercial companies and non-profit associations. The discussions are for information gathering, identifying areas of potential collaboration and identifying grant applications that ICN can support. For the first 75 day period ending January 31, 2016, a high level proposal document will be provided.

Fiber Builds

Essam reported that we have identified Illinois schools and libraries that are potential candidates for ICN fiber builds. The build of the fiber optic circuit would be managed by the ICN and subsidized by the Federal Communications Commission (FCC) through E-rate. Our E-rate bids responses will include a proposal for a fiber build only in cases where it makes sense. The key E-rate rules relevant to the ICN fiber build program are: (1) the FCC has suspended the requirement to amortize over at least three years construction projects that cost over \$500,000 and (2) the FCC allows the school or library to pay their portion of the construction cost in installments over up to 4 years. We will respond to approximately 40 customers with Internet service that includes a fiber build quote. After the closing of the E-rate form 471 window, we will know how many fiber build projects we have been awarded.

Discussion

Hardik opened the floor for discussion and new ideas.

Lori commented that the ICN is working on various strategies to move back into a fiscal balance. After the State funding was reduced, we started operating in a deficit mode. Some strategies have been discussed with staff the Advanced Engineering Task Force (AET) and will be presented at the next meeting in April.

Kathleen Blomberg asked how the membership numbers are compared to last year. Lori stated that since the ARRA project, membership numbers have continued to decrease due to other opportunities that are available to customers at a lower cost. Further discussion held regarding marketplace comparison pricing and ICN value-add services. A brief discussion was held regarding a sunset date for customers using T1 circuits.

Adjourn

Hardik moved to adjourn the meeting. Motion by Mike Dickson and seconded by Tom Steele. Motion passed and meeting adjourned at 1:53 p.m. The next meeting will be April 12, 2016 at the Illinois State Library in Springfield, the JRTC in Chicago or via audio.

**ILLINOIS CENTURY NETWORK
E-RATE UPDATE**

Submitted for: Informational

Summary: This item provides an update on ICN E-rate funding requests.

Action Requested: None

Recommended Motion: *None*

**ILLINOIS CENTURY NETWORK
E-RATE UPDATE**

Of the 369 applications submitted for the 2015 E-rate funding year that listed ICN as service provider, a total of 353 have been approved to receive funding support. These approved applications represent a total of approximately \$3.8 million in ICN services supported by almost \$2.4 million in E-rate funds. Of these, 103 of them represent ICN customers who are receiving their approved E-rate funding via a monthly invoice discount. Currently, data is being compiled to claim reimbursement of this funding via the Service Provider Invoice (SPI) method for the first 6 months of the funding year. This procedure allows the ICN to recover the funds disbursed to applicant customers via invoice discounts. The claim for the first half of the year will be approximately \$283,000. It is unknown at this time how many remaining applicants will be claiming approved E-rate funds via the "BEAR" (Billed Entity Applicant Reimbursement) process.

Applicants continue to post the FCC Form 470 requesting services for the upcoming 2016 E-rate funding year. The deadline to file this form is April 1st. RTC staff has been very busy responding to these requests for service pricing quotes.

On January 25th, USAC officially announced the dates for the filing window for the 2016 E-rate application. The window opened on February 3rd at noon and will close April 29th at midnight eastern time. Applicants must now use the newly created E-rate Productivity Center (EPC), the new online filing portal, to submit their 2016 E-rate application forms.

USAC recently introduced a new download tool to access information on 2016 applications filed in the EPC. As of this writing, a total of 258 Form 471 applications have been filed in Illinois. This new tool results in downloaded information for all applicants in the state. The resulting spreadsheet has multiple tabs displaying the downloaded information and is rather cumbersome to utilize. Hopefully this search tool is a work in progress and will continue to be improved into a much more helpful version. The chart below summarizes activity for the ICN as a service provider in the E-rate program beginning with the 2013 funding year; the first year in which ICN participated as an Internet service provider.

Service Provider Activity

Funding Year	Total apps listing ICN	Total apps approved for funding (to date)	Total dollar amount approved (to date)	Total dollar amount claimed for support (to date)
Year 16 (2013)	117	107	\$1,252,008	\$261,086
Year 17 (2014)	162	154	\$1,880,284	\$585,959
Year 18 (2015)	369	353	\$3,850,244	\$11,567
Year 19 (2016)	N/A	N/A	N/A	N/A
Totals	N/A	N/A	\$6,982,536	\$858,612

The chart below summarizes ICN E-rate application history for each funding year up to 2012.

Applicant Activity

Funding Year	Received	Funding Year (cont.)	Received (cont.)
Year 3 (2000)	\$2,137,765	Year 10 (2007)	\$953,998
Year 4 (2001)	\$2,522,559	Year 11 (2008)	\$799,251
Year 5 (2002)	\$4,996,227	Year 12 (2009)	\$1,339,032
Year 6 (2003)	\$4,644,171	Year 13 (2010)	\$2,982,199
Year 7 (2004)	\$2,497,427	Year 14 (2011)	\$2,561,151
Year 8 (2005)	\$2,424,567	Year 15 (2012)	\$2,520,377
Year 9 (2006)	\$982,392	Totals \$31,361,116	

**ILLINOIS CENTURY NETWORK
E-RATE UPDATE**

The ICN team continues to work hard responding to E-rate bids for school and library broadband connections (E-rate Form 470). The E-rate filing window closes April 29th 2016. The filing window is the final date for the school to submit their funding request to the FCC.

Thus far, ICN has responded to 417 bids. ICN reviews all sites for a possible ICN fiber build. Bandwidth requested is 2 – 3 times the level of last year.

As we are responding to E-rate Form 470's, the biggest issue found is how USAC lists the different service options. For example, when a bid request specifies only "Transport/Internet bundled" we contact the site requesting they issue another bid request specifying "Internet only". (When ICN provides a school or library Internet from an ICN POP, it can only respond to "Internet Only" bid requests).

The RFP responses for Category 2 Internal Connections are undergoing evaluation. We expect award announcement 2nd quarter 2016.

**ILLINOIS CENTURY NETWORK
K-12 BROADBAND INITIATIVE**

Submitted for: Informational

Summary: This item provides an update on the K-12 Broadband Initiative program.

Action Requested: None

Recommended Motion: *None*

ILLINOIS CENTURY NETWORK K12 BROADBAND INITIATIVE

As communicated in prior meetings, we have been working with Education SuperHighway (ESH) on understanding broadband connectivity in Illinois and planning next steps. ESH issued a draft Connectivity Report on 11th March 2016 which will first undergo internal review. Next steps include working to develop an action plan for Illinois.

In January the National Governors Association Center for Best Practices (NGA Center) in partnership with Education SuperHighway issued an RFP soliciting States to take part in the K-12 Broadband and Digital Learning Policy Academy.

The K-12 Broadband and Digital Learning Policy Academy is a project to assist participating states in expanding and connecting their K-12 broadband and digital learning efforts.

The Policy Academy will help governors, and education and technology policy advisors pursue the following:

- Support and guide each participating governor's efforts to build vision, momentum and a plan to make broadband more affordable for school districts, bring fiber to schools that lack access, and provide Wi-Fi in every classroom;
- Provide assistance in making the most efficient use of federal and state funding, namely E-rate resources, to increase Internet access and make that access more affordable for schools;
- Assist states to align efforts to expand broadband and Wi-Fi access with efforts to ensure educators are prepared to better use technology resources to improve student learning; and
- Build and educate teams within participating states to strengthen planning and implementation efforts for K-12 broadband access and digital learning, as well as, to develop a learning community among participating states that captures and shares best practices to accelerate and improve the work in each individual state.

Illinois responded to the RFP and was selected to participate in the Policy Academy. A total of six to eight states are expected to participate.

We have the first Policy Academy scheduled for March 31st – April 1st 2016. A second Policy Academy meeting will be held late summer/early fall with the Policy Academy concluding October 31st 2016.

**ILLINOIS CENTURY NETWORK
BUDGET UPDATE**

Submitted for: Informational

Summary: This item provides an update on ICN revenues and expenses.

Action Requested: None

Recommended Motion: *None*

ICN KPI History

	Fiscal Year							
	2001	2005	2010	2013	2014	2015	2016 (Projected)	2016 (Projected)
Network Capacity								
Backbone Capacity (core ring)	622M	2.5G	2.5G	2.5G	10G	100G	100G	100G
Total Egress Capacity	1.8G	4G	9G	11G	25G	32G	32G	32G
Connected CAIs								
K12 Schools Connected	867	4,087	4,103	3,329	3,219	2,833	2,780	2,780
Higher Ed Connected	76	325	311	254	240	225	221	221
Public Libraries Connected	42	470	441	368	368	375	375	375
Museums Connected	2	29	29	24	22	24	24	24
Healthcare Connected	1	63	56	42	42	36	35	35
Government Connected	12	339	2,023	1,713	1,685	1,657	1,615	1,615
Other	195	874	1,037	652	674	487	461	461
Total CAIs	1,195	6,187	8,000	6,382	6,250	5,637	5,511	5,511
Revenues								
State Appropriation	\$27,743,640	\$20,124,015	\$12,000,000	\$4,000,000	\$5,000,000	\$1,000,000	\$-	\$6,000,000
Legacy Customers/Services	NA	\$2,458,412	\$3,578,246	\$3,997,908	\$2,270,145	\$3,090,000	\$4,238,803	\$5,013,626
Services - State Agencies	NA	NA	\$6,922,008	\$7,096,056	\$7,229,040	\$2,770,000	\$3,040,000	\$3,340,000
Wholesale Services	NA	NA	NA	\$971,306	\$2,028,236	\$2,810,000	\$1,500,000	\$1,650,000
E-rate Reimbursement Recipient*	NA	\$5,771,055	\$794,601	\$-	\$5,081,527	\$-	\$-	\$-
E-rate Reimbursement Provider*					\$96,237	\$326,285	\$615,704	\$759,777
Total Revenue	\$27,743,640	\$28,353,482	\$23,294,855	\$16,065,270	\$21,705,185	\$9,996,285	\$9,394,507	\$16,763,403
Expenses**								
	\$27,740,002	\$27,291,976	\$22,357,379	\$21,786,430	\$18,000,000	\$13,370,000	\$12,710,256	\$12,710,256
Net								
	\$3,638	\$1,061,506	\$937,476	\$(5,721,160)	\$3,705,185	\$(3,373,715)	\$(3,315,749)	\$4,053,147
Rates								
	\$250/MB	\$250/MB	\$170/MB	\$170/MB	\$14/MB	\$14/MB	\$14/MB	\$14/MB
Avg Speed Funded by State								
K12	1.5M	1.5M	8M	8M	21M/1,000 FTE	21M/1,000 FTE	NA	NA
Higher Ed	1.5M	1.5M	8M	8M	21M/1,000 FTE	21M/1,000 FTE	NA	NA
Libraries	1.5M	1.5M	8M	8M	12M/20,000 POP	12M/20,000 POP	NA	NA
Museum	1.5M	1.5M	8M	8M	15M/Campus	15M/Campus	NA	NA

*FY14 E-rate revenues includes reimbursement for FY13 expenses received in FY14. This is the last reimbursement as an E-rate recipient.

**Expenses through FY14 include equipment costs based on depreciated value and not actual purchases. Expenses from FY15 forward are based on actual expenses.

**ILLINOIS CENTURY NETWORK
NEW SERVICE OFFERINGS**

Submitted for:	Action
Summary:	This item provides information on new service offerings for community anchor institutions and proposed pricing changes for bandwidth of 1Gbps to 10Gbps.
Action Requested:	That the Policy Committee approve the proposed pricing for the bandwidth levels.
Recommended Motion:	<i>That the Policy Committee approve the proposed pricing for the bandwidth levels.</i>

**ILLINOIS CENTURY NETWORK
NEW SERVICE OFFERINGS**

Currently ICN does not have pricing for services greater than 1Gbps. As customer bandwidth needs increase, ICN is receiving requests for services greater than 1Gbps. Staff propose the following prices which have been reviewed and approved by the Advanced Engineering Taskforce.

Proposed CAI ICN Pricing for Bandwidth of 1Gbps to 10Gbps				
Mbps	Per Mbps	12 Month Term	36 Month Term	60 Month Term
2000	\$4.25	\$8,500.00	\$8,075.00	\$7,650.00
3000	\$3.89	\$11,670.00	\$11,086.50	\$10,503.00
4000	\$3.62	\$14,480.00	\$13,756.00	\$13,032.00
5000	\$3.36	\$16,800.00	\$15,960.00	\$15,120.00
6000	\$3.13	\$18,780.00	\$17,841.00	\$16,902.00
7000	\$2.86	\$20,020.00	\$19,019.00	\$18,018.00
8000	\$2.63	\$21,040.00	\$19,988.00	\$18,936.00
9000	\$2.42	\$21,780.00	\$20,691.00	\$19,602.00
10000	\$2.22	\$22,200.00	\$21,090.00	\$19,980.00

Subject to engineering study
Installation charges may apply

The staff recommends adoption of the following motion:

That the Policy Committee approve the proposed pricing for the bandwidth levels.

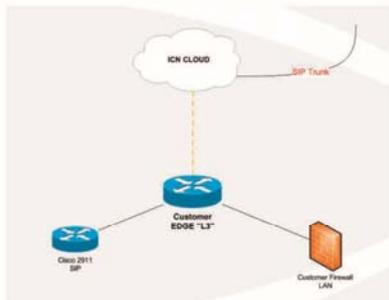
ILLINOIS CENTURY NETWORK NEW SERVICE OFFERINGS

SIP Service – BCCS offers full VoIP services to State Agencies and as such has the infrastructure and expertise to extend that service to all our Community Anchor Institutions. Initially ICN will begin by providing SIP trunking service. Over time, ICN will extend the service to include full IP voice call manager service and support.

By using the ICN SIP service, organizations may use their ICN connection to access the public switched network for both local and long distance services and eliminate the need to maintain a separate PRI service. The service is redundant out of Springfield and Chicago

ICN SIP Services

Smart & Simple Cloud-Based Connectivity For Better Communication!



ICN SIP Services

Monthly Price Per Concurrent Call Path	Monthly Price Per Phone Number	Monthly Price Long Distance Minutes	Monthly Price Unlimited Local Calls
\$28.00	\$0.36	\$0.06	\$0.00

Note: At installation, there will be a one-time charge of \$3,126.00 for a Cisco 2911 router purchase

Ready to make the switch?

To receive a customized quote detailing the benefits of utilizing ICN SIP services, contact us today for a free consultation at 800-366-8768 Option 2.

- FLEXIBILITY
- AGILITY
- SECURITY
- EFFICIENCY

Discounts on Technical Training – Stormwind is the primary training provider for ICN staff with an extensive library of technical courses provided at significant discounts. ICN has negotiated with Stormwind to extend the ICN discounted pricing to ICN customers. That service is available now. Areas of study include Cisco, VMware, Microsoft, Project Management, Security, Microsoft Office 365, and more. Classes are live on line or self-paced.

Why You'll Love Illinois Century Network (ICN) Training:

- ✓ Live Interactive Classes With Replays
- ✓ Complete 1 Year Access
- ✓ 2 Hour College-Style Classes
- ✓ 24x7 Hands-On Lab Access
- ✓ Elite Expert Instructors
- ✓ 94% Cisco Cert Pass Rates
- ✓ **Exclusive ICN Membership Discounts!!**

www.partners.stormwind.com/icn

**ILLINOIS CENTURY NETWORK
MARKETING & OUTREACH**

Submitted for: Informational

Summary: This item provides an update on current marketing and outreach initiatives.

Action Requested: None

Recommended Motion: *None*

ILLINOIS CENTURY NETWORK MARKETING & OUTREACH

In 2016, the ICN will focus on several traditional marketing and outreach strategies. Our goal is to increase general knowledge and awareness about new services, value-add services and customer support.

Social Media

We plan to utilize social media opportunities (i.e. Twitter) to supplement and enhance existing relationships with our customers and reach new audiences. Twitter will be used to build interest and “buzz” around timely events, build connections with current and potential new customers and to disseminate prepared key messages.

Conferences & Speaking Opportunities

Conferences offers a rare opportunity to talk face-to-face with active and dedicated members from a specific customer group (i.e. education, local governments, healthcare, etc.). We will continue to actively leverage speaking opportunities, negotiate free or discounted booths, and partner with businesses/organizations.

Scheduled Conferences/Events thus far:

1. Illinois Computing Educators (ICE) Conference: 02/23 – 02/26 (K-12)
2. ICCCA Information Technology Commission Spring Meeting: 05/04 (Higher Education)
3. TECH 2016: 05/10 (K-12)
4. Illinois Law Enforcement Alarm System (ILEAS) Conference: 06/12 – 06/14 (Law Enforcement)
5. Illinois Municipal Leagues (IML) Conference: 09/22 – 09/22 (Local Governments)
6. Government Management Information Services (GMIS) Conference: 11/6 – 11/9 (Local Governments)

Marketing Materials & Branding

Work is currently underway on revitalizing the ICN brand and identity to enhance our reputation and strengthen customer loyalty. We have started work on the redesign of templates, web content, brochures and marketing materials to increase awareness and educate customers regarding services (see attached materials). Rejuvenating and focusing on value-add service offerings is an area where we will generate the greatest return and may serve as an antidote for customers opting out.

Webinars

The ICN will continue to host free live webinars to provide customers an opportunity to learn about current and future services, share information and provide feedback.

**ILLINOIS CENTURY NETWORK
ADVANCED ENGINEERING TASK FORCE MEMBERSHIP**

Submitted for: Action

Summary: This item seeks renewal of AET members whose terms expire June 30, 2016.

Action Requested: That the ICN Policy Committee approves the confirmation of new members and renewal of membership appointments that expire June 30, 2016.

Recommended Motion: *That the ICN Policy Committee re-appoints Mike Dickson, Tracy Smith and Andrew Bullen to a three year term to expire in June 2019.*

That the ICN Policy Committee appoints Mindy Fiscus, Shannon Smith, and Tom Donovan as new members with a term to expire in June 2019.

That the ICN Policy Committee appoints Andrew Bullen as Co-Chair with a term to expire in June 2019.

**ILLINOIS CENTURY NETWORK
ADVANCED ENGINEERING TASK FORCE MEMBERSHIP**

Participation in the Advanced Engineering Taskforce (AET) continues to be strong and includes a balance of constituent categories, size, and geography. The table on page 21 shows a representation of the current AET membership and attendance is reflected on page 22.

The AET is seeking reappointment for the following members whose terms expired in June 2016. The new three year term would extend through June 2019.

1. Mike Dickson, Western Illinois University
2. Tracy Smith, University of Illinois Champaign
3. Andrew Bullen, Illinois State Library

The AET is not seeking reappointment for the following members whose terms expire in June 2016 due to lack of attendance.

1. Brian Tobin, DeKalb Community Unity SD #428
2. Jim Peterson, Bloomington SD #87

The AET is seeking approval on the appointment of the following new member:

1. Mindy Fiscus, Learning Technology Center (LTC 6)
2. Shannon Smith, Tuscola CSUD #301
3. Tom Donovan, Aptakisik-Tripp SD 102

The AET is seeking approval on the appointment of Andrew Bullen to serve as Co-Chairman. Historically the AET has not had a Co or Vice Chair which creates a problem if the Chair (Jim Flanagan) is unable to attend a meeting.

The staff recommends adoption of the following motions:

The ICN Policy Committee re-appoints Mike Dickson, Tracy Smith and Andrew Bullen to a three year term to expire in June 2019.

The ICN Policy Committee appoints Mindy Fiscus, Shannon Smith, and Tom Donovan as new members with a term to expire in June 2019.

The ICN Policy Committee appoints Andrew Bullen as Co-Chair with a term to expire in June 2019.

**ILLINOIS CENTURY NETWORK
ADVANCED ENGINEERING TASK FORCE MEMBER MATRIX FY 2016**

K-12 Schools	Community Colleges	Universities	Libraries	Museums	Other Institutions	Units of Local Government
Jim Flanagan IL Chief Technology Officers (2018)	*Comm. College Pres. Tech. Counsel Amin Kassem	Michael Shelton SIU (2018)	Andrew Bullen Illinois State Library (2016)	Robert Dulski Brookfield Zoo (2017)	Anita Nikolich National Science Foundation (2017)	Glen Trommels City of Rockford (2018)
Brian Tobin DeKalb CUSD 428 (2016)	Rich Kulig COD (2018)	Mike Dickson Western Illinois University (2016)	Brandon Gant CARLI (2018)			
Jim Peterson Bloomington Schools (2016)	RJ McGarry Kishwaukee Comm. College (2018)	Joe Mambretti Northwestern University (2018)	Troy Brown Illinois Heartland Library System (2017)			
	Raj Siddaraju Spoon River College (2018)	Tracy Smith UIUC (2016)				
		Brian Murphy EIU (2017)				
		Herb Kuryliw NIU (2018)				

*Standing Board Position

**ILLINOIS CENTURY NETWORK
ADVANCED ENGINEERING TASK FORCE MEMBERSHIP ATTENDANCE**

Member	3/20/2015	5/15/2015	10/9/2015	1/15/2016
Jim Flanagan, Chair	X	X	X	X
*RJ McGarry	NA	NA	X	X
Troy Brown		X		
Andrew Bullen	X			X
*Amin Kassem	NA	NA	X	X
Mike Dickson	X	X	X	X
Robert Dulski	X	X	X	X
Brandon Gant	X	X	X	X
Rich Kulig	X	X	X	X
Herb Kuryliw	X	X		X
Joe Mambretti	X	X	X	X
Brian Murphy		X		X
Anita Nikolich			X	
Jim Peterson				X
Mike Shelton	X			
Raj Siddaraju		X		
Tracy Smith		X	X	X
Brian Tobin	X			
Glen Trommels	X		X	

*New Board Members, joined 10/9/2015



SIP Trunking Services

The Illinois Century Network (ICN) is now offering Session Initiation Protocol (SIP) services that will deliver a cost-effective way to consolidate voice and Internet traffic over a single broadband connection by using your existing IP PBX, TDM PBX or Key System. Customers reduce their overall spend by removing idle and un-used technologies. Pay for only what you use and decrease your costs!

What is SIP Trunking?

SIP Trunking is the standard communication protocol for voice and video solution across a data network. A SIP trunk replaces the need for a traditional analog line and basically provides a “virtual” phone line connecting your campus voice services to a cloud-based solution.

Do More With SIP!

- Support for 911 and E911 calling
- Built in redundancy on the ICN network
- Pay only for what you need with simple monthly pricing
- Decrease your monthly costs by removing old analog phone lines
- Use existing telecom infrastructure and combine voice and data on one circuit
- Dynamically allocate bandwidth to allow for variations in call volume and data usage

Schedule a free one-on-one consultation for a personalized assessment of your telecom infrastructure. We will provide advice, suggestions and solutions for your individual installation needs. Contact the ICN today to get CONNECTED!

COST EFFICIENT

Combine your voice and data on one circuit and realize significant cost savings for your schools and school districts.



OPTIMIZE BANDWIDTH

The ICN can adjust the amount of bandwidth dedicated to voice and data, allowing it to remain available for data when not used for voice.



FLEXIBILITY

AGILITY

SECURITY

EFFICIENCY



Contact Us Today!

For more information, contact your local Regional Technology Center or visit www.illinois.net.
General Inquiries: 800-366-8768 Option 2 | cms.bccs.icn@illinois.gov



BENEFITS AT A GLANCE:

FLEXIBILITY:

Compatible with IP PBX, TDM PBX or Key System

RELIABILITY:

Voice traffic resides on the ICN backbone and never touches the public Internet

SCALEABLE:

Easily and quickly add or remove users and applications as needed

OPTIMIZE BANDWIDTH:

The ICN can adjust the amount of bandwidth dedicated to voice and data, allowing it to remain available for data when not used for voice

SECURITY:

Maintain integrity and privacy by using a secure enterprise cloud architecture

QUALITY OF SERVICE (QoS):

Guaranteed QoS for clear call quality and reliable voice calls

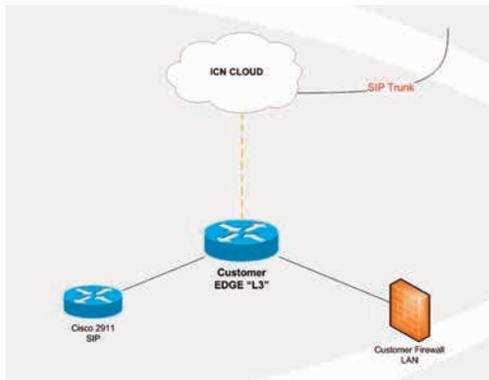
COST SAVINGS:

Use existing telecom infrastructure and combine voice and data on one circuit

24/7 SUPPORT:

Experienced support technicians are available around the clock to answer questions

Smart & Simple Cloud-Based Connectivity For Better Communication!



ICN SIP Services

Monthly Price Per Concurrent Call Path	Monthly Price Per Phone Number	Monthly Price Long Distance Minutes	Monthly Price Unlimited Local Calls
\$28.00	\$0.36	\$0.06	\$0.00

Note: At installation, there will be a one-time charge of \$3,126.00 for a Cisco 2911 router purchase

Ready to make the switch?

To receive a customized quote detailing the benefits of utilizing ICN SIP services, contact us today for a free consultation at 800-366-8768 Option 2.

FLEXIBILITY

AGILITY

SECURITY

EFFICIENCY

ICN Staff & Support

Your Trusted Advisors for Technology Excellence

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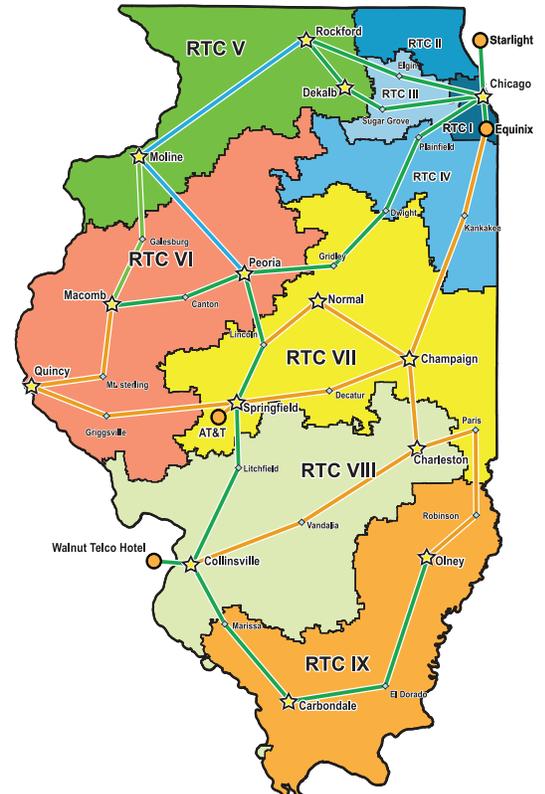
Your Next Step!

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Your Feedback is Important to Us!

Connect with us! Your feedback is important to us and we would appreciate your input on ways to service you better. Our goal is to deliver high-quality and efficient services. Please tell us how we are doing by sending your comments to cms.bccs.icn@illinois.gov.

ICN Network Backbone





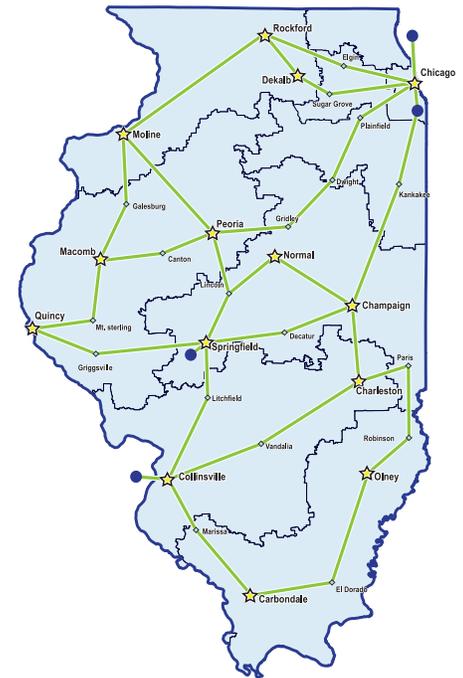
ICN Fiber Services

To improve statewide broadband access, the Illinois Century Network (ICN) completed a three year effort to migrate our statewide backbone to a fiber optic network capable of 1.6 terabits per second (Tbps). In conjunction with ICN's goal to ensure all Illinois schools and libraries have affordable and scalable broadband connectivity, there are currently over 400 Community Anchor Institutions now directly connected with cost-effective fiber capable of speeds of 100 megabits (Mbps) to 10 gigabits per second (Gbps).

Let the ICN Bring Fiber to You!

ICN has the experience and technical expertise to deliver cost-effective solutions to address your current and future bandwidth needs. We offer a turnkey solution for customers looking for long term connectivity options. Large or small, the ICN will manage your fiber installation project by taking care of design, construction, ongoing maintenance, locates, moves and 24/7 repair. Fiber builds are E-rate eligible and schools and libraries may apply individually or as a consortium to significantly reduce the cost of the build (see fiber build example below). The ICN is an E-rate authorized service provider and our staff will assist you with every step of the process. Once the cost for the fiber build is recovered, ongoing costs will be reduced to only the maintenance cost. Contact the ICN today to get CONNECTED!

ICN BACKBONE



Fiber Build Example With 80% E-rate Discount:

Build Cost	\$65,000.00	100Mbps Bandwidth + 1Gbps Transport	Total	Monthly Cost
Amortized 36 months	\$1,805.56	\$850.00	\$2,655.56	\$531.11
Amortized 60 months	\$1,083.33	\$850.00	\$1,933.33	\$386.67
After build cost is recovered	-	\$850.00	\$850.00	\$170.00

SCALEABLE	HIGH-BANDWIDTH	E-RATE ELIGIBLE	24/7 SUPPORT
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DDoS Attack: Who is at risk? Simply Put: Everyone



What is DDoS?

A distributed denial-of-service (DDoS) attack is an attempt to make an online service, website or network unavailable by overwhelming it with traffic, stopping even legitimate traffic. In some cases, an attack can be used as a diversion for other malicious activities such as taking down security appliances (e.g. web application firewalls). Launching an assault no longer requires specialized technical skill, allowing even a novice to generate a DDoS attack. DDoS attacks vary in length from a few minutes to several days. DDoS threats have matured in both volume and sophistication. Unfortunately, the chance of being attacked has never been higher.

What sets ICN DDoS protection apart from other service providers?

Many service providers withhold mitigation until the customer agrees to purchase their DDoS service. Unlike those providers, performance and maintaining the integrity of our customers' data and network is our highest priority. As a value-added service, we provide both on and off-net mitigation services and deliver the best in class DDoS protection for ICN customers at no additional cost.

DDoS Mitigation

A DDoS attack requires a proactive approach, one that identifies the malicious activity and mitigates the attack immediately to protect business continuity and ensure resource availability. Our DDoS detection tools identify attacks based upon unexpected traffic patterns. During mitigation, we will redirect attack packets and allow legitimate data to be routed to the proper destination. We have the capacity to mitigate large attacks and stop harmful traffic before it reaches our customers. If your site is the target of a DDoS attack, ICN engineers are available 24/7 to provide DDoS protection and quickly block attacks to restore your services.

MONITOR & DETECT

Our state-of-the-art DDoS monitoring and detection tools are designed to specifically identify and defeat attacks.



MITIGATE & PROTECT

Protection of the network and customer connections is our priority. The ICN monitors connections 24/7 mitigating DDoS attacks and other threats quickly and effectively.



MONITOR

DETECT

MITIGATE

PROTECT



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BENEFITS AT A GLANCE:

MONITORING:

24/7 monitoring and mitigation of DDoS attacks

DETECTION:

Traffic is observed and baselined continuously to quickly detect and identify traffic anomalies

MITIGATION:

State-of-the-art tools and advanced mitigation techniques

PROTECTION:

Protection against various types of DDoS attacks including encrypted traffic (and botnets)

UPTIME:

ICN protection will keep your network up and available while the attack is occurring

CAPACITY:

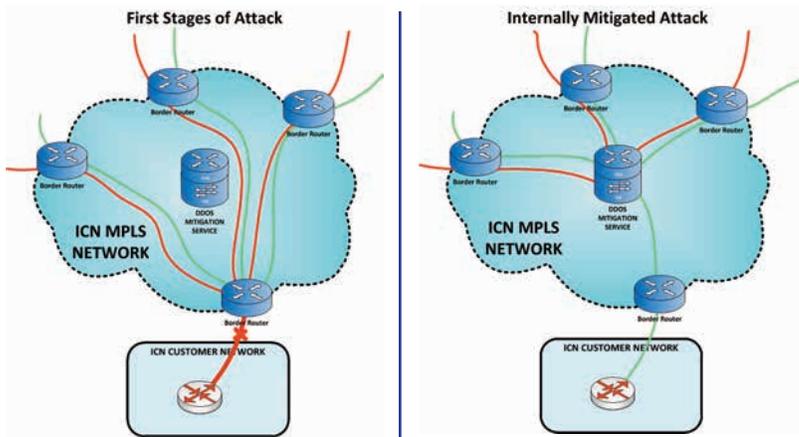
Ability to mitigate attacks from a few mb/s to multiple gb/s

VALUE-ADDED SERVICE:

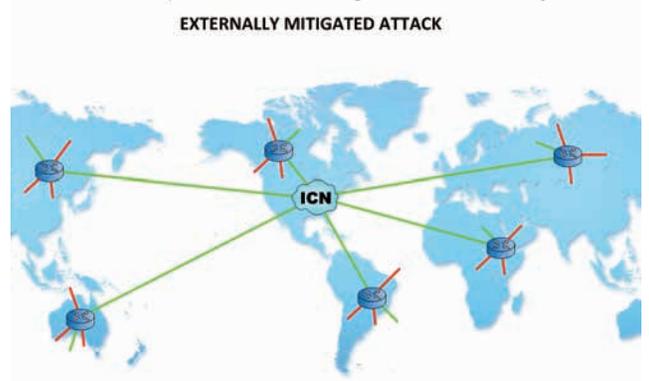
DDoS protection is provided for all ICN customers at no additional cost

24/7 SUPPORT:

ICN staff is experienced in dealing with DDoS attacks and will detect and mitigate threats quickly and effectively



ICN DDoS Mitigation Types



MONITOR DETECT MITIGATE PROTECT

ICN Staff & Support

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Your Next Step!

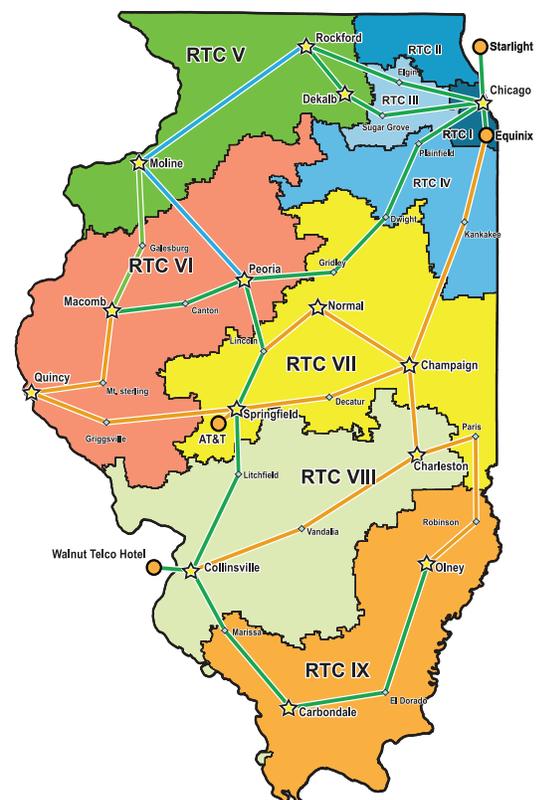
Contact your local Regional Technology Center today to get CONNECTED! Find your local RTC office contact details at www.illinois.net and don't hesitate to call us at 800-366-8768 Option 2.

What Our Customers Say!

ICN Higher Education Customer

"The ICN successfully mitigated a recent attack on our campus network. The ICN resolved the issue immediately and protected us from DDoS attacks ever since. They have always been proactive in letting us know when there might be a potential issue."

ICN Network Backbone





A Network Built For Education

The Illinois Century Network (ICN) understands networking and the importance of high-speed fiber optic broadband for Illinois schools!

The ICN combines cutting edge technology and unsurpassed customer support to provide a secure, dependable and scalable network that delivers fast Internet service for Illinois schools statewide.

Services Tailored For Illinois Schools

The ICN offers a broad portfolio of services catering to the unique requirements of the education community and is designed to meet future demand for the next decade. ICN manages Quality of Service (QoS) based on customer requirements to ensure critical applications have the right of way over the last mile and ICN network. We offer a number of value-added services which include backup and special events bandwidth (including PARCC testing), DNS hosting, collocation and distributed denial-of-service (DDoS) protection. We connect to multiple peering points as well as research and education networks such as Internet2 and many more. The ICN is an E-rate authorized service provider and our staff will assist you with every step of the process.

The ICN ensures both world-class technology and service for Illinois schools!

CONNECTIVITY TO INTERNET2 
Direct connectivity to Internet2! A private worldwide site designed exclusively for the education and research community.



24/7 SUPPORT
ICN services are supported by highly trained staff who monitor the backbone, ensuring availability for all our customers.



- QUALITY OF SERVICE
- INTERNET2
- SYNCHRONOUS BANDWIDTH
- 24/7 SUPPORT



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BENEFITS AT A GLANCE:

QUALITY OF SERVICE (QOS):

You tell us your priority traffic and we will ensure it has the right of way

HIGH-AVAILABILITY:

The ICN will keep you connected! Our redundant statewide backbone ensures high network uptime

GUARANTEED & SYNCHRONOUS BANDWIDTH:

You get exactly what you subscribe to with the same upload and download speeds to access educational resources rapidly

POINT TO POINT & MULTIPOINT TRANSPORT:

Configure your own private network between campus locations

CACHING SERVICES:

ICN has both Google and Akamai caching servers delivering efficient content locally

RESILIENCY & REDUNDANCY:

Built-in resiliency through redundant and diverse routing, with multiple Tier 1 providers and peering with numerous public and private networks

FULLY MULTICAST ENABLED:

Broadcast quality video from CSPAN, PBS, NASA and hundreds of other bandwidth intensive Internet sites without delays or buffering

CONNECTION TO INTERNET2:

Direct connectivity to www.Internet2.edu designed exclusively for our research and education community

FIBER BUILDS:

Interconnect your local campus fiber network to the ICN and realize cost savings for your community schools, libraries, municipalities, and healthcare providers

How Does ICN Compare?

TYPE	ICN	CABLE MODEM	DSL	METRO E
Symmetrical	Yes	No	No	Yes
Oversubscription	7:1	50:1	50:1	10:1
Availability	Guaranteed	Best Effort	Best Effort	Guaranteed
Latency	10ms	Not Measured	Not Measured	40ms

VALUE-ADDED SERVICES

GUARANTEED AVAILABILITY

MULTICAST ENABLED

PEERING PARTNERSHIPS

ICN Staff & Support

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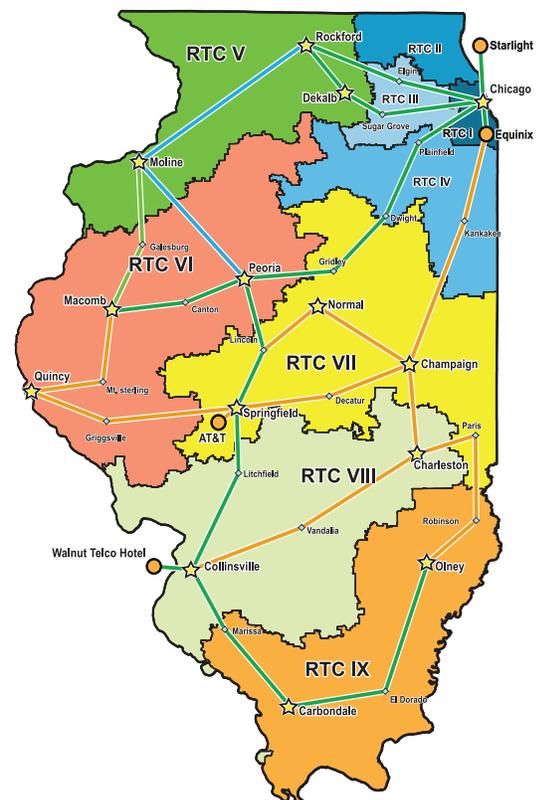
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What Our Customers Say!

Jeff Williams, Computer & Network Service, Danville Area Community College

"The new connection is outstanding, and our users (both students and employees) are benefiting greatly from it. We now have bandwidth to spare even during the middle of the day, which is a wonderful thing to have. Thank you!"

ICN Network Backbone





A Network Built For State & Local Governments

The Illinois Century Network (ICN) understands networking and the importance of high-speed fiber-optic broadband for state and local governments!

We provide a 2000 mile fiber-optic communications network connecting over 1500 government sites. The ICN offers the capacity, dependability, security and scalability required to support shared service partnerships, video, audio and first responder applications. Our network is designed to meet the ever-growing needs of state and local governments.

Services Tailored For Illinois Government

The ICN offers a broad portfolio of services catering to the unique requirements of state and local governments. The ICN architecture, personnel and services are focused on supporting government. Examples of this include: collocation services which eliminate the need for municipalities to establish their own data centers, Quality of Service (QoS) which ensures quality and throughput for high priority video and voice communications, and the ability for local governmental entities to quickly interact with State Agencies as part of the State of Illinois' data network.

The ICN ensures both world class technology and service for the State of Illinois and local governmental entities!

SPEED & RELIABILITY

The ICN 100Gbps core is fully redundant connecting to multiple Tier 1 providers and peers with presence at 350 East Cermak in Chicago and 900 Walnut in St. Louis. Service is available from 10Mbps to 10Gbps with the ability to scale higher.



NETWORK MONITORING

Protection of the network and customer connections is our priority. The ICN Communications Management Center (CMC) monitors the network and customer connections 24x7, mitigating DDoS attacks and other threats quickly and effectively.



SPEED & RELIABILITY

HIGH-AVAILABILITY

GUARANTEED AVAILABILITY

24/7 SUPPORT



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BENEFITS AT A GLANCE:

HIGH-AVAILABILITY

The ICN will keep you connected! Our redundant statewide backbone ensures network uptime

SPEED & RELIABILITY

Fast reliable and scalable service with low latency and ability to control Quality of Service (QoS)

GUARANTEED & SYNCHRONOUS BANDWIDTH:

You get exactly what you subscribe to with the same upload and download speeds

POINT TO POINT & MULTIPOINT TRANSPORT:

Configure your own private network between locations across the state

CACHING SERVICES:

ICN has both Google and Akamai caching servers delivering efficient content locally

RESILIENCY & REDUNDANCY:

Built-in resiliency through redundant and diverse routing, with multiple Tier 1 providers, physically diverse backbone and Internet egress points

FULLY MULTICAST ENABLED:

Broadcast quality video from CSPAN, PBS, NASA and hundreds of other bandwidth intensive Internet sites without delays or buffering

COLLOCATION FACILITIES:

Place large applications at the network core freeing up your last mile bandwidth and improving availability

FIBER BUILDS:

Interconnect your local municipal fiber network to the ICN and realize cost savings for your community government offices, libraries, schools, and healthcare providers

How Does ICN Compare?

TYPE	ICN	CABLE	MODEM	DSL
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Oversubscription	7:1	50:1	50:1	10:1
Availability	Guaranteed	Best Effort	Best Effort	Guaranteed
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VALUE-ADDED SERVICES

SECURE CONNECTION

MULTICAST ENABLED

PEERING PARTNERSHIPS

ICN Staff & Support

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Your Next Step!

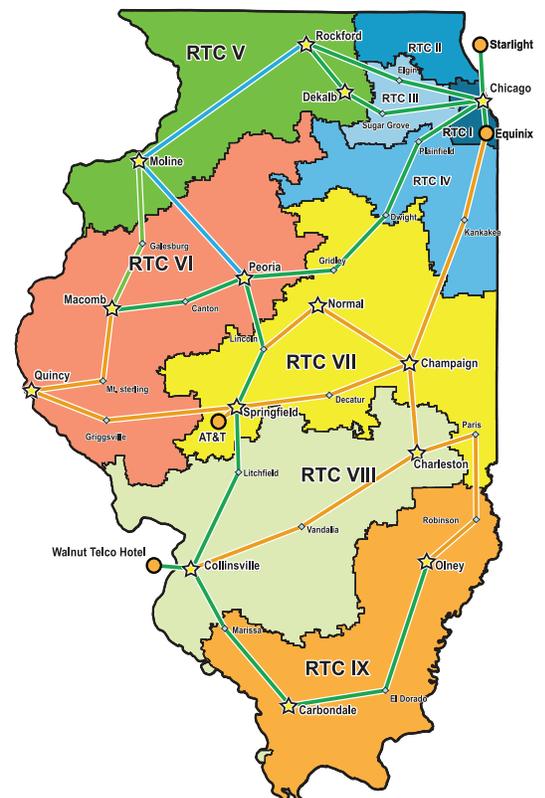
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What Our Customers Say!

Mark Latham, City Manager, City of Highland

"The more businesses we get on the network, the more we will all benefit. It used to be location, location, location. Now it is location but communication and communication. The new fiber network enables physicians to send x-rays to Chicago or anywhere in the world."

ICN Network Backbone





Illinois Century Network Connecting Illinois

Why You'll Love Illinois Century Network (ICN) Training:

- ✓ Live Interactive Classes With Replays
- ✓ Complete 1 Year Access
- ✓ 2 Hour College-Style Classes
- ✓ 24x7 Hands-On Lab Access
- ✓ Elite Expert Instructors
- ✓ 94% Cisco Cert Pass Rates
- ✓ **Exclusive ICN Membership Discounts!!**



Register For Your **FREE** Training Consultation Today!

www.partners.stormwind.com/icn

Contact Curtis Frank: (o) 480-339-2987 (e) curtis.frank@stormwind.com

