

GIS in Integrated Systems:

Improving Field Service Efficiency through Effective System Integration
at the Sacramento Suburban Water District (SSWD)

Wayne Scherffius, SSWD

Glenn Wolf, Westin Engineering, Inc.



Sacramento Suburban Water District

- ❑ Location: suburban Sacramento, Ca
- ❑ Population served: approx. 170,000
- ❑ Staff: 57 full time
- ❑ 709 Miles of Mains
- ❑ 91 Production Wells
- ❑ 44,909 Service Connections
- ❑ 2007 Annual budget: O&M \$16,800,000
CIP \$18,600,000

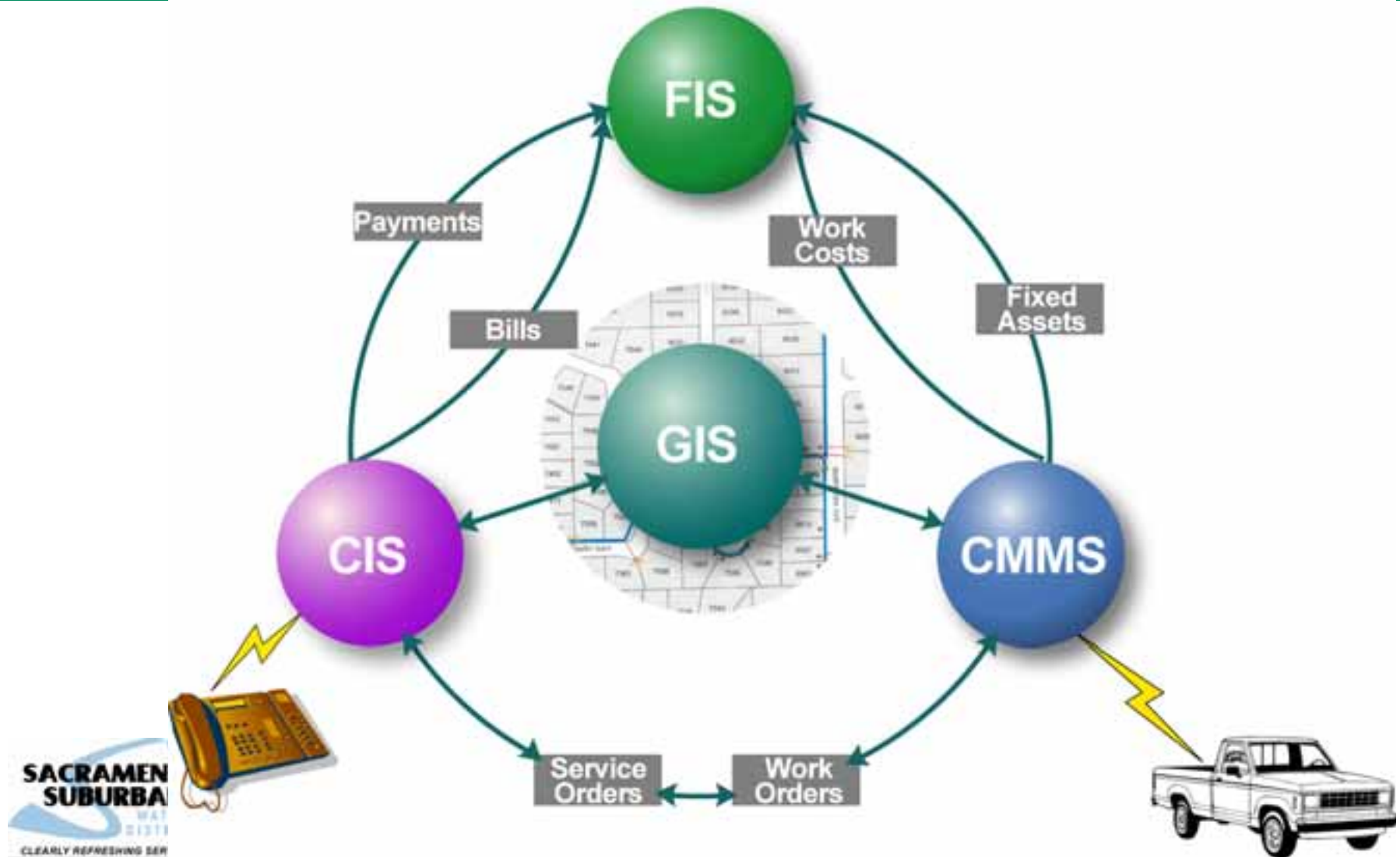
Integration, Integration, Integration

- Systems selected for integration compatibility
 - Cogsdale corporation: customer information
 - Microsoft great plains: financial information
 - Azteca systems CityWorks: work order management
 - ESRI ArcGIS: mapping & infrastructure
 - Tokay: Data pushed from CIS
 - AVL: MS Access database integration to SDE
 - Microsoft systems and database software

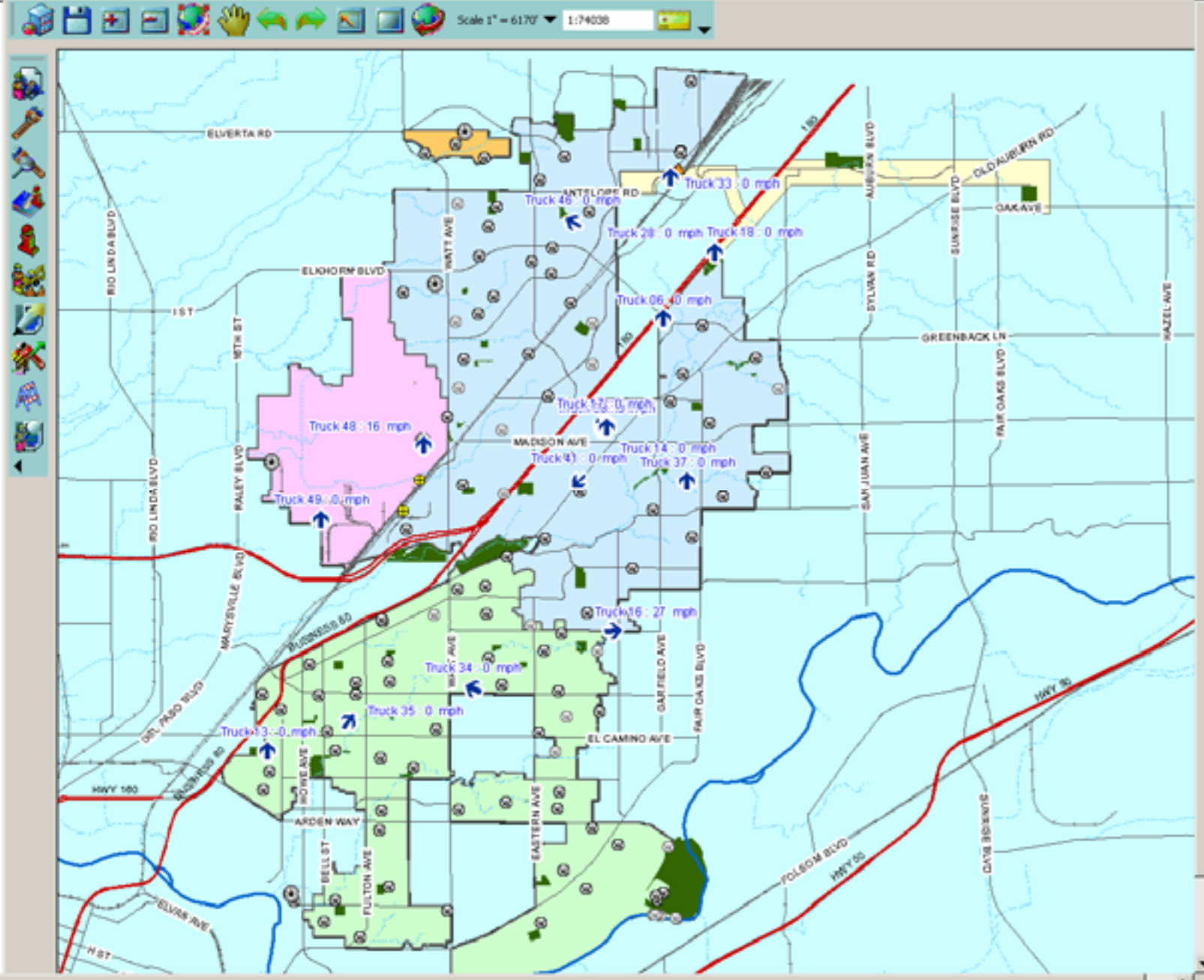
Integration Goals

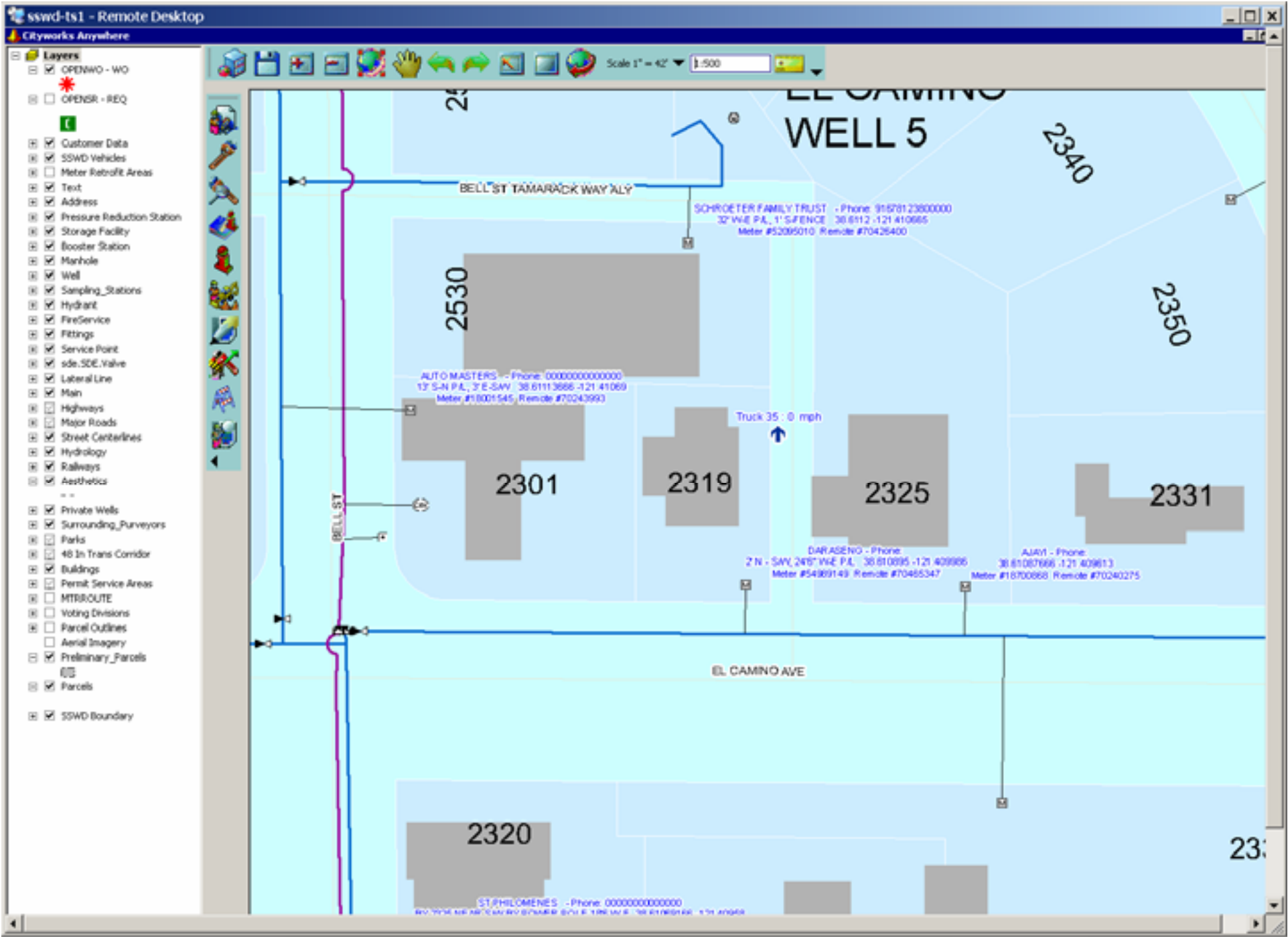
- Reduce or eliminate redundant data entry tasks
- Leverage best components of each application without the burden of overlapping functionality

System Architecture



- OPENWO - WO
- OPER - REQ
- Customer Data
- SSWD Vehicles
- Meter Retrofit Areas
- Text
- Address
- Pressure Reduction Station
- Storage Facility
- Booster Station
- Manhole
- Well
- Sampling Stations
- Hydrant
- Fire Service
- Fittings
- Service Point
- sde_SDE_Valve
- Lateral Line
- Man
- Highways
- Major Roads
- Street Centerlines
- Hydrology
- Railways
- Aesthetics
- Private Wells
- Surrounding_Purveyors
- Parks
- 48 In Trans Corridor
- Buildings
- Permit Service Areas
- MTRROUTE
- Voting Divisions
- Parcel Outlines
- Aerial Imagery
- Preliminary_Parcels
- Parcels
- SSWD Boundary





sswd-ts1 - Remote Desktop

Cityworks Anywhere

Layers

- OPENWO - WO
- OPENR - REQ

Service Request # 1

Request Recent Search

Problem Code [7/8]
 Description [Reference]
 ID/Status 1000015
 Priority/Category Medium
 Initiated By MIDDLEB
 Submit To MIDDLEB
 Opened By MIDDLEB
 Dispatched To UNDETRV
 Opened By
 Proj Comp. Date 11/21/06
 Closed By
 Is the Investigator
 Is This Incident
 Is a Work Order
 Cancel
 Work Order 50483
 WD Description
 Proj Start/Finish Date
 Actual Start/Finish Date
 Project

Cityworks Asset Identify Form

Save List Print List

Asset Work History

Attribute	Value
SASTREETNAME	EASTERN AVE
SACITYNAME	SACRAMENTO
SASTATE	CA
SAZPCODE	95864
SAAPTNUMBER	
UMKEYNUM	
BASTREETNUMBER	3344
BASTREETNAME	MISSION
BACITYNAME	CARMICHAEL
BASTATE	CA
BAZPCODE	95603111
BAAPTNUMBER	
CPHONE1	9164882810000
CPHONE2	0000000000000
CFAX	0000000000000
OASTREETNUMBER	3344
OASTREETNAME	MISSION
OACITYNAME	CARMICHAEL
OASTATE	CA
OAZPCODE	95603111
OAAPTNUMBER	
OPHONE1	9164882810000
OPHONE2	0000000000000
OFAX	0000000000000
LOCATIONDESC	85 E S/W 24 N S P/L 38.58642166 -121.364303
UMEQUIPMENTID	70077692
METERINSTALLDATE	3/13/2001
UMEQUCLSS	NE_3_5D
UMEQUCLSSDESC	Nephew 3" - 5 Digit
UMDIAMETERD	3.0000
REMOTE_ID	70424716
REMOTEINSTALLDATE	3/29/2005
DDNDRTYPE	Z
TESTORCLE	-1
LASTREAD	45335
LASTREADDATE	12/14/2006
CONSUMPTION	66

1056

MIDDLESTEAD, RACHEL (SWO) #7025
 (M) (M) VALVE REPLACEMENT

CREATION PARK DISTRICT - Phone: (916) 488-2100
 41 W 24 N S P/L 38.58642166 -121.364303
 Meter #70077692 Remote #70424716

DAY Phone: 0000000000000
 41 W 24 N S P/L 38.58642166 -121.364303
 Meter #2502245 Remote #70424716

You are in the SSWE

Start | Contacts - Mcr... | My Documents | Microsoft Power... | Microsoft Excel | SSWD District S... | sswd-ts1 - Re... | 10:31 AM

Service Requests

- Integrated with customer information system
- Complete customer history of service calls
- Wireless field access to service requests and USA tags
- No more “Lost” service requests
- Less travel time (more efficient time in field)
- Ability to create work order from service request
- Display service requests on map

sswd-ts1 - Remote Desktop

Cityworks Anywhere

Layers: OPENWO - WO, OPENR - REQ

Scale 1" = 42' 1:500

Service Request # 1000015381 D/R / Determine Leak Responsibility

Request Recent Search Save Close New Print Tools Labor Search for Request ID: Recently Opened

Problem Code: 078
 Description: Determine Leak Responsibility
 ID/Status: 1000015381 COMPLETE
 Priority/Category: 3 Medium DIST

Initiated By: MIDDLESTEAD, RACHEL 11/21/2006 10:33:07 AM
 Submit To: MIDDLESTEAD, RAC 11/21/2006 10:33:07 AM
 Opened By: MIDDLESTEAD, RACHEL 11/21/2006 10:33:07 AM
 Dispatched To: UNDERWOOD, MAT 11/27/2006 10:18:12 AM

Project Completion Date: 11/21/06
 Closed By: [blank]
 Is the Investigation Complete? 11/28/2006 3:47:25 PM
 Is This Incident an Emergency?
 Is a Work Order Needed?
 Cancel

Work Order: 50483 Open W/O Attach To Create
 W/O Description: VALVE REPLACEMENT
 Proj Start/Finish Date: 11/28/2006 11/29/2006
 Actual Start/Finish Date: 12/1/2006

Project: [blank] Open Attach To

Work Comments:
 11/18/06: Per on call (Ryan), customer Wilford @ 359-6285 stated valve box is leaking in the street near intersection.
 END COGSDALE NOTES
 By FLAA, ERIK: 11/22/2006 3:36:49 PM
 A MLV is leaking in front of Valley Oak Park. I turned the valve but it just kept spinning. I called in a USA. Ticket #426365.
 By RYGH, SCOTT: 11/28/2006 3:47:20 PM
 MLV is broken and leaking. Needs to be replaced. Erik painted out and called USA.

Caller Information:
 Date/Time: 11/21/2006 10:33:07 AM Account: 000005
 Mr Ms No. Callers: 1
 First Name: KAREN Last: DAY
 Address: 1056 LA SALLE DR
 City: SACRAMENTO Zip: 958045315
 Home Phone: 0000000000000000 Work: 0000000000000000
 Other Phone: Type:
 Email:
 Caller Information:

Is Caller a Resident Within the Service Area?
 Is This a Follow-up Call?
 Customer Contacted on Site?
 Customer Contacted Afterwards?

Incident Address: 1056 LA SALLE DR Locate Using: Streets Parcels
 City/Zip: SACRAMENTO 95804

METER DATA

Custom Field Name	Value	Required
METER NUMBER	29823249	N
REMOTE ID	70240360	N
METER LOCATION	41' W-E P/L NEAR S P/L 38 50426	N
METER TYPE	BA, 3/4, 40 Badger 3/4" - 4 Digit	N
LAST READ	321.00000	N
LAST READ DATE	Nov 16 2006 12:00AM	N
SO NUMBER	SORD00000015381	N
CURRENT READ	n/a	Y
CURRENT READ DATE	11/22/2006	Y
NEW DIMS	n/a	Y

MISSION OAKS RECREATION PARK DISTRICT - Phone: 916488281000
 85 E SAWYER N-S P/L 38 50642166 121 364300
 Meter #70077692 Remide #70424716

DAY - Phone: 0000000000000000
 41' W-E P/L NEAR S P/L 38 50426333 121 364268 305 E W/P/L NEAR S P/L 38 50426833 121 364
 Meter #29823249 Remide #70240360 Meter #30122949 Remide #70240362

GARZA - Phone: 0000000000000000
 50' W-E P/L 45 S-CURB 38 504215 121 363
 Meter #30122949 Remide #70240364

KNIGHT - Phone: 0000000000000000
 50' W-E P/L 45 S-CURB 38 504215 121 363
 Meter #30122949 Remide #70240364

1056 1052
 LA SALLE DR
 EASTERN AVE
 1057 105

You are in the SSWD *** PRODUCTION ***

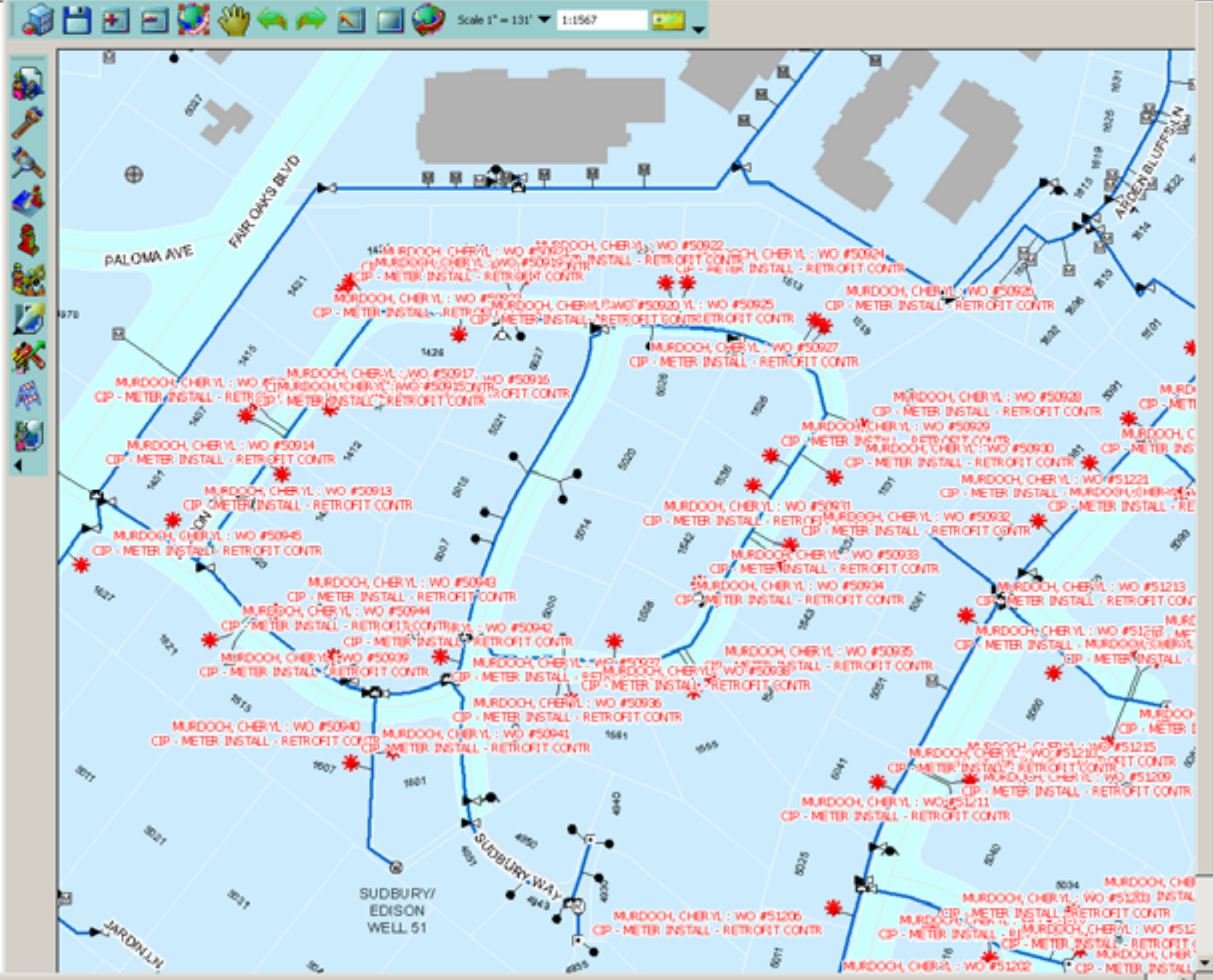
Start | Contacts - Mcr... | My Documents | Microsoft Power... | Microsoft Excel | SSWD District S... | sswd-ts1 - Re... | 10:24 AM



Work Orders

- Real-time, centralized access to all work order information
- Reduced amount of manual work (writing, calculating, etc.)
- Improved accuracy of work orders (materials, labor, contractor)
- Easier and quicker to make changes
- Better reporting
- Greater access to historical work order data
- No more “Lost” work orders
- Better tracking of work order status
- Accessible to employees in the field
- Integrated with mapping and infrastructure application

- OPENWO - WO
- OTHER - REQ
- Customer Data
- SSWD Vehicles
- Meter Retrofit Areas
- Text
- Address
- Pressure Reduction Station
- Storage Facility
- Booster Station
- Manhole
- Well
- Sampling Stations
- Hydrant
- Fire Service
- Fittings
- Service Point
- side_SDE_Valve
- Lateral Line
- Main
- Highways
- Major Roads
- Street Centerlines
- Hydrology
- Railways
- Aesthetics
- Private Wells
- Surrounding_Purveyors
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- Aerial Imagery
- Preliminary_Parcels
- Parcels
- SSWD Boundary



sswd-ts1 - Remote Desktop

Cityworks Anywhere

Layers: OPENWO - WO, OPENR - REQ

Scale 1" = 42', 1:500

Work Order # 50483 VALVE REPLACEMENT

Save, Print, Tools, Inspections, Tasks, Labor, Material, Equipment

Find Work Order: 50483

General | Details | Attachments | Cycle | Print | Custom

Description: VALVE REPLACEMENT

Entity Type: VALVE

Number: 50483

Status: SCHED, Priority: 3 Medium

Requested By: UNDERWOOD, MAT

Initiated By: RYGH, SCOTT, 11/28/2006 3:53:39 PM

Submit To: CHANEY, SHAWN, 1/3/2007 10:07:27 AM

Supervisor: [Empty]

Projected Start/Finish: 11/28/2006 - 11/29/2006

Opened By: CHANEY, SHAWN, 12/1/2006 11:06:47 AM

Completed By: [Empty]

Actual Start/Finish: 12/01/2006 - MM/DD/YYYY

Close Work Order

General Location: 1056 LA SALLE DR

Locate with Streets, Locate with Parcels

Comments, Entities, Instructions, Map Layers

New Comments: Audit Log

Existing Comments:

From: Request ID: 1000015301, 11/28/2006 3:53:15 PM
D/R
Determine Leak Responsibility
Problem Details: 11/18/06- Per on call (Ryan), customer Willard @ 359-6295 stated valve box is leaking in the street near intersection.
Problem Comments: 11/18/06- Per on call (Ryan), customer Willard @ 359-6295 stated valve box is leaking in the street near intersection.
"END COGS DALE NOTES"
By FLAA, ERIC: 11/22/2006 3:36:49 PM
A MLV is leaking in front of Valley Oak Park. I turned the valve but it just kept spinning. I called in a USA. Ticket #426365.
By RYGH, SCOTT: 11/28/2006 3:47:20 PM
MLV is broken and leaking. Needs to be replaced. Erik painted out and called USA.

Search By: HIERARCHY

SeqID	Task	Description	Assigned To	Shop	Comments
1	USA Locate	COMPLETE	Y	N	CHANEY, SHAWN
2	Work	CURRENT	N	N	CHANEY, SHAWN
3	GIS/Mapping Update	PENDING	N	N	SCHERFFIUS, WAYNE
4	Close	PENDING	N	N	MIDDLESTEAD, RACHEL

Sequence: 5, Response: [Empty]

Assigned To: [Empty], Status: [Empty]

Shop: [Empty], PermitNo: [Empty]

Comments: [Empty]

Pj Start Finish: 11/28/2006 - MM/DD/YYYY

Actual Start: 12/01/2006 - [Empty]

Actual Finish: MM/DD/YYYY - [Empty]

Rework, Continue

Add/Update, Remove

Sequence	Task	Status	Proceed	Rework	Assigned To	Shop	Start Date	Finish D.
1	USA Locate	COMPLETE	Y	N	CHANEY, SHAWN	DIST	12/1/2006	12/1/20
2	Work	CURRENT	N	N	CHANEY, SHAWN	DIST		
3	GIS/Mapping Update	PENDING	N	N	SCHERFFIUS, WAYNE	GIS		
4	Close	PENDING	N	N	MIDDLESTEAD, RACHEL	OPS		

MIDDLESTEAD, RACHEL: SWO #50732, CM CM VALVE REPLACEMENT

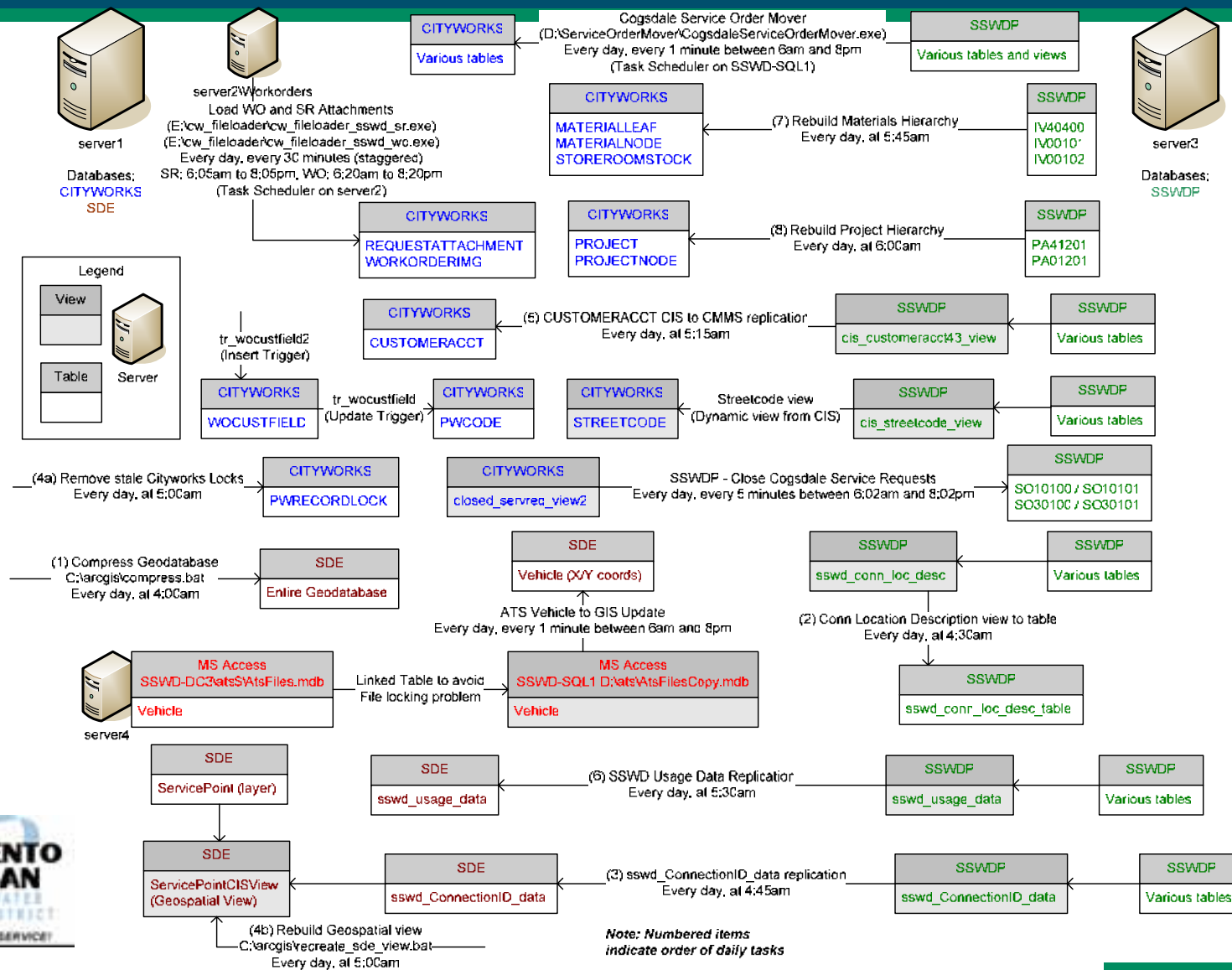
OAKS RECREATION PARK DISTRICT - Phone: 91648026100
80 E SAWYER N S PAL 38 586426333 -121 364300
Meter #70077692 Rework #70424716

1056

DAY - Phone: 000000000000000
41 W E PAL NEAR S PAL 38 58426333 -121 364
Meter #29823249 Rework #70240360

Start, Contacts - Mcr..., My Documents, Microsoft Power..., Microsoft Excel, SSWD District S..., sswd-ts1 - Re... 10:28 AM

Integration Diagram



Core Applications

- Financial Information System (FIS)
 - Microsoft Great Plains
- Customer Information & Billing System (CIS)
 - Cogsdale Corporation CSM
- Mapping & Infrastructure (GIS)
 - ESRI ArcGIS (Geographic Information System)
- Maintenance Management System (CMMS)
 - Azteca Systems CityWorks
- Backflow
 - Tokay Systems
- Automated Vehicle Location (AVL)
 - Airlink and Airlink AVL

Technology

- Low- to mid-range standard Dell laptops
- Combination GPS / Cell data device mounted in trucks
- Microsoft Terminal Services on mid-range Dell servers
- NetMotion Mobility XE for VPN and network stability
- ESRI ArcSDE
- Microsoft SQL Server
- Microsoft DTS (Data Transformation Services) jobs
- SQL Views
- Microsoft T-SQL Database Triggers
- Custom Visual Basic Applications

In-Depth Look at CIS to GIS Integration

- Goal: Bring customer and meter data in the CIS into the GIS for display and analysis
- Components
 - Two SQL Server databases (ESRI ArcSDE and Cogsdale CIS)
 - SQL Server Database Link
 - SQL View in Cogsdale CIS, matching registered table in SDE
 - Daily scheduled Microsoft DTS Job to load data
 - Daily scheduled batch file to recreate ArcSDE Geospatial View
 - GIS Relationship Class between ServicePoint and new table (sswd_connectionID_data) – name indicates one-to-one relationship based on unique connection identifier

Source SQL View (Cogsdale CIS)

```
create view ssvd_ConnectionID_data as
select distinct rtrim(rtrim(cu.umCISIdentifier)) as ConnectionID,
    rtrim(rtrim(la.umLocationID)) as umLocationID,
    rtrim(rtrim(la.umLocClass)) as umLocClass,
    rtrim(rtrim(lu.umUserDefined1)) as OccupancyCode,
    rtrim(rtrim(lu.umUserDefined2)) as LocationInfo,
    com.umConnectSeq,
    com.umConnectStatus,
    rtrim(rtrim(left(com.umRouteID,4))) as umRouteID,
    com.umConnectionDate,
    com.umDisconnectionDate,
    rtrim(rtrim(lp.umAssessorID)) as APN,
    rtrim(rtrim(cu.umLastName)) as CLastName,
    rtrim(rtrim(cu.umFirstName)) as CFirstName,
    rtrim(rtrim(cu.umPlaceOfWork)) as CPlaceOfWork,
    rtrim(rtrim(ou.umLastName)) as OLastName,
    rtrim(rtrim(ou.umFirstName)) as OFirstName,
    rtrim(rtrim(ou.umPlaceOfWork)) as OPlaceOfWork,
    rtrim(rtrim(sa.umStreetNumber)) as SASStreetNumber,
    rtrim(rtrim(sa.umStreetName)) as SASStreetName,
    rtrim(rtrim(sa.umCityName)) as SACityName,
    rtrim(rtrim(sa.STATE)) as SASSTATE,
    rtrim(rtrim(sa.umZipCode)) as SASZipCode,
    rtrim(rtrim(sa.umAptNumber)) as SAAPtNumber,
    rtrim(rtrim(lp.umKeyNum)) as umKeyNum,
    rtrim(rtrim(ba.umStreetNumber)) as BASTreetNumber,
    rtrim(rtrim(ba.umStreetName)) as BASTreetName,
    rtrim(rtrim(ba.umCityName)) as BACityName,
    rtrim(rtrim(ba.STATE)) as BASTATE,
    rtrim(rtrim(ba.umZipCode)) as BAZipCode,
    rtrim(rtrim(ba.umAptNumber)) as BAAPtNumber,
    rtrim(rtrim(pa.phone1)) as CPhone1,
    rtrim(rtrim(pa.phone2)) as CPhone2,
    rtrim(rtrim(pa.fax)) as CFax,
    rtrim(rtrim(oa.umStreetNumber)) as OASTreetNumber,
    rtrim(rtrim(oa.umStreetName)) as OASTreetName,
    rtrim(rtrim(oa.umCityName)) as OACityName,
    rtrim(rtrim(oa.STATE)) as OASTATE,
```

```
    rtrim(rtrim(oa.umZipCode)) as OAZipCode,
    rtrim(rtrim(oa.umAptNumber)) as OAAptNumber,
    rtrim(rtrim(pao.phone1)) as OPhone1,
    rtrim(rtrim(pao.phone2)) as OPhone2,
    rtrim(rtrim(pao.fax)) as OFax,
    rtrim(rtrim(lcdesc.description)) as LocationDesc,
    rtrim(rtrim(em.umEquipmentID)) as umEquipmentID,
    em.umInstallationDate as MeterInstallDate,
    rtrim(rtrim(em.UMEQCLSS)) as UMEQCLSS,
    rtrim(rtrim(ec.UMEQCLSSDESC)) as UMEQCLSSDESC,
    rtrim(rtrim(ec.umDiameterd)) as umDiameterd,
    rtrim(rtrim(remote.Remote_ID)) as Remote_ID,
    remote.umInstallationDate as RemoteInstallDate,
    rtrim(rtrim(tx.umUserDefined1)) as TxprdrType,
    rtrim(rtrim(tx.umUserDefined2)) as TestCircle,
    (case when ard.umReading > 0 and ard.umReading <> 9999
        then ard.umReading else ardh.umReading end) as lastRead,
    (case when ard.umReading = 0 and ard.umReading <> 9999 and ard.umReading <> 99999
        then ar.umReadingDate else arh.umReadingDate end) as lastReadDate,
    (case when ard.umReading > 0 and ard.umReading <> 9999 and ard.umReading <> 99999
        then ard.umConsumption1 else ardh.umConsumption1 end) as Consumption,
    rtrim(rtrim(com.umLocationID*1000+com.umConnectSeq)) as EQUIPMENTID
from    ua00301 as cu -- connection ID#
inner join ua00300 as com on cu.umLocationID = com.umLocationID -- connection master
        and cu.umConnectSeq = com.umConnectSeq
left outer join ssvd_conn_loc_desc_table as locdesc on com.umLocationID = locdesc.umLocum
        and com.umConnectSeq = locdesc.umConnectSeq
inner join ua00400 as la on com.umLocationID = la.umLocationID -- location master
inner join ua00401 as lu on la.umLocationID = lu.umLocationID -- location ID#
inner join ua00403 as lp on la.umLocationID = lp.umLocationID -- location info
```

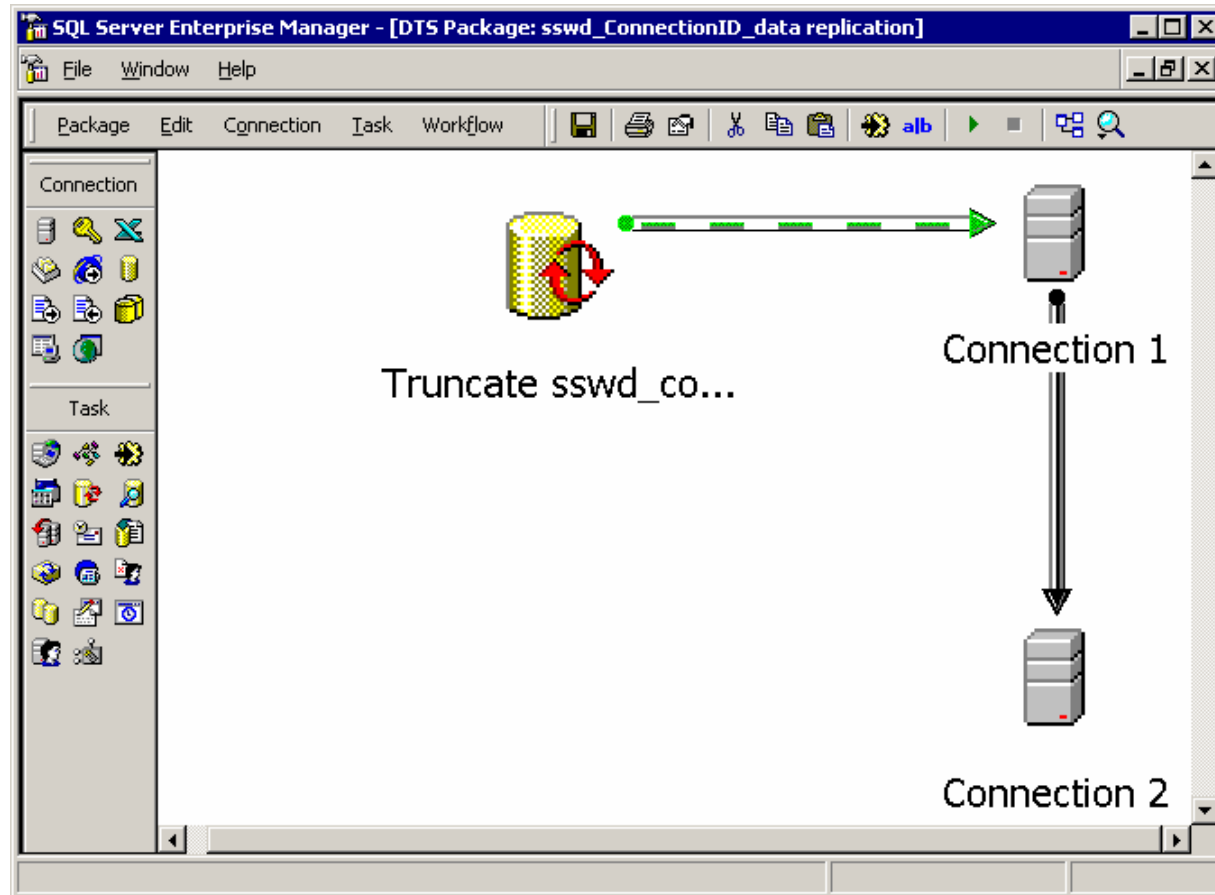
... 3-page long Complex SQL Statement
To pull various customer data and
meter components from over 24 tables

Destination Table in ArcSDE

- One-to-one column mapping from view to matching table, to keep DTS job setup and debugging simple

Column Name	Data Type	Length	Allow Nulls
ConnectionID	varchar	31	✓
umLocationID	varchar	15	✓
umLocClass	varchar	15	✓
OccupancyCode	varchar	31	✓
LocationInfo	varchar	31	✓
umConnectSeq	int	4	✓
umConnectStatus	int	4	✓
umRouteID	varchar	15	✓
umConnectionDate	datetime	8	✓
umDisconnectionDate	datetime	8	✓
APN	varchar	14	✓
CLastName	varchar	31	✓
CFirstName	varchar	31	✓
CFaceOfWork	varchar	41	✓
OLastName	varchar	31	✓
OFirstName	varchar	31	✓
OPlaceOfWork	varchar	41	✓
SAStrreetNumber	varchar	7	✓
SAStrreetName	varchar	31	✓
SACityName	varchar	31	✓
SASTATE	varchar	29	✓
SASZipCode	varchar	11	✓
SAAptNumber	varchar	7	✓
umKeyNum	varchar	21	✓
BAStrreetNumber	varchar	7	✓
BAStrreetName	varchar	31	✓
BACityName	varchar	31	✓
BASTATE	varchar	29	✓
BAZipCode	varchar	11	✓
BAAptNumber	varchar	7	✓
CPhone1	varchar	21	✓
CPhone2	varchar	21	✓
CFax	varchar	21	✓
Cu&StrreetNumber	varchar	7	✓

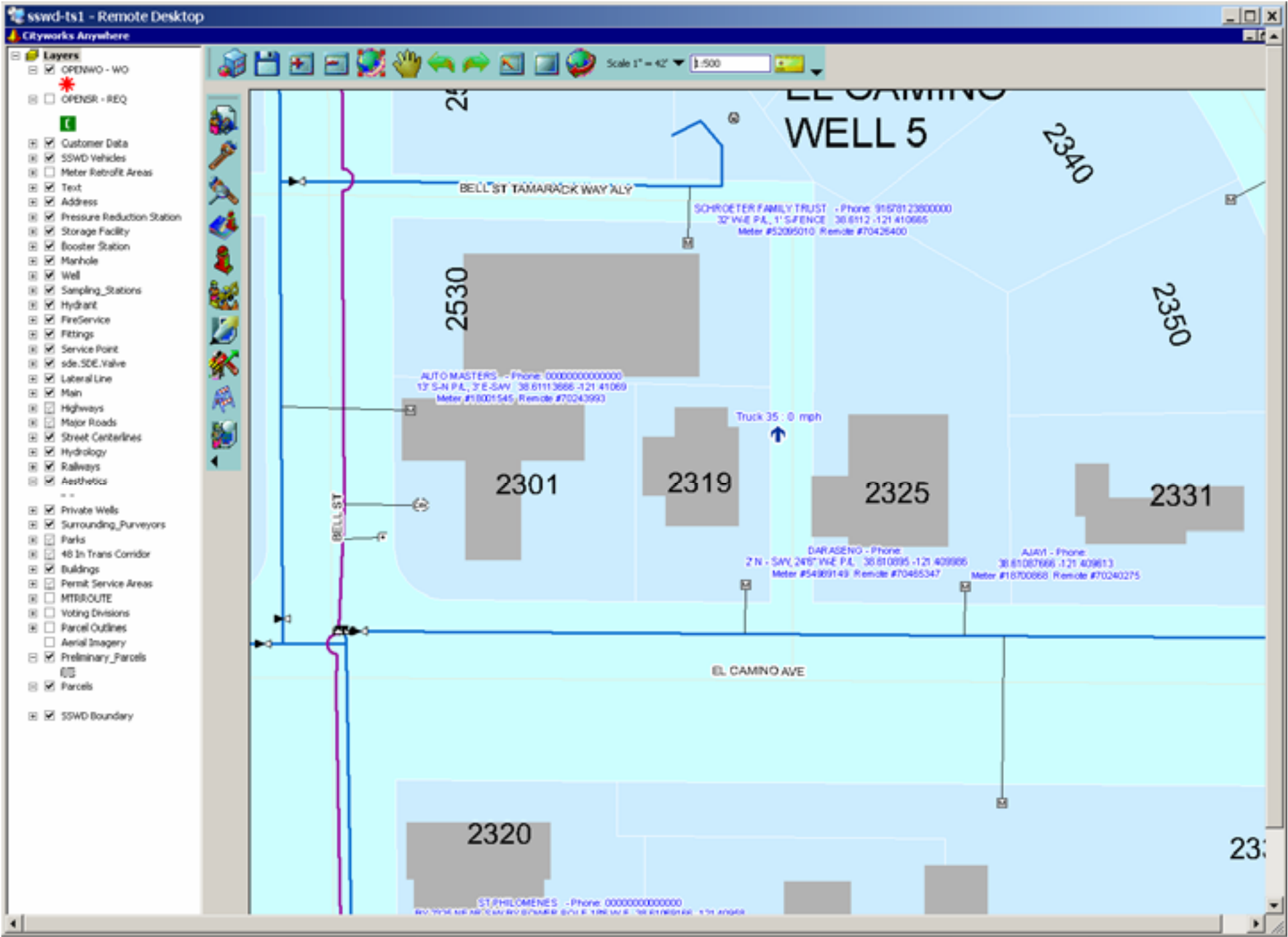
Microsoft SQL Server DTS job to load data



Batch file to recreate SDE Geospatial View

```
sde table -o delete -t ServicePointCISView -N -q -u sde
```

```
sde table -o create_view -T ServicePointCISView -t ServicePoint,sswd_ConnectionID_data -c  
ServicePoint.OBJECTID,ServicePoint.Entity,ServicePoint.Handle,ServicePoint.Layer,ServicePoint.Color,ServicePoint.Linetype,ServicePoint.Elevation,ServicePoint.Thickness,ServicePoint.Text,ServicePoint.ACCTNO,ServicePoint.ADDRESS,ServicePoint.SERNO,ServicePoint.SIZE,ServicePoint.TYPE,ServicePoint.Shape,ServicePoint.SUBTYPE,ServicePoint.FacilityID,ServicePoint.LegacyID,ServicePoint.Location,ServicePoint.WarrantyDate,ServicePoint.InstallDate,ServicePoint.Condition,ServicePoint.ConditionDate,sswd_ConnectionID_data.umLocationID,sswd_ConnectionID_data.umLocClass,sswd_ConnectionID_data.OccupancyCode,sswd_ConnectionID_data.LocationInfo,sswd_ConnectionID_data.umConnectSeq,sswd_ConnectionID_data.umConnectStatus,sswd_ConnectionID_data.umRouteID,sswd_ConnectionID_data.umConnectionDate,sswd_ConnectionID_data.umDisconnectionDate,sswd_ConnectionID_data.APN,sswd_ConnectionID_data.CLastName,sswd_ConnectionID_data.CFirstName,sswd_ConnectionID_data.CPlaceOfWork,sswd_ConnectionID_data.OLastName,sswd_ConnectionID_data.OFirstName,sswd_ConnectionID_data.OPlaceOfWork,sswd_ConnectionID_data.SAStreetNumber,sswd_ConnectionID_data.SAStreetName,sswd_ConnectionID_data.SACityName,sswd_ConnectionID_data.SA STATE,sswd_ConnectionID_data.SAZipCode,sswd_ConnectionID_data.SAAptNumber,sswd_ConnectionID_data.umKeyNum,sswd_ConnectionID_data.BAStreetNumber,sswd_ConnectionID_data.BAStreetName,sswd_ConnectionID_data.BACityName,sswd_ConnectionID_data.BA STATE,sswd_ConnectionID_data.BAZipCode,sswd_ConnectionID_data.BAAptNumber,sswd_ConnectionID_data.CPhone1,sswd_ConnectionID_data.CPhone2,sswd_ConnectionID_data.CFax,sswd_ConnectionID_data.OAStreetNumber,sswd_ConnectionID_data.OAStreetName,sswd_ConnectionID_data.OACityName,sswd_ConnectionID_data.OA STATE,sswd_ConnectionID_data.OAZipCode,sswd_ConnectionID_data.OAAptNumber,sswd_ConnectionID_data.OPhone1,sswd_ConnectionID_data.OPhone2,sswd_ConnectionID_data.OFax,sswd_ConnectionID_data.LocationDesc,sswd_ConnectionID_data.umEquipmentID,sswd_ConnectionID_data.MeterInstallDate,sswd_ConnectionID_data.UMEQUCLSS,sswd_ConnectionID_data.UMEQUCLSSDESC,sswd_ConnectionID_data.umDiameterd,sswd_ConnectionID_data.Remote_ID,sswd_ConnectionID_data.RemoteInstallDate,sswd_ConnectionID_data.TxpndrType,sswd_ConnectionID_data.TestCircle,sswd_ConnectionID_data.LastRead,sswd_ConnectionID_data.LastReadDate,sswd_ConnectionID_data.Consumption -w "ServicePoint.FACILITYID=sswd_ConnectionID_data.ConnectionID" -u sde
```



GIS Relationship Class for customer drill-down from map

The screenshot displays a GIS application window titled "Cityworks Asset Identify Form". The interface includes a map on the right, a data table on the left, and a sidebar with filters and notes.

Map: Shows a street view with a highlighted area. A red box highlights a specific location with the address "1056".

Data Table: A table with columns "Attribute" and "Value".

Attribute	Value
SASTREETNAME	EASTERN AVE
SACITYNAME	SACRAMENTO
SASTATE	CA
SACPCODE	95864
SASPTNUMBER	
LINEYFROM	
BASTREETNUMBER	3344
BASTREETNAME	MISSION
BACITYNAME	DARWINHILL
BASTATE	CA
BACPCODE	95820111
BASPTNUMBER	
CPHONE1	916482010000
CPHONE2	000000000000
CPAX	000000000000
OASTREETNUMBER	3344
OASTREETNAME	MISSION
OACITYNAME	DARWINHILL
OASTATE	CA
OACPCODE	95820111
OASPTNUMBER	
OPHONE1	916482010000
OPHONE2	000000000000
OPAX	000000000000
LOCADDRESS	88 E SAN JOSE AVE, 38 984216 121.8400
UNEQUIPMENTID	700702
REMTERMINSTALLDATE	5/15/2005
UNEDUCLES	NE_3_30
UNEDUCLESDESC	Revenue P - 1.0yr
UNEMETERS	3.0000
REWRITE_ID	7642476
REMTERMINSTALLDATE	5/26/2005
TYPEIDTYPE	2
TESTORCLE	1
LASTREAD	6/2/05
LASTREADDATE	12/14/2006
CONSUMPTION	66

Sidebar: Contains filters for "Problem Code", "Priority/Category", "Assigned By", "Submitted To", "Closed By", "Open Date", "Closed Date", "In the Inventory", "Of the Inventory", "Is a Work Order", "Work Order", "WQ Description", "Proj Start/Finish Date", "Actual Start/Finish Date", "Project", "Work Order", "11/19/06: For an call Blue valve box is leaking in the c... END COGS DALE NOTES By FLAA, ERIC - 11/22/06 A MLY is leaking in base of ... and kept opening. I called a ... By RYSH, SCOTT - 11/26/06 MLY is broken and leaking and called USA.

Cityworks Logo: A logo for Cityworks is displayed in the center of the sidebar.

Windows Taskbar: Shows the Start button and several open applications: Contacts - Mr..., My Documents, Microsoft Power..., Microsoft Excel, SSWD District S..., and sswd-tsl - Re... The system clock shows 10:31 AM.

Question and Answer / Discussion



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