OUTAGE MANAGEMENT SYSTEM AT TACOMA POWER

NWESS - MAY 1ST, 2014

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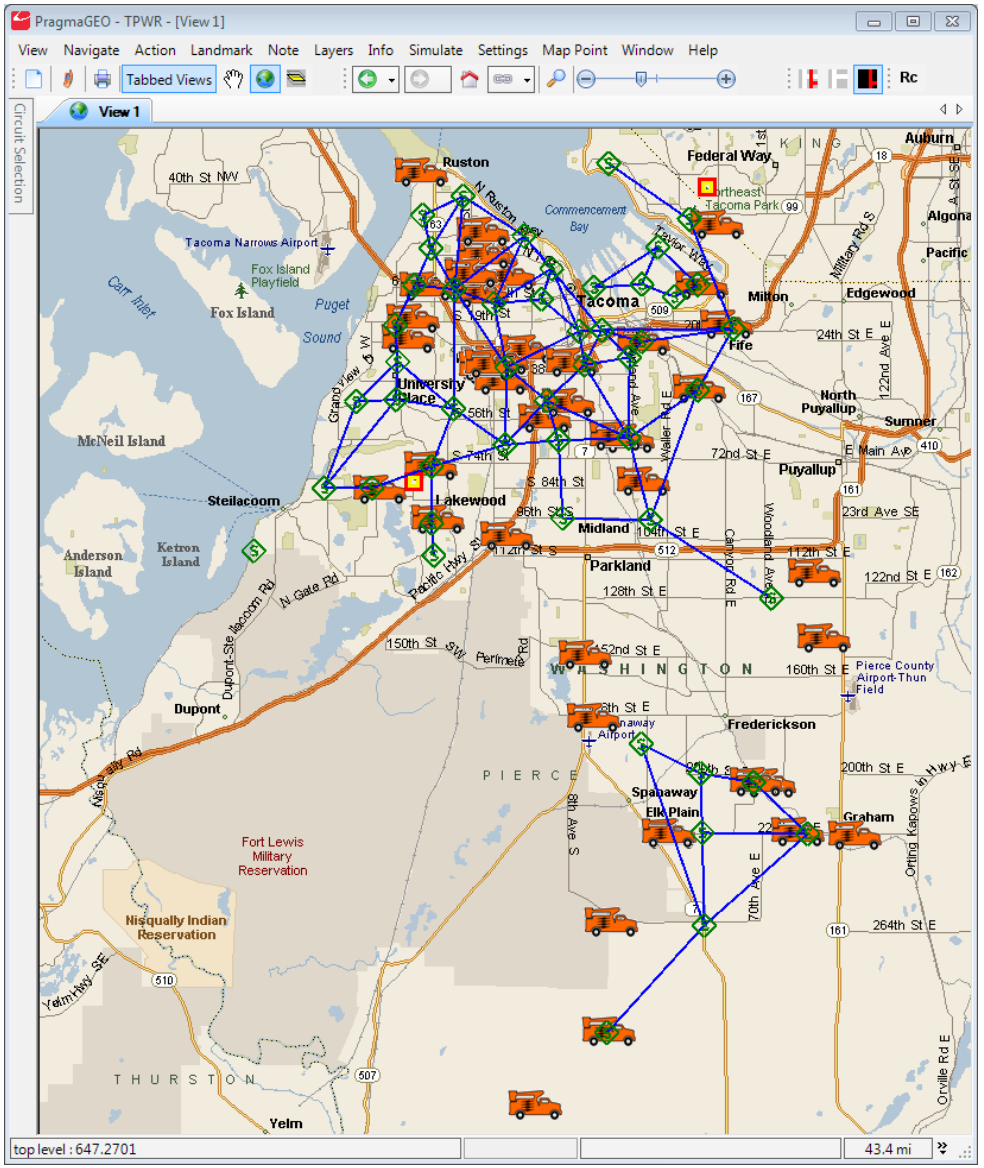
TACOMA POWER
TACOMA PUBLIC UTILITIES

AGENDA

- Quick Facts
- OMS History
- Selection Process
- Challenges
- Advanced Uses
- Future Steps
- Questions



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TACOMA POWER – EST. 1893

Quick Facts

- 180 Sq-Miles in Pierce County
- 170,000 customers
  - ~55% inside Tacoma
  - ~45% outside Tacoma
- Distribution System – 1800 Miles
  - 180 - 12.5kv and 13.8kv circuits
  - 6 circuit Secondary Network
- Transmission System – 420 Miles
  - 115kv and 230kv
- Generation
  - 8 Generation Switchyards
- 1 of 14 Electric Utilities in Pierce County

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OMS HISTORY

GIS

- 1997 – Implemented Smallworld GIS

CCMS

- 2002 – Internally built Customer Call Management System (CCMS) completed

OMS

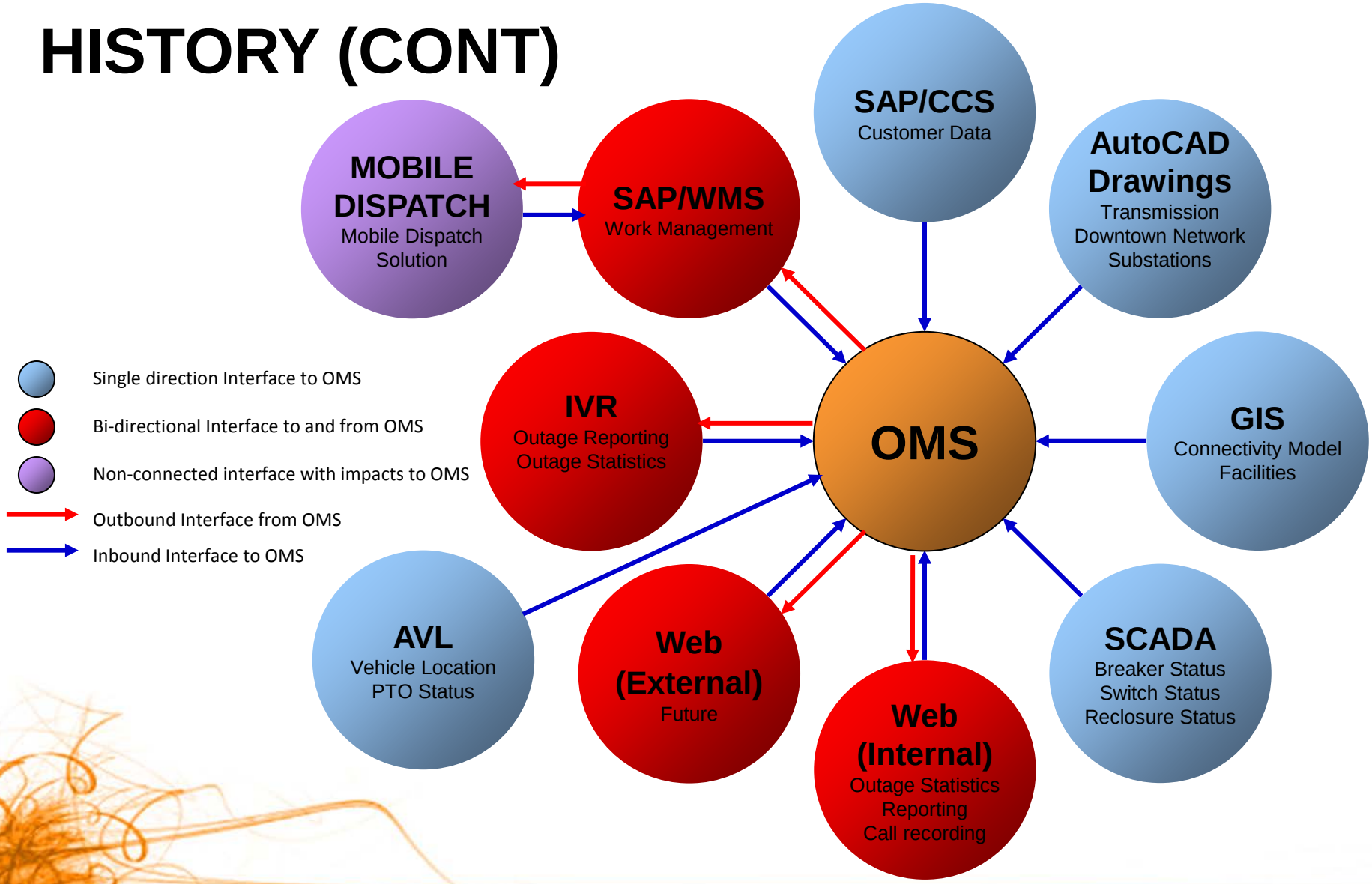
- 2006 – Completed Outage Management System (OMS) business needs assessment

HISTORY (CONT)

Assessment Requirements

- Commercially Available
- Call Taking and Processing
- Incident and Outage Analysis
- Managing Outage Jobs
- Outage and Trouble Reporting including IEEE 1366
- Intranet/Internet Requirements
- Complete Representation of Generation to Customer
- Switching, Tagging and Clearance Reservations
- Dispatcher Logging

HISTORY (CONT)



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SELECTION

Process

- November 2007 – RFP responses received
- February 2008 – Vendor demos
- April 2008 - Site visits completed
- June 2008 – Follow-up vendor demos completed
- December 2008 – Contract Negotiations Completed
- January 2009 – Project Start
- **May 3rd, 2010 – Go-Live**
  - May 3rd, 2010 – 1st Storm

CHALLENGES

Asset and Map Data

- GIS connectivity
- GIS cleanup
- Mapping backlog
- Proposed and In-construction facilities
- Substation/Transmission/Generation Data
- Not all switchable devices in GIS

CHALLENGES (CONT)

Customer Data

- Customer phone #s
- Transformer to customer link
- Disconnected customers

Other

- User Acceptance
- Limited end user participation during project
- Reporting requirements

ADVANCED USES

Complete Representation of Generation to Customer

- Generation, Transmission and Substation Models based on one-lines and mimic board
- GIS Distribution translated from GIS to OMS graphicical viewer
- ALL switchable points are included
- ALL clearance points are included

ADVANCED USE (CONT)

Switching, Tagging and Clearance Issuance

- Switch schedule planning, simulation and implementation
- Steps are auto-populated based on rules
- All switch actions based on the type of device
- All clearances documented and issued from OMS
- Steps performed near real time
- Tightly coupled to incidents during outage events

ADVANCED USE (CONT)

Dispatcher Logging and Reporting

- All logging performed in the OMS
  - Shift changes and briefings
  - Periodic system checks
  - Generation unit cut-in/out
- All Generator availability reports recorded and produced from OMS
  - Maintenance
  - Planned/Un-planned
- Individual jobs and general logging

FUTURE STEPS

System Upgrade

- New version
- Virtual environment

Customer Presentment

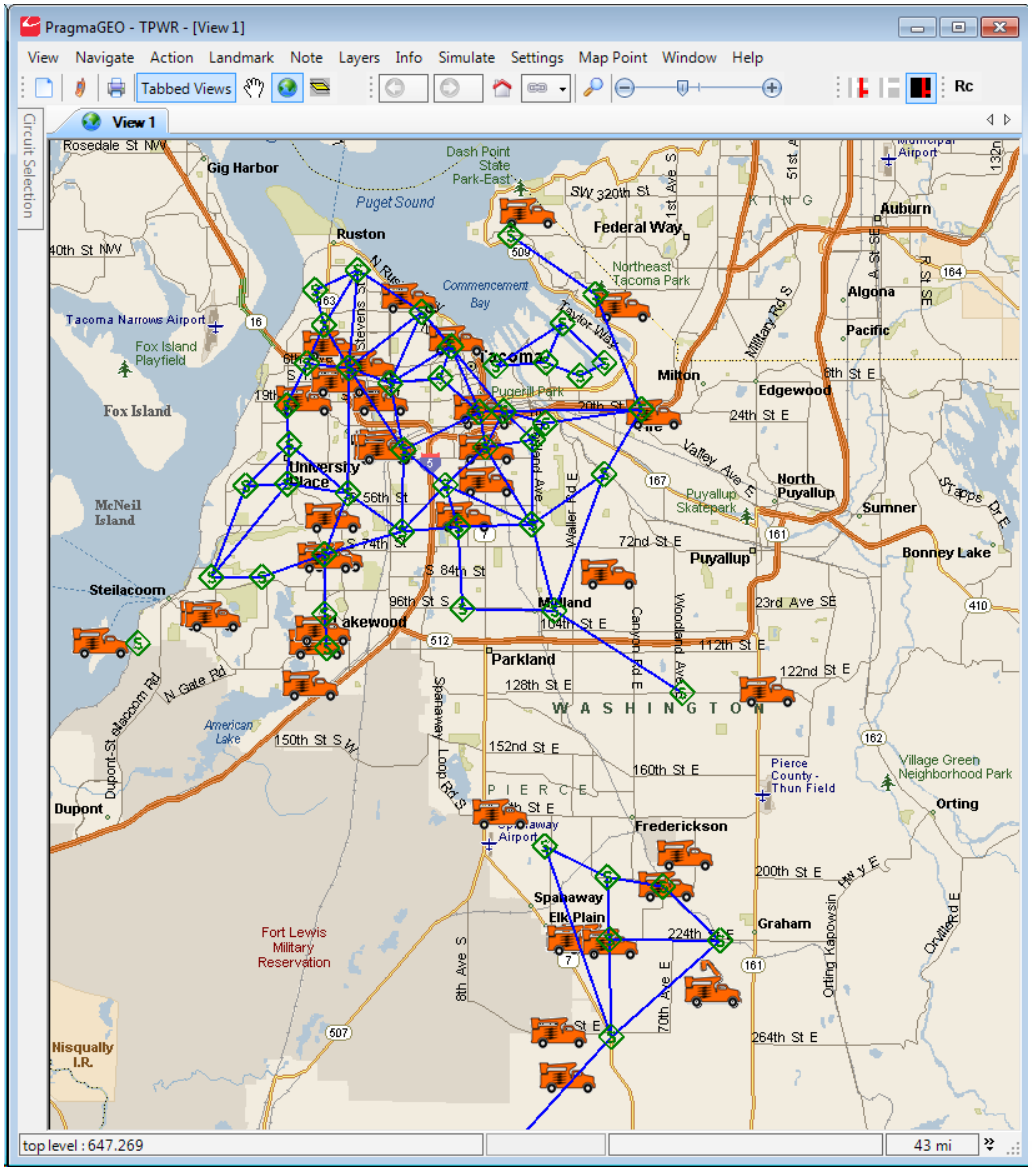
- New intranet/internet web based applications
- Processes to enhance customer information

Transmission Reporting

- Enhance transmission outage reporting process

THANK YOU

QUESTIONS?



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