Upper Peninsula 9-1-1 Authority's ESInet Project

Providing 9-1-1 Services in the Upper Peninsula

Gary Johnson, ENP Manager
Marquette County Central Dispatch

Thom Sumbler
PFN Sales and Business Development

UP 9-1-1 Authority's ESInet Project

- History of the UP 9-1-1 Authority
  - Established in 2009
  - Inter-local Agreement Signed by all 15 Counties
  - Formed using the Urban Cooperation Act
  - Each County appoints a representative to the Authority
  - The Upper Peninsula Commission for Area Progress (UPCAP) is the Authority's Secretary/Administrative Agent

UP 9-1-1 Authority's ESInet Project

- Governance provided by the Authority
  - Contract signatory
  - Owns the Equipment
  - Single point of contact for vendors
  - Committee Structure
    - Technical Committee
    - Dispatcher Training Committee
    - Others as needed

UP 9-1-1 Authority's ESInet Project

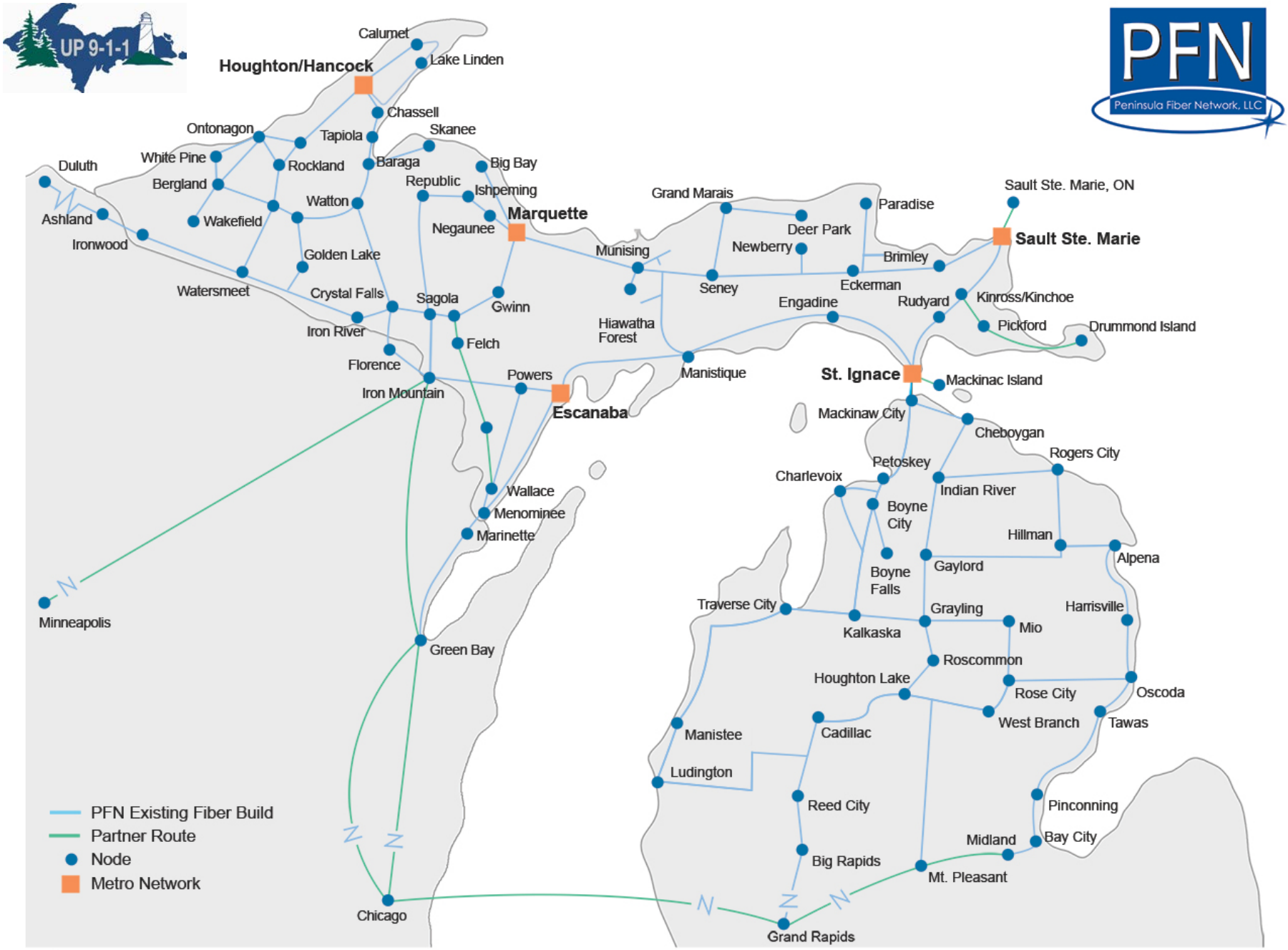
- Public/Private Partnership
  - Formed early on with Peninsula Fiber Network (PFN)
  - Vital to Project Success
  - Communication exchange between Authority & PFN
    - No unrealistic time frames set was kept a moving target
  - Commitment from UP Authority
    - Letter of Intent
    - Letter of Authorization
  - Commitment from PFN
  - Was a Win/Win for the Authority & PFN

UP 9-1-1 Authority's ESInet Project

- All 15 UP counties worked cooperatively
- Serving area – 16,377 square miles
- Population served – 311,377
- 8 PSAP's
- 7 PSAP's share same CAD system

Next Generation Functional Elements

- FCC 911 Reliability Report and Order mandates that a 911 network must be “redundant, resilient and reliable”
- PFN designed its network to ensure that all the FCC conditions have been met or exceeded for 911 applications
- Network, ESRP, ALI Database provider all meet the “redundant, resilient and reliable”
- The UP 911 Authority project will combines all of those to deliver 911 calls and transport CAD sharing
- PFN and INdigital have committed long-term to 911 network deployment


UP 9-1-1
PFN
Peninsula Fiber Network, LLC
Houghton/Hancock
Calumet
Lake Linden
Chassell
Ontonagon
Tapiola
Skanee
White Pine
Rockland
Baraga
Big Bay
Duluth
Bergland
Republic
Ishpeming
Watton
Ashland
Wakefield
Negaunee
Marquette
Ironwood
Golden Lake
Watersmeet
Crystal Falls
Sagola
Gwinn
Iron River
Felch
Florence
Powers
Iron Mountain
Escanaba
Wallace
Menominee
Marinette
Minneapolis
Green Bay
Chicago
Grand Marais
Paradise
Sault Ste. Marie, ON
Deer Park
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Pickford
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Manistique
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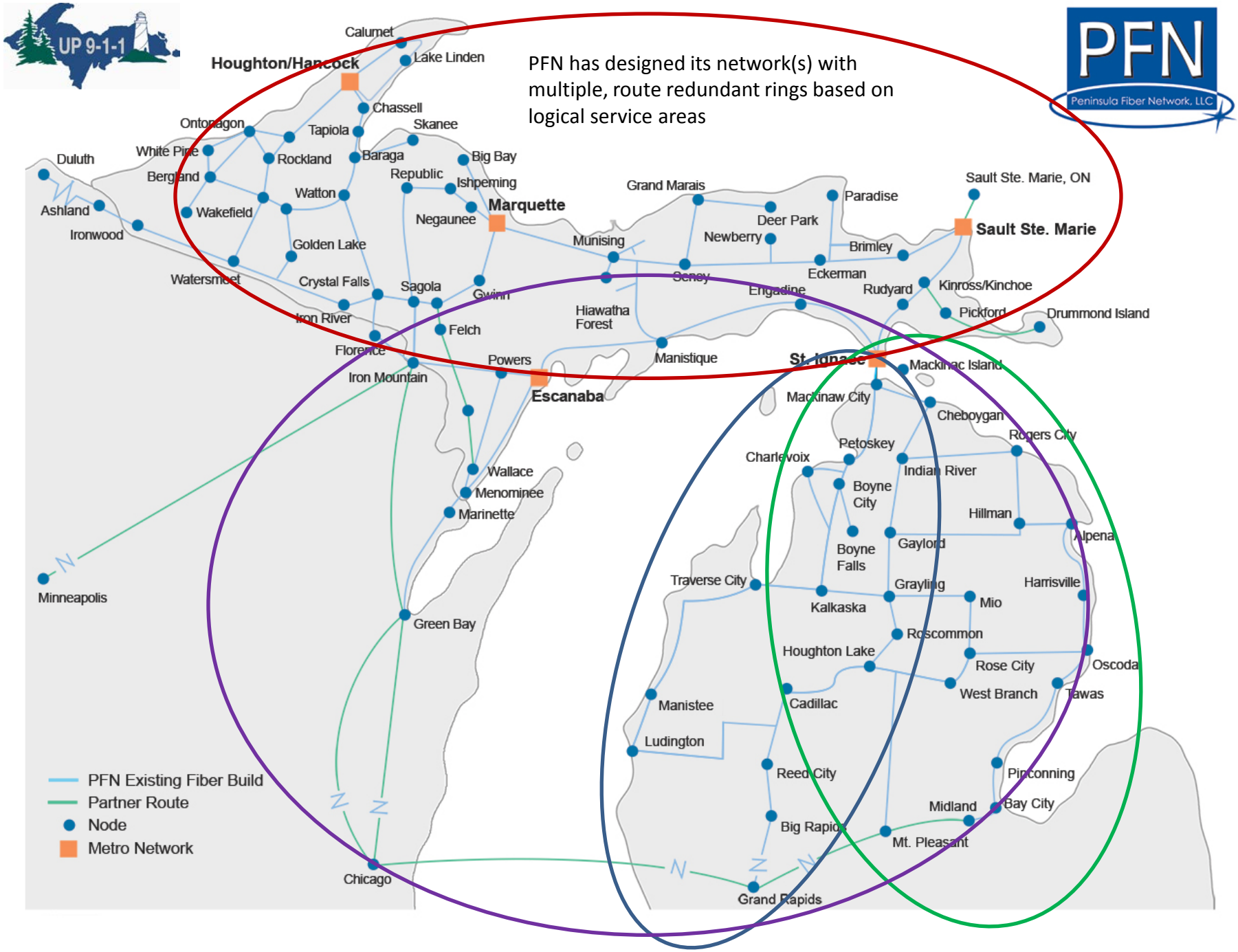
Grayling
Harrisville
Kalkaska
Mio
Roscommon
Houghton Lake
Rose City
Oscoda
West Branch
Tawas
Manistee
Cadillac
Ludington
Reed City
Pinconning
Midland
Bay City
Big Rapids
Mt. Pleasant
Grand Rapids
PFN Existing Fiber Build
Partner Route
Node
Metro Network


UP 9-1-1
PFN
Peninsula Fiber Network, LLC
PFN has designed its network(s) with multiple, route redundant rings based on logical service areas
Houghton/Hancock
Calumet
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Chassell
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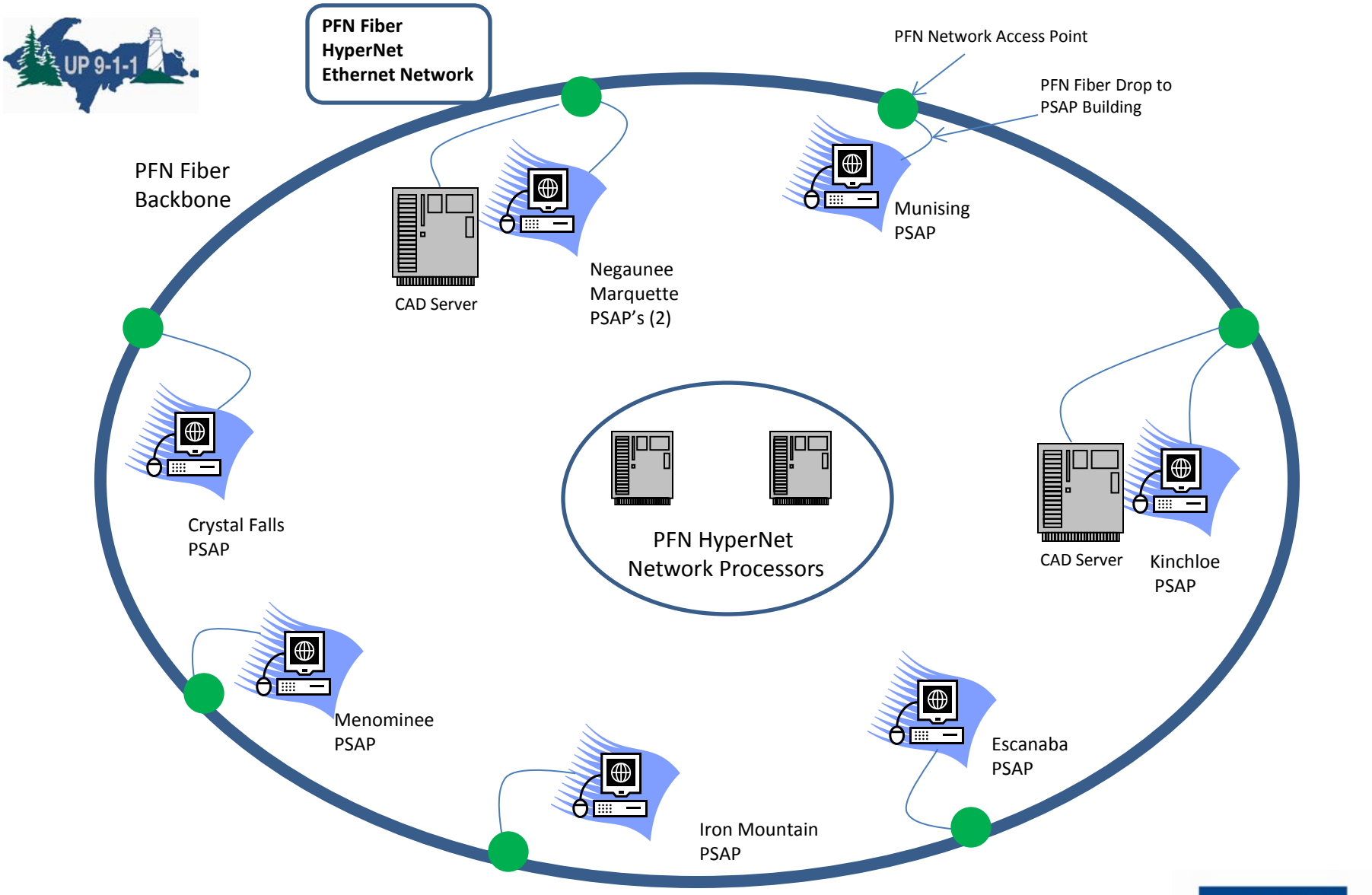
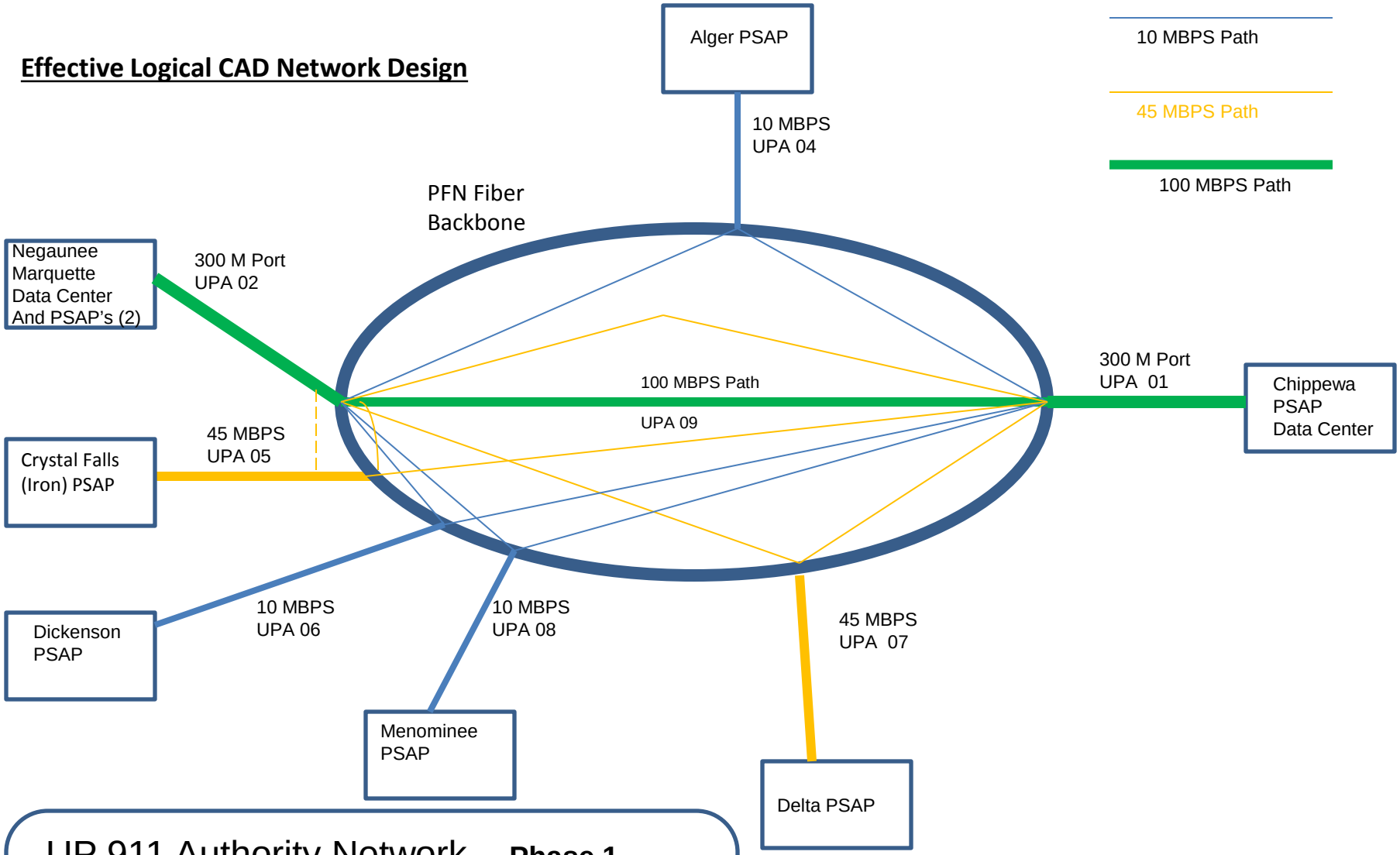


UP 911 Authority Network

PSAP Core Network

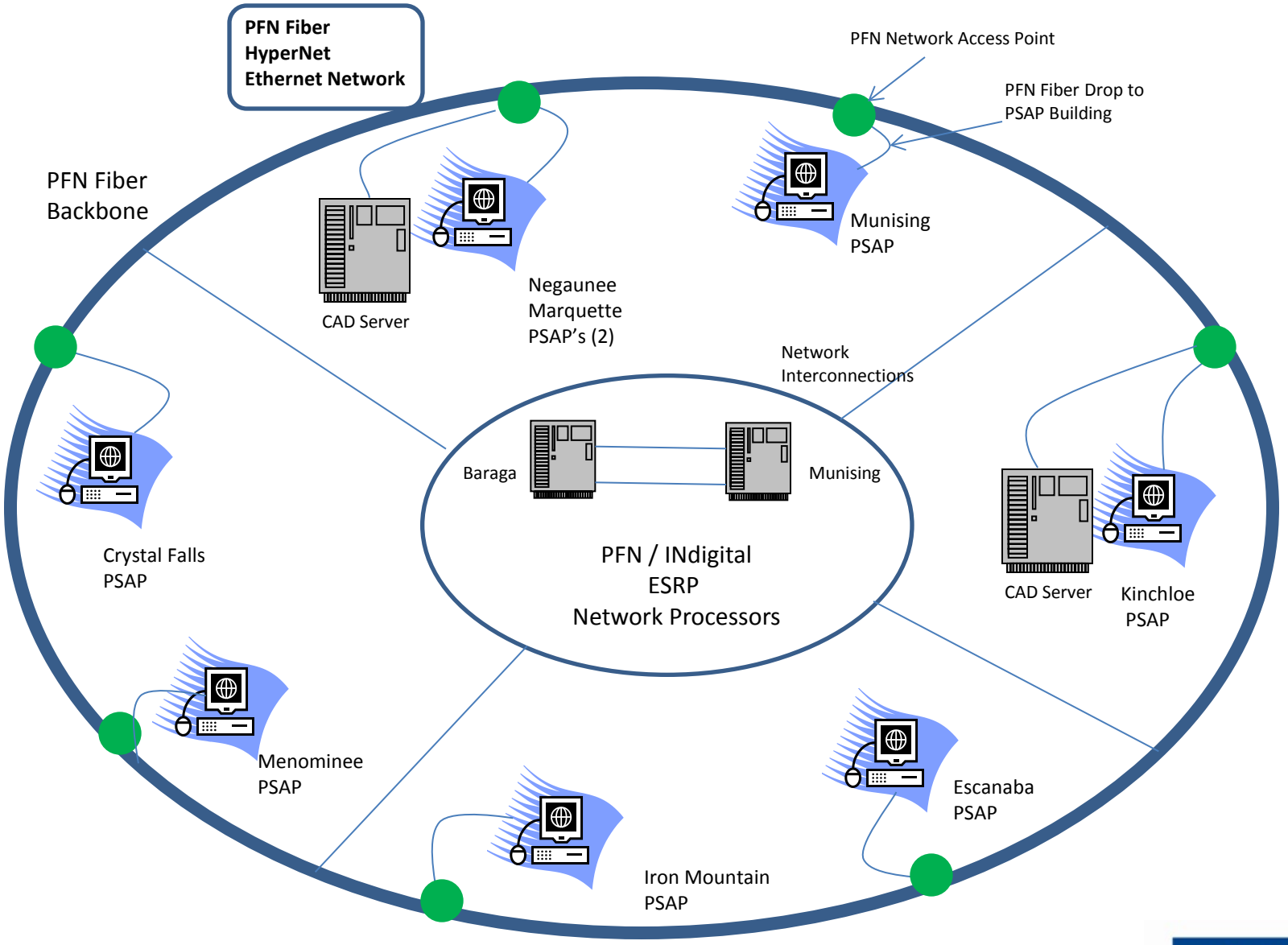
Effective Logical CAD Network Design



UP 911 Authority Network – **Phase 1**

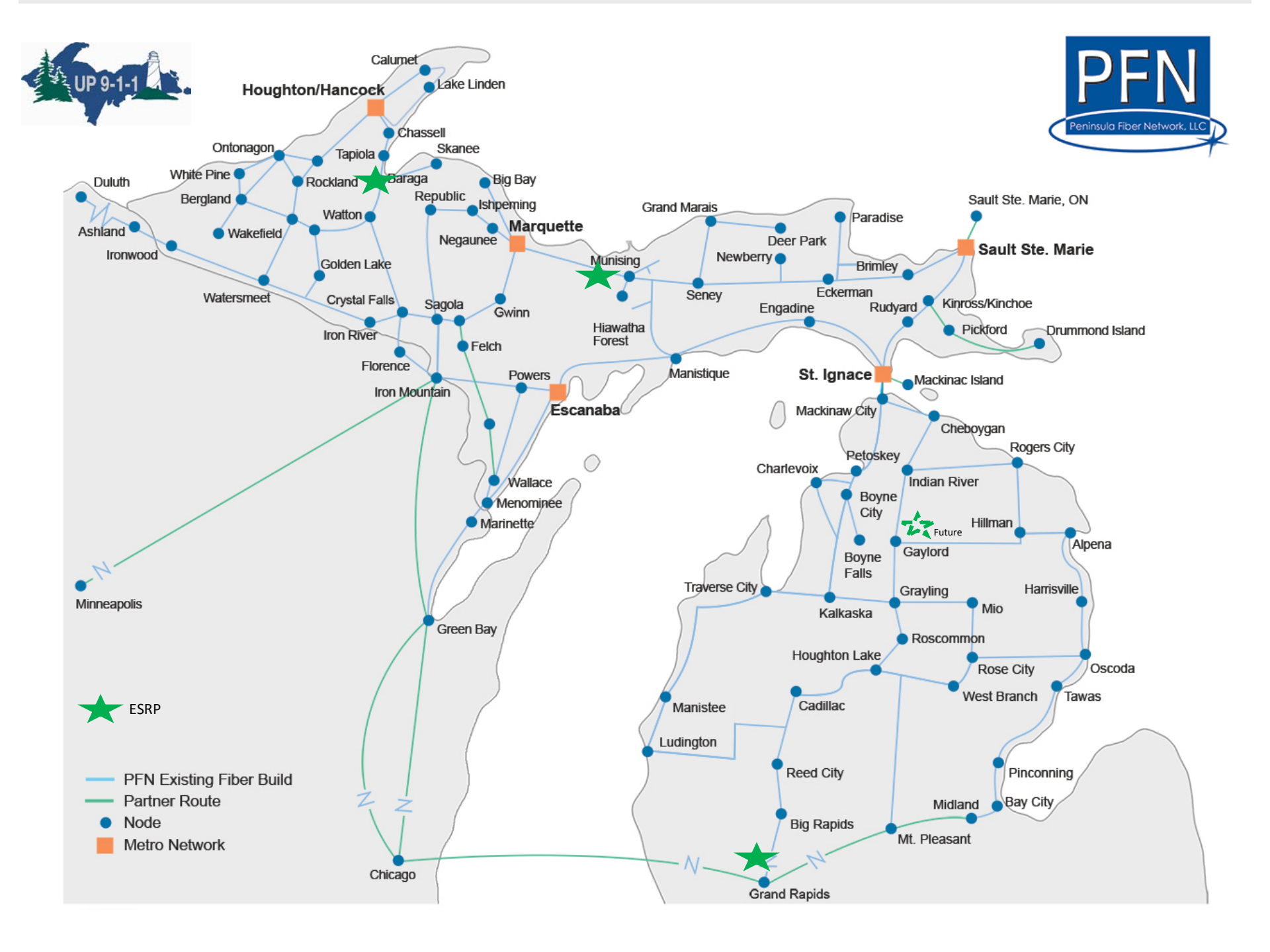
UP 911 Contacts: Tim McKee 906 495 7488 / Gary Johnson 906 475 1196

Thom Sumbler – PFN Sales – 906 387 6617
Dave McCartney – PFN GM – 906 226 2010
Bill Tidd – Network Manager (OSP Transport) 906 387 0043
Todd Proehl – (IP Engineering) 906 226 2010



UP 911 Authority Network

ESRP Interconnected Core Network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ESRP
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UP 911 Authority – Project

- Presented the concept to all 15 county boards
- Obtained approval and authorization to make changes to their 911 system configuration
  - Resolution to each county's 911 plan
  - Letter of agency allowing change of 911 carrier
  - PFN provides documents for the county's use
- Coordination with the MPSC
- Coordination with existing 911 service provider

UP 911 Authority Project Continued

- Coordination of all required components
  - Network provider – PFN
    - ESRP technology within PFN network – INdigital
  - CPE provider – Intrado
  - Digital recording provider (3)
  - County MSAG coordinators (7)
  - ILEC's (9)
  - CLEC's / VoIP (9)
  - Wireless operators (5)

NextGen 911 Enhanced Features

- **Suite of *non-voice* features**
  - "Textty" – ability for PSAP's to send and receive text
  - "T.im" – instant messaging for text, pictures and video
  - Interconnection to "*other data services*"
    - Onstar, video surveillance, license plate recognition, etc
- **Other new services as the become available**
  - The nature of this network system is that it will allow integration of new features and enhancements as they are developed
  - This NextGen network will continue to be upgraded as technology develops

UP 9-1-1

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Network Resiliency

- Marquette County 9-1-1 call flow prior to ESInet
  - Six 9-1-1 trunks
  - Single Selective Router for entire UP
  - Negaunee Regional Dispatch common equipment
  - Marquette City PD overflow & back-up PSAP
  - Backhoe fade impact

Network Resiliency

- Marquette County 9-1-1 call flow on ESInet
  - Six IP “trunks”
  - Two ESRP’s
  - Auto call rollover to Negaunee Regional Dispatch
  - Back-up phone (MEVO) at each workstation – includes ANI/ALI
  - Backhoe Fade eliminated– Fully ringed network
  - Alternate Routing
    - On the IP network
    - If Network is unavailable (Charter Connection for Mqt Co)
    - Auto Alternate route to Chippewa County Central Dispatch
    - Re-route 9-1-1 calls to back-up PSAP Marquette City PD
    - On the PSTN (Tertiary 9-1-1 Route)

UP 9-1-1

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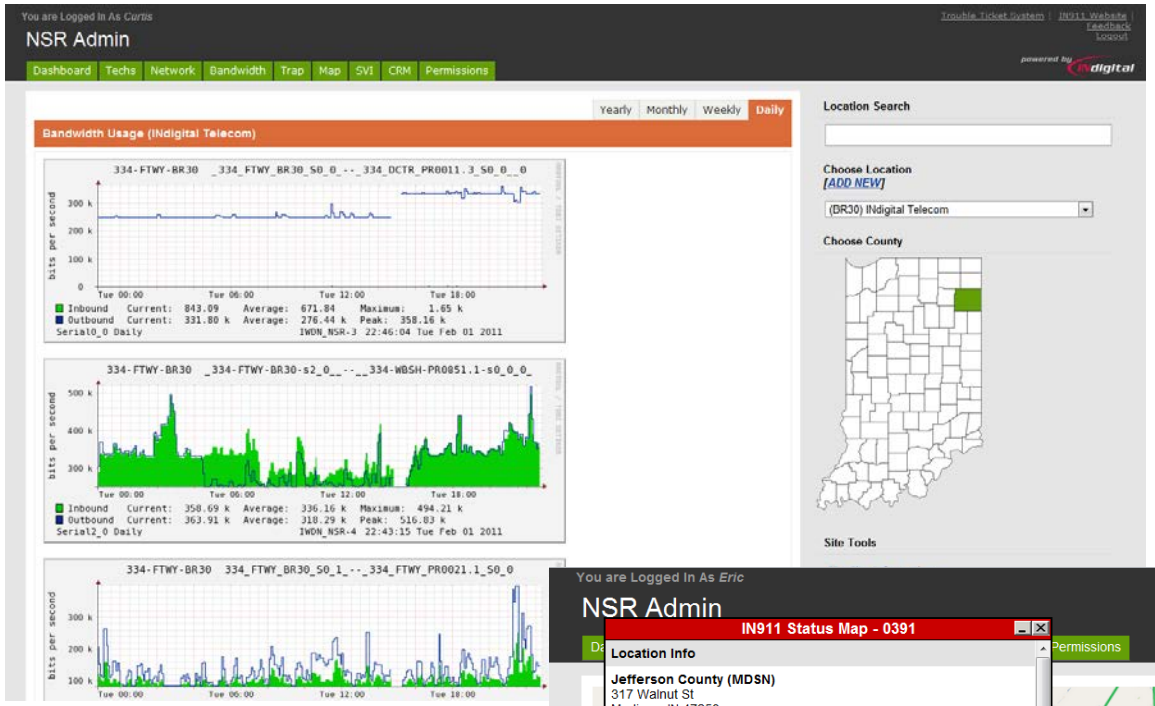
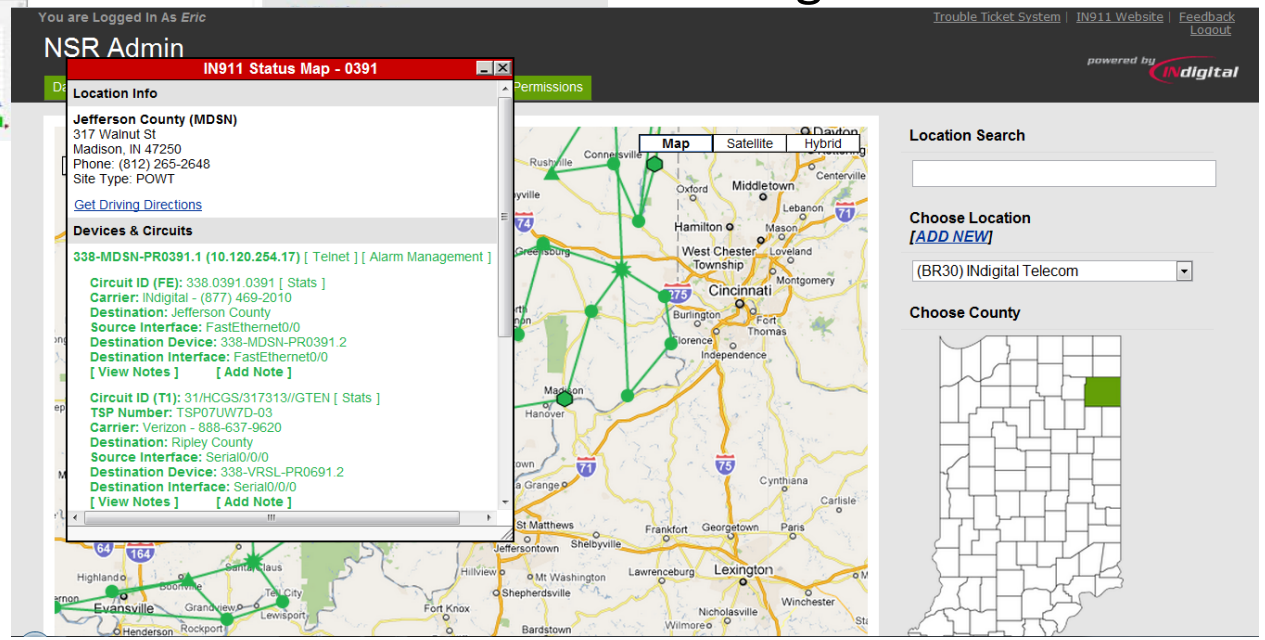
network and PSAP monitoring

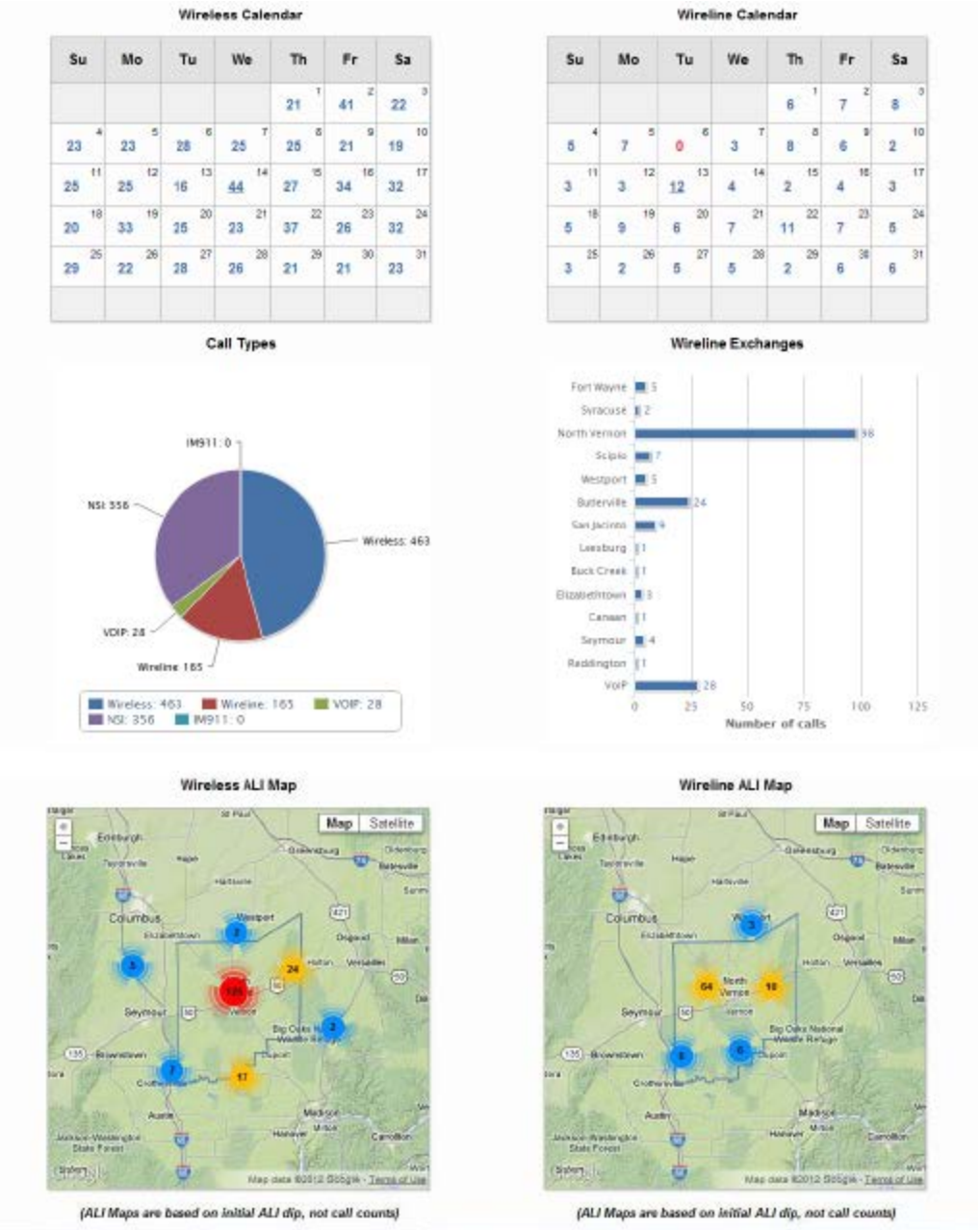


- can be used by technicians or PSAP community
- notify key personnel of outages
- provides forward looking warning to prevent outages

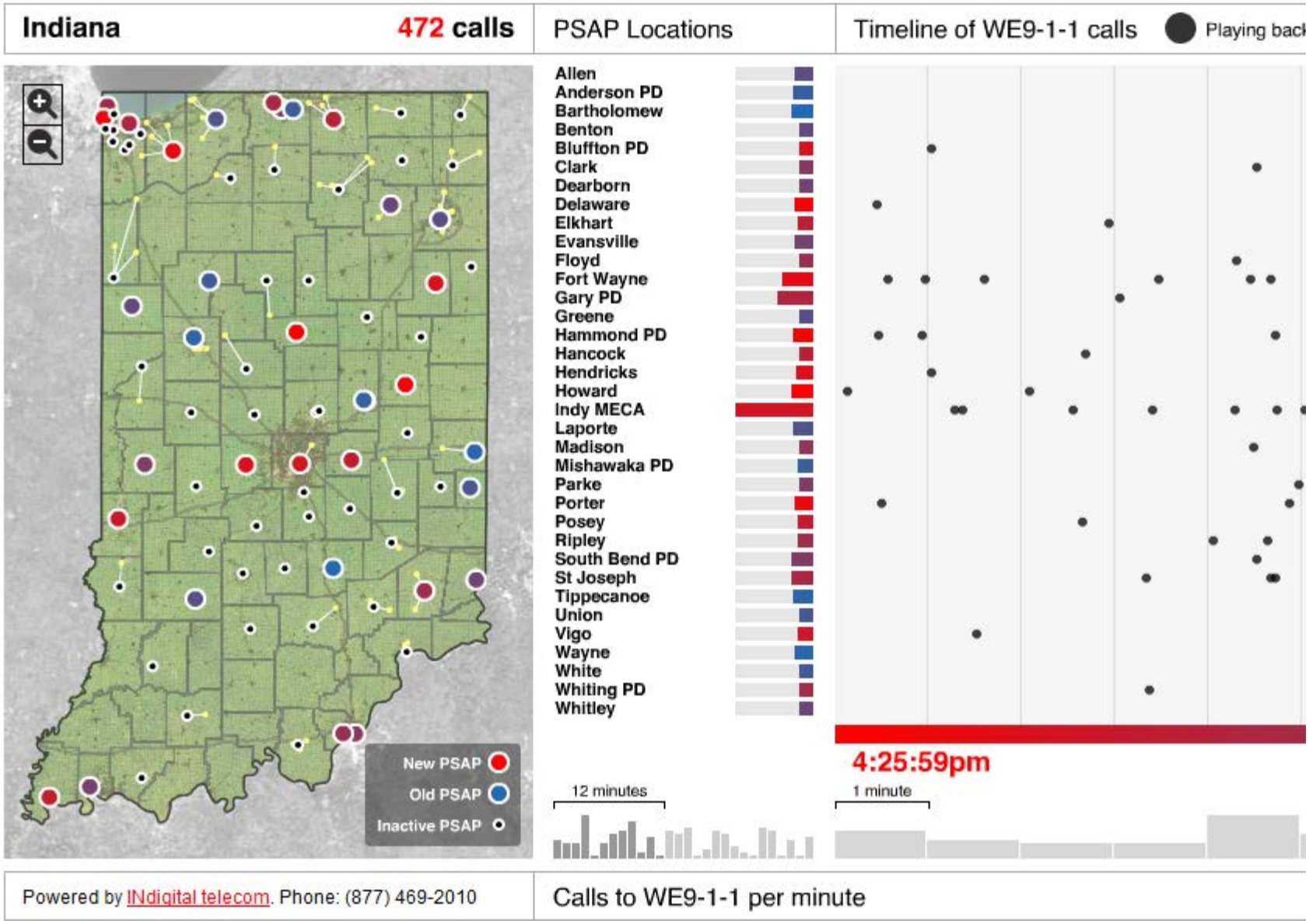


PSAP Toolkit

- calls per month
- calls per type
- map display of calls
- ALI Tools
- Call detail records
- MSAG manager
- trouble ticketing



active display map



Questions?

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