Updates on Networks Throughout Northern Illinois
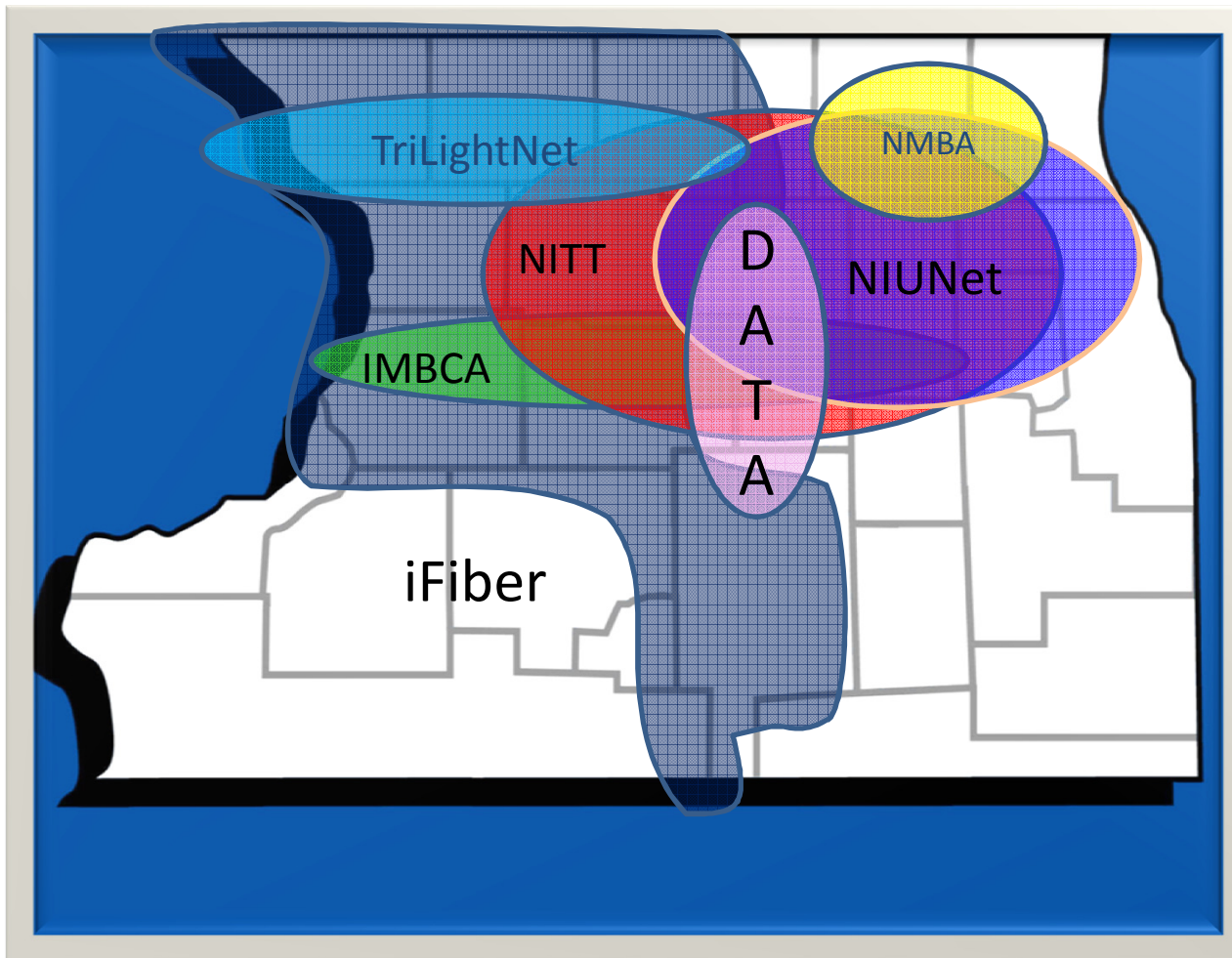
Herb Kuryliw

Network and Technology Architect

... Connecting Illinois' Northern Region to the World ...

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Review of Broadband Initiatives in Illinois

NIUNet - Northern Illinois University Research and Education Network.

IMBCA – Illinois Municipal Broadband Communications Association for Economic Development.

**NITT** – Northern Illinois Technology Triangle for Economic Development.

TriLightNet – A medical network for HIE development and healthcare.

NMBA – Northwest Municipal Broadband Authority – A municipal and education network.

DATA – DeKalb Advancement of Technology Authority – A BTOP funded grant for DeKalb County.

iFiber – The Illinois Broadband Opportunities Partnership – A nine county BTOP funded grant awarded to Northern Illinois University.

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DeKalb Advancement of Technology Authority (DATA) Update
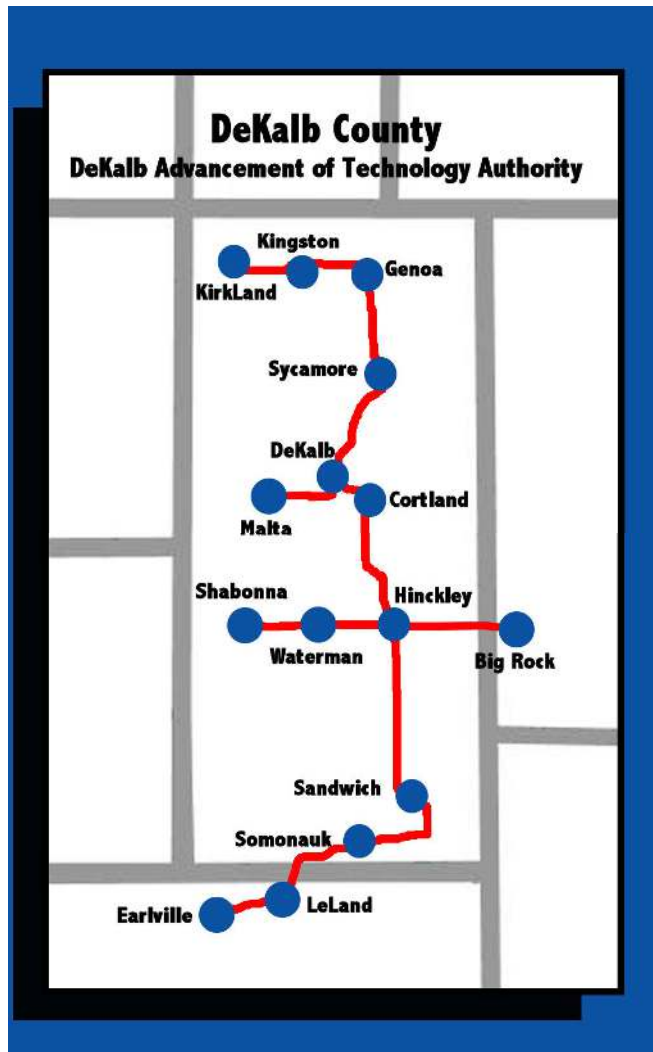
- **Miles of Conduit Buried**: 131 (100%)
- **Miles of Fiber:** 143 (100%)
- **Community Anchor Institutions Contracted and Connected**: 78 (100%)
- **Grant Closed 10/1/2013**
- **Grant came in under budget ~$300K**

Above and Beyond the Grant

- Connected 12 locations for 911

- Agreements for Co-Location within telco space in Sandwich, Hinckley, DeKalb and Genoa

- Signed up 3 ISP's that compete within the DATA space with more coming:
  - Illinois Century Network
  - Syndeo
  - NIUNet

Above and Beyond the Grant (Cont)

- Partnership with iFiber providing expanded network services.

- Purchased a 100 Gigabit network node for the DeKalb location to participate in a ring topology.

- Created redundancy within the network.

One of many successes

- GK Schools was paying $650/Month for a 10Mb connection ($65/Mb)
- Currently paying $850/Month for 100Mb ($8.50/Mb)
- With connection fee of $7000/Year total Mb cost is $14.33/Mb
- They have installed a Mitel phone system through Frontier.
  - More phones more functionality.
  - Phones in every room can call emergency
  - Use the phones for intercom system
- Opened up all media streaming, no restrictions.
- Opportunity to network printers and copiers allowing for monitoring and savings.
- Wireless network has expanded now with a single controller centrally. Over 512 connections daily.
- In process of consolidating servers and storage.
- Backups are performed regionally now between buildings and all storage is replicated.

Private Sector Taking off

- 22 Connected bank sites.

- 9 Rural Agriculture Businesses and other businesses connected.

- 36 Local Businesses within cities connected to fiber.

- Gigabit over fiber now delivered to Paw Paw region in a new expansion of the DeKalb network.

- Engaged in working with municipals to deliver fiber to the home in cities and rural sub-divisions. Hidden Oaks Subdivision north of Sandwich.

- Triple Play setup for 1st Quarter 2014 with new vision and method of delivering content over broadband.

iFiber One Year Ago 2012

- **Permits & Construction**

- Over **600** Miles of Designed Routes submitted (**98%** of network)

- Over **540** Miles of Permits received (**86%**)

- **480** Miles of Fiber Duct installed to date (**76%**)

- **365** Miles of 144-Count Fiber installed to date (**58%**)

- Approximately **115** CAIs have duct/fiber installed (**22%**)

- **528** CAI's have been contacted (**99%**)

- **419** CAI's have submitted letters of intent (**79%**)

- **170** CAI's have signed Service Agreements (**32%**)

iFiber Today 2013

- **Permits & Construction**

- **601** Miles of Designed Routes submitted (**100%** of network)
- Permits received (**99.9%**) (One left in LaSalle County)
- **600** Miles of Fiber Duct installed to date **(99.9%)**
- **597** Miles of 144-Count Fiber installed to date (**99.5%**)
- Almost **All** CAIs have duct installed (**100%**)
- **490** CAI's have been contacted **(100%)** (Some CAI's dropped out originally 533)
- **361** CAI's have signed Service Agreements **(74%)**
- Out of 295 connections 134 are lit (**45%**)

Charted iFiber Progress

iFiber Progress
Overall
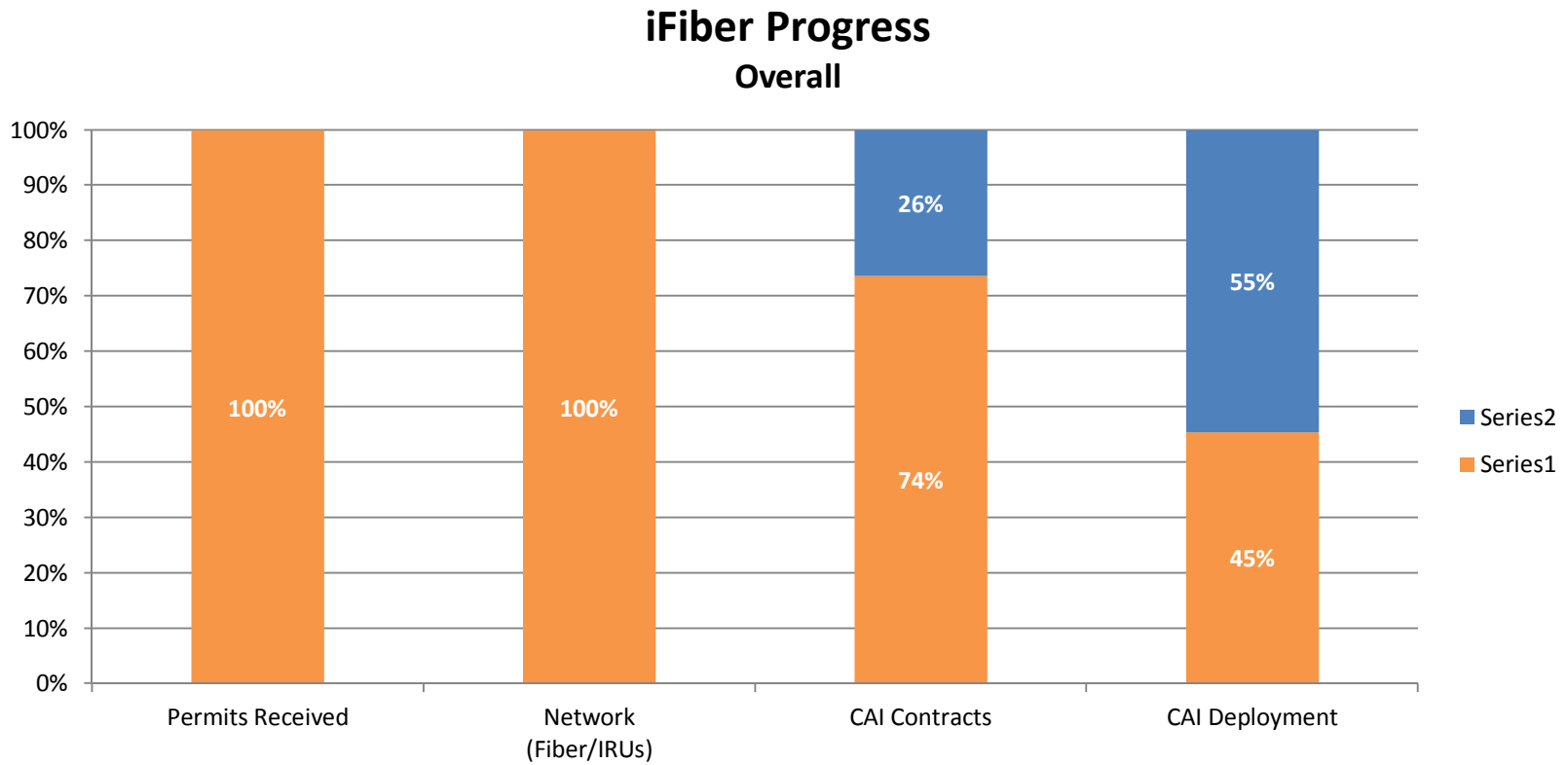
CAI Progress
iFiber
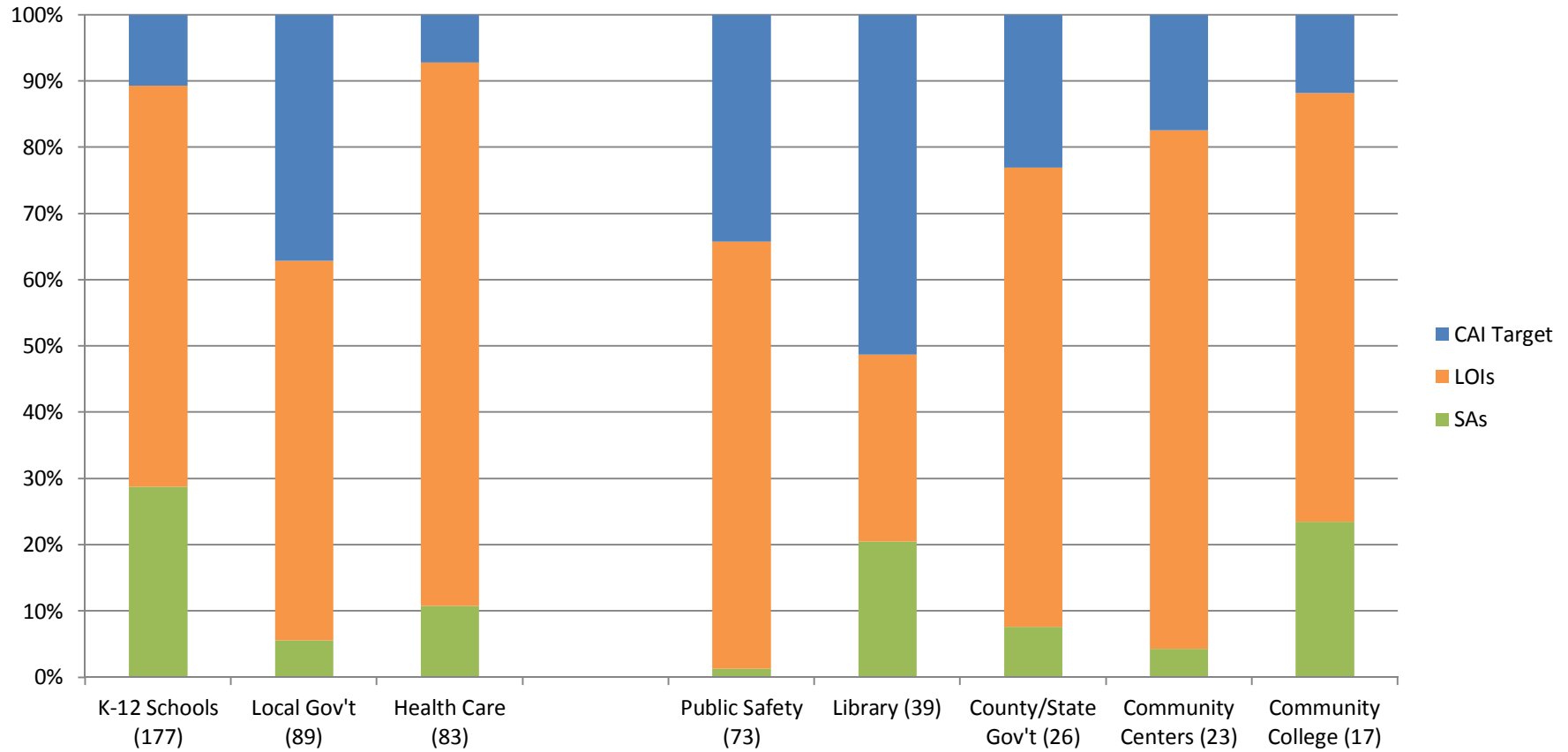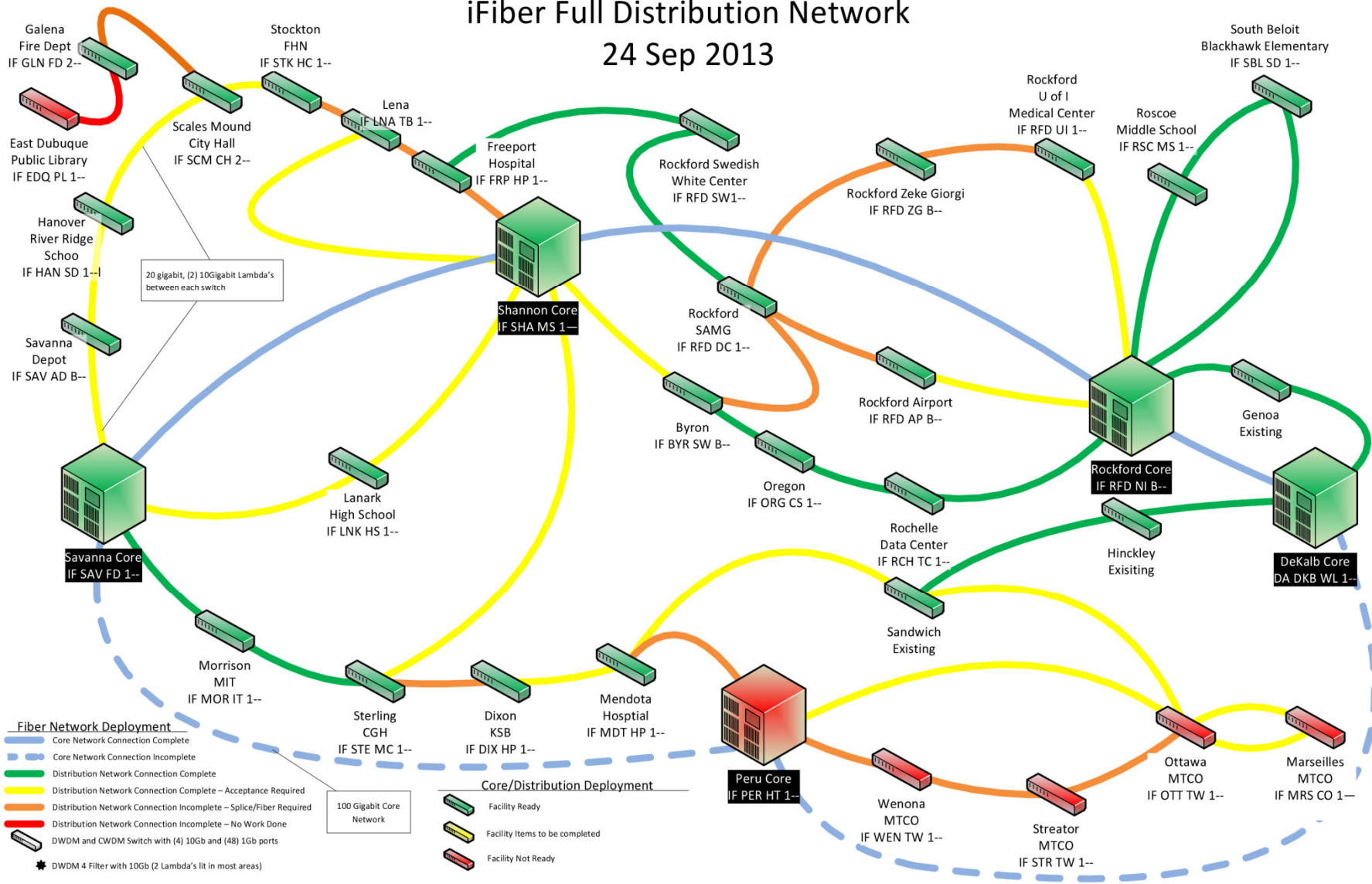
iFiber Update 2013 (Cont)

Schedule Moving Forward

- Grant was extended to December 31, 2013

- All construction will be completed end of October 2013

- All fiber placement and Splicing completed by November 15th

- Equipment installation resumes 3rd week in October with a goal to get all services lit before the 1st of the year.

iFiber Full Distribution Network
24 Sep 2013

Galena Fire Dept IF GLN FD 2--

Stockton FHN IF STK HC 1--

Lena IF LNA TB 1--

South Beloit Blackhawk Elementary IF SBL SD 1--

Rockford U of I Medical Center IF RFD UI 1--

Roscoe Middle School IF RSC MS 1--

East Dubuque Public Library IF EDQ PL 1--

Scales Mound City Hall IF SCM CH 2--

Freeport Hospital IF FRP HP 1--

Rockford Swedish White Center IF RFD SW1--

Rockford Zeke Giorgi IF RFD ZG B--

Hanover River Ridge Schoo IF HAN SD 1--I

20 gigabit, (2) 10Gigabit Lambda's between each switch

Shannon Core IF SHA MS 1—

Rockford SAMG IF RFD DC 1--

Savanna Depot IF SAV AD B--

Rockford Airport IF RFD AP B--

Genoa Existing

Lanark High School IF LNK HS 1--

Byron IF BYR SW B--

Oregon IF ORG CS 1--

Rockford Core IF RFD NI B--

Savanna Core IF SAV FD 1--

Rochelle Data Center IF RCH TC 1--

Hinckley Exisiting

DeKalb Core DA DKB WL 1--

Morrison MIT IF MOR IT 1--

Sandwich Existing

Fiber Network Deployment
- Core Network Connection Complete
- Core Network Connection Incomplete
- Distribution Network Connection Complete
- Distribution Network Connection Complete – Acceptance Required
- Distribution Network Connection Incomplete – Splice/Fiber Required
- Distribution Network Connection Incomplete – No Work Done
- DWDM and CWDM Switch with (4) 10Gb and (48) 1Gb ports
- DWDM 4 Filter with 10Gb (2 Lambda's lit in most areas)

Sterling CGH IF STE MC 1--

Dixon KSB IF DIX HP 1--

Mendota Hosptial IF MDT HP 1--

100 Gigabit Core Network

Core/Distribution Deployment
- Facility Ready
- Facility Items to be completed
- Facility Not Ready

Peru Core IF PER HT 1--

Wenona MTCO IF WEN TW 1--

Streator MTCO IF STR TW 1--

Ottawa MTCO IF OTT TW 1--

Marseilles MTCO IF MRS CO 1—

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ISP's Servicing CAI's over the iFiber Network

iFiber
ISP Partners

Illinois Fiber Resources Group

Choose from these providers & services [as of 7/16/13]. Pricing varies based on individual service needs. Contact them:

ISP	Region served	Date service available	Internet Access	VoIP	Cloud-based Services	Server Hosting	Security	IT Consulting
Aero Group Inc. Adam Schulz (815) 801-3388 (O) (815) 801-9951; or Todd Fransen (sales) (815) 757-1664 aschulz@aeroinc.net www.aeroinc.net	All iFiber	By 7/1/13	✓	✓		✓		✓
CenturyLink Cameron Parker (312) 498-0390 cameron.parker@centurylink.com www.centurylink.com	All iFiber	By 9/1/13	✓	✓	✓	✓	✓	
Frontier Communications Thomas Kuschman (815) 895-1445 Thomas.Kuschman@ftr.com www.frontier.com	All iFiber	By 9/1/13	✓	✓	✓	✓	✓	
Heartland Cable Steve Allen (309)432-2075 (o);(309)275-2018 (c) steallen@tsuminet.net www.hcable.net	LaSalle, Lee counties	By 9/1/13	✓	✓			✓	✓
H.I. Cable, LLC Fred Hartenbower (815) 368-3341 mfh@hihart.net	LaSalle, surrounding counties	By 7/1/13	✓	✓	✓	✓	✓	✓

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ISP's Servicing CAI's over the iFiber Network

ISP	Region served	Date service available	Internet Access	VoIP	Cloud-based Services	Server Hosting	Security	IT Consulting
IL Century Network (ICN) www.illinois.net	All iFiber	By 7/1/13	✔					
ISI Communications Dan Howard (630)887-2910(o);(630)878-1325(c) dhoward@isicommunications.com www.isicommunications.com	All iFiber	By 9/1/13	✔	✔		✔		✔
Jo-Carroll Energy/Sand Prairie Jeff Harrelson (815) 858-2207 ext. 1336 jharrelson@jocarroll.com www.connectsp.com	All iFiber	By 9/1/13	✔	✔		✔	✔	✔
MTCO Tina Glidewell, Sales Mgr. tglidewell@cop.mtco.com (309)367-4197(o);(309) 253-8009(c) www.mtco.com	All iFiber	By 9/1/13	✔	✔	✔		✔	✔
NIU Net Kevin Finley (815)753-7272 kfinley@niu.edu www.niunet.niu.edu	All iFiber	By 7/1/13	✔					
Syndeo US Toll Free: (855) 479-6336 Local Phone: (630) 457-4218 sales@syndeonetwork.com www.syndeonetwork.com	All iFiber	By 7/1/13	✔	✔	✔	✔	✔	✔
Urban Communications Inc. Edmund G. Urban III 1-855-243-4237 sales@urbancom.net www.urbancom.net	All iFiber	By 9/1/13	✔	✔	✔	✔	✔	✔

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Support Moving Forward

- Northern Illinois University will be supporting the network moving forward with the Northern Illinois Monitoring Center (NIMC)
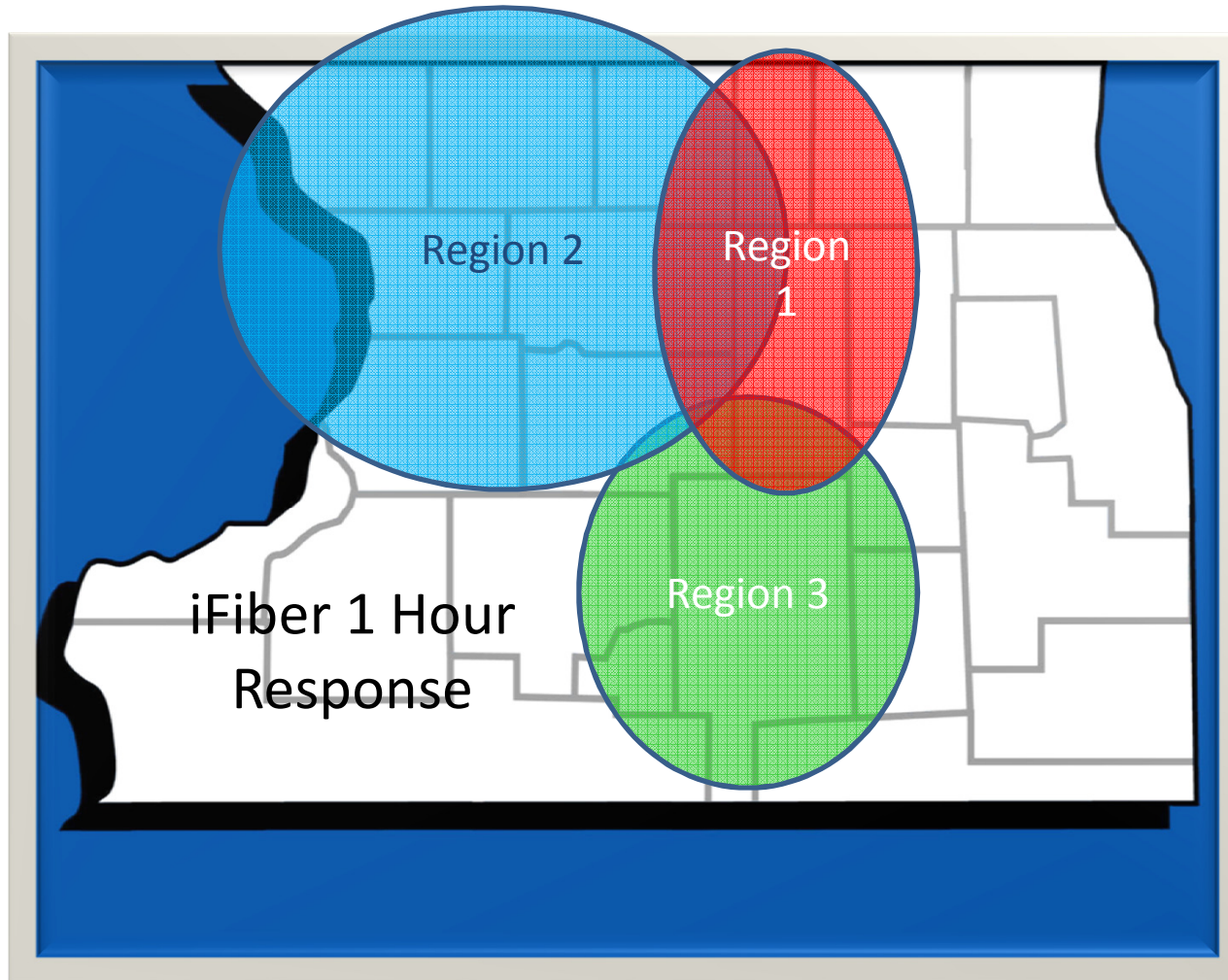
- http://nimc.niu.edu

NIU Response Time for NOC Services

- NIU Will partner with local ISP providers in the region to have a 1 hour onsite response time.

- iFiber will have spares parts locally in the event of equipment failure with a full vendor equipment replacement on-site within 4 hours if needed.

- Fiber cuts when identified will have onsite review and repair process within 1 hour through G4S.

- Fiber system will be reviewed twice a year for repairs or weather wear on system.

Partnering with local service providers for better response time and trouble shooting

Thank you!