MultiSpeak Case Study – WIN Energy REMC

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February 13, 2010

MultiSpeak®

WIN ENERGY® REMC

"The Energy Company Of Choice"®


In the past, all of us have lived with our software processes because….
“We have always done it this way”.

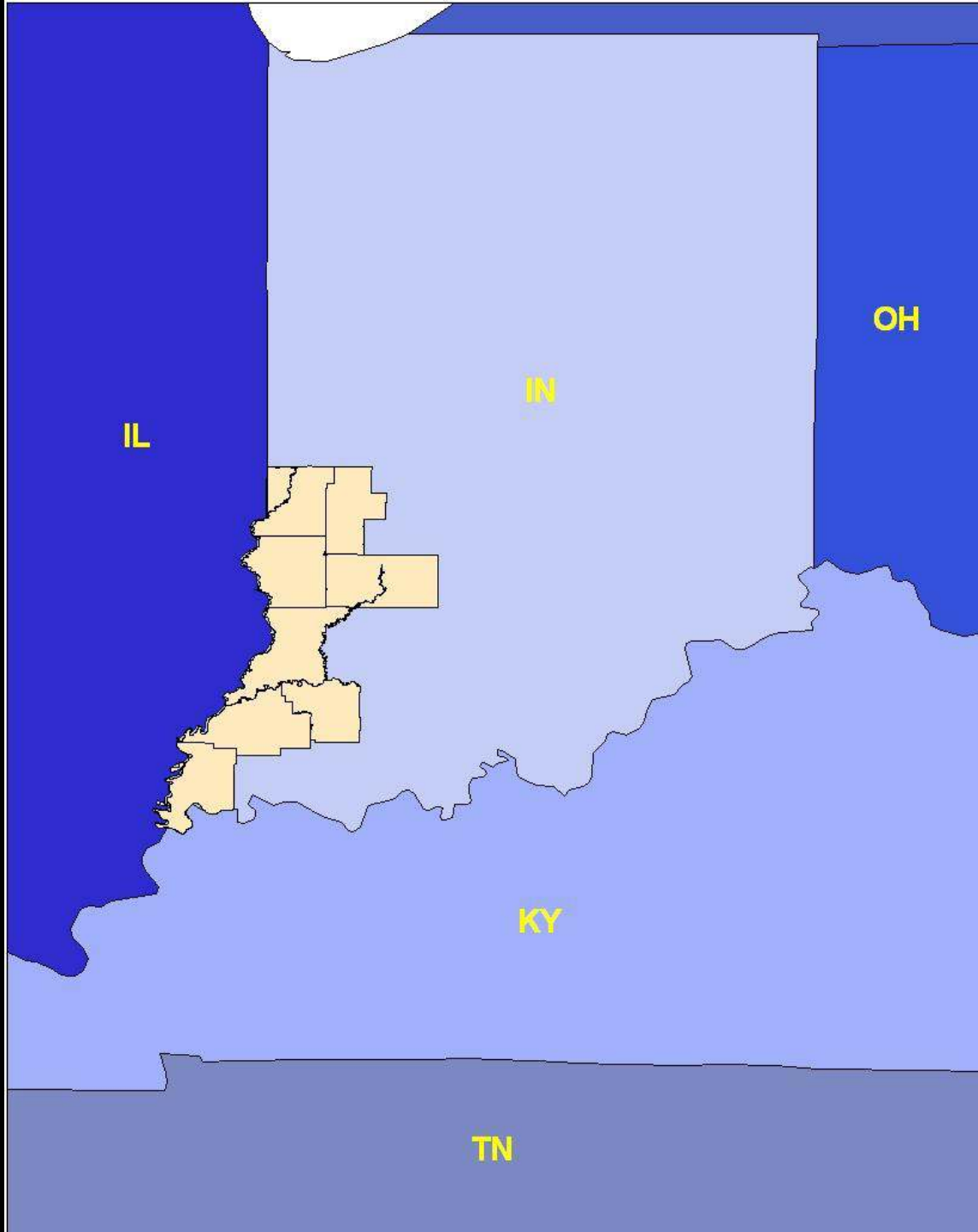
Topics to Cover

- Who is WIN Energy REMC?
  (put things in perspective)
- WIN Energy MultiSpeak Interfaces
- Savings (?)
- Engineering and Operations Benefits

Who is WIN Energy REMC?

"The Energy Company Of Choice"®

- Located in SW Indiana
- Approx. 16,500 meters
- 135 MW NCP
- 41 Substations
  - 17 Dedicated
  - 24 Residential
- Territory: 1,500 sq. miles
- 46 TOTAL Employees



WIN Energy's Involvement

- WIN Energy was one of two cooperative's involved in the CRN pilot project that eventually became MultiSpeak.
- All cooperatives have the same issue, we want a certain software; however, we worry about interoperability, software updates, and interface issues.
- **WE** want to choose the software we want. We do NOT want a software chosen because we are afraid that desired functionality may not work with other software we have/or want.
- "Best of Breed" is in **ALL** of our best interests.

Disclaimer

- The following slides show what WIN Energy REMC is using.
- This **DOES NOT** mean anything else is better or worse. The intent is to show different processes that are presently working together at WIN Energy and what you can accomplish at your cooperative.
- SOME AMI vendors may not be supporting features to the level I am demonstrating in this presentation.

WIN Energy MultiSpeak Interfaces

- **CIS to Staking**
  - NISC iVue to Powel StakeOut
    - Send units and stock materials from NISC to StakeOut
- **Staking to CIS**
  - Powel StakeOut to NISC iVue
    - Send units from StakeOut to NISC
- **CIS to AMR**
  - NISC iVue to Landis & Gyr TS2
    - Sends meter deployment, meter status change and customer information from NISC to Hunt
- **AMR to CIS**
  - Landis & Gyr TS2 to NISC iVue
    - Interval reading automatically posts readings into CIS for the CSR's to view trends
    - "Get reading Now" allows CSR to stay in iVue and get most recent meter reading
    - Sends phasing information from TS2 to NISC
- **AMR to OMS**
  - Landis & Gyr TS2 to Milsoft DisSPatch
    - Shows the following graphically and in tabular format
      - Signal strengths
      - Blink Count
      - Outage Status
- **CIS to OMS**
  - NISC iVue to Milsoft DisSPatch
    - Customer information updates (name, phone number, etc) from iVue to DisSPatch.
    - Additional bi-directional information from iVue to OMS on outage input, billing information and account information and updates.

WIN Energy MultiSpeak Interfaces

- **Coming Soon in WIN Energy's Project (next ? months)**
  - **Call Center to OMS**
    - CRC to Milsoft DisSPatch
      - CRC to be able to do restorals in DisSPatch soon.
  - **OMS to Call Center**
    - Milsoft DisSPatch to CRC
      - Send connectivity predictions (scope of the outage, not just received call) and comments concerning site specific outages from DisSPatch to CRC.

WIN Energy MultiSpeak "Savings"

- **CIS to Staking**
  - NISC iVue to Powel StakeOut
    - Send units and stock materials from NISC to StakeOut
      - 30 minutes per month (custom dll's and parsing) down to 2 minutes/month
- **CIS to AMR**
  - NISC iVue to Hunt TS2
    - Sends meter deployment, meter status change and customer information from NISC to Hunt
      - Meter reading savings: 22 labor hours per month down to 4 labor hrs. per month. There are savings in researching reads, but….

WIN Energy MultiSpeak "Savings"

- **AMR to CIS**
  - Hunt TS2 to NISC iVue
    - "Get reading Now" allows CSR to stay in iVue and get most recent meter reading
      - Never could do this before with once a month handheld reads. Value ???
      - We are also posting daily reads into iVue for easier usage review in the CIS system. Value ??
    - Sends phasing information from TS2 to NISC
      - Updates daily (only changes if 3 consecutive days are the same), for outages, PRICELESS!
      - Physical phasing took 10 man months previously. If ALL phases changed we would now get this solidly confirmed in 3 days.
- **AMR to OMS**
  - Hunt TS2 to Milsoft DisSPatch
    - Shows the following graphically and in tabular format
      - Signal strengths
      - Blink Count
      - Outage Status
    - This has saved outages and found blinks as well as helping to define the "real" extent of an outage. Value ??????
- **CIS to OMS**
    - NISC iVue to Milsoft DisSPatch
      - Customer information updates (name, phone number, etc) from iVue to DisSPatch
      - Phasing is sent to OMS model through AMR to CIS to OMS interface.
    - WAS a manual batch file process. NOW totally automated daily process. Savings is more on not having to babysit and verify that the updates actually occur. Lost opportunity and aggravation cost savings.

WIN Energy MultiSpeak "Savings"

- **Staking to CIS**
  - Powel StakeOut to NISC iVue
    - Send units from StakeOut to NISC
      - 100 work orders per month. Average 600 entries for unit to CPR conversion.
        - » Manual tabulation - Average of 1 minute per entry. 10 hour labor savings per month.
        - » MultiSpeak method – Instantaneous!

WIN Energy MultiSpeak “Savings”

Ultimately, whether any of these listed savings actually have value to you depends on your cooperative’s philosophy. “Lost opportunity cost” is a topic I personally have to deal with and is important to me.

What I have listed are obvious time savers and there are many that are not so direct and much harder to quantify.

Web Services

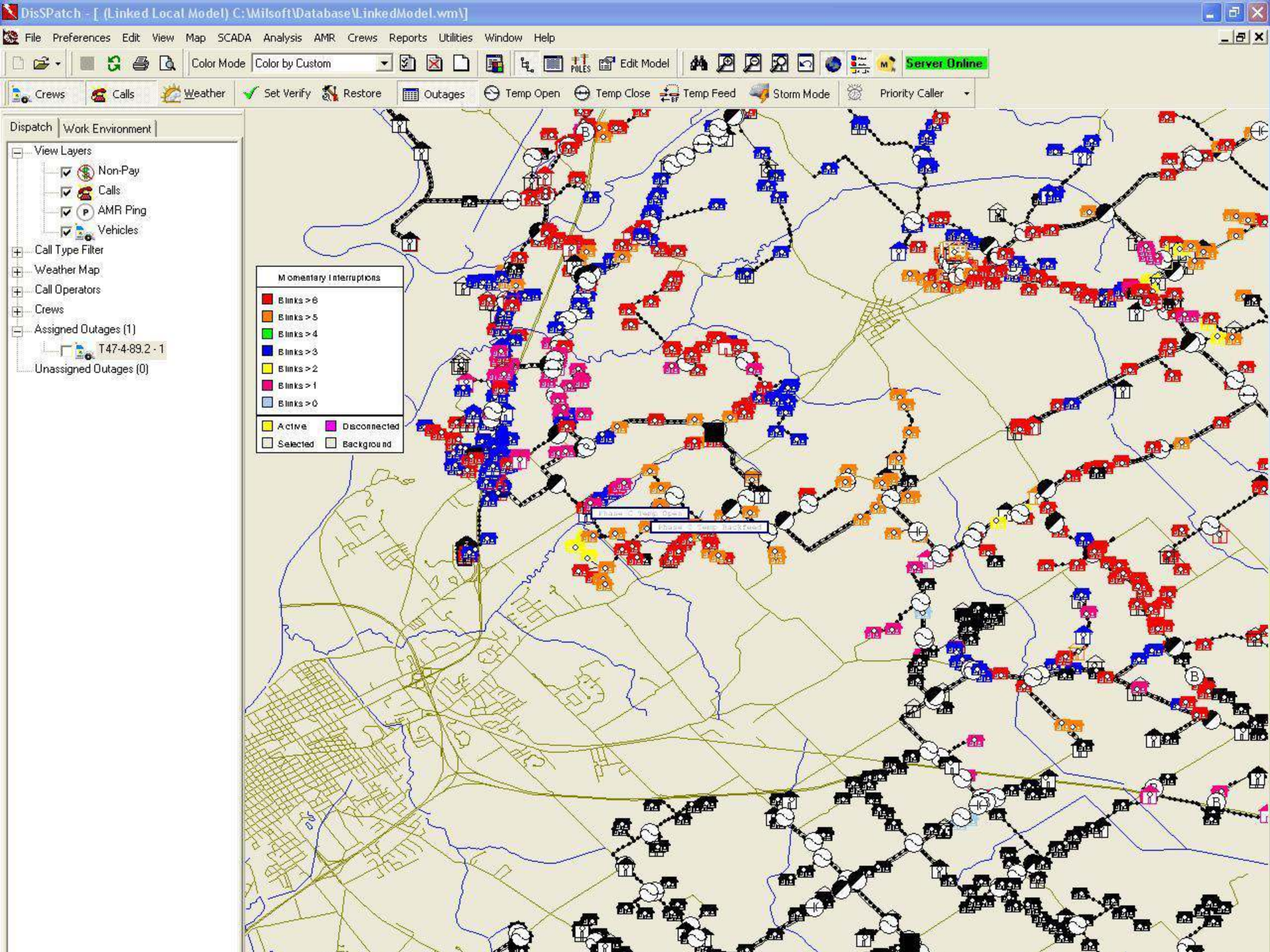
- Web services DO NOT have to be done with a vendor!
- Once the data is defined, you can do a web service call with programs like Microsoft Excel. This allows you to do reports and gives you functionality even if you only have one MultiSpeak compliant software.

(See Sean Solberg's paper.)

http://www.powelinc.com/templates/Page____714.aspx

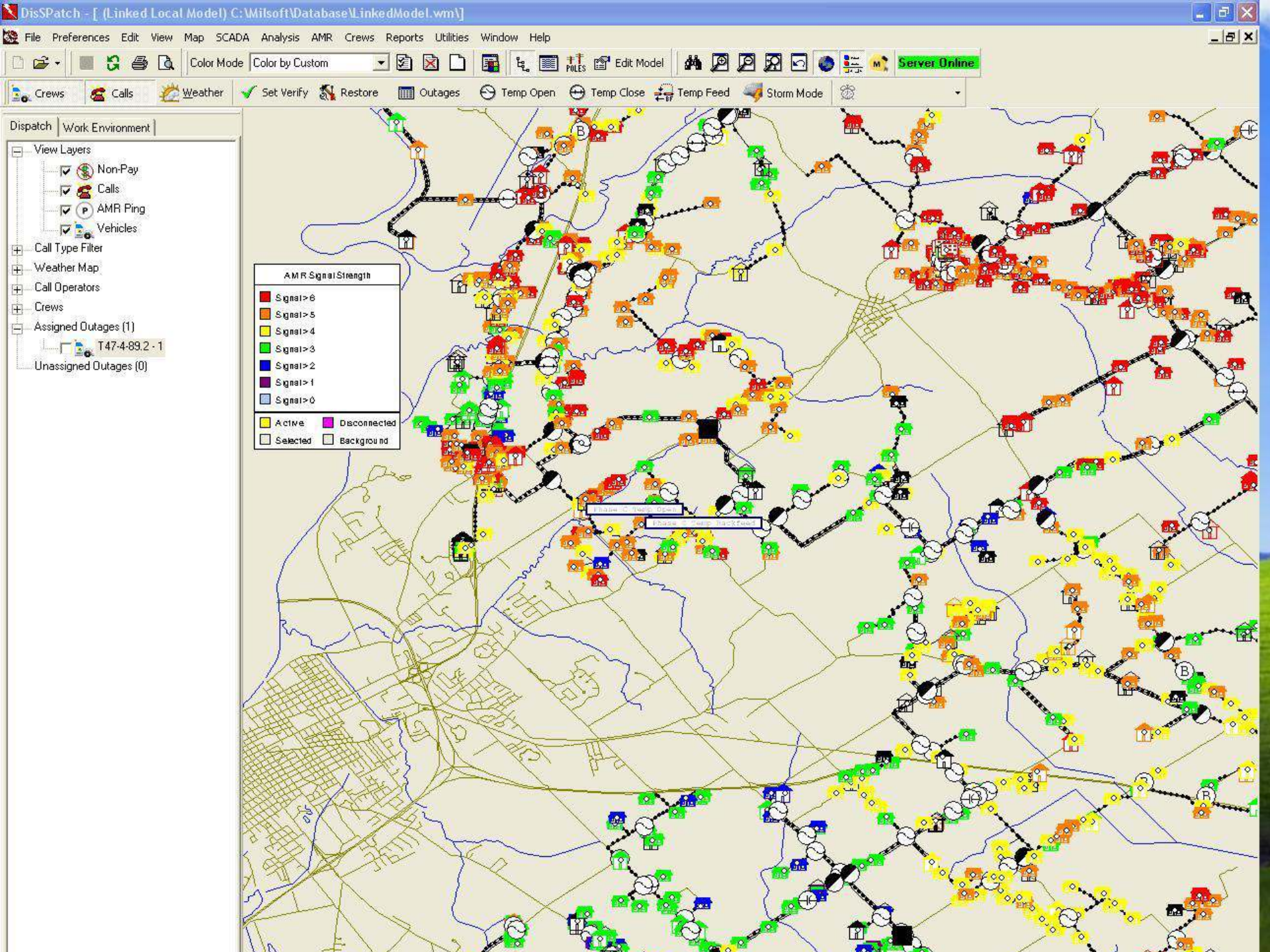
Engineering and Operations Benefits

- Engineering and Operations benefits greatly enhance the Operatons business case.
  - These benefits include, but are not limited to:
    - Blink Count
      - Use this option, along with a good OMS system, to help track down system disturbances and, therefore, enhance member service satisfaction.


DisSPatch - [(Linked Local Model) C:\Milsoft\Database\LinkedModel.wm\]
File Preferences Edit View Map SCADA Analysis AMR Crews Reports Utilities Window Help
Color Mode
Color by Custom
Edit Model
Server Online
Crews Calls Weather Set Verify Restore Outages Temp Open Temp Close Temp Feed Storm Mode Priority Caller
Dispatch
Work Environment
View Layers
Non-Pay
Calls
AMR Ping
Vehicles
Call Type Filter
Weather Map
Call Operators
Crews
Assigned Outages (1)
T47-4-89.2 - 1
Unassigned Outages (0)
Momentary Interruptions
Blinks > 6
Blinks > 5
Blinks > 4
Blinks > 3
Blinks > 2
Blinks > 1
Blinks > 0
Active
Disconnected
Selected
Background

Engineering and Operations Benefits

- Engineering and Operations benefits greatly enhance the AMI business case.
  - These benefits include, but are not limited to:
    - Signal strength (PLC systems)
      - This can be used to enhance AMR performance
      - Look into potential problems, proactively
        - » Vines, tree contact, bad connections and bad meter bases to name a few.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Crews
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Weather
Set Verify
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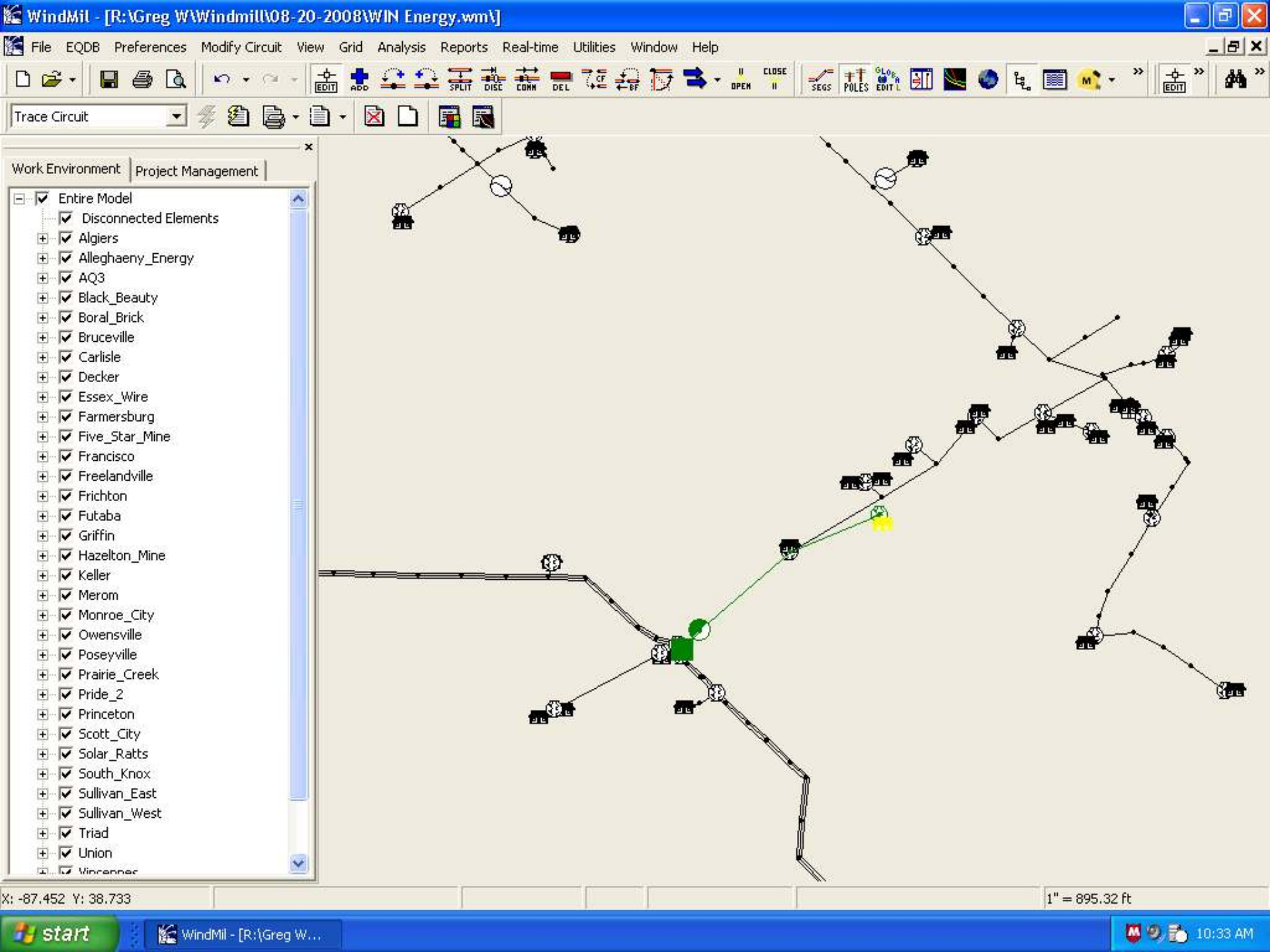
Outages
Temp Open
Temp Close
Temp Feed
Storm Mode
Dispatch
Work Environment
View Layers
Non-Pay
Calls
AMR Ping
Vehicles
Call Type Filter
Weather Map
Call Operators
Crews
Assigned Outages (1)
T47-4-89.2 - 1
Unassigned Outages (0)
AMR Signal Strength
Signal>6
Signal>5
Signal>4
Signal>3
Signal>2
Signal>1
Signal>0
Active
Disconnected
Selected
Background

Engineering and Operations Benefits (cont.)

- KW Demand
  - Transformer sizing
  - Load Flow
    - » Enhanced with a good EA system, system planning is taken to a level few dreamed of even as recently as 5-10 years ago.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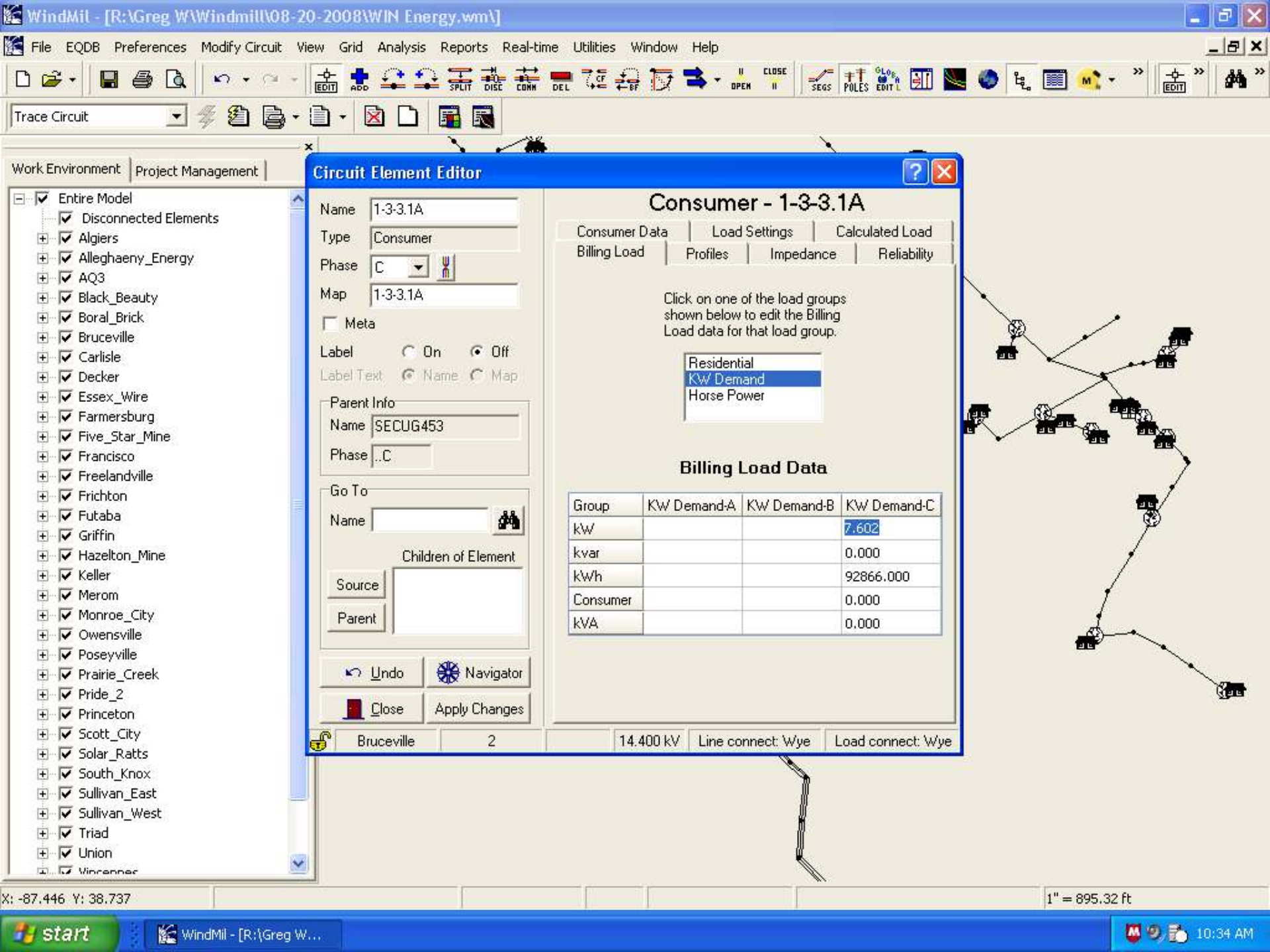
File EQDB Preferences Modify Circuit View Grid Analysis Reports Real-time Utilities Window Help
Trace Circuit
Work Environment
Project Management
Entire Model
Disconnected Elements
Algiers
Alleghaeny_Energy
AQ3
Black_Beauty
Boral_Brick
Bruceville
Carlisle
Decker
Essex_Wire
Farmersburg
Five_Star_Mine
Francisco
Freelandville
Frichton
Futaba
Griffin
Hazelton_Mine
Keller
Merom
Monroe_City
Owensville
Poseyville
Prairie_Creek
Pride_2
Princeton
Scott_City
Solar_Ratts
South_Knox
Sullivan_East
Sullivan_West
Triad
Union
X: -87.452 Y: 38.733
1" = 895.32 ft
start
WindMil - [R:\Greg W...
10:33 AM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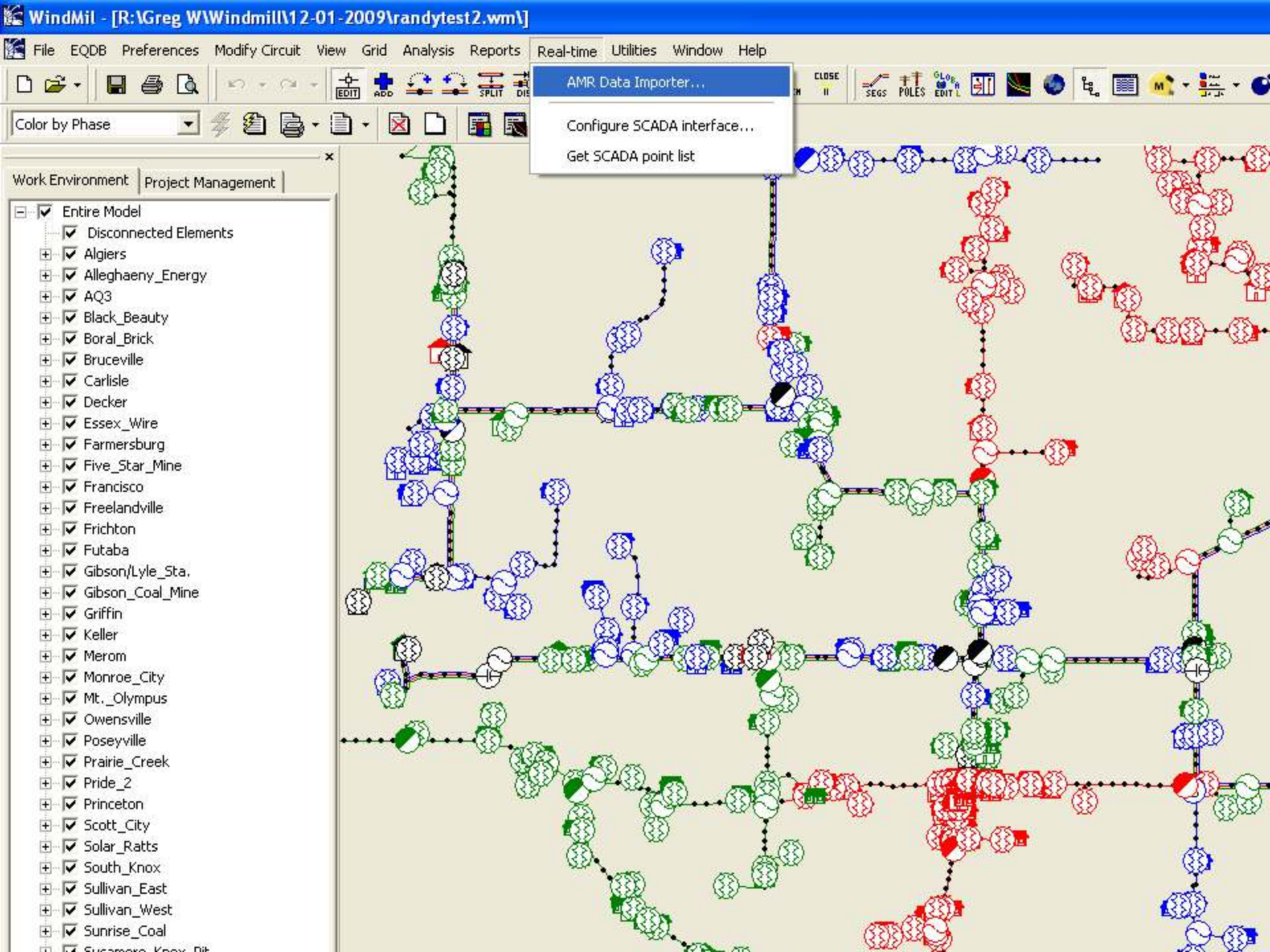
Essex_Wire
Farmersburg
Five_Star_Mine
Francisco
Freelandville
Frichton
Futaba
Griffin
Hazelton_Mine
Keller
Merom
Monroe_City
Owensville
Poseyville
Prairie_Creek
Pride_2
Princeton
Scott_City
Solar_Ratts
South_Knox
Sullivan_East
Sullivan_West
Triad
Union
Circuit Element Editor
Name 1-3-3.1A
Type Consumer
Phase C
Map 1-3-3.1A
Meta
Label On Off
Label Text Name Map
Parent Info
Name SECUG453
Phase ..C
Go To
Name
Children of Element
Source
Parent
Undo
Navigator
Close
Apply Changes
Consumer - 1-3-3.1A
Consumer Data
Load Settings
Calculated Load
Billing Load
Profiles
Impedance
Reliability
Click on one of the load groups shown below to edit the Billing Load data for that load group.
Residential
KW Demand
Horse Power
Billing Load Data
Group KW Demand-A KW Demand-B KW Demand-C
kW 7.602
kvar 0.000
kWh 92866.000
Consumer 0.000
kVA 0.000
Bruceville 2 14.400 kV Line connect: Wye Load connect: Wye
X: -87.446 Y: 38.737
1" = 895.32 ft
start
WindMil - [R:\Greg W...
10:34 AM


WindMil - [R:\Greg W\Windmill\12-01-2009\randytest2.wm\]
File
EQDB
Preferences
Modify Circuit
View
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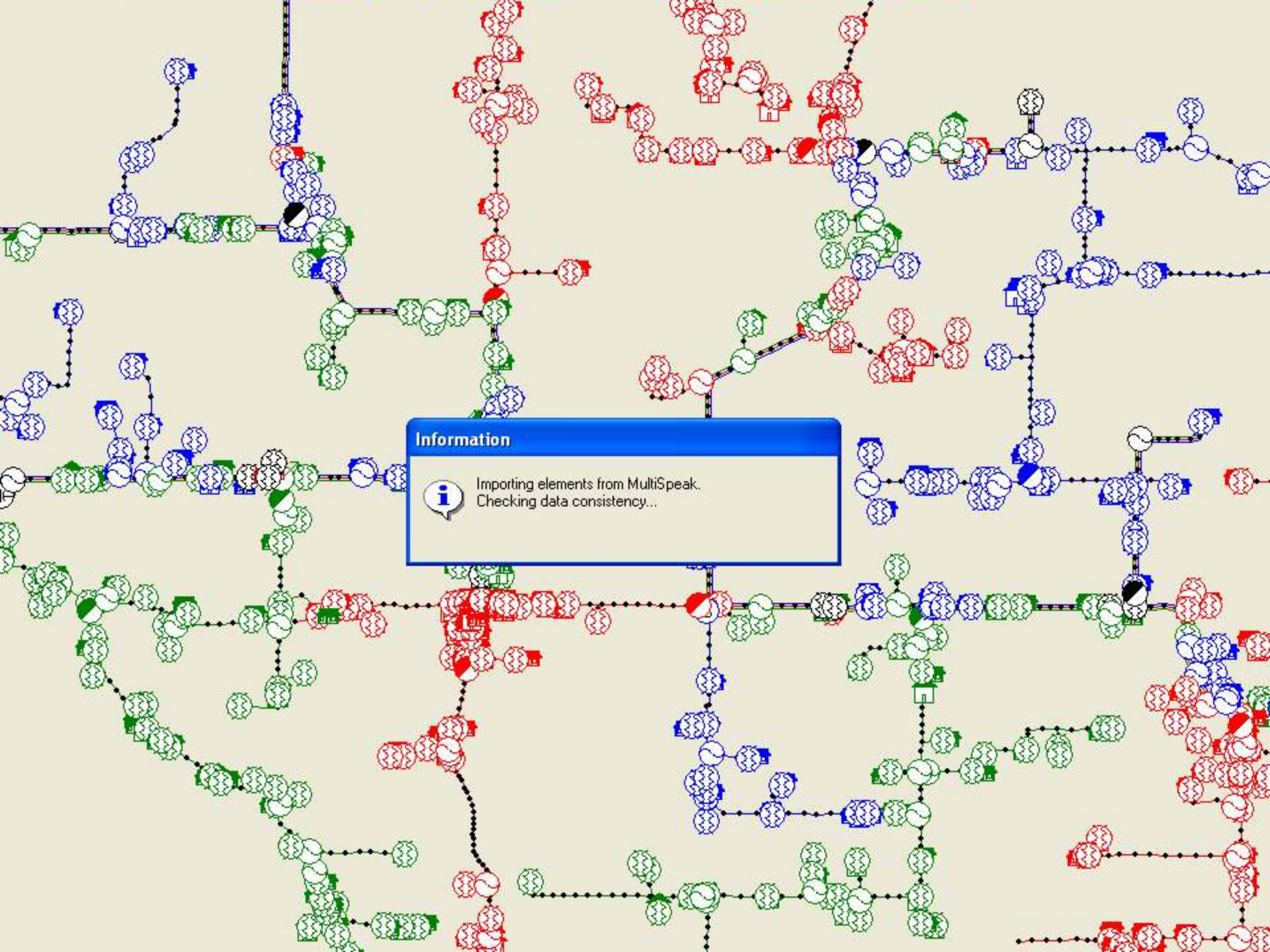
Reports
Real-time
Utilities
Window
Help
AMR Data Importer...
Configure SCADA interface...
Get SCADA point list
Color by Phase
Work Environment
Project Management
Entire Model
Disconnected Elements
Algiers
Alleghaeny_Energy
AQ3
Black_Beauty
Boral_Brick
Bruceville
Carlisle
Decker
Essex_Wire
Farmersburg
Five_Star_Mine
Francisco
Freelandville
Frichton
Futaba
Gibson/Lyle_Sta.
Gibson_Coal_Mine
Griffin
Keller
Merom
Monroe_City
Mt._Olympus
Owensville
Poseyville
Prairie_Creek
Pride_2
Princeton
Scott_City
Solar_Ratts
South_Knox
Sullivan_East
Sullivan_West
Sunrise_Coal


Information
Importing elements from MultiSpeak.
Checking data consistency...

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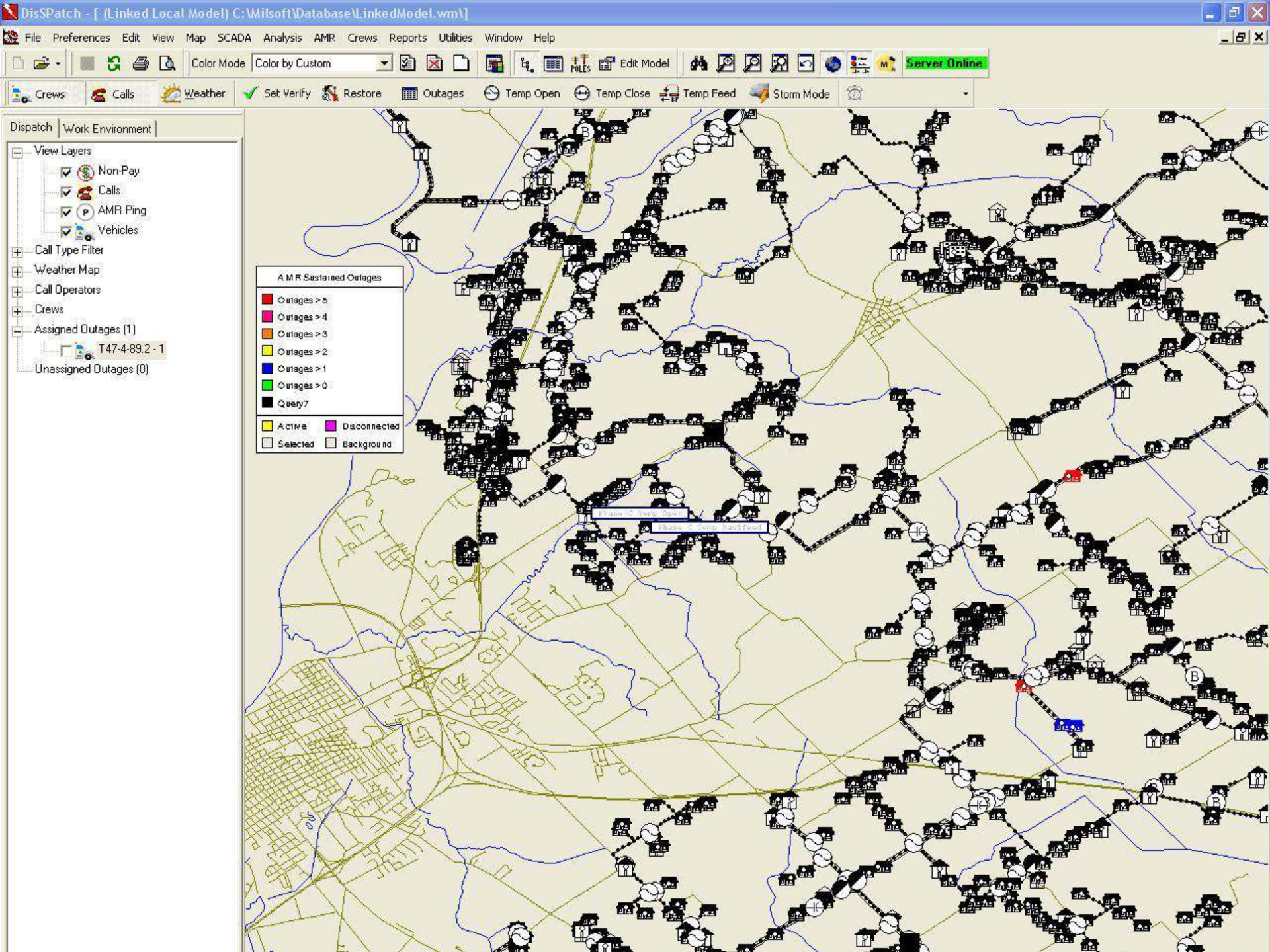
AMR and OMS

- Outage Management
  - Manage expectations
    - AMR outage DETECTION (NOT outage verification) is a tool, not the “silver bullet”
  - Realize your system potential
    - If you have vines, cracked insulators, bad connectors it’s a noisy environment for PCL.
  - OMS integration and custom application
    - By graphically DISPLAYING meters that are in the lost status in OMS, outage detection and the extent of outages can be determined before visually verified allowing better utilization of resources. (WIN Energy uses this EVERY storm)

AMR and OMS

- Realizing system potential
  - Look for reoccurring problems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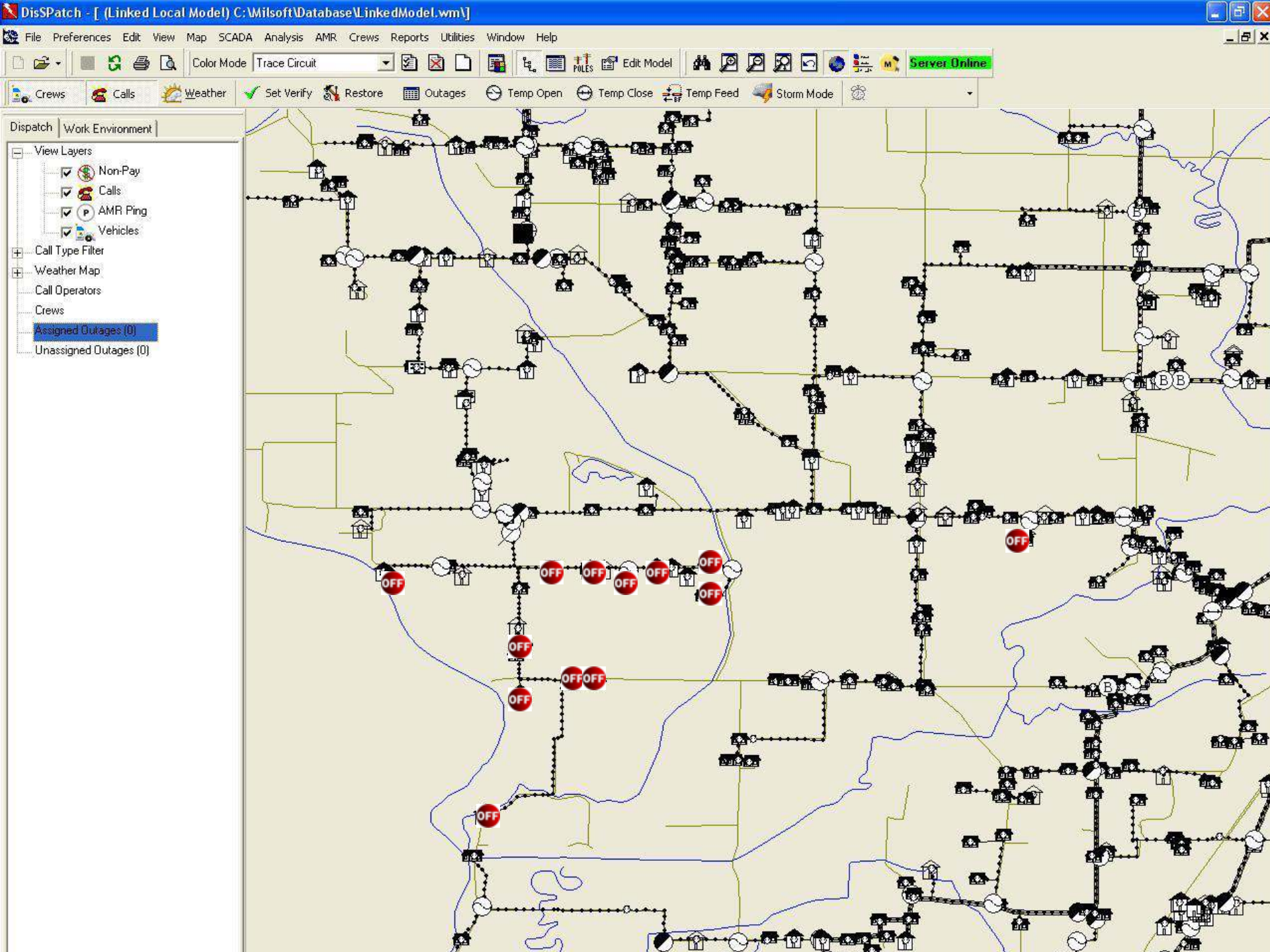
Assigned Outages (1)
T47-4-89.2 - 1
Unassigned Outages (0)
AMR Sustained Outages
Outages > 5
Outages > 4
Outages > 3
Outages > 2
Outages > 1
Outages > 0
Query7
Active
Disconnected
Selected
Background

AMR and OMS

- OMS integration and custom application
  - By graphically DISPLAYING meters that are in the lost status in OMS, outage detection and the extent of outages can be determined before visually verified allowing better utilization of resources.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Dispatch
Work Environment
View Layers
Non-Pay
Calls
AMR Ping
Vehicles
Call Type Filter
Weather Map
Call Operators
Crews
Assigned Outages (0)
Unassigned Outages (0)
OFF

Conclusion

- MultiSpeak is a project that is gaining national and international acceptance. (NIST, ANSI, IEC WG14)
- I urge you to think about making MultiSpeak a requirement for any new request for proposals (RFP) in new software purchases. As well as investigating existing links in software you may already have.
- I encourage you to join the MutliSpeak Initiative. It's IMPORTANT FOR YOU!
- While not every process is included in MultiSpeak (a lot are), new processes are added every year, based on requests from vendors and end-users (YOU!)
- There is NO DATA Fairy!! If you have data issues now, when you implement MultiSpeak compliant software interfaces you will still have data issues!
- As with any interface, review your internal procedures. With a new way of getting information, you MAY be able to save labor and effort and eliminate the "That's the way we've always done it" procedure.

Questions ?

Thank You !

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www.multispeak.org