AIMS Coordinator's Meeting Minutes
July, 15 2004
Hosted by Water One

Announcements

Shannon Porter informed the group about a bug AIMS found in ArcGIS 9 where the projection information in the planimetric coverages is being misread. Instead of being read as Kansas North it is being read as Delaware.

Water One Introduction

Water One is a quasi municipal utility serving portions of Johnson County. It is controlled by a 7 member elected board.
Water One pulls water from the Missouri and Kansas Rivers and from wells.
Water One has 2400 miles of water mains in the county.
Water One uses SQL Server 2000 and ArcSDE 8.3.

Versioning

Water One uses a geodatabase versioning schema that allows them to QC their data in a stepped process. The default version is never touched accept by the sde administrator. The default and their QC Current version are produced as Protected versions that only a few people have privileges into. The rest of their versions are produced as public. The public versions are reconciled into the QC Current version which is checked by personnel and then this is reconciled into the default version by the sde administrator.

Terry Watts discussed the reasoning behind using versions and described some of the particulars of SDE. There are 3 tables that are involved in versions 1) SDE_STATES, 2) SDE_STATE_LINEAGE and 3) SDE VERSION.
SDE_STATES – keeps track of the versions
SDE_STATE_LINEAGE – keeps track of the changes applied to a version
SDE_VERSIONS – keeps track of the version name

Terry discussed the usefulness of compressing the geodatabase. It is done to improve performance and to clear out all of the A and D tables produced when editing a versioned geodatabase. He pointed out that compress does compress the entire database, that all users must be out of the database to allow a compress and that only the SDE administrator has privileges to perform a compress operation.

Data Replication

Terry also described the role of data replication in Water One. Water One uses data replication to move their SDE data from their production server to their user server. They use Transitional Replication that allows them to only move the updated information instead of requiring them to move all of the data with each replication like Snapshot Replication. All of the replication is handled directly by SQL Server, SDE does not have a role in the replication process.

Redlining

Jamie Roberts discussed Water One's redlining technique. They had originally planned to georeference AutoCAD drawings to use as redlining, but found this to be tedious and inaccurate so they have gone to using a hyperlink procedure within ArcMap to do redlining.

Water One employees open the AutoCAD drawing, select all and copy the drawing to a layout view within an ArcMap document. They then export the layout as a PDF, and open that PDF in a different ArcMap document that will allow them to set the path of that PDF document into a field in their shapefile that is used to hyperlink the PDF document. The user then clicks on this hyperlink to view the AutoCAD drawing when needed.

Using ArcReader

Water One uses ArcReader to provide a simple interface for their non-technical employees. They get to see all of the information and can do a Find process in ArcReader to locate a specific address or zipcode etc. The project that was setup for ArcReader views feature classes stored in Water One's SDE database.

Field Computing

Tom Price demonstrated Water One's use of geometric networks and some custom applications that field technicians use. The geometric networks allow crews in the field to determine what valves need to be turned off when a water line break occurs. Water One feels this alone saves them many man hours of hunting for all of the shutoff valves during a break incident. Tom has produced two dlls that are used to provide the tools to the field crews. These simplify the parameters needed to setup network tracing.

Utilizing AIMS to Create Hydrologic Models

Matt Carter demonstrated how Water One utilizes data from AIMS in developing their hydrologic models. There are two models that are used 1) Checking Main and 2) New Customers.

Water One has to verify that they can keep their max day water flow going throughout the system. They have to provide 1000 gpm to residential and 1500 gpm to commercial entities. They do not want the system falling below 20 psi or they will start to have air infiltrate the system and degrade performance.

Water One uses AIMS data to determine 1) Where is the new development, 2) What is currently at the site, and 3) Elevation. They use the models and this data to determine if new lines will need to be run to accommodate a new residence or business.

Future

Water One is planning to incorporate the following in future technology:
ArcIMS

GPS
PDAs
Wireless Access

Utility Repository

Matt Wennstedt introduced the new Utility Viewer application that AIMS is developing to allow users to determine if prebuilt utilities are present at a site. AIMS has picked a small pilot area to begin with so the program can be evaluated. A secure login will be provided to alleviate security concerns. Matt emphasized that this is a planning tool only. It should not be thought of as a replacement for One Call.

The viewer will include the following data:
Water
Sewer
Gas
Electric
Storm Water
Georeferenced Plats (some discussion of this occurred focusing on accuracy)
Phone
Cable
Oil
Natural Gas