



Enterprise Asset Management
& GIS Integration

Introductions

Sean Hawley

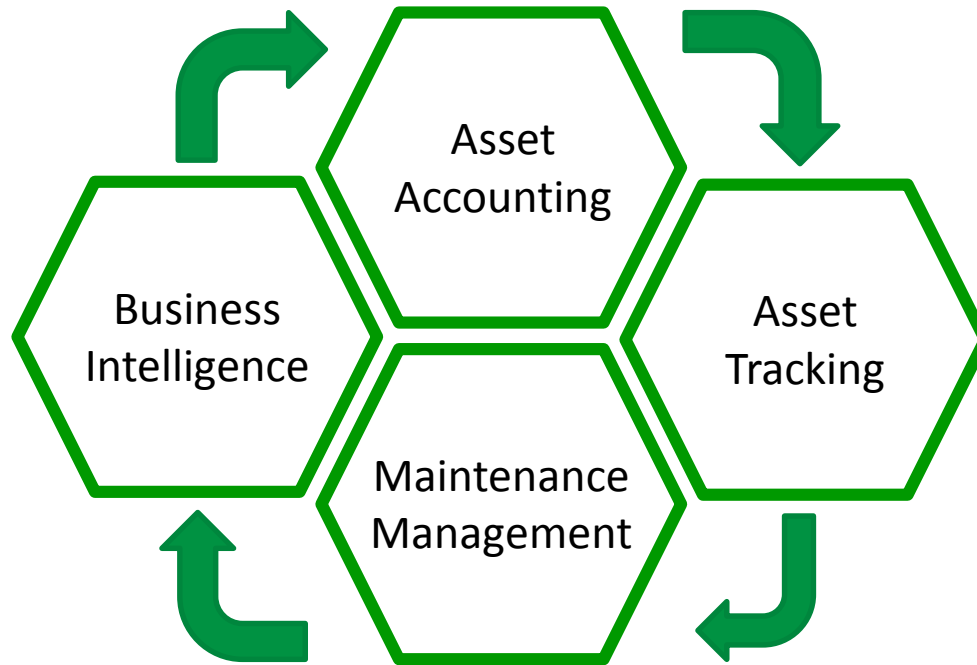
GIS Systems Coordinator

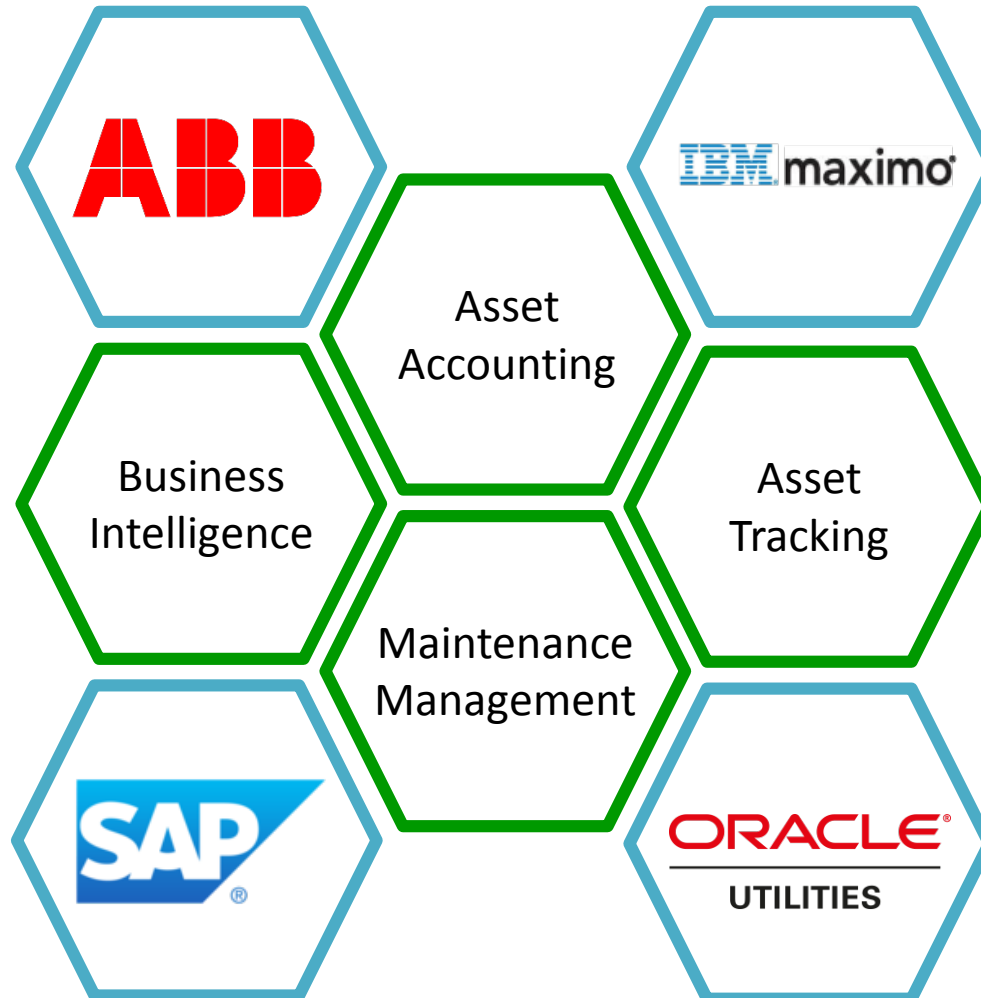
Greenville Utilities

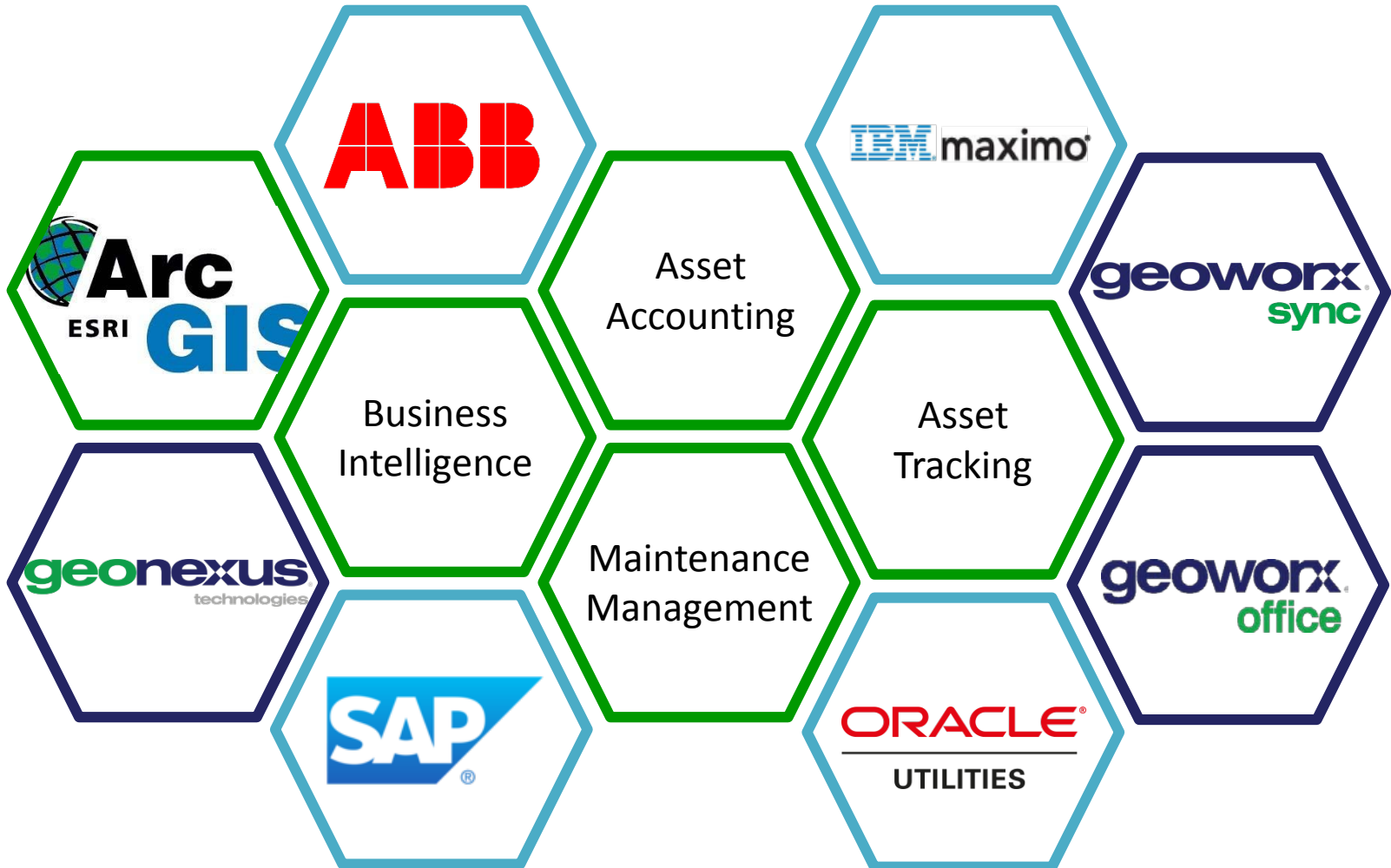
Sean Graebner

VP of Sales & Marketing

GeoNexus Technologies









geoworx
sync







**Greenville
Utilities**



Electric





**Greenville
Utilities**



Water





**Greenville
Utilities**



Wastewater



**Greenville
Utilities**

Natural Gas









Oracle WAM Database

- Asset Class/Type
- Assets
- Specifications
- Code Tables
- Unique ID

Geo Database

- Feature Classes
- Features
- Attributes
- Domains
- Unique ID





A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Feature Class	PLUS	Subtype	CD (ADD Subtype)	PLUS	Domain Code	Additional Attribute Field	PLUS	Domain Code	Additional Attribute Field	EQU	Parent	Asset Type	PREFIX	Status
Subtype														
ele.GU.PriOverheadElectricLineSegment	+	1	Single Phase Primary Overhead	+	N/A	N/A	+	N/A	N/A	=	CDR DIST OH	ECDRPRIOH	POH	ACTIVE
ele.GU.PriOverheadElectricLineSegment	+	2	Two Phase Primary Overhead	+	N/A	N/A	+	N/A	N/A	=	CDR DIST OH	ECDRPRIOH	POH	ACTIVE
ele.GU.PriOverheadElectricLineSegment	+	3	Three Phase Primary Overhead	+	N/A	N/A	+	N/A	N/A	=	CDR DIST OH	ECDRPRIOH	POH	ACTIVE
Subtype														
ele.GU.SecOverheadElectricLineSegment	+	4	Connector	+	N/A	N/A	+	N/A	N/A	=	CDR DIST OH	ECDRSECOH	SOH	ACTIVE
Subtype														
ele.GU.SecOverheadElectricLineSegment	+	1	Single Phase Secondary Overhead	+	N/A	N/A	+	N/A	N/A	=	CDR DIST OH	ECDRSECOH	SOH	ACTIVE
ele.GU.SecOverheadElectricLineSegment	+	2	Three Phase Secondary Overhead	+	N/A	N/A	+	N/A	N/A	=	CDR DIST OH	ECDRSECOH	SOH	ACTIVE
ele.GU.SecOverheadElectricLineSegment	+	3	Two Phase Secondary Overhead	+	N/A	N/A	+	N/A	N/A	=	CDR DIST OH	ECDRSECOH	SOH	ACTIVE
Subtype														
ele.GU.Switch	+	1	Auto Transfer	+	N/A	N/A	+	N/A	N/A	=	SXN DIST OH	ESWXFEROH	SWI	PLANNED
ele.GU.Switch	+	2	Overhead Disconnect	+	N/A	N/A	+	N/A	N/A	=	SXN DIST OH	ESW12OH	SWI	PLANNED
ele.GU.Switch	+	6	Overhead Gang Operated	+	N/A	N/A	+	N/A	N/A	=	SXN DIST OH	EGOAB12OH	SWI	PLANNED
ele.GU.Switch	+	4	Underground Disconnect	+	N/A	N/A	+	N/A	N/A	=	SXN DIST UG	ESW12UG	SWI	PLANNED
ele.GU.Switch	+	7	Underground Gang Operated	+	N/A	N/A	+	N/A	N/A	=	SXN DIST UG	ESWGEARUG	SWI	PLANNED
Subtype														
ele.GU.SupportStructure	+	1	H-Frame	+	N/A	N/A	+	W	WOOD	=	POLE TMN LN	EPOLEHFWD	POL	PLANNED
ele.GU.SupportStructure	+	1	H-Frame	+	N/A	N/A	+	S	STEEL	=	POLE TMN LN	EPOLEHFSTL	POL	PLANNED
Subtype														
ele.GU.SupportStructure	+	2	Non-Wood Power Pole	+	TRN, TWD	TRANSMISSION	+	C	CONCRETE	=	POLE TMN LN	EPOLECNCR	POL	PLANNED
ele.GU.SupportStructure	+	2	Non-Wood Power Pole	+	TRN, TWD	TRANSMISSION	+	S	STEEL	=	POLE TMN LN	EPOLESTL	POL	PLANNED

File Help

Console Configuration Reports

- System
 - Properties
 - Notification
 - Email Settings
 - Validation
 - Validate Configuration
 - Connections
 - GIS Connections
 - Electric
 - Gas
 - Water
 - Sewer
 - OWAM Connections
 - WAMPRD
 - Value Lists
 - Dataset Groups
 - Datasets
 - Summary
 - gGateStation
 - gDistributionMainOB
 - gDistributionMainPE
 - gDistributionMainPVC
 - gDistributionMainSTL
 - gDistributionMainUNK
 - gCPTestPoint
 - gCPRectifier
 - gRegulatorStation
 - gIsolatedRisers
 - gServiceSTL
 - gServicePVC
 - gServicePE
 - gServiceOB
 - gServiceCUNK
 - gServiceGV
 - gGasValveMER
 - gGasValveCRIT
 - gGasValveCOMM
 - sForceMain
 - sGravityMain
 - sManhole
 - sSystemValve
 - sServiceLine
 - wFireHydrant
 - wControlValve
 - wMainSTL
 - wMainACP
 - wMainCI
 - wMainDI
 - wMainHDPE
 - wMainPVC
 - wWaterServiceLinesWSVC
 - wWaterServiceLinesAutoFlush
 - wSampleSites
 - wSystemValveBTRFLY
 - wSystemValveBALL
 - wSystemValveGate
 - wSystemValveTap
 - wSystemValvePlug
 - ePriOverheadElectricLineSegment
 - eSecOverheadElectricLineSegment
 - eSwitchXFEROH
 - eSwitch120H
 - eSwitch12UG
 - eSwitchGOAB120H

GeoWorx Sync for OWAM - C:\Apps\GeoWorxSync\GeoWorxSyncGUI.exe

File Help

Console Configuration Reports

GIS to OWAM

GIS Record Created | GIS Data Modified | GIS Record Linked | GIS Record Deleted | OWAM Record Orphaned | GIS Record Split | GIS Record Copied

Action: GIS Feature was CREATED.

Result: OWAM Asset to be created using these rules.

Do Create SA_ASSET

Allow PreAssigned key/Value for SA_ASSET

Add Row Delete Selected Copy WAM Record Created Rules

	<input type="checkbox"/>	Source Type	Value or GIS Field	Target OWAM Entity	Target OWAM Attribute Type	Target OWAM Attribute Name	Value List (Optional)	<input type="checkbox"/> Enabled	
1	<input type="checkbox"/>	DEFAULT	CDR-DIST-UG	SA_ASSET	ATTRIBUTE	PARENT_ASSET_ID		<input checked="" type="checkbox"/>	
2	<input type="checkbox"/>	DEFAULT	ECDRPRJUG	SA_ASSET	ATTRIBUTE	ASSET_TYPE		<input checked="" type="checkbox"/>	
3	<input type="checkbox"/>	DEFAULT	ACTIVE	SA_ASSET	ATTRIBUTE	ASSET_STATUS		<input checked="" type="checkbox"/>	
4	<input type="checkbox"/>	DEFAULT	E-UG RESIDENTIAL	SA_ASSET	ATTRIBUTE	ASSET_CLASS		<input checked="" type="checkbox"/>	
5	<input type="checkbox"/>	DEFAULT	ELECTRIC	SA_ASSET	ATTRIBUTE	DEPARTMENT		<input checked="" type="checkbox"/>	
6	<input type="checkbox"/>	DEFAULT	ELE-SYSTEM	SA_ASSET	ATTRIBUTE	AREA		<input checked="" type="checkbox"/>	
7	<input type="checkbox"/>	DEFAULT	E	SA_ASSET	ATTRIBUTE	PARENT_ASSET_RECORD_TYPE		<input checked="" type="checkbox"/>	
8	<input type="checkbox"/>	DEFAULT	1	SA_ASSET	ATTRIBUTE	CRITICALITY		<input checked="" type="checkbox"/>	
9	<input type="checkbox"/>	GIS FIELD	ASSET_DESCRIPTION	SA_ASSET	ATTRIBUTE	ASSET_DESC		<input checked="" type="checkbox"/>	
10	<input type="checkbox"/>	GIS FIELD	INSTALLATIONDATE	SA_ASSET	SPECIFICATION	INSTALLATIONDATE		<input checked="" type="checkbox"/>	
11	<input type="checkbox"/>	GIS FIELD	LENGTHSOURCE	SA_ASSET	SPECIFICATION	LengthSource		<input checked="" type="checkbox"/>	
12	<input type="checkbox"/>	GIS FIELD	MEASUREDLENGTH	SA_ASSET	SPECIFICATION	MeasuredLength		<input checked="" type="checkbox"/>	
13	<input type="checkbox"/>	GIS FIELD	SUBTYPECD	SA_ASSET	SPECIFICATION	SUBTYPECD	GIS to WAM - ePrimaryUGElect...	<input checked="" type="checkbox"/>	
14	<input type="checkbox"/>	GIS FIELD	WORKORDERID	SA_ASSET	SPECIFICATION	WORKORDERID		<input checked="" type="checkbox"/>	
15	<input type="checkbox"/>	GIS FIELD	CONDUCTORMATERIAL	SA_ASSET	SPECIFICATION	ConductorMaterial		<input checked="" type="checkbox"/>	
16	<input type="checkbox"/>	GIS FIELD	CONDUCTORSIZE	SA_ASSET	SPECIFICATION	ConductorSize		<input checked="" type="checkbox"/>	
17	<input type="checkbox"/>	GIS FIELD	ELECTRICLINEOBJECTID	SA_ASSET	SPECIFICATION	ELECTRICLINEOBJECTID *		<input checked="" type="checkbox"/>	
18	<input type="checkbox"/>	GIS FIELD	LABELTEXT	SA_ASSET	SPECIFICATION	LABELTEXT		<input checked="" type="checkbox"/>	
19	<input type="checkbox"/>	GIS FIELD	NEUTRALMATERIAL	SA_ASSET	SPECIFICATION	NeutralMaterial		<input checked="" type="checkbox"/>	
20	<input type="checkbox"/>	GIS FIELD	NEUTRALSIZE	SA_ASSET	SPECIFICATION	NeutralSize		<input checked="" type="checkbox"/>	
21	<input type="checkbox"/>	GIS FIELD	NEUTRALINSULATIONTYPE	SA_ASSET	SPECIFICATION	NEUTRALINSULATIONTYPE		<input checked="" type="checkbox"/>	
22	<input type="checkbox"/>	GIS FIELD	NUMBERCONDUCTORSPERPH...	SA_ASSET	SPECIFICATION	NumberConductorsPerPhase		<input checked="" type="checkbox"/>	
23	<input type="checkbox"/>	GIS FIELD	OPERATINGVOLTAGE	SA_ASSET	SPECIFICATION	OperatingVoltage		<input checked="" type="checkbox"/>	
24	<input type="checkbox"/>	GIS FIELD	FEEDERID	SA_ASSET	SPECIFICATION	FEEDERID		<input checked="" type="checkbox"/>	
25	<input type="checkbox"/>	GIS FIELD	FEEDERID2	SA_ASSET	SPECIFICATION	FEEDERID2		<input checked="" type="checkbox"/>	
26	<input type="checkbox"/>	GIS FIELD	FEEDERINFO	SA_ASSET	SPECIFICATION	Feeder Information		<input checked="" type="checkbox"/>	
27	<input type="checkbox"/>	GIS FIELD	ELECTRICTRACEWEIGHT	SA_ASSET	SPECIFICATION	MMElectric Trace Weight		<input checked="" type="checkbox"/>	
28	<input type="checkbox"/>	GIS FIELD	PHASEDESIGNATION	SA_ASSET	SPECIFICATION	Phase Designation		<input checked="" type="checkbox"/>	
29	<input type="checkbox"/>	GIS FIELD	FORMGRNONTRACEABLE	SA_ASSET	SPECIFICATION	Feeder Manager Non-Traceable		<input checked="" type="checkbox"/>	
30	<input type="checkbox"/>	GIS FIELD	BACKFILLMATERIAL	SA_ASSET	SPECIFICATION	BackfillMaterial		<input checked="" type="checkbox"/>	
31	<input type="checkbox"/>	GIS FIELD	BURIEDDEPTH	SA_ASSET	SPECIFICATION	BURIEDDEPTH		<input checked="" type="checkbox"/>	

Console Configuration Reports



- System
 - Properties
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 - Validation
 - Validate Configuration
 - Connections
 - GIS Connections
 - Electric
 - Gas
 - Water
 - Sewer
 - OWAM Connections
 - WAWMPRO
 - Value Lists
 - GIS to WAM - Subtype to Account
 - GIS to WAM - POHL Subtype
 - GIS to WAM - SOHL Subtype
 - GIS to WAM - SwitchXFEROH
 - GIS to WAM - e SwitchGOAB12OH
 - GIS to WAM - e Switch12OH
 - GIS to WAM - e Switch12UG
 - GIS to WAM - e SwitchGEARUG
 - GIS to WAM - e Support Structure
 - GIS to WAM - e Distribution Transformer
 - GIS to WAM - e Capacitor/Bank
 - GIS to WAM - e Voltage Regulator
 - GIS to WAM - e UndergroundLinearStructure
 - GIS to WAM - e Underground Structure
 - GIS to WAM - e PrimaryUGElectricLine Segment
 - GIS to WAM - e Sec UG ELe Ln Seg
 - GIS to WAM - e Switching Facility
 - GIS to WAM - Switch
 - GIS to WAM - e Transmission
 - GIS to WAM - e Dynamic Protective Devices
 - GIS to WAM - e StreetLight
 - GIS to WAM - WaterLines Subtype
 - WaterLines Subtype
 - GIS to WAM - Phase Designation
 - GIS to WAM - e KVA
 - GIS to WAM - e Voltage
 - GIS to WAM - gMaterial
 - GIS to WAM - e AreaLightRole
 - GIS to WAM - e StreetLightRole
 - Dataset Groups
 - Datasets

Value List: GIS to WAM - SOHL Subtype

Test

Name: GIS to WAM - SOHL Subtype

Value List

If this Value List is applied to a GIS to OWAM mapping, then each From Value in GIS is converted to the To Value in OWAM.
 If this Value List is applied to a OWAM to GIS mapping, then each From Value in OWAM is converted to the To Value in GIS.
 If this Value List is applied to a GIS-Edit to GIS-Pub mapping, then each From Value in GIS-Edit is converted to the To Value in GIS-Pub.

If the source value is not in the list of From Values, then:

- Populate target with this value:
- Set target to NULL
- Leave target unchanged
- Copy source value
- Copy uppercase source value
- Copy lowercase source value

* Dynamic Value List Configuration *

Connection Name:

SQL Query:

Append SQL results to value lists:

Delimiter:

Populate

Value List / From-To Conversion Table

Add Row Delete Selected Copy Values

<input type="checkbox"/>	From Value (Source)	To Value (Target)	ONLY if Target Value Currently In:	
<input type="checkbox"/>	1	SINGLE PHASE SECONDARY OVERHEAD		
<input type="checkbox"/>	2	THREE PHASE SECONDARY OVERHEAD		
<input type="checkbox"/>	3	TWO PHASE SECONDARY OVERHEAD		
<input type="checkbox"/>	4	CONNECTOR		

* WAMPRD GUC 19126 HAWLEYSN Hawley, Sean GUPRDWA - Internet Explorer

File Edit Views Actions Favorites Go Help Window

Asset E PUG01002715
Oracle Utilities Work and Asset Management V1.9.1 (r1912-13) 20 September 2016

ORACLE

Asset E PUG01002715

Search Options

Results

Asset

Views

Notes

Attachments*

Depreciation

Inspection Log

Manufacturer Data

Manufacturer Warranty

Additional Accounts

Period Costs

Cost Summary

Cost Summary YTD

Hazardous Components

Actions

Create Bookmark

Audit Log (Header)

Export

Asset Reliability

Components

Component Tracking Lo

Asset ID: PUG01002715 Criticality: 1 Status: Active

Description: Conductor UG Primary 1/0, AAC, THREE PHASE PRIMARY UNDERGROUND

FMEA System: Specification: 0000295975

Asset Type: ECDRPRIUG BOM ID:

Asset Class: E-UG COMMERCIAL Total Asset Condition Score:

Asset Class Type: E-DIST SYSTEMS Asset Condition Reset Date:

Log Reviewer: Confidence Rating Percentage:

Parent Asset: E CDR DIST UG Environmental Rating:

Process:

Location

Basis: Facility Point ID:

Building:

Room:

Location:

Position:

Breaker: Breaker Panel:

Latitude: Breaker Asset ID:

Longitude:

W.O. Defaults

Planner: Work Request Route: Safety

Asset Record Type.
Record: 1/1 <OSC>

125%

ORACLE



Find module

Specification 0000295975

Search Options

Results

Specification

Views

Notes

Asset List

Actions

Create Bookmark

Audit Log (Header)

Export

Copy Specification

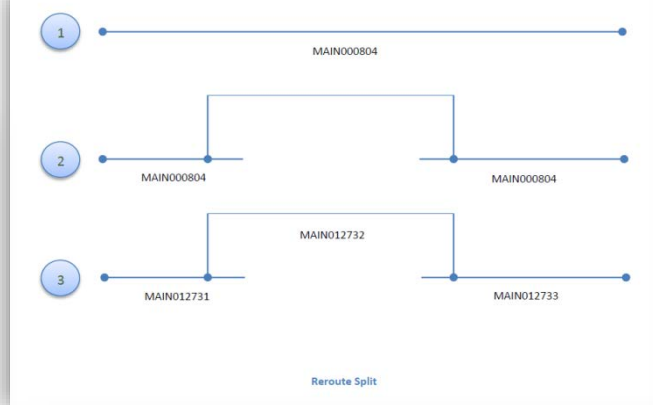
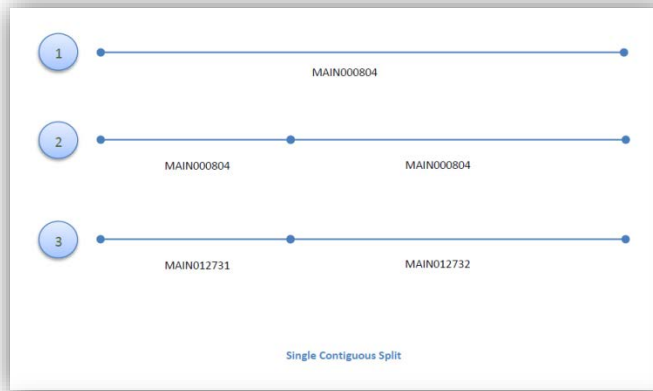
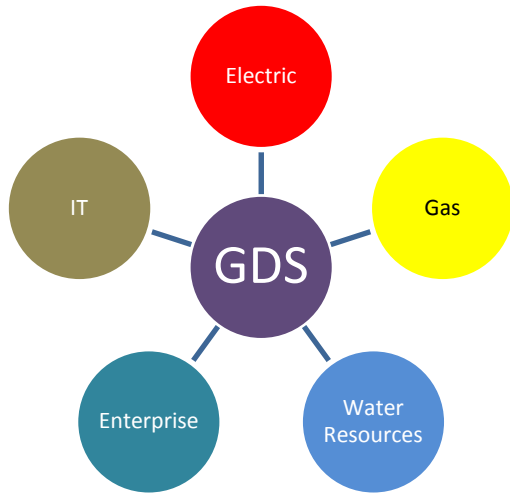
Specification ID

Type

Category

Description

Seq. No.	Specification Attribute	Specification Value	Source Information
5	OBJECTID *		
10	Enabled		
15	CREATIONUSER		
20	DATECREATED		
25	DATEMODIFIED		
30	LASTUSER		
35	INSTALLATIONDATE		
40	LengthSource	MS	
45	MeasuredLength		
50	SUBTYPECD	THREE PHASE PRIMARY UNDERGROU	
55	WORKORDERID		
60	ConductorMaterial	AAC	
65	ConductorSize	1/0	
70	ELECTRICLINEOBJECTID *		
75	LABELTEXT		
80	NeutralMaterial	AAC	



Errors			
KeyID	Error Message	Error Details	Error Value
DATASET: g02smv000MainPis			
PHASE: RESOLVE_EDIT_DUPLICATES - Resolve duplicate key values in EDIT			
1614073	Unable to resolve GIS Edit duplicates.	Duplication is not due to a split	1614073
DATASET: w02wv000Pis			
PHASE: CREATE_SA_ASSET_FROM_EDIT - Create SA_ASSET records from records in EDIT			
MM00000502	Unable to insert SA_ASSET record	Unable to create SA_ASSET record ORA-20001: unique constraint (SYNERGEN_PK_SA_ASSET) violated ORA-20012: at line 1 Unable to create SA_ASSET_ATTACHMENT record (null) is not valid. info_create_attachment_record Encountering INSERT attachment SQL. ORA-1402: cannot insert NULL into (SYNERGEN_SA_ASSET_ATTACHMENT_PLANT)	
DATASET: w02smv000MainPis			
PHASE: CREATE_SA_ASSET_FROM_EDIT - Create SA_ASSET records from records in EDIT			
WS02000146	Unable to insert SA_ASSET record	Unable to create SA_ASSET record ORA-20001: unique constraint (SYNERGEN_PK_SA_ASSET) violated ORA-20012: at line 1 Unable to create SA_ASSET_ATTACHMENT record (null) is not valid. info_create_attachment_record Encountering INSERT attachment SQL. ORA-1402: cannot insert NULL into (SYNERGEN_SA_ASSET_ATTACHMENT_PLANT)	
WS02011044	Unable to insert SA_ASSET record	Unable to create SA_ASSET record ORA-20001: unique constraint (SYNERGEN_PK_SA_ASSET) violated ORA-20012: at line 1 Unable to create SA_ASSET_ATTACHMENT record (null) is not valid. info_create_attachment_record Encountering INSERT attachment SQL. ORA-1402: cannot insert NULL into (SYNERGEN_SA_ASSET_ATTACHMENT_PLANT)	
DATASET: w02smv000TransformPis			
PHASE: CREATE_SA_ASSET_FROM_EDIT - Create SA_ASSET records from records in EDIT			
T020200502	Unable to insert SA_ASSET record	Unable to create SA_ASSET record ORA-20001: unique constraint (SYNERGEN_PK_SA_ASSET) violated ORA-20012: at line 1 Unable to create SA_ASSET_ATTACHMENT record (null) is not valid. info_create_attachment_record Encountering INSERT attachment SQL. ORA-1402: cannot insert NULL into (SYNERGEN_SA_ASSET_ATTACHMENT_PLANT)	
DATASET: w02smv000MainPisStructure			
PHASE: RESOLVE_EDIT_DUPLICATES - Resolve duplicate key values in EDIT			
1612000007	Unable to resolve GIS Edit duplicates.	Duplication is not due to a split	1612000007
DATASET: w02smv000MainPisStructure			
PHASE: CREATE_SA_ASSET_FROM_EDIT - Create SA_ASSET records from records in EDIT			
PUG0000100	Unable to insert SA_ASSET record	Unable to create SA_ASSET record ORA-20001: unique constraint (SYNERGEN_PK_SA_ASSET) violated ORA-20012: at line 1 Unable to create SA_ASSET_ATTACHMENT record (null) is not valid. info_create_attachment_record Encountering INSERT attachment SQL. ORA-1402: cannot insert NULL into (SYNERGEN_SA_ASSET_ATTACHMENT_PLANT)	

GDS- Instructions

Table of Contents	Page
1. Summary	1
2. Contiguous	1
3. 2.1 Single Contiguous Split	2
4. 2.2 Multiple Contiguous Split	7
5. Insertion	8
6. 3.1 Insertion Split	8
7. 3.2 Reroute Split	9
8. 4. Abandonment	10
9. 4.1 Simple Abandonment	10
10. 5.1 Deleting Point Features	11
11. 5.2 Deleting Line Features	11
12. 6.1 Merging A line	12

GeoWorx Sync Line Split Detection and Resolution

- 1 Summary
- It is common over time to split linear GIS features for various reasons. Some of those reasons are:
- Insertion or discovery of a new fitting
 - Insertion of a new segment into an existing segment

File Help

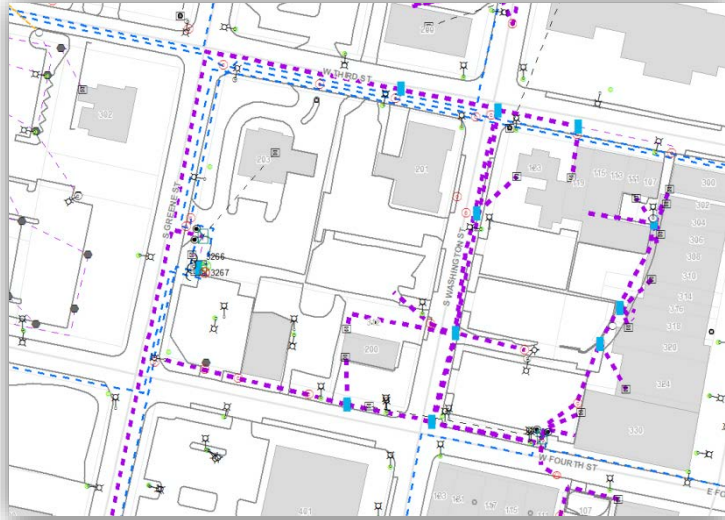
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 - Properties
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 - Sewer
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 - Dataset Groups
 - Datasets
 - Summary
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 - gDistributionMainOB
 - gDistributionMainPE
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 - gServicePE
 - gServiceOB
 - gServiceCUNK
 - gServiceGV
 - gGasVaveMER
 - gGasVaveCRIT
 - gGasVaveCOMM
 - sForceMain
 - sGravityMain
 - sManhole
 - sSystemVave
 - sServiceLine
 - wFireHydrant
 - wControlVave
 - wMainSTL
 - wMainACP
 - wMainCI
 - wMainDI
 - wMainHDPE
 - wMainPVC
 - wWaterServiceLinesWSVC
 - wWaterServiceLinesAutoFlush
 - wSampleSites
 - wSystemVaveBTRFLY
 - wSystemVaveBALL
 - wSystemVaveGate
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 - eSwitchGOAB120H

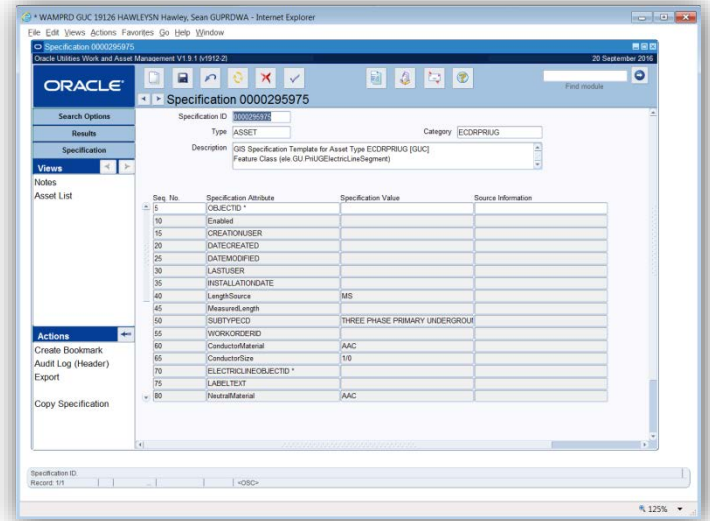
Data Reviewer

Data Reviewer |      Select Data Check     





275,000+





Q & A