



Delivering Efficiencies  
for  
Rural Local Exchange Carriers

Max B. Huffman, President

# Outline

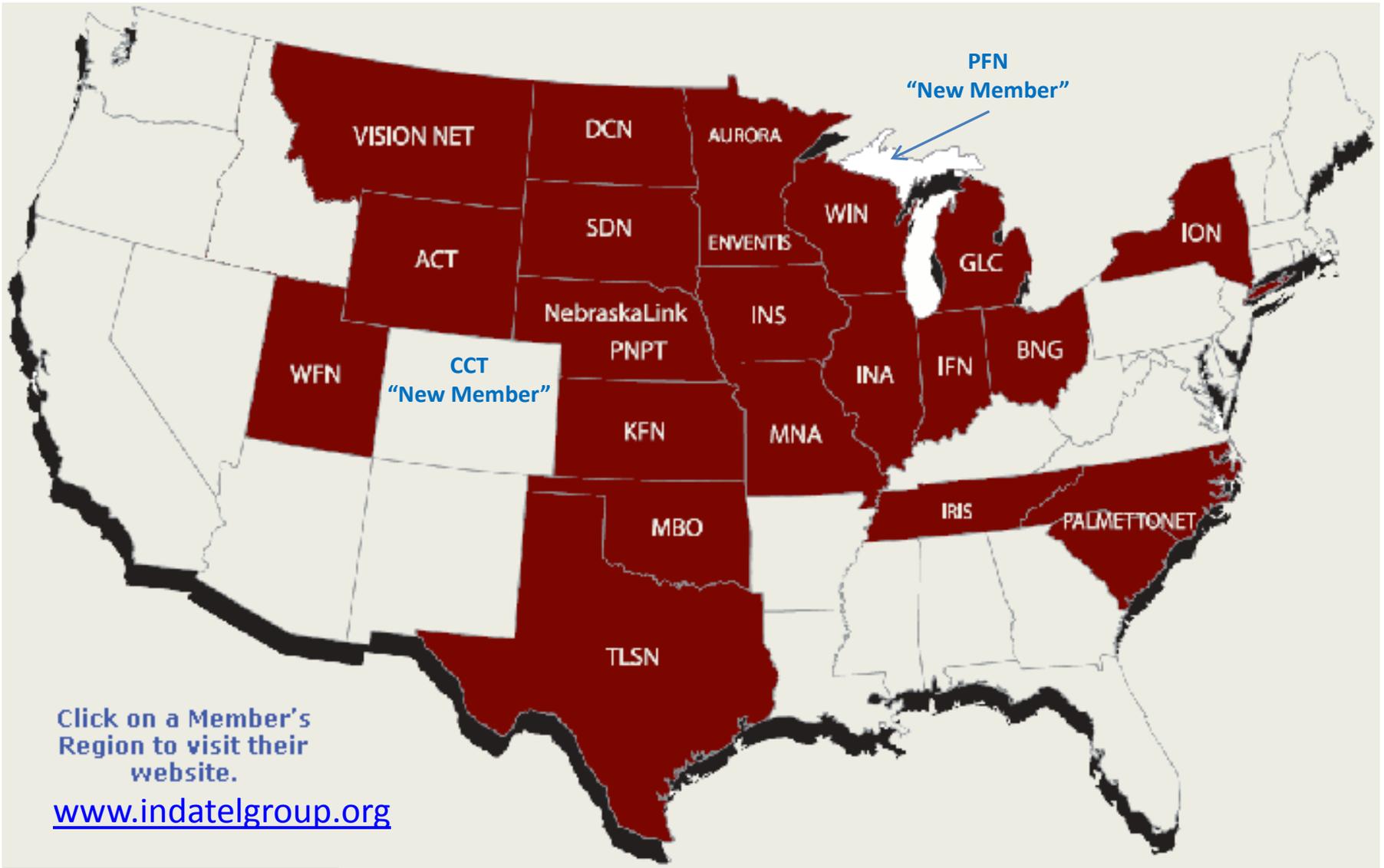
- INDATELgroup™ Overview
- History of Statewide Networks owned by Rural Local Exchange Carriers (RLECs):
  - Drivers
    - Examples of efficiencies gained...
  - Restrainers
    - Why isn't everyone doing it?
- Midwest Collaboration Examples
- Expanded Collaboration
  - INDATEL Services LLC
    - A new example of expanded collaboration...
- Conclusion

# INDATELgroup™ Overview

- INDATELgroup™ - A national telecommunications trade association established in the Summer of 2003
  - Chartered with fifteen (15) Members
  - The trade association was formed for the following key purposes:
    - Joint Marketing of our individual networks through a shared cost model
      - *National marketing and tradeshow activities are too costly on a stand-alone basis*
    - Information sharing of best in class business practices between companies with similar ownership structures and business objectives
      - *There really was no information sharing forum for our types of companies prior to the establishment of the INDATELgroup™*
  - The underlying statewide networks have been formed over the last 30+ years with the pioneers being formed in the mid to late 1980's.
  - The majority of these companies were formed during the 1990's and 4 within the last 2 years
    - *The average age is 11.5 years*

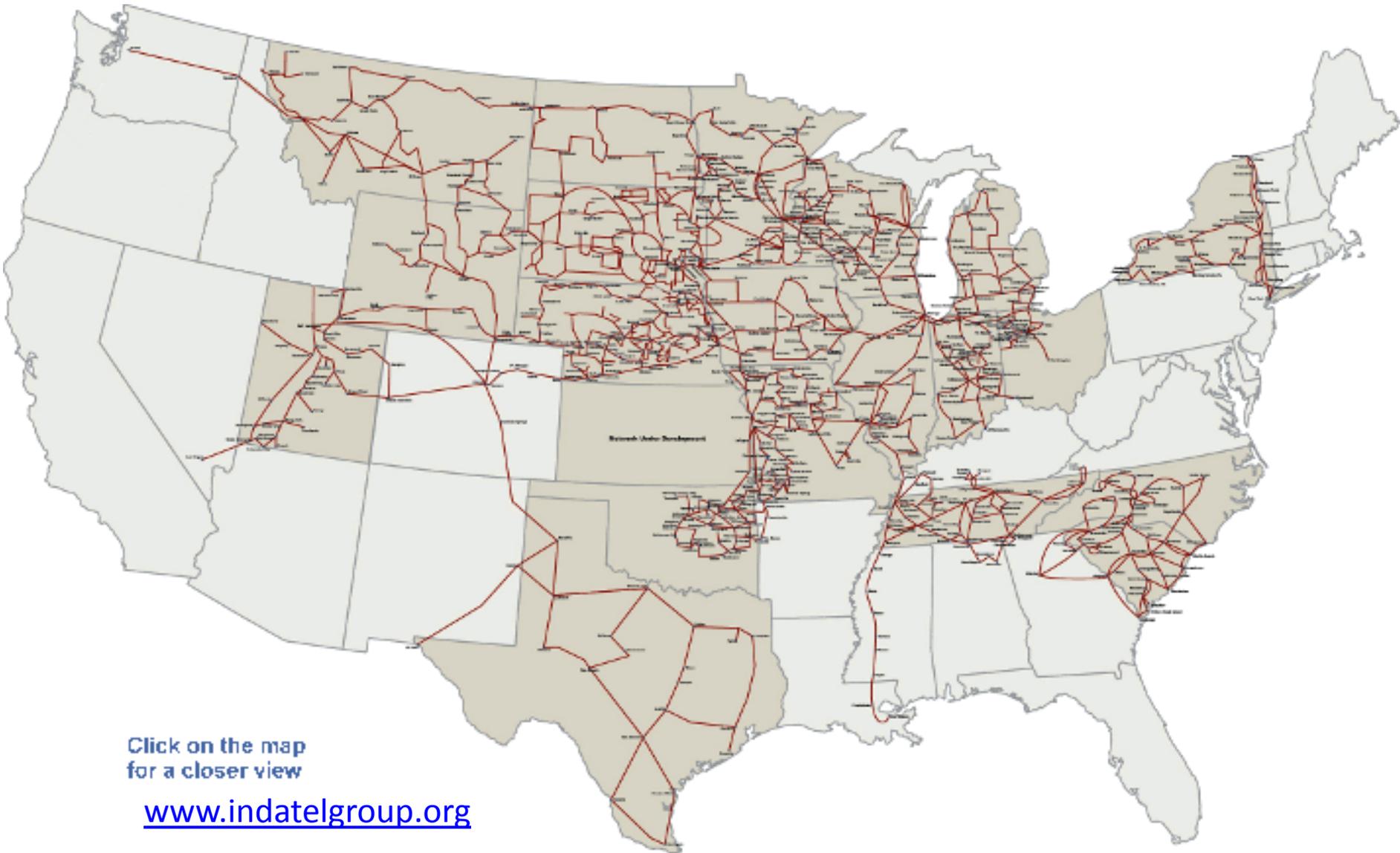
# INDATELgroup™ Overview (cont.)

- Our Mission:
  - *The mission of INDATELgroup™ is to promote and support state fiber networks owned by Independent Telcos through joint marketing, information sharing and regulatory and technical educational advocacy.*
- Today – 24 Members representing 22 states:
  - All Members are Statewide Network Operators that are majority owned by RLECs
  - Combined representation is 760 of the 1100 RLECs spread across the United States
  - The strength in our number of Members sends a strong message to RLECs in states that have not yet looked at the benefits of this type of collaboration



Click on a Member's  
Region to visit their  
website.

[www.indatelgroup.org](http://www.indatelgroup.org)



Click on the map  
for a closer view

[www.indatelgroup.org](http://www.indatelgroup.org)

# History of Statewide Networks

- The Pioneers:
  - PalmettoNet (the Carolinas), Iowa Network Services and South Dakota Network
    - All started in mid to late 80's and early 90's
    - All started with the deployment of a shared Equal Access Tandem Switch and followed with fiber optic backbone transport facilities
    - Some drivers of formation will be examined in pages that follow
- Steady deployment across other states during the 80's and 90's, and continuing into this century:
  - All have shared a common vision of providing network services efficiencies for their owners via the economies of scale
  - Most have formed LLCs and invested cash and network facilities to launch the companies
  - All are providing high quality and competitive broadband transport solutions to lower tier markets with access to higher tier markets within the states they serve (e.g. competitive "middle-mile" services long before the term was coined)

# Drivers

- Equal Access Tandem Switching:
  - Provided a quick and efficient entrance into Equal Access in the mid to late 1980's:
    - First generation digital switches did not support Equal Access
    - Through Automatic Number Identification (ANI) look-up, the shared Tandem provided Equal Access quickly and efficiently
  - An early and continuing driver that can bring significant economies of scale for RLECs and IXC's:
    - Ten (10) *INDATEL*group™ Members currently provide a shared Equal Access Tandem Switching platform for their RLEC owners

# Drivers (cont.)

- Equal Access Tandem Switching (cont.):
  - Can offer a cost-effective means for IXC's to access RLEC-based networks
    - IXC's connect to one common switch versus many local switches
    - Lowers RLEC switching costs
  - Creates efficiencies and opportunities via deployment of a shared backbone network in conjunction with Centralized Tandems
    - Transport facilities were deployed after the “early deployments” of Equal Access Tandem Switches to reduce the “Special Access” costs incurred by the RLECs when deploying circuits over the predominant RBOC-based transport networks
    - Also can provide a revenue stream to help recover the costs of deploying broadband middle-mile facilities to support other shared services – specifically the explosion in bandwidth needs of the RLEC's customers
    - Helps to manage capacity too – easier and faster to provision and augment owned transport facilities than leased Special Access circuits

# Drivers (cont.)

- Internet/Data Services:
  - Significant economies of scale provided via the continued deployment of fiber-optic network facilities and associated IP/Data switching and routing equipment
    - Shared backbone “middle-mile” deployments have enabled the RLECs to spend their limited resources in the “last-mile” to meet the ever-increasing customer demand for broadband services
      - Residential and Business Customers
      - Community Anchor Institutions
      - Wireless Carriers – Cell Site backhaul services
    - In many cases, the predominant RBOC-based network providers did not have adequate capacity, at an affordable price, to meet the broadband demands of the RLEC’s Customers
      - Especially critical at a time when bandwidth demands are exploding (e.g., Netflix and other peak demands on traffic)
      - World-class networks in the last-mile are only as good as the middle mile connection that enables them

# Restrainers

- Why isn't everyone doing it?
  - Geographic and terrain challenges are key factors that “break the business case” of deploying shared network resources across a state or region
    - In some cases, resource-sharing of this kind could actually be *inefficient* and cost more to finance and deploy than the savings to be realized
  - Economic and regulatory uncertainty are serious roadblocks today as compared to 10 years-plus ago
  - The ARRA Broadband Stimulus funding is helping, but there are still a lot of RLECs that do not have cost-effective access to middle-mile facilities
  - Historic independence and general issues arising out of joint ventures
    - Many already had access to cost-effective middle-mile facilities due to their geographic advantage of being close to a major market
    - Some lacked the knowledge of the benefits of collaboration – this restrainer has more or less been eliminated

# Collaboration Examples

- Missouri Network Alliance, LLC (MNA)
  - Established in October 1999
  - Fifteen (15) RLEC owners
  - Fiber Optic Broadband Transport Services Network
  - RUS Broadband Pilot Loan Program recipient
    - \$5MM 10 year Loan – Paid off 2 years early
    - Excellent example of a Government supported program that had an objective of expanding broadband services to rural America
  - MNA has been a critical facilitator for MNA's RLEC owner's last mile broadband expansion in rural Missouri
    - Collectively a CAGR in Internet bandwidth consumption of 40% over the last 5 years
    - A growth rate of 60% from 2009 to 2010 fueled by Video content

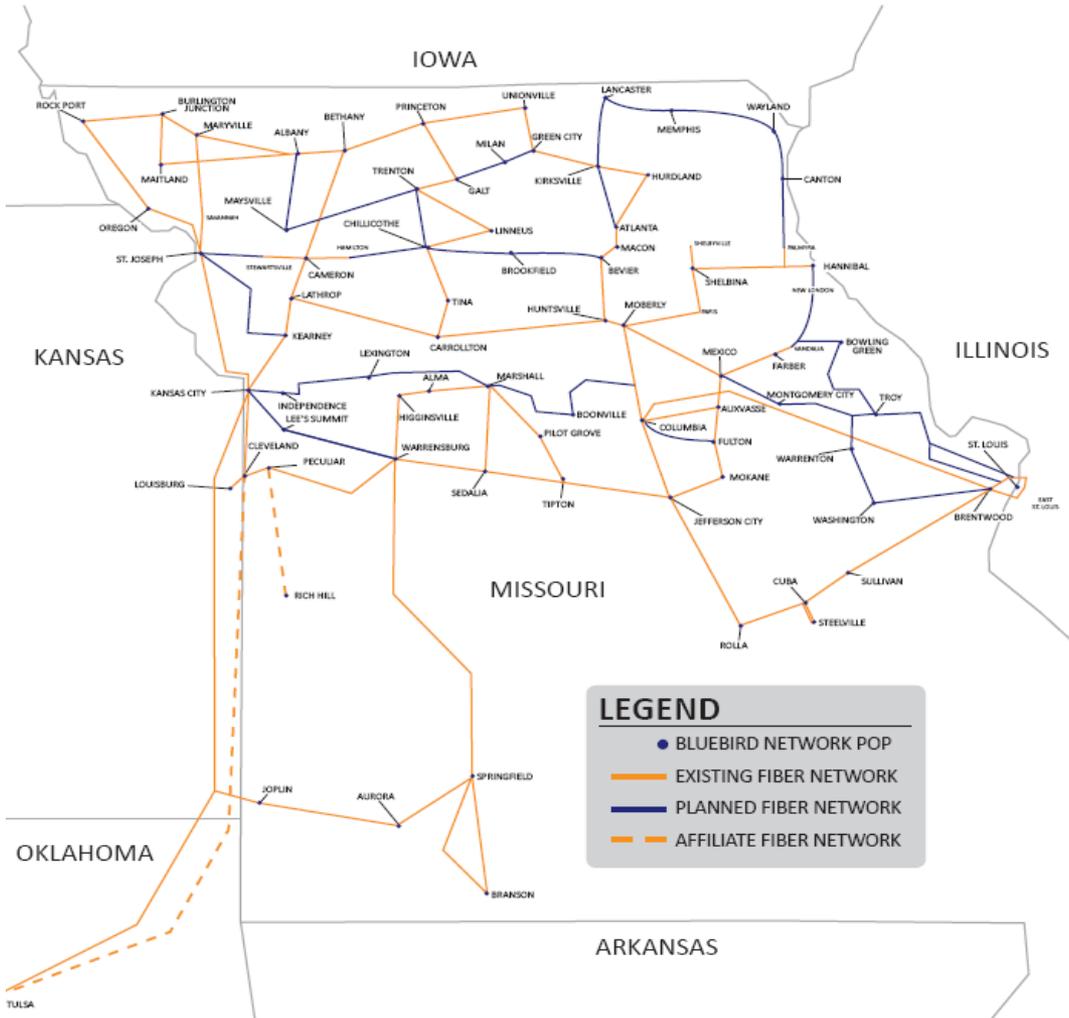
# Collaboration Examples (cont.)

- MNA's Broadband Network supports:
  - Internet Services
  - Broadband private line TDM and Ethernet services
    - Carrier's Carrier Services
    - Wireless Backhaul Services
      - *Supporting 3G and the emerging 4G high bandwidth needs of Wireless Carriers across Missouri*
  - SS7 Network Services for rural carriers
  - Tandem Switching Services for rural carriers

# Collaboration Examples (cont.)

- In March of this year MNA merged with Bluebird Media LLC:
  - Created Bluebird Network LLC - a new company that merges the MNA legacy network with the Bluebird Media NTIA BTOP Grant Award to deploy \$65MM of new broadband facilities in northern Missouri
    - A Public/Private partnership that supports Governor Jay Nixon's 5-year broadband expansion plans for Missouri that are in concert with the objectives of the ARRA Broadband Stimulus Program
    - The Grant funding will provide new and expanded broadband services to a minimum of 102 Community Anchor Institutions (CAIs) in a 59 county area of northern Missouri with the deployment of over 1100 miles of new fiber optic cable routes

# NETWORK MAP

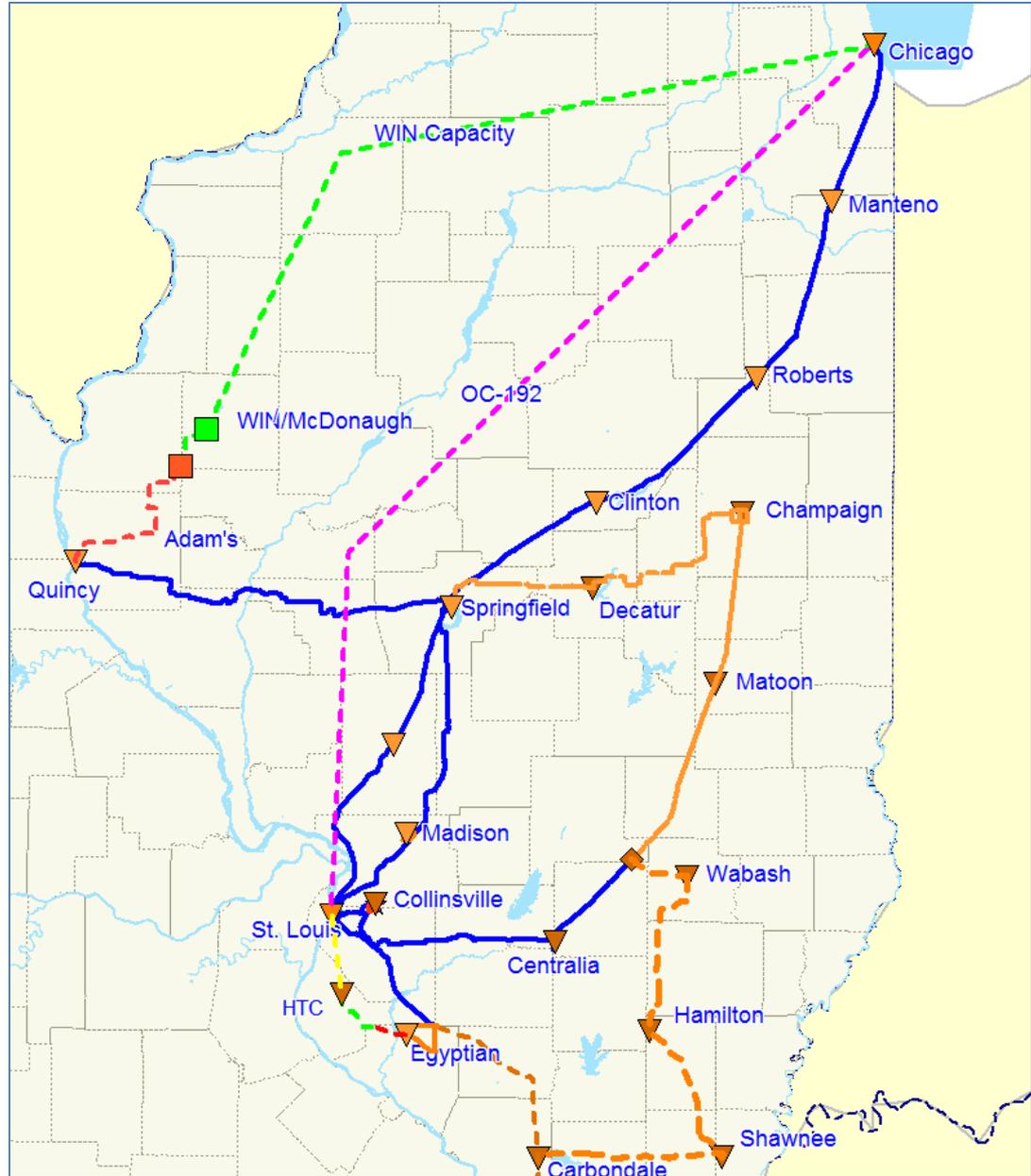


**LEGEND**

- BLUEBIRD NETWORK POP
- EXISTING FIBER NETWORK
- PLANNED FIBER NETWORK
- - - AFFILIATE FIBER NETWORK

# Collaboration Examples (cont.)

- Illinois Network Alliance, LLC (INA):
  - Established in April 2009
  - Eleven (11) RLEC-based owners, including MNA/Bluebird as the managing partner
  - A start-up company that is providing high quality and cost effective Internet and private line TDM and Ethernet Services for its Members and other rural carriers within Illinois
    - Key Midwest Network Anchor points in St. Louis, Springfield and Chicago

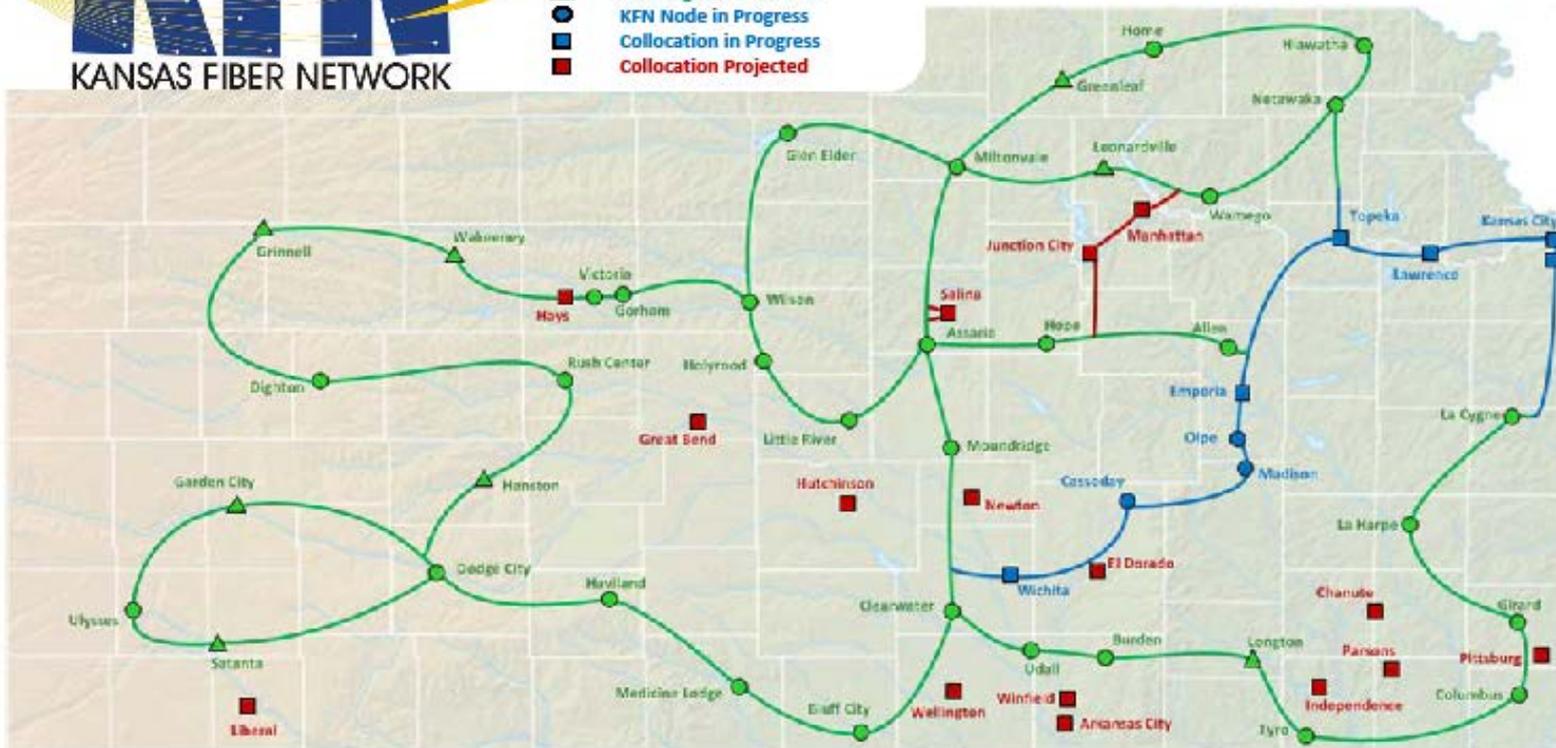


# Collaboration Examples (cont.)

- Kansas Fiber Network, LLC (KFN):
  - Established in May 2009
  - Twenty-nine (29) RLEC owners
  - MNA/Bluebird helping with the Network Design, Engineering and Implementation of a new Fiber Optic Broadband Transport Services Network
    - A replication of the MNA Services Model starting with Member services:
      - SS7 Network Services
      - Tandem Switching Services
      - Internet Services
  - A great recent example of *INDATELgroup*<sup>™</sup> Members sharing the story of success that led to the start-up of another RLEC-owned Statewide Network



- Fiber Route
- Fiber Route in Progress
- Fiber Route Planned
- KFN Node
- ▲ KFN Regeneration Site
- KFN Node in Progress
- Collocation in Progress
- Collocation Projected



**Corporate Contact Information**

121 N. Mead, Suite 200  
 Wichita, KS 67202  
 sales@kansasfibernet.com

Phone: 316-712-6030  
 Toll Free: 877-492-2555  
 Fax: 316-712-6029

[www.KansasFiberNetwork.com](http://www.KansasFiberNetwork.com)

# Expanded Collaboration

- INDATEL Services LLC
  - A new company formed in August of 2010
  - Fifteen (15) INDATELgroup™ Members
  - A national Internet/Data Services peering point established in Chicago, Illinois
    - High Capacity Router/Switch interconnected to major Content Delivery Network (CDN) service providers such as; Google, Akamai, Limelight and others
    - A service model that drives down costs for Internet access to content services (specifically the exponential growth in video content) while reducing the latency (network delay) in accessing these services

# Conclusion

- Statewide fiber-optic based networks deployed by RLECs are continuing to drive efficiencies that come through collaboration at a state, regional and national level.
- These networks confirm that RLECs are interested in resource-sharing and obtaining efficiencies where opportunities permit, conditions support deployment, and access to capital is available.