Implementing a Spatially Integrated AMS DPTI - PTS

Speaker:

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AMS Analyst



Government of South Australia





Rail Revitalisation Projects

- 30 years of little investment
- SA Government's \$3 billion ten year commitment was the biggest single investment ever in public transport in SA.
- The majority of the investment was to revitalise Adelaide's passenger rail network.
- Upgrades include:
 - Track upgrade
 - Extending Noarlunga line to Seaford
 - Electrification of Seaford line
 - New electric Trains & Trams (larger fleet)
- Overhaul of several train stations
- Increased services
- Tramline extension (to Entertainment Centre)



Government of South Australia Department of Planning, Transport and Infrastructure













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What Maximo Linear does?

Discrete assets/work orders/service requests

@ a location, can have (or can be) child assets

Linear assets/work orders/service requests

Has length (or exists along a line). Assets can be segmented using features, and can have attributes, reference points and relationships.



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What Maximo Spatial does?

- Ties an asset, work order or service request to a spatial location (point, line or polygon feature).
- Terminology difference between a Maximo Feature and a Spatial Feature.
 - A spatial dataset within ArcGIS is referred to as a Feature Class. A Feature Class contains features
 - Features can be Points, Lines or Polygon



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A priority 1 work order comes in through Maximo.

- Planner organises immediate dispatch of crew to fix fault. Planner then interrogates the system for surrounding faults
- Planner uses the spatial select tool to drag a 500m radius around the work site and identifies 20 jobs.
- He pushes the selected work orders into the list screen, and filters by owner group, picking up 3 additional work orders that can be completed by the dispatched crew.
- He then assigns additional work to the crew, to be completed after rectifying the high priority fault.
- The crews view and complete assigned work orders using toughbooks.



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Expanding Linear and Spatial functionality

- ArcGIS is capable of converting linear information (i.e chainage) into point or line features.
- This allows for linear work orders to be displayed spatially.
- Although Maximo Spatial is capable of linking to the asset at fault, it can not spatially identify the linear section of an asset at fault.



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Generation of Spatial features from Linear Information

- References the Maximo WORKORDER table
- Prepares data within ArcGIS for linear referencing
- Creates GIS Features from linear information
- Pushes updated features into the Work Order Feature Class
- Updates Maximo Work Order table via MIF



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A basic example of the work order output

With the availability of Maximo tables through the SDE, the potential for analysis and interrogation is virtually endless.

Example: Work orders displayed by length.



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MAXIMO.REPORTDESIGN

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Contents Preview Description MAXIMO. MAXINTOBJALIAS MAXIMO.PERSONCAL MAXIMO MAXINTORICOLS MAXIMO PERSONGROUP MANTA O MANTORIDETAN MAXIMO MAXINTOBIECT MAXIMO.MAXINTODIECT MAXIMO.MAXINTPOLICY MAXIMO.MAXINTPOLICYPARAM MAXIMO.PHONE MAXIMO MAXLABELS MAXIMO.PM MANTHO MANY AUNCHENTRY MAYIMO PMANCESTOR MAXIMO MAXI ECONTEXT MAXIMO.MAXLECONTEXT MAXIMO.MAXLISTOVERVAL MAXIMO.MAXLOGAPPENDER MAXIMO.MAXLOGGER MAXIMO.PMCOMCC MAXIMO.PMCOMSR MAXIMO.PMMETER MAXIMO.PMSEASONS MAXIMO.MAXLOOKUPMAP MAXIMO.PMSEQUENCE MAXIMO MAXMENU MAXIMO.PO AAAVBAO MAAVMEECCACES TAAVILIO BOCOST MAXIMO.MAXMESSAGE MAXIMO.MAXMODULES MAXIMO.MAXOBJECT MAXIMO.MAXOBJECTCFG MAXIMO.POLINE MAXIMO MAXPRESENTATION MAXIMO PORTLET MAXIMO.MAXPROCCOLS MAXIMO.MAXPROP MAXIMO.MAXPROP MAXIMO.MAXPROPINSTANCE MAXIMO.MAXPROPVALUE MAXIMO.PORTLETDISPL MAXIMO.POSTATUS MAXIMO.POTERM MAXIMO.PPCRAFTRATE MAXIMO.MAXOUEUE MAXIMO.PPLABORRATE MAYIMO MAYRELATIONSHIP MAXIMO PR MAXIMO MAXREPI ACEPROC MAXIMO PRCOST MAXIMO.MAXROLE MAXIMO.MAXROWSTAMP MAXIMO.PRECAUTION MAXIMO.MAXSEQUENCE MAXIMO.MAXSERVICE MAXIMO.PRLINE MAXIMO MAXSERVSECURITY MAXIMO PROBLEM MAXIMO.MAXSESSION MAXIMO.MAXSYSINDEXES MAXIMO.MAXSYSKEYS MAXIMO.MAXTABLE MAXIMO.PRSTATUS MAXIMO.MAXTABLECEG MAXIMO.PRTERM MAXIMO MAXTABLEDOMAIN MAXIMO PURCHVIEW MAXIMO.MAXTOKEN MAXIMO.MAXTRANSFORMPROC MAXIMO.MAXUSER MAXIMO.MAXUSERSTATUS MAXIMO.MAXUSRDBAUTHINFO MAXIMO.MAXVARS MAXIMO MAXVARTVPF MAXIMO.MAXVIEW MAXIMO.MAXVIEW MAXIMO.MAXVIEWCFG MAXIMO.MAXVIEWCOLUMN MAXIMO.MAXVIEWCOLUMNCFG MAXIMO MAXWSREGISTRY MANYING MANY PEROVERYAL MAXIMO.MAXIRO.MEACUMMY_TABLE MAXIMO.MEASUREMENT MAXIMO.MEASUREPOINT MAXIMO MEASUREUNIT MAYIMO METER MAXIMO METERGROUP MAXIMO.METERINGROUP MAXIMO.METERREADING MAXIMO.MODAVAIL MAXIMO.MR MAXIMO.RECONTASK MAXIMO MRCOST MAXIMO.MRLINE MAXIMO.MRSTATUS MAXIMO.MULTIASSETLOCCI MAXIMO.MULTIASSETLOCCIPR MAXIMO MXCOLLAR MAXIMO RELATEDSLA MANUACOLLARDER MAXIMO.NAMEDUSERS MAXIMO.NETPRINTER MAXIMO.REORDERPAD MAXIMO.NONWORKTIME MAXIMO.REPORT MAXIMO NUMERIC DOMAIN MAXIMO NUMPANGEDOMAIN MAXIMO REPORTAUTH MAXIMO.OMP MAXIMO.OMPIMLMORLN MAXIMO OMPIMPI N MAXIMO ORGANIZATION MAXIMO REPORTIOR MAXIMO.PALETTEITEM MAXIMO.PASSWORDHISTORY MAXIMO.REPORTLABEL MAXIMO.REPORTLABEL MAXIMO.REPORTLISTCFG MAXIMO.REPORTLOOKUP MAXIMO.PDSPEC MAXIMO.PERSON MAXIMO.REPORTOSAUTH

MAXIMO.REPORTPARAM MAXIMO REPORTPROCRESERVE MAXIMO PERSONGROUPTEAM TAAVING REPORTPROCECUED MAXIMO.PERSONGROUPVIEW MAXIMO.REPORTRUNLOCK AAXIMO.REPORTRUNEOCK MAXIMO.PERSONSTATUS MAXIMO.REPORTRUNQUEUE MAXIMO.REPORTSCHED MANTINO REPORTUSAGELOG MAXIMO PMCOMCONEGURATION MAXIMO.RESULTSETCOLS MAXIMO.RESOLTSI MAXIMO.REQ MAXIMO.REQUINE MAXIMO.RFOSTATUS MAXIMO.RFQTERM MAXIMO REOVENDOR MAXIMO.RFQVENDORTERM MAXIMO.ROUTE_STOP MAXIMO.ROUTES MAXIMO.POECOMSTATUS MAXIMO.RSCONFIG MAXIMO SAFETYLEXICON MAYIMO POPTI ETDISPI AV MAYIMO SAFETYPI AN MAXIMO.SAFETYPEAN MAXIMO.SCCONFIG MAXIMO.SCHEDULE MAXIMO.SCHEDULELINE MAXIMO.SCHLEASEVIEW MAXIMO SCHPURCHVIEW MAXIMO SCHWARRANTYVIEW MAXIMO.SCTEMPLATE MAXIMO.SERVICEITEMS MAXIMO.SERVICEOBJECT MAXIMO SERVRECTRANS MAXIMO.PRODUCTUPDATE MAXIMO.PROPERTYASSOC MAXIMO.PROPERTYDEFAULT MAXIMO.SETS MAXIMO.SFWLICENSE MAXIMO.SFWLICENSE MAXIMO.SFWLINE MAXIMO.SFWVIEW MAXIMO.SFWVIEWLINE MAXIMO SHIET MAXIMO.QUALCRAFTSKILL MAXIMO.SHIFTPATTERNDAY MAXIMO.SHIPMENTLINE MAXIMO.SHIPMENTLINE MAXIMO.SIGOPTFLAG MAXIMO.OUOTATIONLINE MAXIMO.SIGOPTION MAXIMO.RECONASSETLINK MAXIMO.SITE MAXIMO RECONASSETRESULT MAXIMO SITEAUTH MAXIMO.RECONATSETRESULT MAXIMO.RECONATTRCLAUSE MAXIMO.RECONCILINK MAXIMO.RECONCIRESULT MAXIMO.SITEADTH MAXIMO.SITEECOM MAXIMO.SLA MAXIMO.SLAASSETLOC MAXIMO.SLACOMMITMENTS MAXIMO.RECONCOMPFILTER MAXIMO RECONCOMPELTRAST MAXIMO SLACONTRACT MANTHO RECONCOMPELTROPA AAAVINAO SI AKRI MAXIMO.RECONCOMPFETRI MAXIMO.RECONCOMPRULE MAXIMO.RECONLINK MAXIMO.SLARPI MAXIMO.SLARECORDS MAXIMO.SMS MAXIMO.SOLUTION MAXIMO.RECONLINKCLAUSE MAXIMO.RECONLINKRULE MAXIMO.SOLUTIONSPEC MAYIMO RECONMULTIUNK MAXIMO SOLUTIONSTATUS MAXIMO.RECONROL TILINK MAXIMO.RECONREDCLAUSE MAXIMO.RECONRESULT MAXIMO.RECONRULE MAXIMO SPAREPART MAXIMO.SPLEXICONLINK MAXIMO.SPRELATEDASSET MAXIMO.RECONRULECLAUSE MAXIMO SPWORKASSET MAXIMO.SR MAXIMO RECONTASKCOMP MAXIMO SYNONYMDOMAIN MAXIMO.RECONTASKFILTER MAXIMO.RECONTASKFILTER MAXIMO.TAGLOCK MAXIMO.TASKSCHEDULER MAXIMO.RECONTASKLINK MAXIMO.RELATEDRECORD XAT.OMIXAM MAXIMO, TAXTYPE MAXIMO.RELATION MAXIMO.RELATIONRULES MAXIMO.REORDERMUTEX MANINO TOTVERS MAXIMO.TDTVERSION MAXIMO.TEMPLATESTATUS MAXIMO.TERM MAXIMO.TICKET MAXIMO.TICKETSPEC MAYIMO REPORTAPPAUTH MAXIMO TROWNERHISTORY MAXIMO.TKOWNERHISTOR MAXIMO.REPORTDEPEND MAXIMO, TKTEMPLTACTIVITY MAXIMO REPORTOSPARAM MAXIMO TETEMPI TACTYSPEC MAXIMO TLOAMASSETCONTRACT MAXIMO.TLOAMDPAPARENT MAXIMO.TOOLINV

MAXIMO.TOOLOUAL MAXIMO TOOL TRANS AAAVINAO UKEPOPEE MAXIMO.USERPREF MAXIMO.USERPURGL MAXIMO.VENDORSTATUS MAXIMO.VIEWSECURITYDET MAXIMO WARRANTYASSET MANTHO WARRANTYI INF MAXIMO WARRANTVUEW MAXIMO.WARRANTYVIEWLINE MAXIMO.WARRANTYVIEWLINE MAXIMO.WFACTION MAXIMO.WFAPPTOOLBAR MAXIMO.WFASGNGROUP MAXIMO WEASSIGNMENT MAXIMO.WFCALLSTACK MAXIMO.WFINPUT MAXIMO.WFINSTANCE MAXIMO WEINTERACTION AAAVIMO WENODE MAXIMO.WFNODE MAXIMO.WFNOTIFICATION MAXIMO.WFPROCESS MAXIMO.WFREVISION MAXIMO.WESTART MAXIMO WESTOR MAXIMO WESURPROCESS MAXIMO.WFTASK MAXIMO.WFTRANSACTION MAXIMO.WFWAITLIST MAXIMO.WMASSIGNMENT MAXIMO.WMMATCH MAXIMO WOACTIVITY MAXIMO.WOACTIVITY MAXIMO.WOANCESTOR MAXIMO.WOASSETUSERCUST MAXIMO.WOCHANGE MAXIMO.WOCONTRACT MAXIMO WOGEN MAXIMO.WOHAZARD MAXIMO.WOLOCKOUT MAXIMO.WOLOCUSERCUST MAXIMO.WOMETER MAXIMO.WOOWNERHISTORY MAXIMO WORRECAUTION MAXIMO.WORELEASE MAXIMO.WORELEXT MAXIMO.WORKLOG MAXIMO.WORKORDER MAXIMO WORKORDERSPEC AAVING WORKPERIOD MAXIMO WORKPRIORIT MAXIMO.WORKTYPE MAXIMO.WORKVIEW MAXIMO.WOSAFETYLINE MAYIMO WOSAFETYPI AN MAXIMO WOSTATUS MAXIMO.WOTAGLOCK MAXIMO.WOTASKRELATION MAXIMO.WPEDITSETTING MAXIMO WPITEM MAXIMO.WPLABOR MAXIMO.WPMATERIA MAXIMO.WPSERVICE MAXIMO.WPTOOL PTASSET.RAIL DTASSET RailAssats Line PTASSET.RaiLassets_line PTASSET.RaiLassEts_LINE_MAP_V PTASSET.RaiLassets_point PTASSET.RaiLassEts_POINT_MAP_V DTASSET.RailAssets_poly PTASSET.RailuasseTs_POLY_MAP_\ PTASSET.Railway
 PTASSET.RailwAY_MAP_V
 PTASSET.ServiceRequest
 PTASSET.SERVICEREQUEST_MAP_V DTASSET WorkOrde TASSET WORKORDER MAP V

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SDE schema with access to Maximo tables



Government of South Australia

Department of Planning, Transport and Infrastructure

Database Connection selected

Spatial analysis and statistics

- Nearest Neighbour Analysis
- Density Analysis
- Weighted Density Analysis













