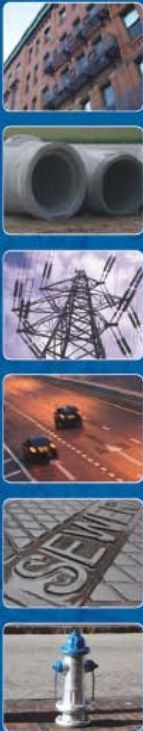




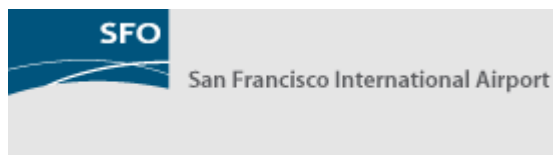
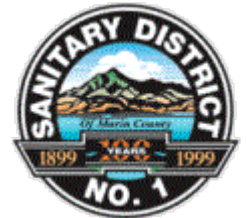
“Bridging the gap between CAD and GIS for Cadastral Mapping”

CCMA 2008 Annual Conference - Sacramento

Colin Hobson
Munsys, Inc

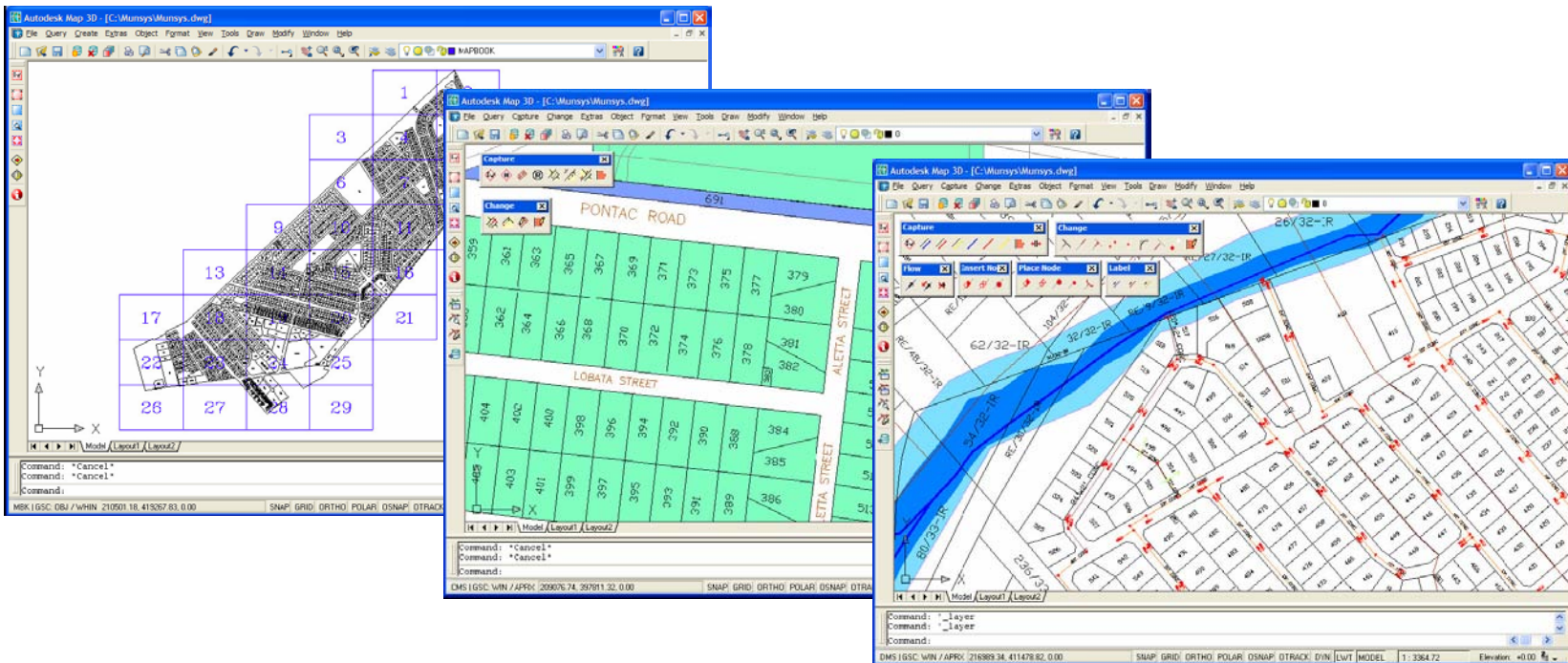


Sample Customers – North America

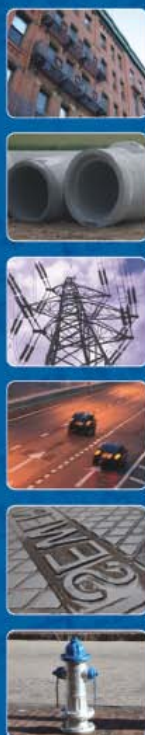


Overview

Munsys provides an integrated family of proven solutions that solve the asset mapping and management needs of utilities and State and local governments.

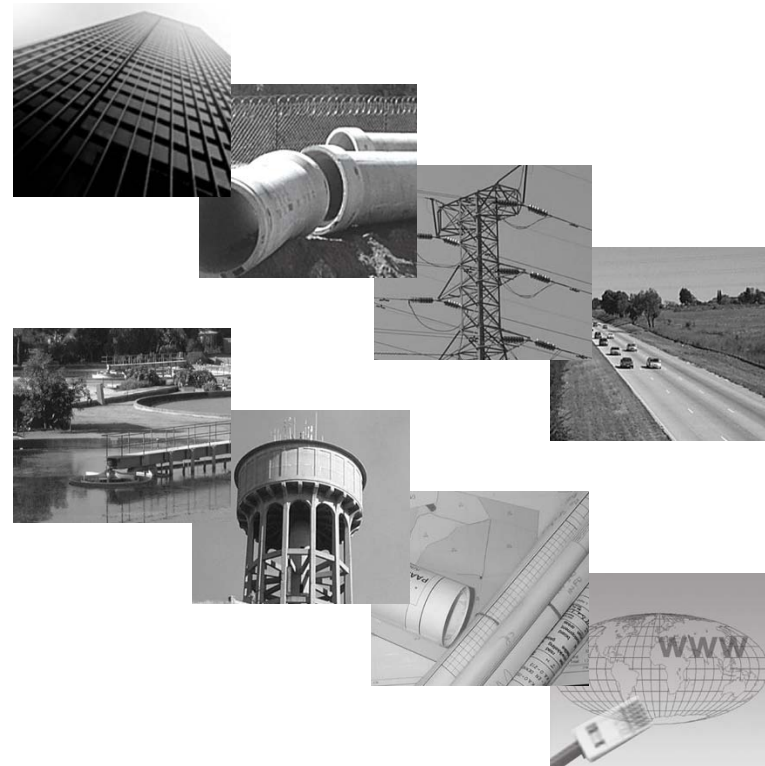


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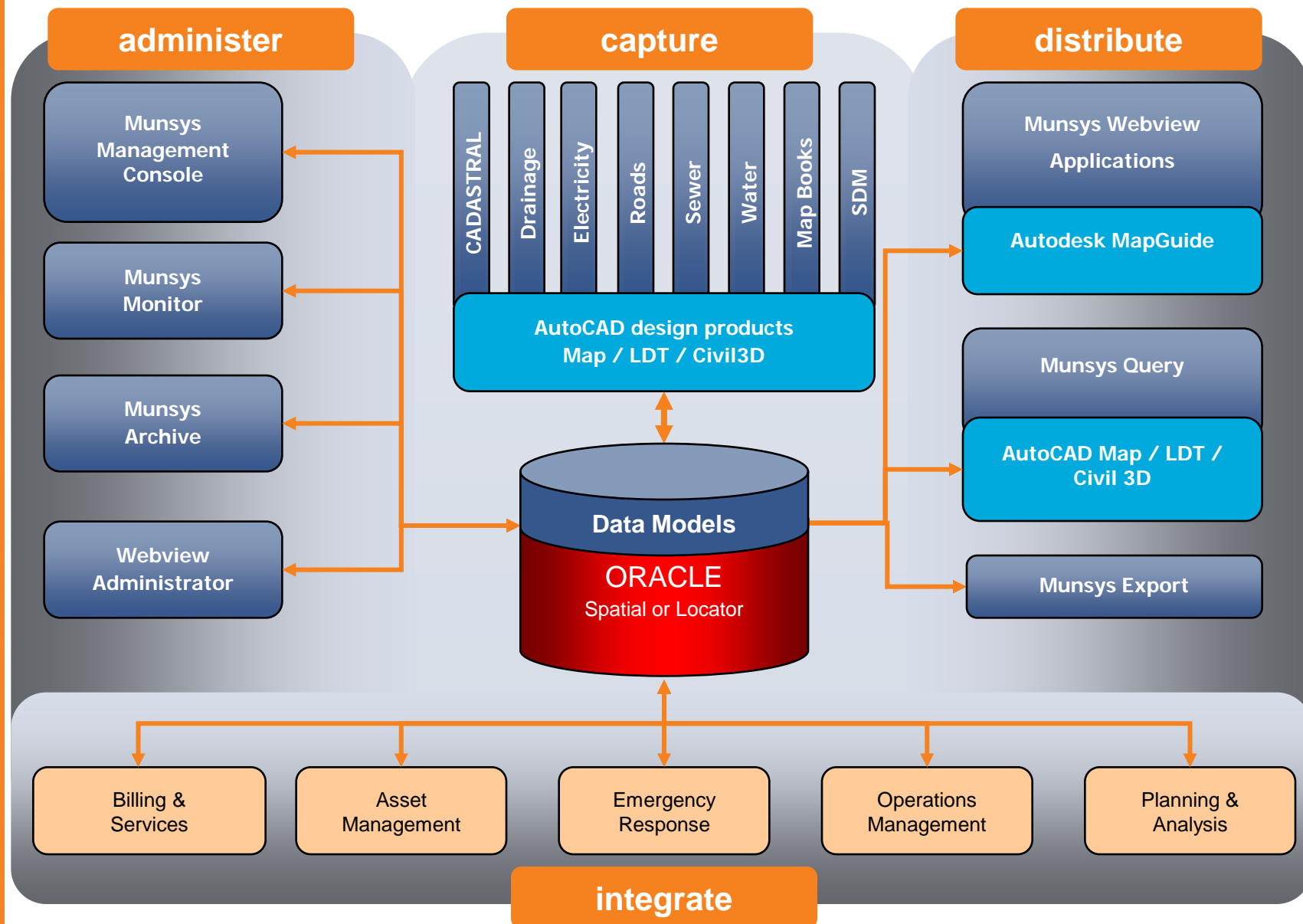


Munsys Products

- Cadastral
- Drainage
- Electricity
- Roads
- Sewer
- Water
- Map Books
- Spatial Data Manager
- Webview
- Archive
- Monitor
- Management Console
- Query



The Munsys centralized data solution



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Why Munsys ?

It's all about CAD and GIS...



Introduction

Today most CAD systems have GIS functionality and most GIS systems can work with CAD data.

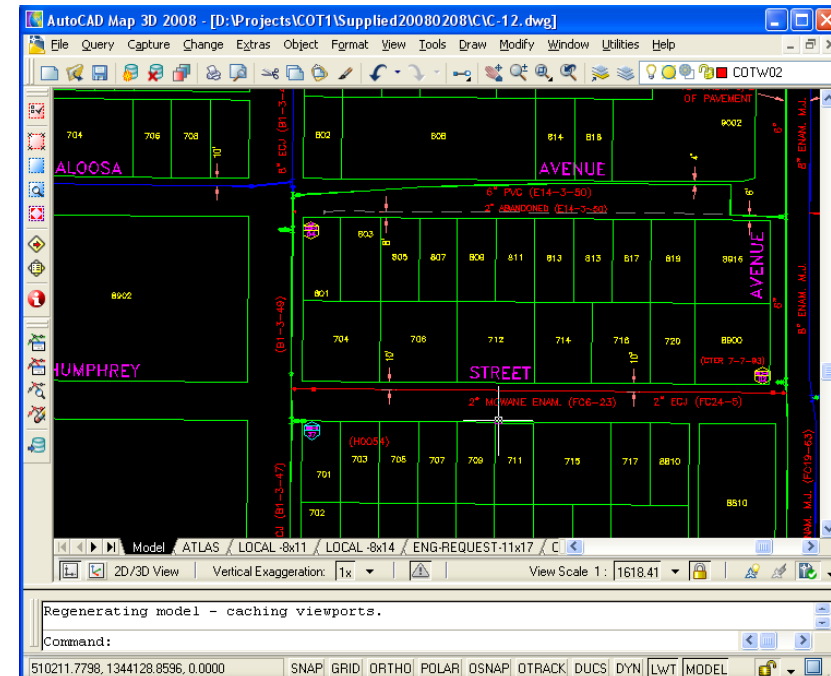
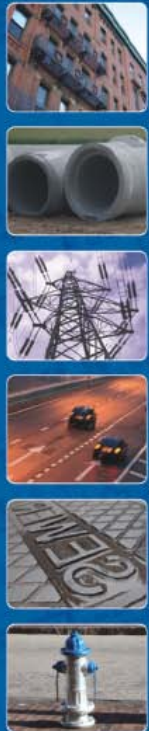
Yet most organizations continue to have both CAD and GIS systems being used in different groups with limited and very ineffective data sharing between them.

Can these traditionally disparate systems effectively share data?



The CAD focus

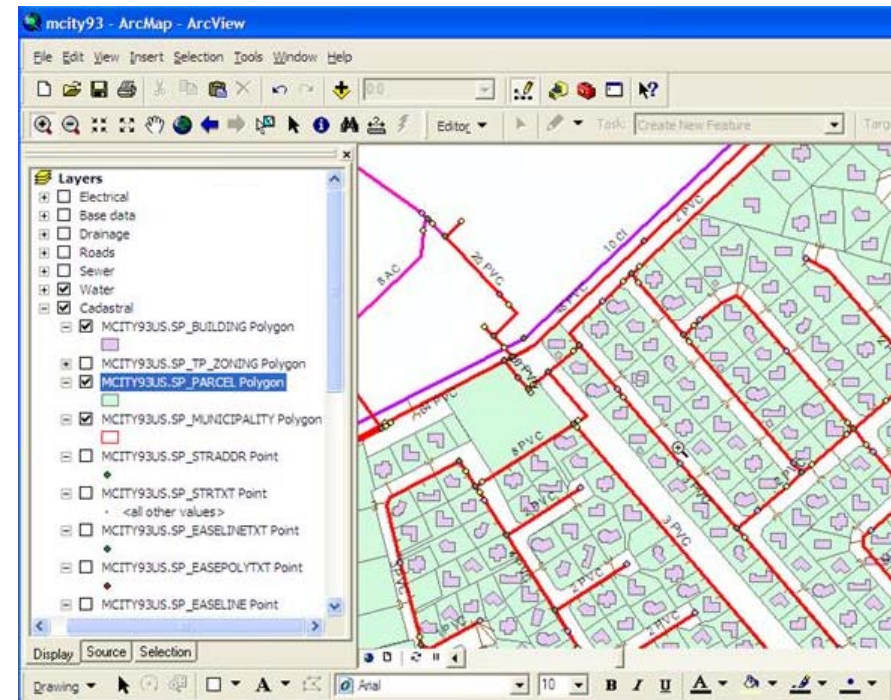
- Detailed designs
- Rich drawing and design experience
- The data is in the drawing and annotations
- Most spatial data originate from the CAD environment as designs



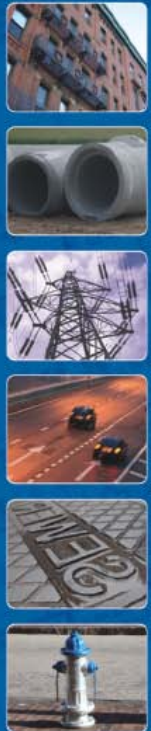
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The GIS focus

- Cartographic excellence
- The data is in the attributions
- Data for modeling, analysis and presentation
- Forms the basis for integration with other enterprise systems



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Defining the problem

- CAD and GIS data needs and data users are different
 - There are separate workflows and players in each
 - They need different tools
 - Different data standards apply
 - Coordinate precision and editing needs are different
- However, both CAD and GIS groups definitely need to share data
- Also: There are two dynamics at play – the different technologies as well as the approach to data management



Solving the problem – with existing tools

- Initiate project to convert the CAD data to GIS
- Trace or re-digitize drawings to create required topology and integrity
- Data processors and automated tools are used to “fix” the CAD data
- Two separate systems are maintained
- How many times have you heard the question:
 - When did we receive the last update?



Creating new problems

- CAD remains the editing engine of choice
- New plans and/or as-built drawings are provided in CAD
- To keep the GIS current all update processes need to be duplicated
- Two systems tend to get out of sync
- Trace or re-digitize projects are expensive and often introduce more errors
- Automated tools used to “fix” the CAD data typically only work on 80% and can introduce new errors
- Conflict between departments on data responsibility
- Twice the effort and no single truth of data...



Solving the problem – using the right tools

- Create GIS ready CAD data
- Store the data in Open GIS format instead of drawings
- Do not duplicate data
- Create a central data repository
- Each department takes responsibility for their own data
- The latest data is always available to everyone
- Existing tools, workflows, and data standards remain in place

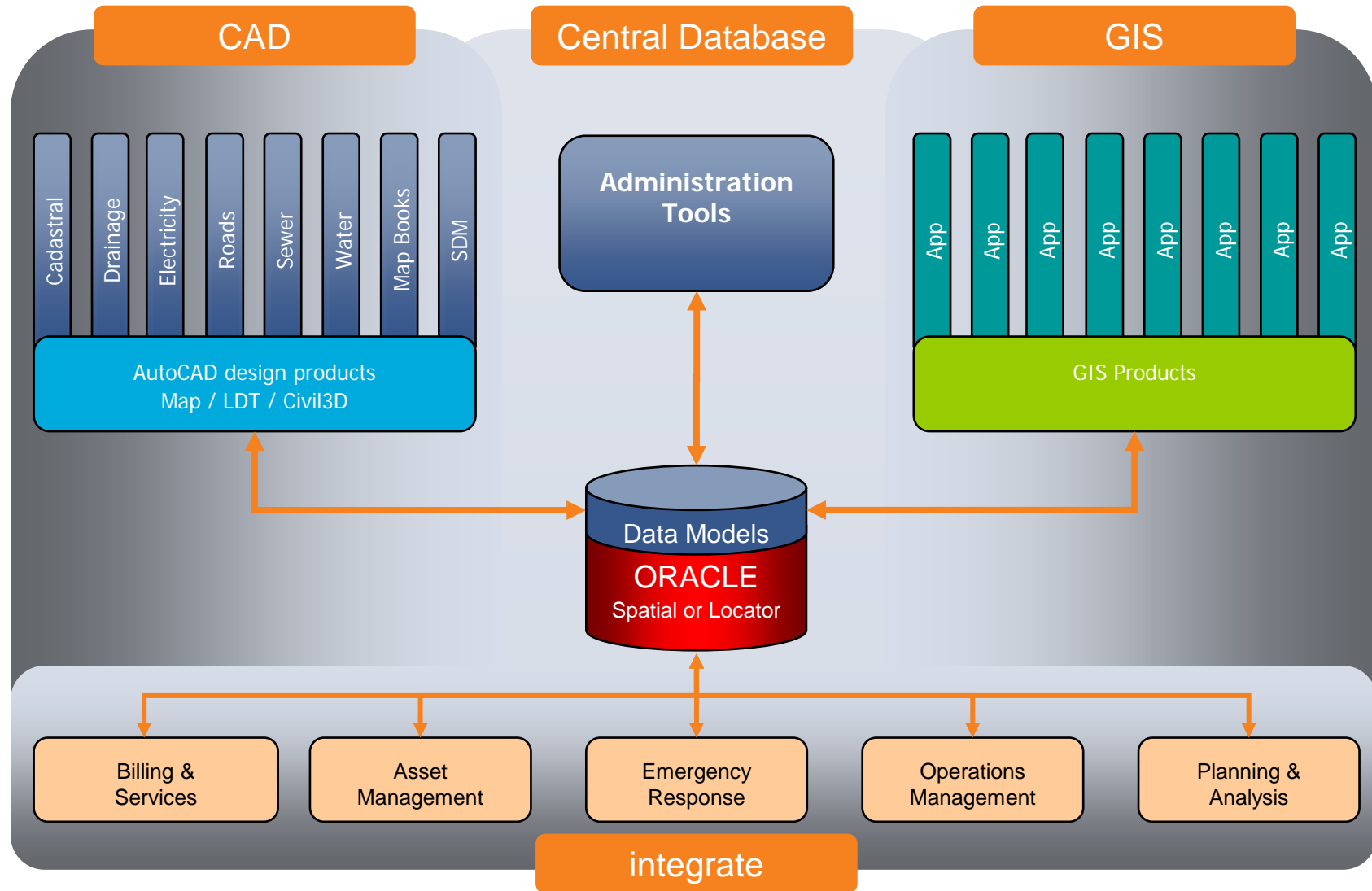


Demonstration

See munsys in action....



Solving the problem – using the right tools

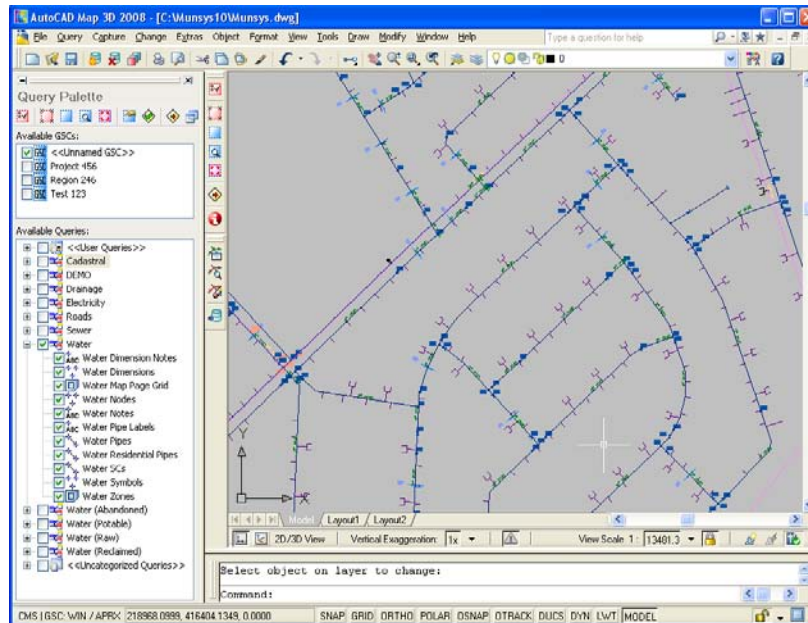


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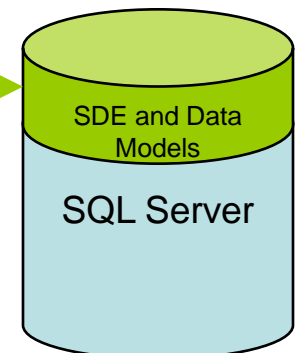
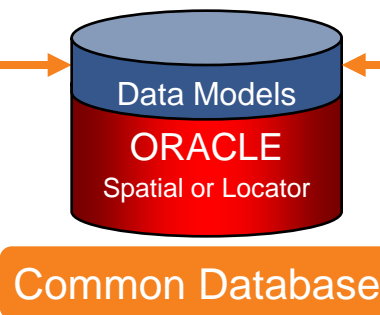
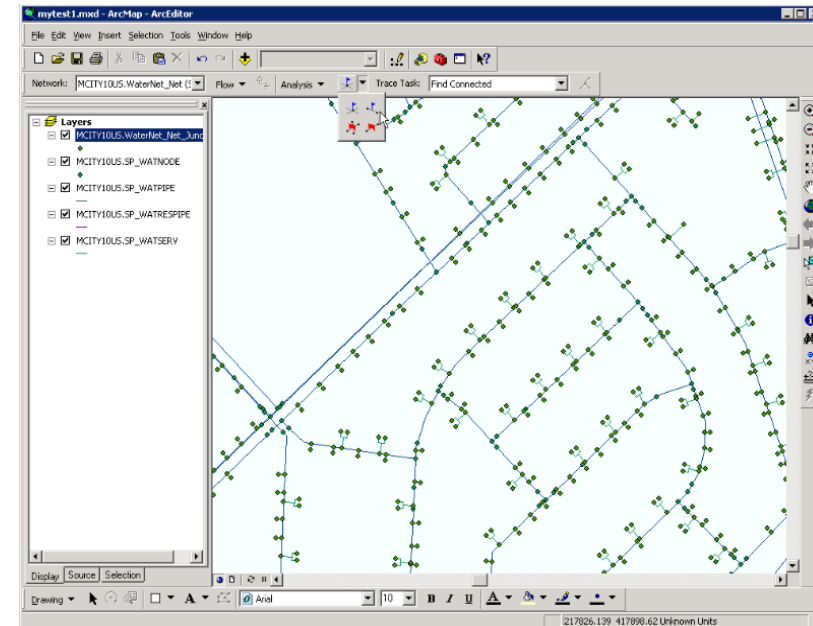


Solving the problem – using the right tools

CAD

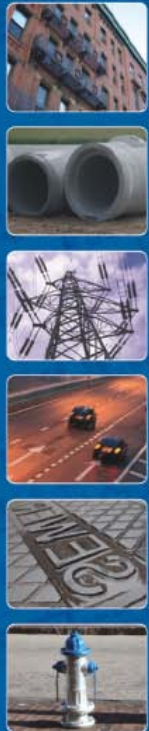


GIS



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right tools – proven results



Munsys-ESRI interoperability in action



Solving the problem – using the right tools

- The right tools must allow the CAD operator to create GIS ready data
 - Data creation tools
 - Integrity rules
 - Connectivity and topology
 - Lookup tables
- The tools must be easier to use than traditional methods
- The tools must apply the required business rules for each department
- The data must be shared through a central database
- The GIS operator must be able to use the data without any alterations



Bridging other Gaps

- Enterprise systems, financial, assessor, maintenance management etc
- Digital submissions, new developments
- CAD drawings to other groups
- Web sites, intranets, extranets



Summary

- Desire for data integrity, timeliness and reliability
- Data availability
- Organizations or groups should maintain their own data but it should be available for others
- Efficient workflow helped not hindered by technology
- Adopting OpenGIS standards now will avoid future data conversion
- **Use the rights tools for the right job...**



Munsys Benefits

- Powerful editing functionality - CAD
- Single dataset not many drawings and other files
- No more import/export or duplicate work
- OpenGIS data format
- History tracking
- CAD for editing GIS for analysis
- Geometry and attributes integrated into a single database record – use standard tools for managing this data and to link to other databases
- Off-the shelf product for small and large organizations



Questions

- Questions?
- For more information or a list of other customers that have adopted this approach please visit our website at www.munsys.com or email us at info@munsys.com
- Thank You.

