



GS2468-R: How to survive in multi-vendor GIS environment

Eric Vincent
Systems Analyst – Southern California Edison

Serguei Sokolov
Solution Architect – Autodesk

Roundtable class objectives

- Learn from peers' experience
- Generate new ideas and solutions
- Note lots of cool hints, ideas, and action items to be used later

Session format

Here is how we are planning this session:

- Describe Survey and Identify topics
- Describe SCE's challenges and solutions
- Discuss selected topics (~10min / topic)
 - Share experience
 - Generate ideas on how to address/solve
 - Try to reach a common understanding of the topic
- Summarize key “take aways” and conclusions

Rules of Engagement

Guidelines for good discussion:

- When you comment make it snappy
- Share solutions not gripes
- Talk about what works for you
- ... and No complaining about Autodesk 😊

Survey

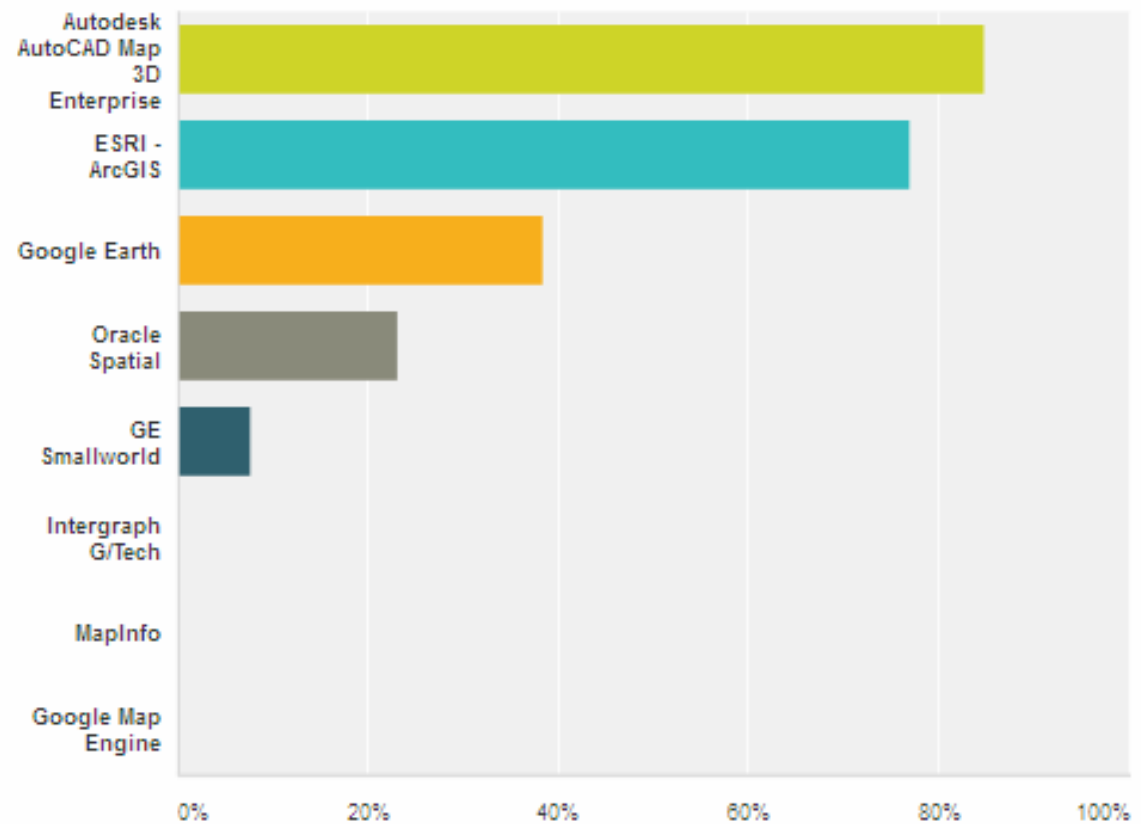
We asked you:

- Q1: Which of these GIS technology your Company owns?
- Q2: How is your GIS data being used today.
- Q3: What other Enterprise system should be integrated with GIS?
- Q4: Is it important for you to create a “single point of truth” for all records in your Organization?
- Q5: Is it important for you to maintain different graphic representations/views of the plant assets? (e.g. Design, Geographic, Geo-schematic, One-line diagram, etc...)

Survey – Q1

Which of these GIS technology your Company owns? (Please select all that apply)

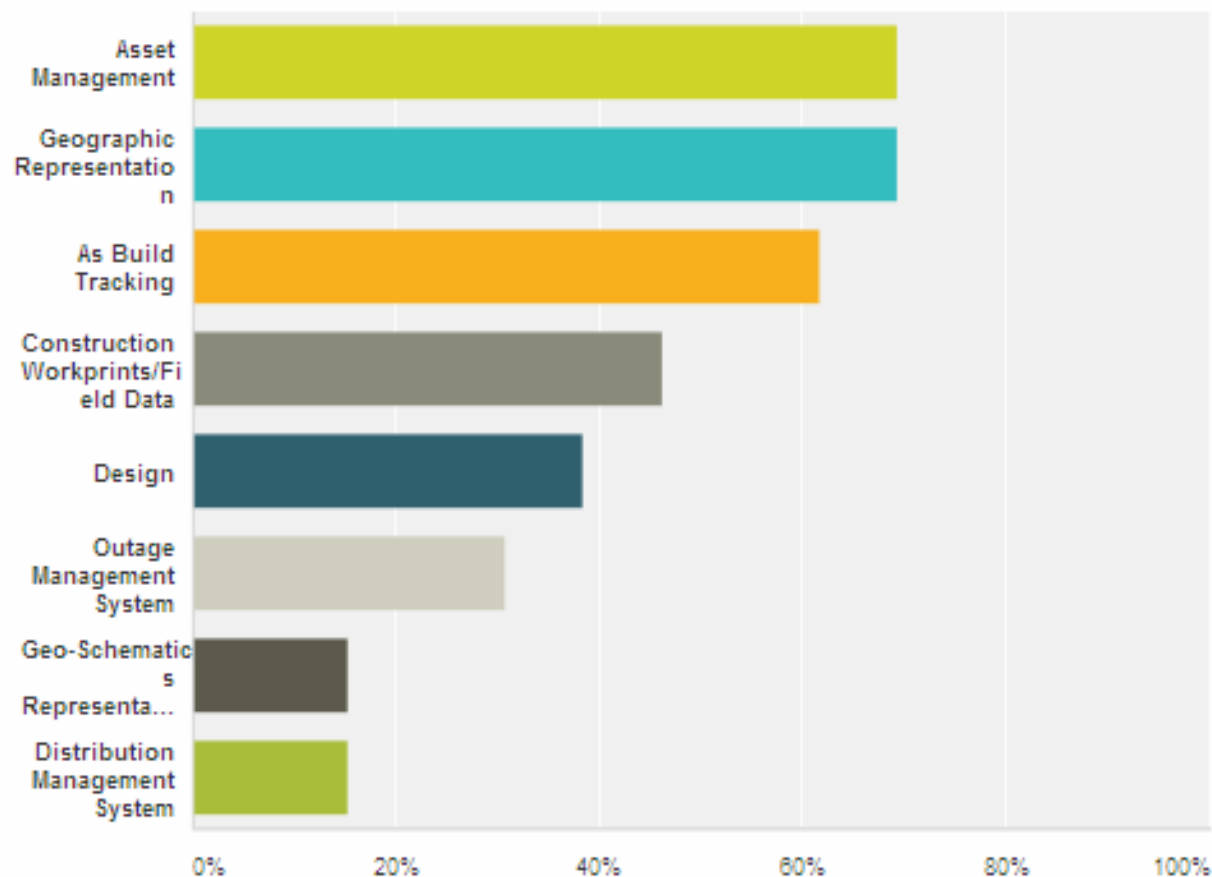
Answered: 13 Skipped: 0



Survey – Q2

How is your GIS data being used today.
(Please select all that apply)

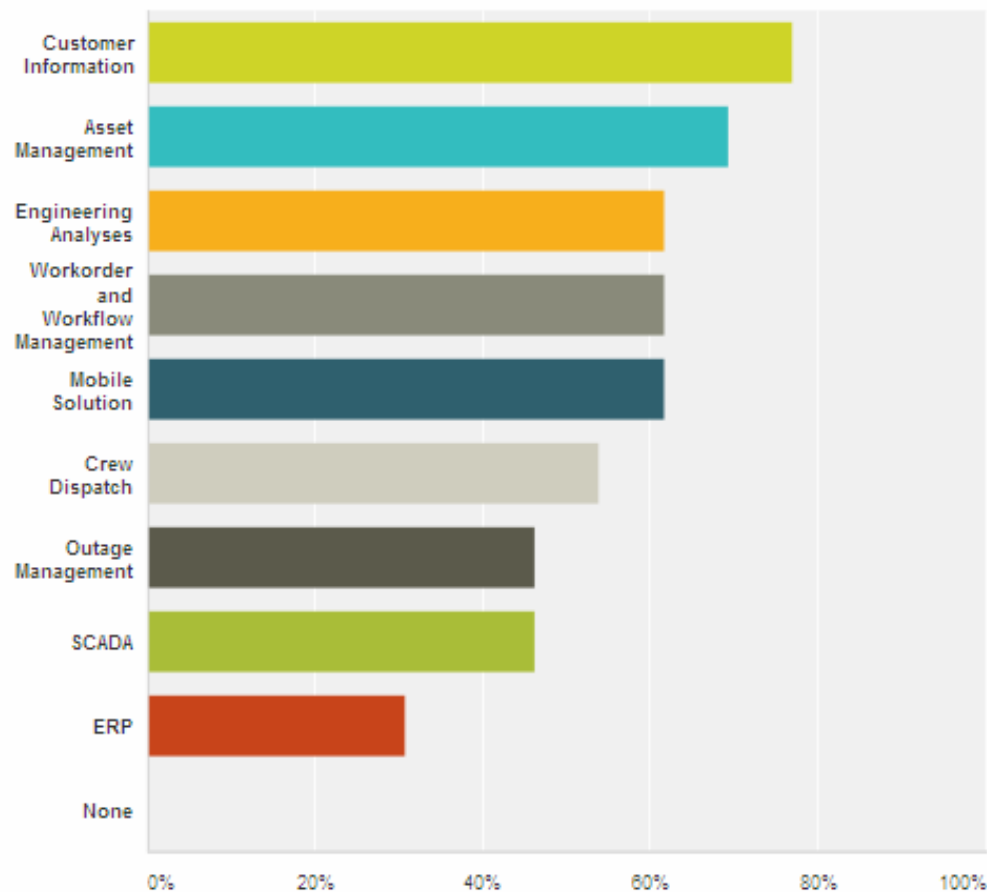
Answered: 13 Skipped: 0



Survey – Q3

What other Enterprise system should be integrated with GIS? (Please select all that apply)

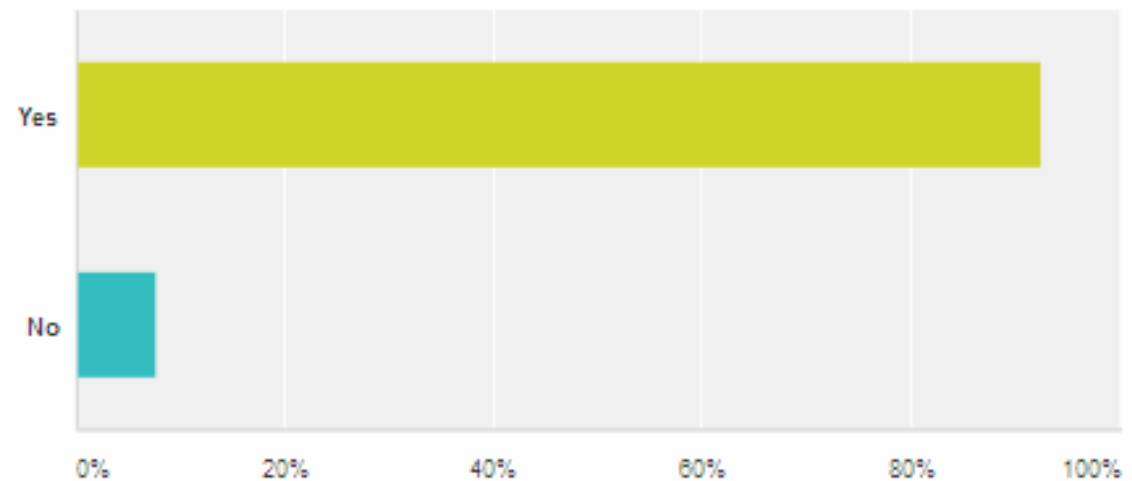
Answered: 13 Skipped: 0



Survey – Q4

Is it important for you to create a “single point of truth” for all records in your Organization?

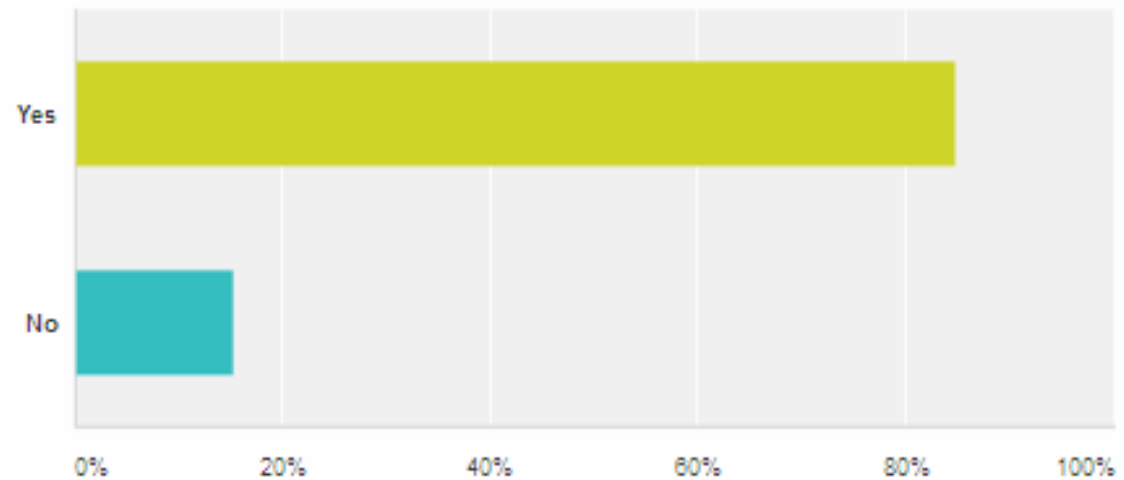
Answered: 13 Skipped: 0



Survey – Q5

Is it important for you to maintain different graphic representations/views of the plant assets? (ie. Design, Geographic, Geoschematic, One-line diagram, etc...)

Answered: 13 Skipped: 0

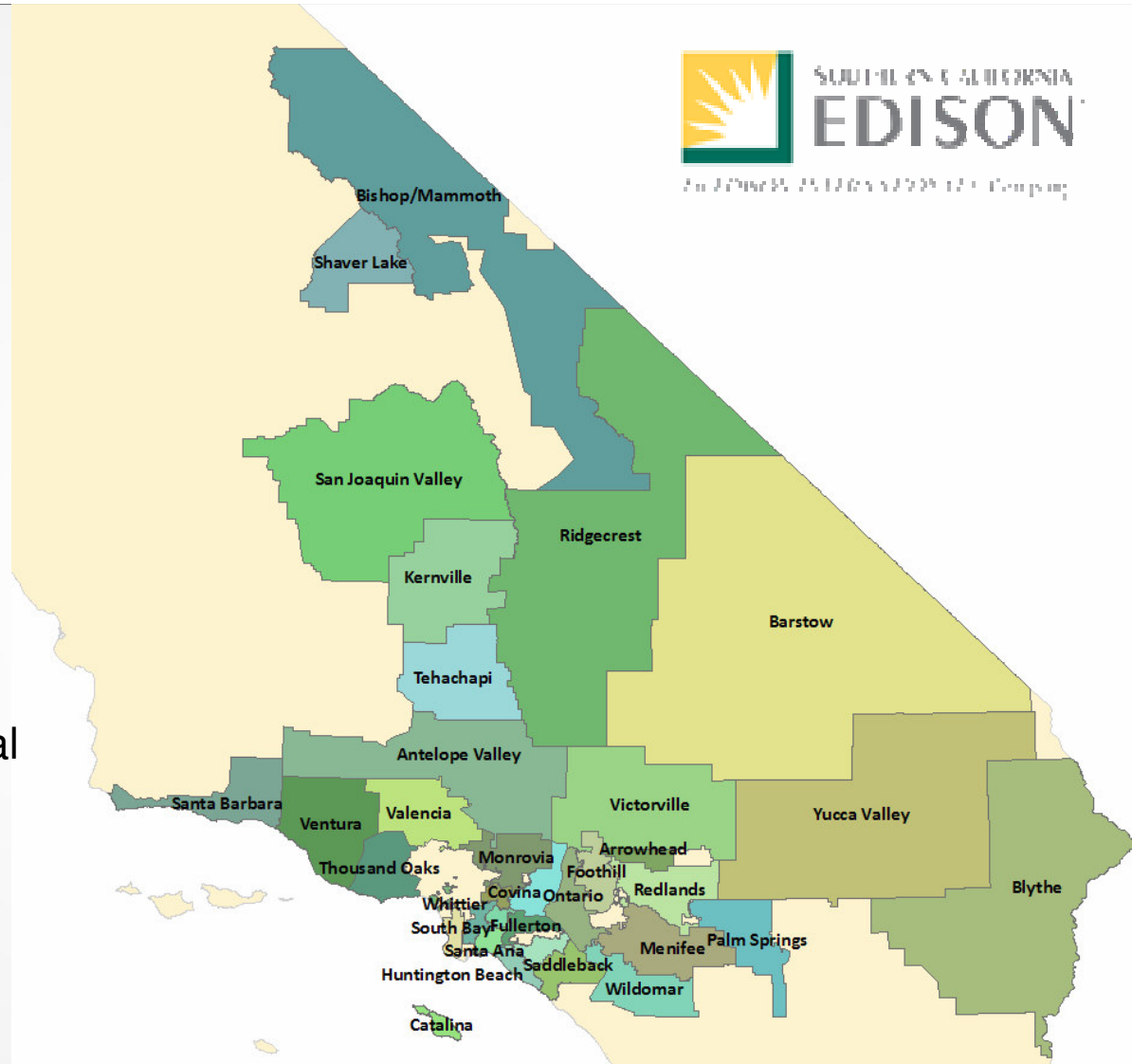


Today's Topics

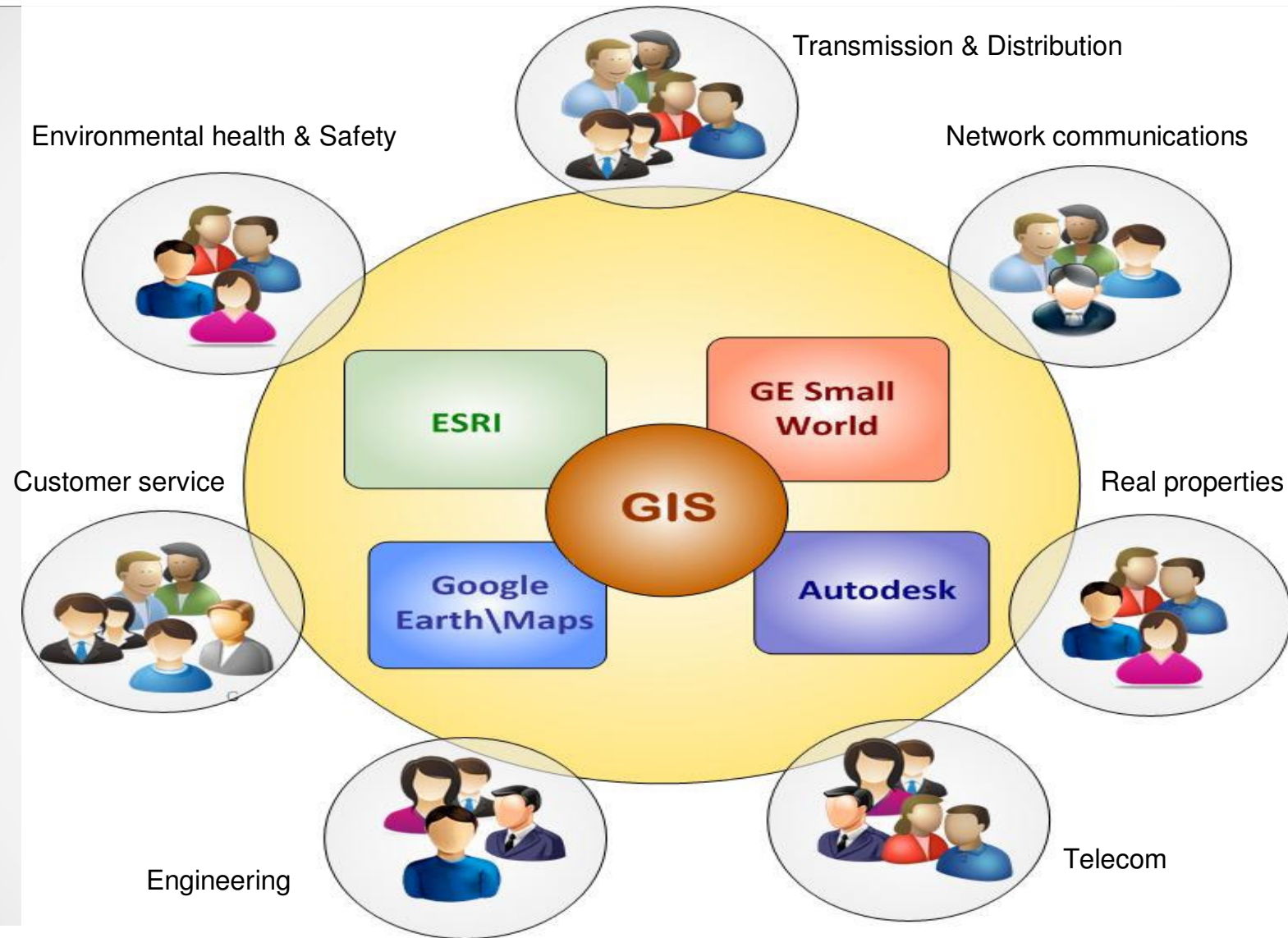
- Topic 1: Where is your geo-spatial data maintained?
- Topic 2: How do you merge/overlay geo-spatial data from source systems?
- Topic 3: Do you maintain different graphic representations/views of the plant assets (Geographic vs Geo-Schematic)?
- Topic 4: How do you integrate multi-vendor systems into one solution?
- Other?

About SCE

- Provide power to nearly 14 million people
- 50,000 square miles of service area
- 3.7 million Residential
- 5,000 Large Commercial/Industrial
- 280,000 Small Commercial/Industrial
- Governmental Agencies



GIS at SCE



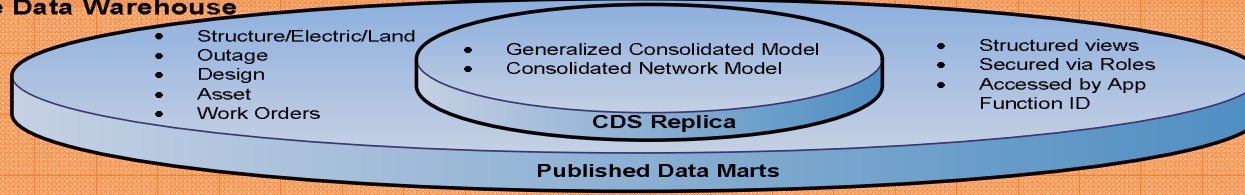
Multi-vendor GIS environment

The two options

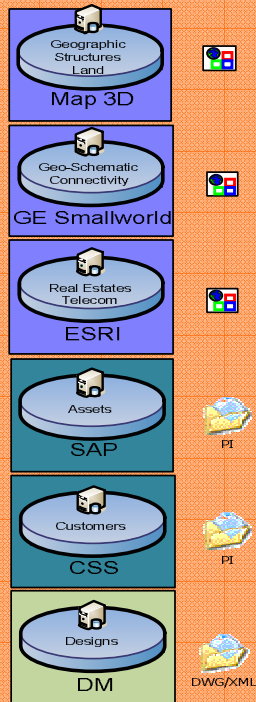
- **One vendor** complete solution
 - Not everyone happy with functionality
 - Still need to sync data between different instances (ex. CMS, OMS)
 - Complete transformation – (OCM, work arounds, custom functionality, etc.)
 - Highly dependent on the vendor vision and direction of the suites.
- **Multi-vendor** complete solution
 - Use the tools that best suit your needs
 - Consolidate your data in a central location

Enterprise Data Manager

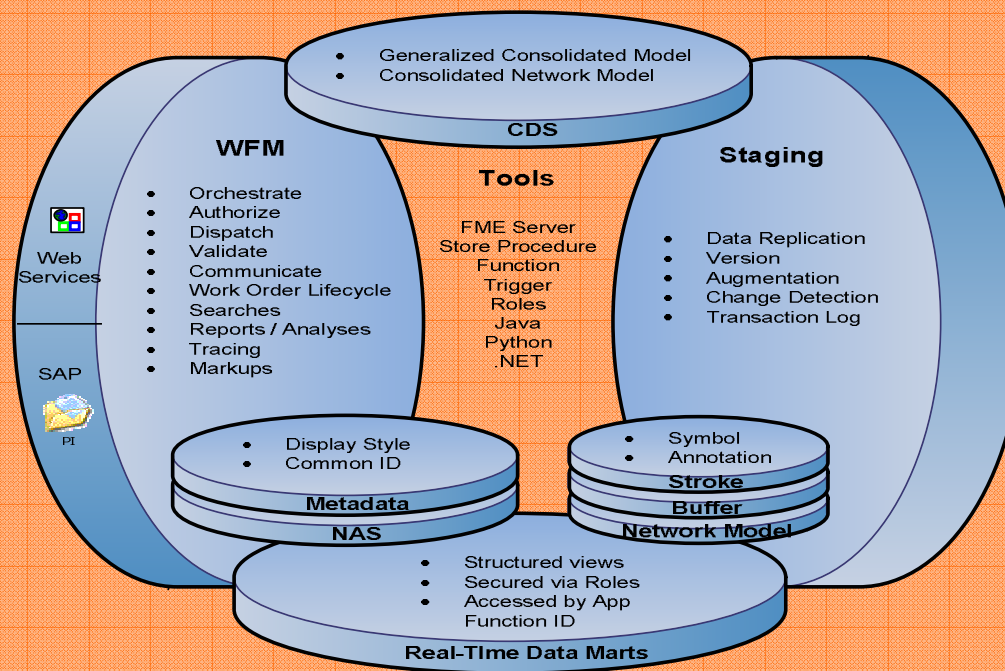
Enterprise Data Warehouse



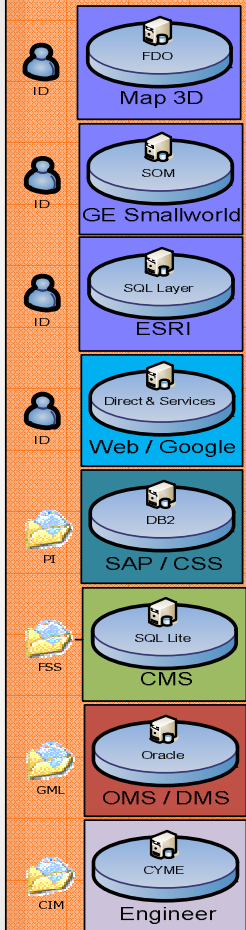
Source Systems



Operational Data Store (ODS)



Consumers



Roundtable Topic #1

Where is your geo-spatial data maintained?

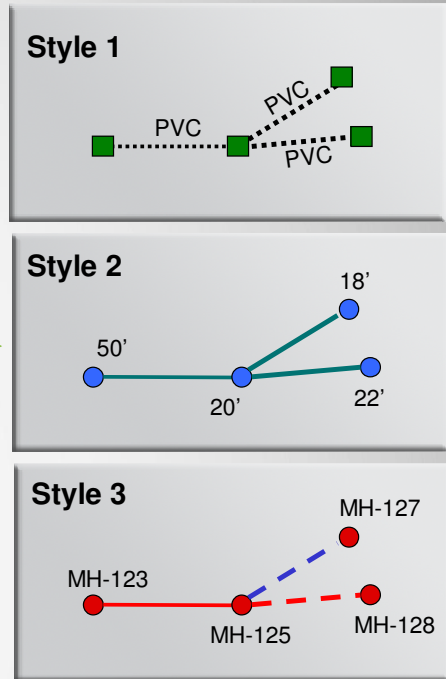
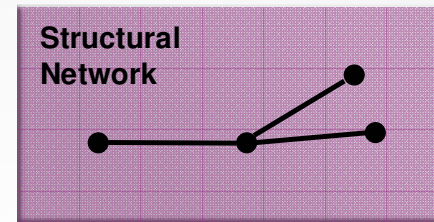
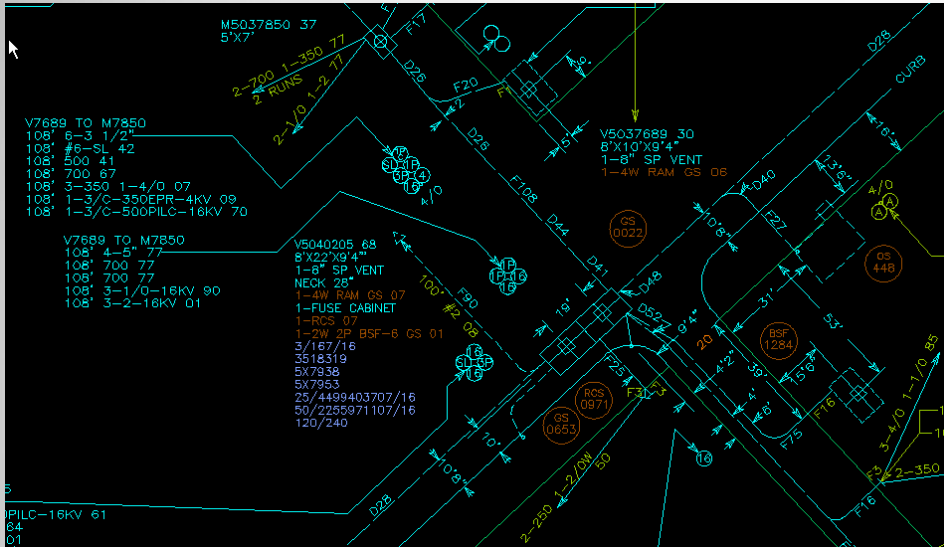
- What types of geo-spatial data do you maintain (design, geographic GPS locations, schematics, Plant maps, tiles or seamless)?
- Do you have silos of data?
- Why in your organization geo-spatial data is maintained in different systems?
- How do you know what value and in what systems is correct?
- How difficult is it for you to consolidate and report?
- Could one source of truth be more effective?

Roundtable Topic #2

How do you merge/overlay geo-spatial data from source systems?

- What are the best practices you have established for the source vendor systems to simplify data merge/mashups (e.g. Common projection, domain values, common structural network as foundation for plant assets)?
- How do you control data access and maintenance (e.g. Enforcing data ownership, defining user profiles, separating data at class, attribute, domain levels)?
- What solutions for data integration have you tried (FME, Custom)? What worked for you?

The structural network



- Represent the real location in the ground of all assets
- Accurate distances
- Electrical relation to structure is key

Roundtable Topic #3

Do you maintain different graphic representations/views of the plant assets?

- What type of maps do you maintain? Design, Geographic location, Geo-Schematic, One-line diagrams?
- What type of maps are used in the office? In the field?
- Do you create your data with paper output in mind (e.g. Focused on white space, scale, title block) or for software solution to consume / display visualization?
- How do you maintain consistency in graphic presentation (maps) between Source systems?

Roundtable Topic #4

How do you integrate systems into one solution?

- Why integration between systems is important for your Organization? What problems are you trying to solve?
- What integration technologies / frameworks you had tried and what actually worked for you?
- Have you employed any common model / metadata standards / Global ID? Do you believe there could be an Industry standard model or each Enterprise is unique?
- Do you need to synchronize data between source systems? How frequently?

Example – Data consolidation - Searches

- Access to complete data
- Google like searches

eWorld Portal - Windows Internet Explorer

http://eworld.sce.com/Portal/

File Edit View Favorites Tools Help

News

Need Help? If you experience any issues with eWorld or need assistance with how a feature works; please report them to Help Desk at Pax 51234.

Web Applications

Assets

- Emap PC
- General Viewer
- Google Earth KMZ
- Graphical Design Tool
- Single Line Circuit Maps
- Smart Connect Visualization
- TDBU Comprehensive GIS

Planning

- DVMP UG Replacement
- Overhead Detailed Inspection

Outage

- Customer Rep Outage Map
- Rotating Outage Maps
- SCE.com Outage Map

Job Aids

FAQs

Links

FIM

Map Search Contractors

Portal Map LIVE

Base Map

SCE Search

What are you searching for? 12345
(ex. Circuit Name or No., Structure No., FIM Map #)

Category? Search All

STREET LIGHT (5 results)

| STRUCTURE | HEIGHT | MATERIAL | LAMP_TYPE | LUMIN | TARIFF | INS_SERV_NO | SVC_ACC | DIST_NO | GEOMETRY |
|-----------|--------|----------|-----------|-------|--------|-------------|---------|---------|-------------------|
| 1234547E | 45 | WOOD | HPSV | 9500 | LS_1 | | | 29 | Zoom Google Earth |
| 1234552E | 50 | WOOD | HPSV | 9500 | LS_1 | | | 29 | Zoom Google Earth |
| 1234576E | 45 | WOOD | HPSV | 8800 | LS_1 | | | 29 | Zoom Google Earth |
| 1234584E | 45 | WOOD | HPSV | 8800 | LS_1 | | | 29 | Zoom Google Earth |
| 1234586E | 45 | WOOD | HPSV | 8800 | LS_1 | | | 29 | Zoom Google Earth |

FIM MAP BY STRUCTURE (1 - 15 of 159 results) Next

| STRUCTURE | LAYER | DIST | MAP_NUM | MAPTYPE | GEOMETRY |
|-----------|----------|------|------------|---------|------------------------------|
| P1234567 | UG_DIST | 32 | 059-4219-5 | UG | Zoom FIM Google Earth Street |
| V12345 | UG_DIST | 32 | 060-4219-5 | UG | Zoom FIM Google Earth Street |
| P12345 | UG_DIST | 32 | 077-4224-0 | UG | Zoom FIM Google Earth Street |
| 123456E | UG_DIST | 32 | 090-4231-5 | UG | Zoom FIM Google Earth Street |
| P12345 | UG_DIST | 32 | 090-4231-5 | UG | Zoom FIM Google Earth Street |
| 123456E | UG_DIST | 32 | 090-4233-0 | UG | Zoom FIM Google Earth Street |
| 1123451E | OH_POLES | 59 | 102-58 | OH | Zoom FIM Google Earth Street |
| 4012345E | UG_DIST | 59 | 107-55C-5 | UG | Zoom FIM Google Earth Street |

Search Clear

1: 4622336.1742 1346514.69 x 651854.98 m

Powered by MapGuide

CONFIDENTIAL: CRITICAL ENERGY INFRASTRUCTURE INFORMATION Facilities Inventory Maps (FIMs) contain information relating to Southern California Edison Company's electric transmission/distribution system. It is classified as Critical Energy Infrastructure Information as defined in 18 Code of Federal Regulations section 388.113(c)(1). FIMs are not to be supplied to third party (non-SCE) entities without the required authorization/approval in advance per SCE-OPS-CEII-PL-451. Please contact FIM management or SCE Law if further clarification is needed.

FOR REFERENCE ONLY. FIMs are created to SCE standards to be used by SCE personnel only and are not intended to be a legal representation of real property. Please don't forget to call Dig Alert: 1-800-227-2600

Topics we discussed

- Topic 1: Where is your geo-spatial data maintained?
- Topic 2: How do you merge/overlay geo-spatial data from source systems?
- Topic 3: Do you maintain different graphic representations/views of the plant assets (Geographic vs Geo-Schematic)?
- Topic 4: How do you integrate multi-vendor systems into one solution?
- Other?

