



Security and Sensitivity for GIS Data

Lessons learned from the Powerline Work Group (PWG)

Topics Covered

1. Background of the PWG
2. Sensitive Data: Proprietary
3. Sensitive Data: Security
4. Current Status/Lessons Learned

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Powerline Work Group Objectives

- Update and develop power line data, a subset of features in the Oregon GIS framework Utilities theme
- Develop power line data that are shareable with the public
- Develop or recommend a standard for power line data elements for the Oregon FIT and GIS community
- Develop a stewardship plan for transmission line data elements
- Document findings related to data security and public access to data
- Deposit documents and meeting notes to an online resource accessible by group members

Mission

The mission of the Utilities Power Line Work Group (work group) is to develop geospatial data for electric power lines and enhance the stewardship of that data in Oregon. Power lines for the purpose of this work group encompass any electric lines including: transmission lines (high voltage electric lines), distribution lines that run off of transmission lines at substations, "tap" lines that run to buildings from higher order electric lines. Substations are not included in this work group's work scope.

Problem:

Many Data Sources, None Complete

- **Utilities FIT**
(http://navigator.state.or.us/arcgis/rest/services/Framework/Utilities_GeneralMap_WM/MapServer)
- **Department of Homeland Security HIFLD Open Data**
(https://services2.arcgis.com/lcdVlmlckpAyl7Wo/ArcGIS/rest/services/Electric_Power_Transmission_Lines_1/FeatureServer)
- **Bonneville Power Administration**
(http://services3.arcgis.com/lz3chmSt4P7oOoZy/ArcGIS/rest/services/BPA_TransmissionLines/FeatureServer)
- **Other States (Florida and Utah) publish transmission lines/power lines**
- **Power companies (PacifiCorp, others)**
- **Private sources (Ventyx, Platts, etc)**

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S&P Global
Platts

By Source (WP:NFCC#4), Fair use,
<https://en.wikipedia.org/w/index.php?curid=51066765>





Request for Data

Organization Name: _____
Contact Name: _____
Phone Number: _____
Email Address: _____
Web Address/URL: _____

Organization's Physical Address: _____

From GISCI Code of Ethics, Section 3: Obligations to Colleagues and the Profession

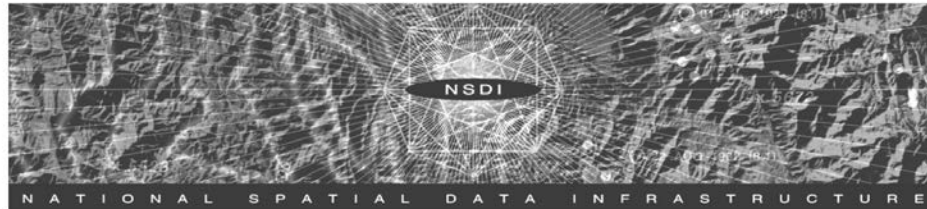
- **“Honor the intellectual property rights of others. This includes their rights in software and data.”**

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**Question: Would
Developing/Disseminating
Our Powerline dataset
impact public safety or
operational security?**

FGDC has a nice document covering this.



Final June 2005
**Guidelines for Providing Appropriate Access to Geospatial Data in Response
to Security Concerns**

Questions:

1. Do the geospatial data originate in the organization? (In this case, Utilities FIT)
2. Does the data need to be safeguarded? Based on three factors:
 1. Risk to security – is it useful for planning an attack?
 2. Uniqueness of information – is the data difficult to observe?
 3. Net benefit of disseminating the data – do the security costs outweigh the societal benefits of active dissemination of these data?
3. If the data should be safeguarded, what safeguards are justified? Choose from:
 1. Change the data: remove or modify sensitive information
 2. Restrict the data: establish restrictions on access, use, or redistribution

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Our Process

- With Theresa and Don's leadership, the PWG has taken a collaborative approach
- We've included utility industry stakeholders
 - Northwest Natural
 - Bonneville Power
 - PacifiCorp
 - Others
- We've gathered information from other involved public agencies and contractors

Current Status

- Documented powerline GIS data use cases from numerous agencies
- Documented research and findings related to data sensitivity/security
- Documented existing sources and standards of powerline GIS data
- Stakeholder meeting with utilities is in the planning phase

Lessons Learned

- Focus on public safety and employee safety
- Respect intellectual property rights
- Don't shy away from difficult conversations with stakeholders
- Show due diligence
- Listen – both to understand concerns and imagine success

Further Reading/Discussion

- [PWG Resources - Oregon GovSpace](#)
- [FGDC: Guidelines for Providing Appropriate Access to Geospatial Data in Response to Security Concerns](#)
- [Oregon BLM Leverages Enterprise GIS to Conserve the Greater Sage-Grouse](#)