
Migrating a County Government to Geodatabase Editing

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Abstract

Johnson County AIMS (Automated Information Mapping System) is the GIS department in the third fastest growing county in the nation and the largest county in Kansas. The department, originally started in 1986, has a significant code investment in AML, Avenue, and MapObjects for the purpose of data maintenance and quality control.

Abstract (Cont.)

In order to utilize many of the new advances in ArcSDE and ArcGIS, AIMS realized it needed to expedite its transition from coverage to geodatabase editing and replace current editing applications. This paper identifies not only the issues and problems AIMS faced, but the solutions, workarounds, and best practices that AIMS has discovered in the process of this transition.

Preparations

- Inventory geographic data and required formats
- Inventory editing routines
- Inventory applications that consume geographic data
- Identify frequency of dataset update
- Review naming for standardization

Milestones

1. Load data into SDE environment
2. Determine Order of Coverages to Migrate
3. Develop Editing Procedures
4. Determine Publishing Mechanism
5. Develop Publishing Procedures

1. Load data into SDE environment

- Load procedures
 - ArcCatalog - manual
 - SDE Administration Commands
 - Does not register with the geodatabase
 - ArcObjects
- Reloading
 - Dynamic data
 - Slow

2. Order of Coverages to Migrate

Actively Edited Point Files

GolfHole_PT

School_PT

CntyFuel_PT

CntyOffice_PT

FireStation_PT

GovtOffice_PT

Hospital_PT

Hotel_PT

Library_PT

MedActStation_PT

NursingHome_PT

PoliceStation_PT

PostOffice_PT

Shelter_PT

Siren_PT

ATM_PT

ConvenienceStore_PT

Restaurant_PT

Towers_PT

2. Order of Coverages to Migrate

Other Actively Edited Files Without Annotation

Cerizip_PL

FireDist_PL

SherDist_PL

SubParcZoning_PL

Zip_PL

Watershed_PL

GolfFairway_PL

ElectricServiceArea_PL

GasServiceArea_PL

NpmsPipe_LN

WaterDist_PL

WilliamsPipe_LN

CentCorpBnd_PL

Cemetery_PL

Apartment_PL

2. Order of Coverages to Migrate

Actively Edited Files With Annotation

Lake_PL

Water_LN

Stream_LN

Golf_PL

SchoolDist_PL

SchoolPrivate_PT

ShopCenter_PL

Museum_PT

2. Order of Coverages to Migrate

Semi-Static Files

Sunflower_PL

CntyBnd_PL

PLSS_PL

PLSSQuarter_PL

FloodZone_PL

River_PL

FemaQ3_PL

Soil_PL

Plat_PL

Park_PL

SchoolAttendBnd_PL

AirCenter_PL

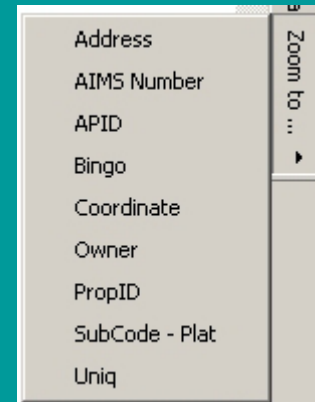
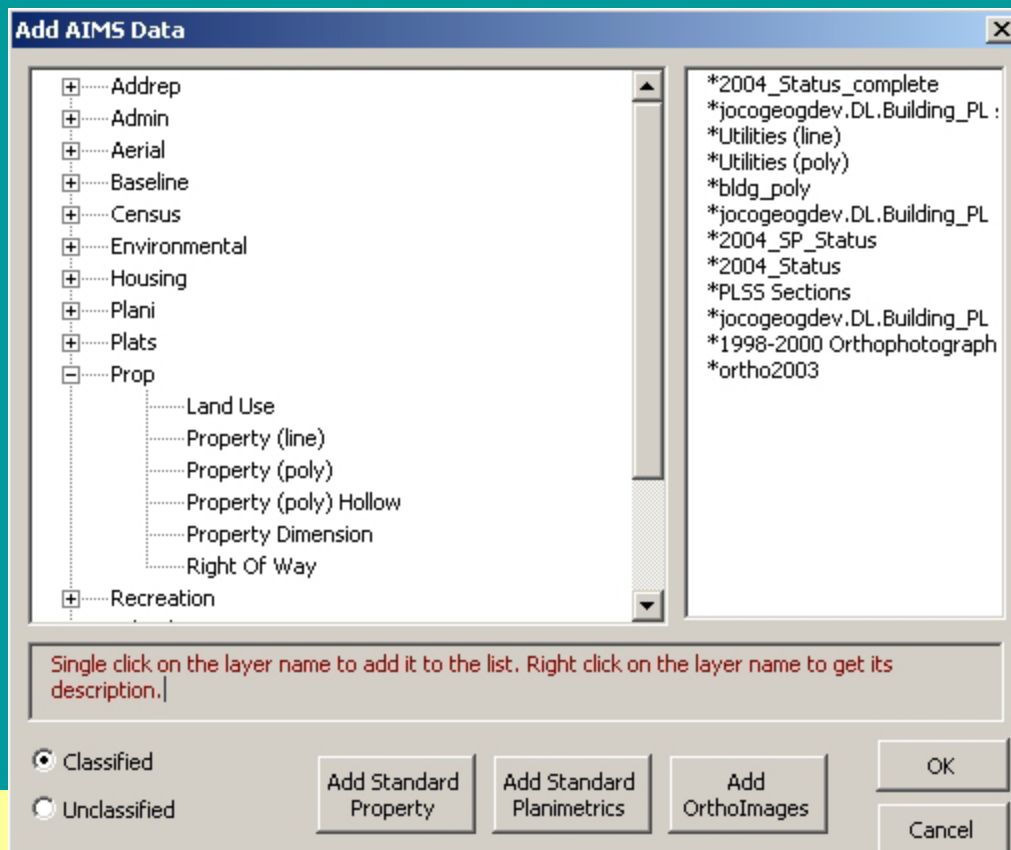
AirExec_PL

Rail_LN

FlightCorridor_PL

3. Develop Editing Procedures

- Utilize built in tools as much as possible
- Create custom Add data and zoom to tools



3. Develop Editing Procedures

- Use of Custom Editor Listeners



- New Fields in the Data
 - AIMSfid
 - Will go into every editing feature class except annotation
 - DATEADDED
 - DATEMOD
 - LASTUSER 20 Characters, Login Username
 - XCOORD (If point file) Double
 - YCOORD (If point file) Double
 - SECTID (in Plani)
- Multiple Magnifier windows

4. Develop Publishing Mechanism

- Data Converter
 - Table
 - Ini file
 - GUI
 - Command line

```

d:\ini - Notepad
File Edit Format View Help
:used with dataconverter
:Shapefiles, Coverages, CAD just use Type and Path
:Personal Geodatabase: use Path as full path to .mdb, FeatureClass for name, outDataset if there is one
:SDE does not use inPath or outPath
:LogFile is where DataConverter will write the log files
:2 logfiles are written, the one you designate and one with _delimited.txt
:syntax for using ini is full path to dataconverter.exe ini,fullpath to ini
[Process]
InType=sde
InPath=
InServer=admsdbwin02
InInstance=afms_sde
InDatabase=jocogeogdev
InUser=dl
InPassword=jocoaies
InFeatureClass=SherDist_PL
outType=csv
outPath=M:\data
outServer=
outInstance=
outDatabase=
outUser=
outPassword=
outDataSet=
outFeatureClass
outIdSize=
outConfigKey=
LogFile=d:\temp\
query=all
    
```

The screenshot shows the 'Data Converter' application window. It has two main sections: 'Source' and 'Target'.
 Source Type: Personal Geodatabase, Enterprise Geodatabase, ArcInfo Coverage, Shapefile. 'Shapefile' is selected.
 Source Path/FileName: D:\data\WorldTables\demog
 Target Type: Personal Geodatabase, Enterprise Geodatabase, Shapefile. 'Personal Geodatabase' is selected.
 Target Personal Geodatabase: D:\data\geodatabase\usa.mdb
 Target Feature dataset: (empty)
 Target Feature class or table name: (empty)
 Load SDEs: Feature 0, 01 0
 A 'Load FeatureClass' button is at the bottom right.

The screenshot shows a data table with the following columns: Name, Type, Path, Instance, Database, User, Password, FeatureClass, OutType, OutPath, OutInstance, OutDatabase, OutUser, OutPassword, OutDataSet, OutFeatureClass, OutIdSize, OutConfigKey, LogFile, and Query. The table contains multiple rows of data, including entries for 'admsdbwin02' and 'afms_sde'.



5. Develop Publishing Procedures

- AIMSDataMaint SQL table:
 - Accessible via website
 - Emailed reminder to check
- Keeps track of:
 - Last update
 - Next update
 - Updatee
 - Primary Format
- Publishing Website

Other Issues

- Archiving
- Annotation
 - Coverage requires subclass
 - Feature linked?
- Database maintenance and database access
- Conversion back to tiled coverage
- Dev/Pub server

Summary

- Take small steps
- Utilize arcobjects to create scripts for loading data into SDE
- Choose easy migrations and learn from them
- Utilize the power of ArcGIS

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