



Enterprise Technology And Solutions by ESRI

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Business GeoInfo Summit
April 18 - 19, 2005 · Chicago

What is “Enterprise”?

- An *enterprise* consists of all functional departments, people, and systems within an organization.
- Successful *enterprises* have a “free flow” of information between the systems that support their missions and functions
- It is not a proxy for size.



Geographic Information Systems (GIS)

- GIS is like other Enterprise Information Technology Systems...
 - Architecture
 - Interfaces
 - Development tools
 - Deployment strategies
 - Standards



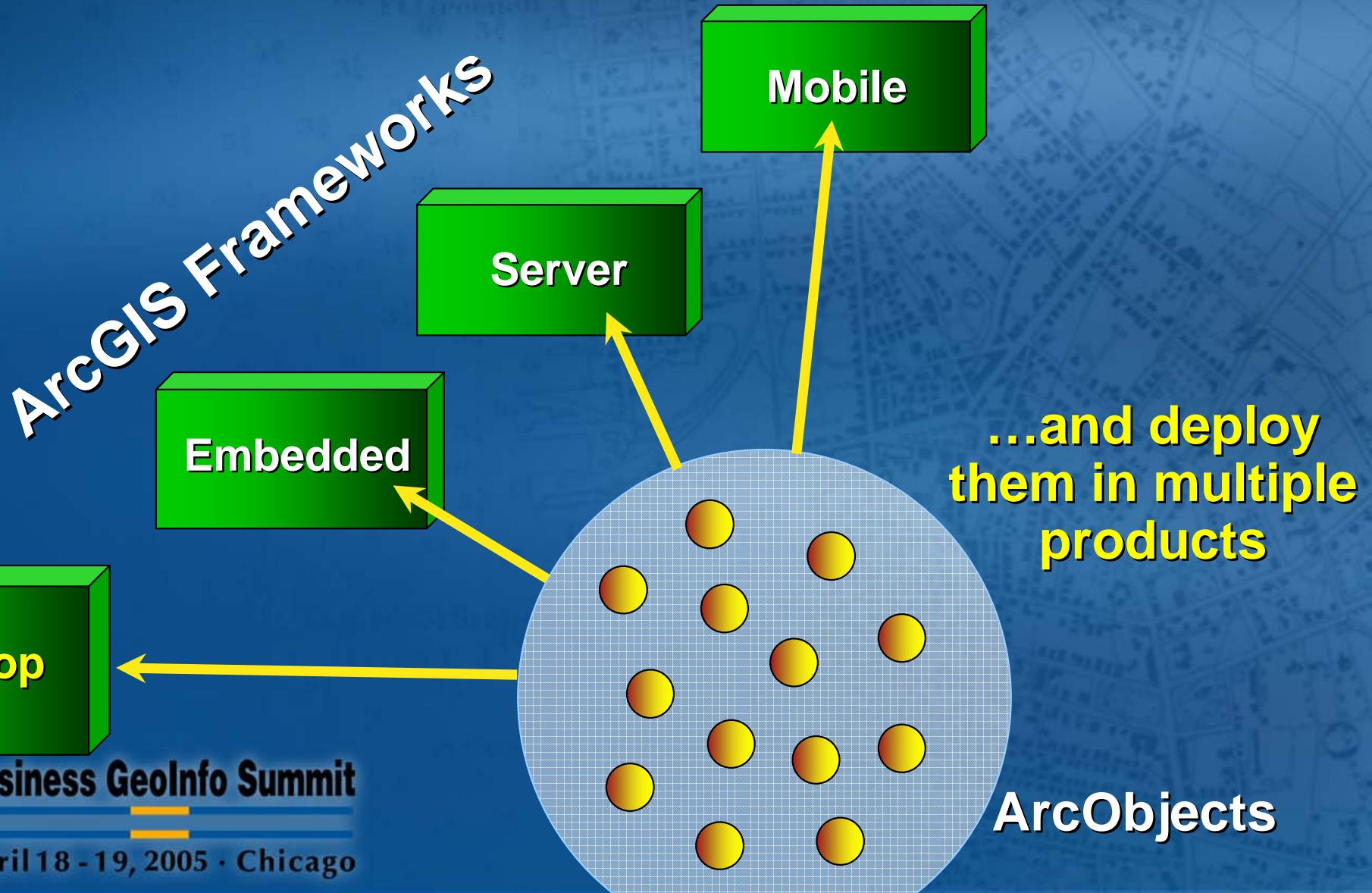
Standards for GIS

- **Information Technology Standards**
 - DBMS: RDBMS & SQL
 - Web Services: J2EE, .NET, XML/SOAP
 - Computing Platforms: Windows, Unix
 - Development Languages: C++, Java, Visual Basic, .NET (C#, etc.)
- **Domain Standards**
 - Industry, ISO, Military, OGC standards, FEA
 - Data and Metadata formats
 - Web Service APIs
- **User Community/Organizational Standards**
 - Your organization's :“IT System and Architectural Design Guidelines”



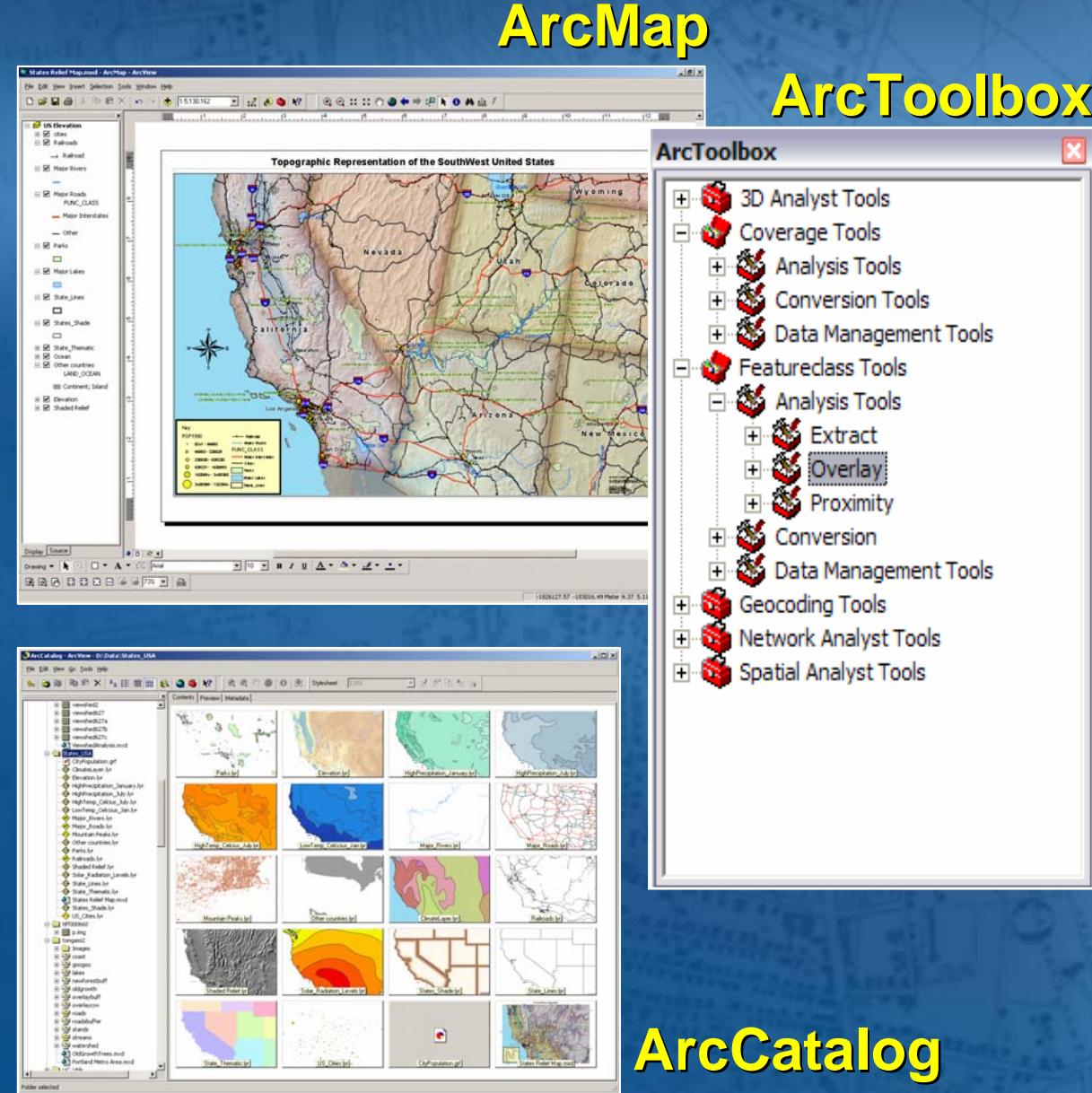
ESRI Product Strategy

Develop Generic GIS Components . . .



Desktop GIS

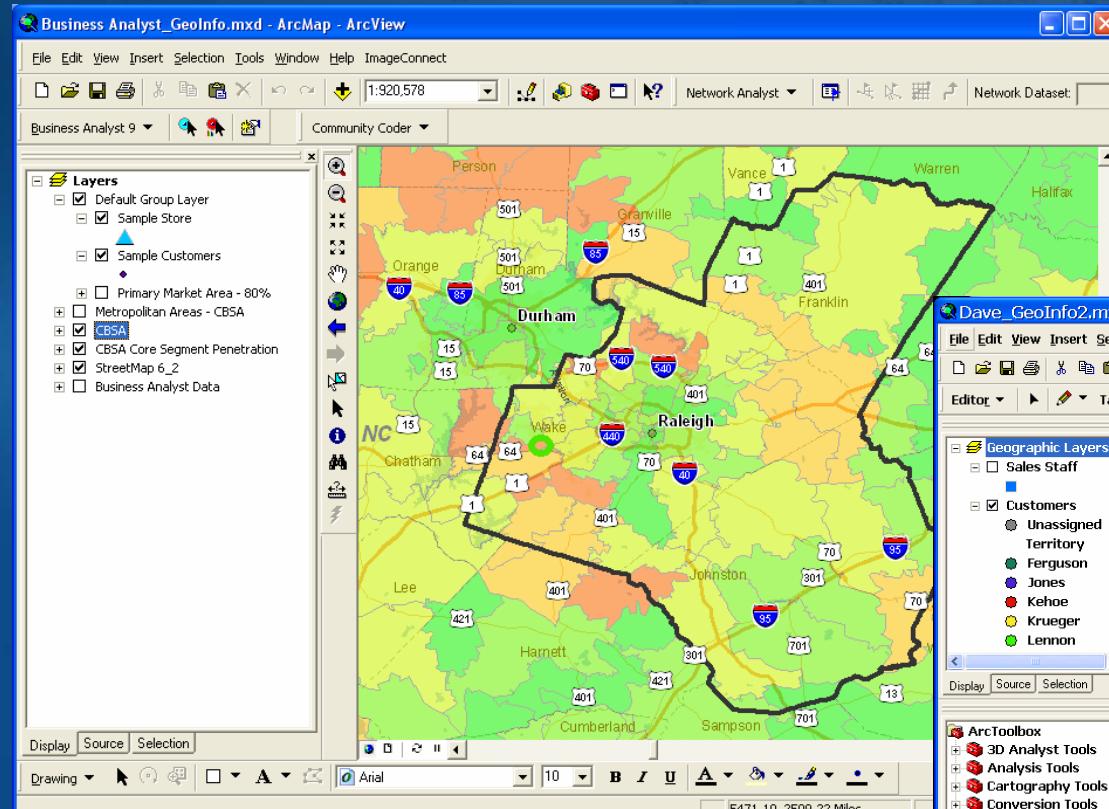
- A suite of Windows desktop applications for the Professional GIS User.
- ArcObjects on the desktop.
- Available in Products
 - ArcView
 - ArcEditor
 - ArcInfo



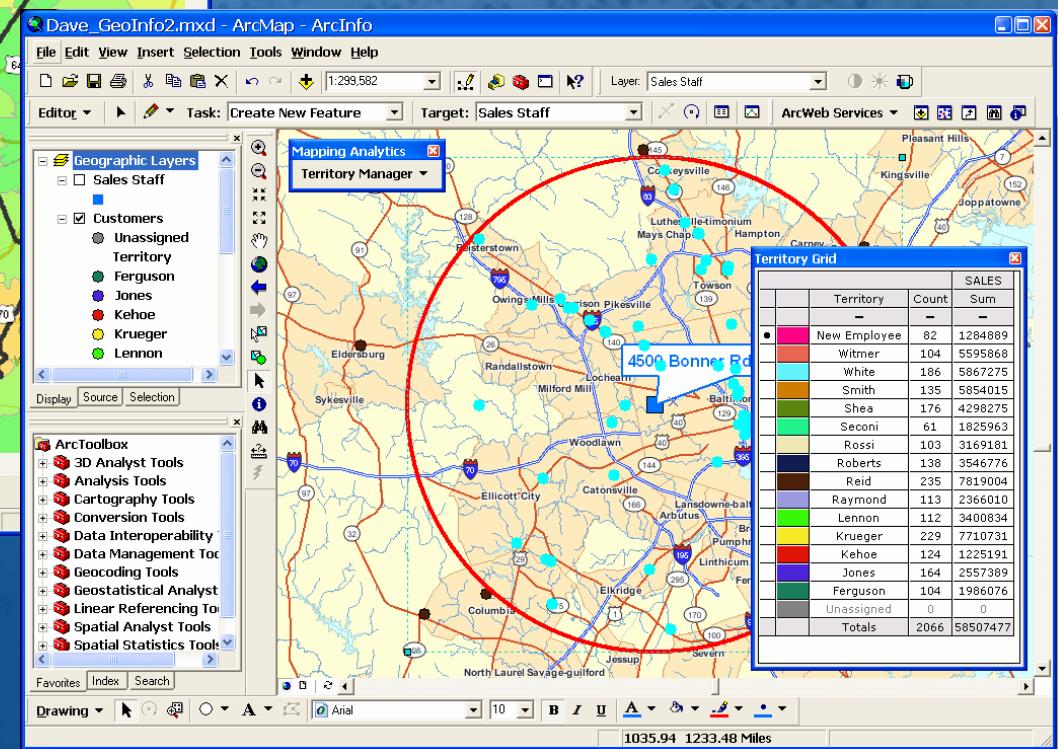
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ArcGIS Desktop: ArcView



Business Analyst



Territory Manager

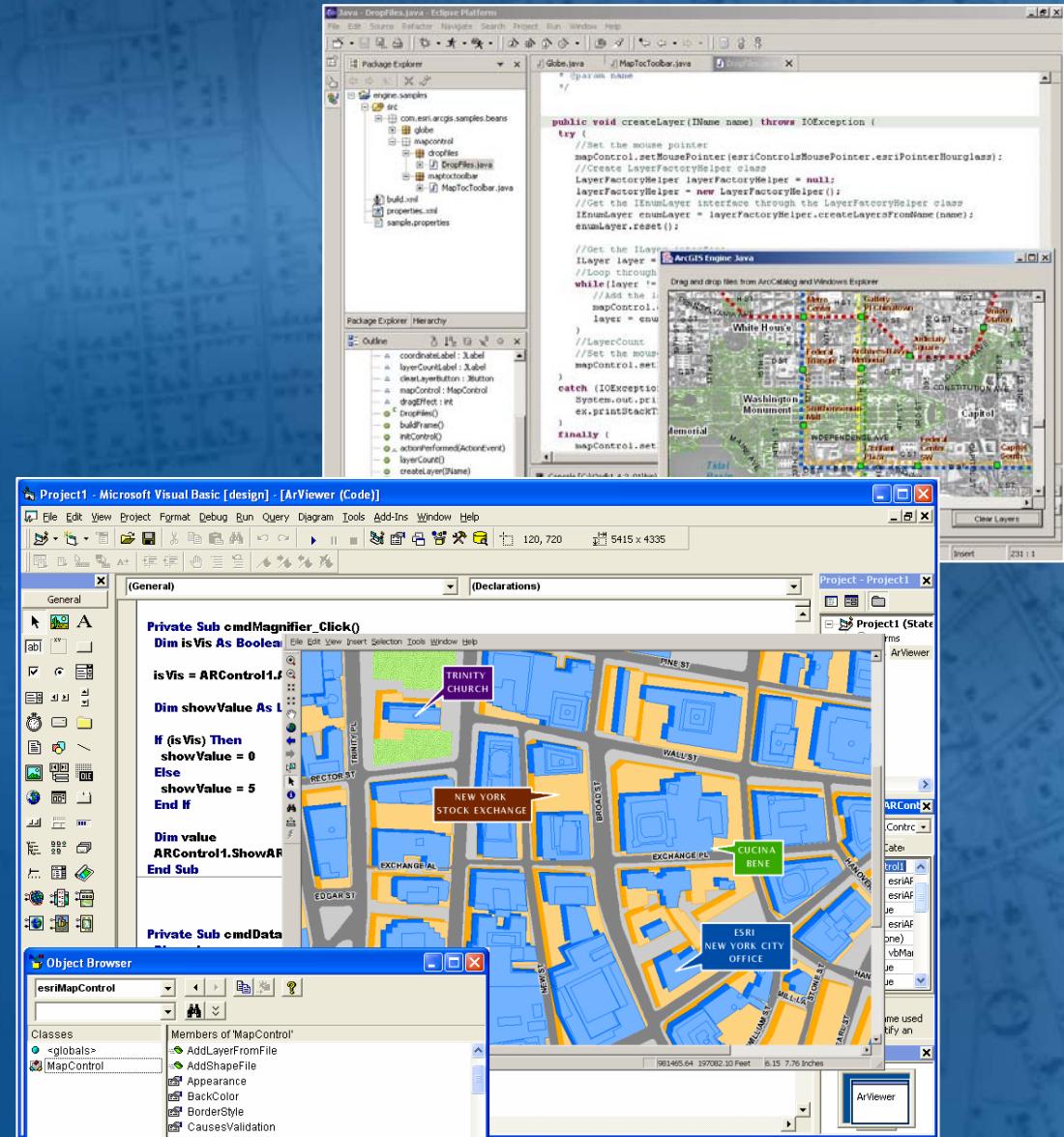


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Embedded GIS

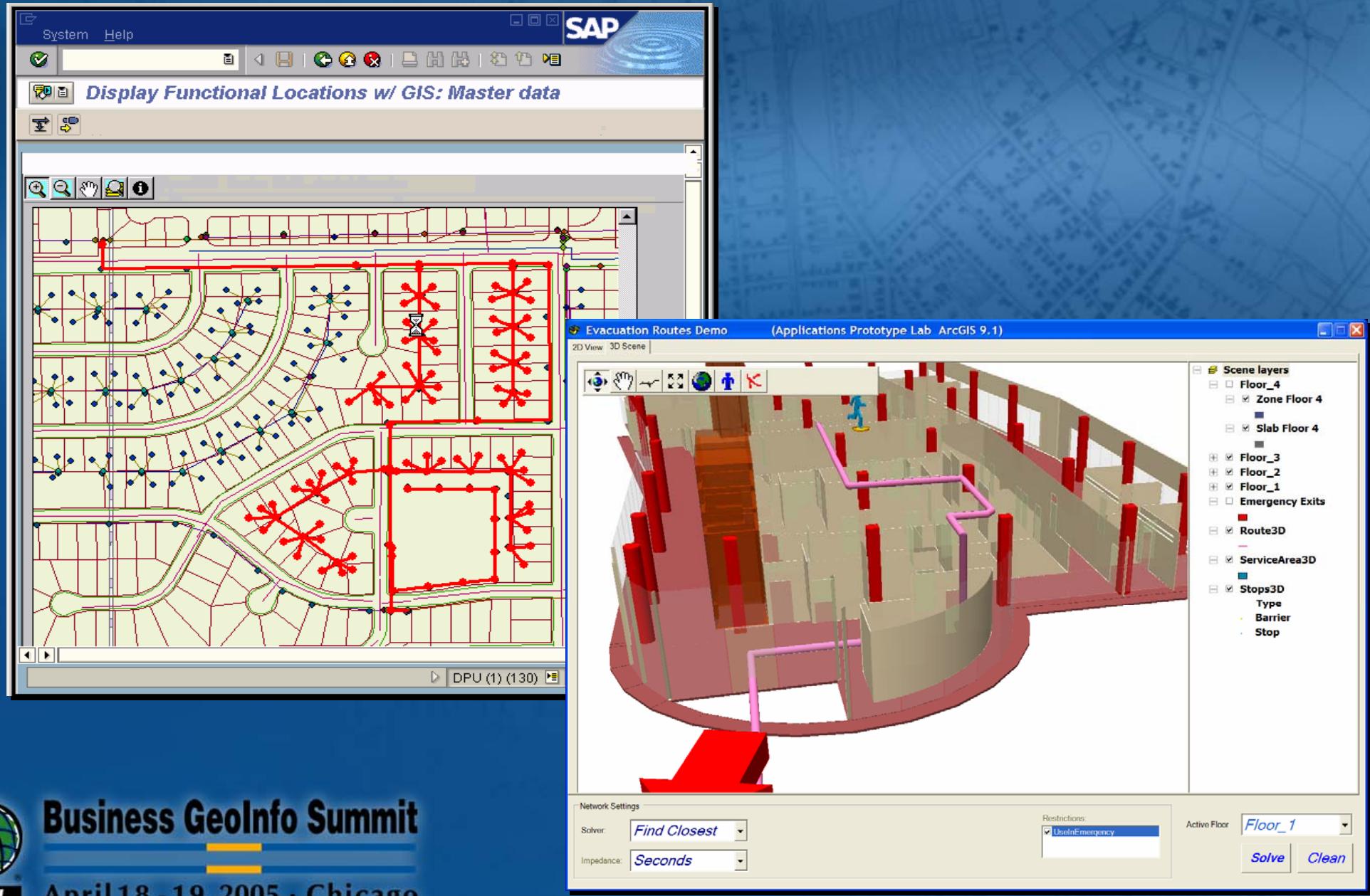
- Embeddable ArcObjects components (fine and coarse grain objects, controls & tools) for the **GIS Application Developer**.
- Cross-platform (Windows, UNIX, and Linux).
- Programmers interact with component object API.
- Product:
 - ArcGIS Engine



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ArcGIS Engine

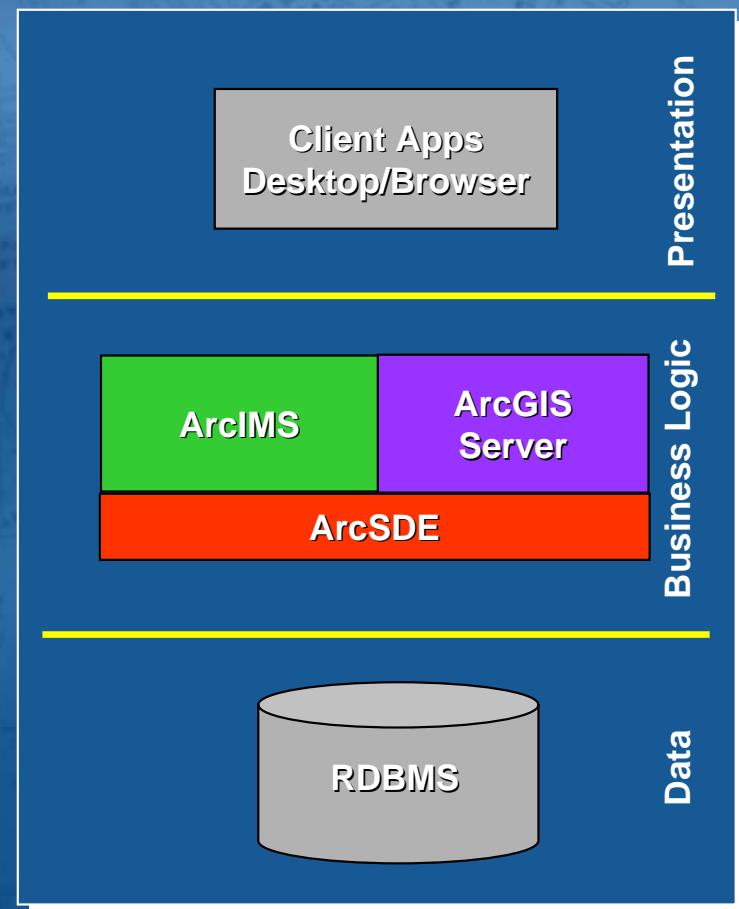


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Server GIS

- Centrally managed, server-based ArcObjects primarily for **IT Professionals**.
- Cross-platform (Windows, UNIX, and Linux).
- Strong developer platform (web controls, web application templates, samples and web services.)
- Products:
 - ArcSDE
 - ArcIMS
 - ArcGIS Server



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ArcGIS Server

Supply Chain Visibility Demo - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Well Links GeoFence BA Online AutoTheft MPD -DC

Supply Chain Viewer

Applications Prototype Lab (ESRI)

Exceptions

Stationary Inventory

Order: 15774
PTA: 10/24/2004 12:00:00 AM
ETA: 10/23/2004 12:00:00 AM
Var. Days: 1

Order # PTA ETA

15774	10/24/2004 12:00:00 AM	10/23/2004 12:00:00 AM
447	10/24/2004 12:00:00 AM	10/23/2004 12:00:00 AM
77	10/24/2004 12:00:00 AM	10/23/2004 12:00:00 AM

Applications Prototype Lab, Dispatcher v2 Demo - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Well Links GeoFence BA Online AutoTheft MPD -DC

Dispatcher v2

Applications Prototype Lab

3) Specify solver settings and solve.

Order in which stops will be visited:

as specified in the file. best order.

Impedance: Miles Consider Real Time Traffic Information

Use Hierarchy Generate Driving Directions Zoom to result

Driving Directions

Polyline - Click to start line. Click again to add vectors. Press Ctrl key while clicking, or double-click to add last vector a

Internet

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Mobile GIS

- Technology for remote GIS Consumers and Professionals.
- Full GIS
 - ArcEditor / ArcView on Laptop / Tablet PC
- Lightweight GIS
 - ArcPad on Pocket PC
 - Browser-based apps
- Phones and other Devices
 - Server / web service clients



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Mobile GIS



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Incident reported at:
1591 SLOAN ST APT 2,
55101
Close valve 1000230
10/20/2003 4:27:18 PM

Close valve 1000230
10/20/2003 4:27:18 PM

1 Get Map
2 Get directions
3 Get Facility Map

OK

Close valve: 1000230

Back

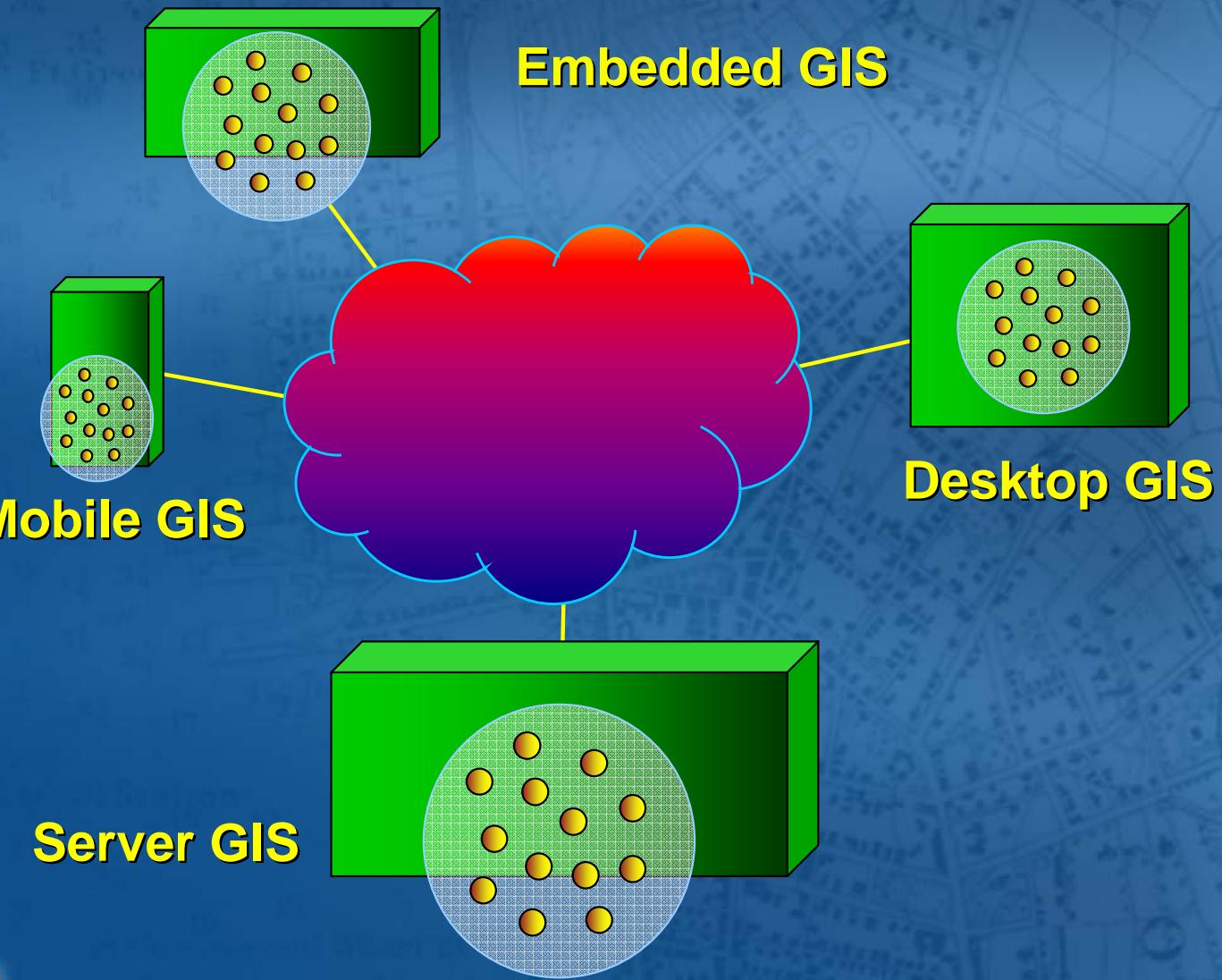
Directions by ESRI ArcWeb Services:
1. Depart Start Go
East on Nebraska Ave
W Drive 0.1 mile(s) ~
1 minute

Back

Deploying ArcGIS

Advantages

- Flexibility
- Consistency
- Integration
- Interoperability
- Efficiency



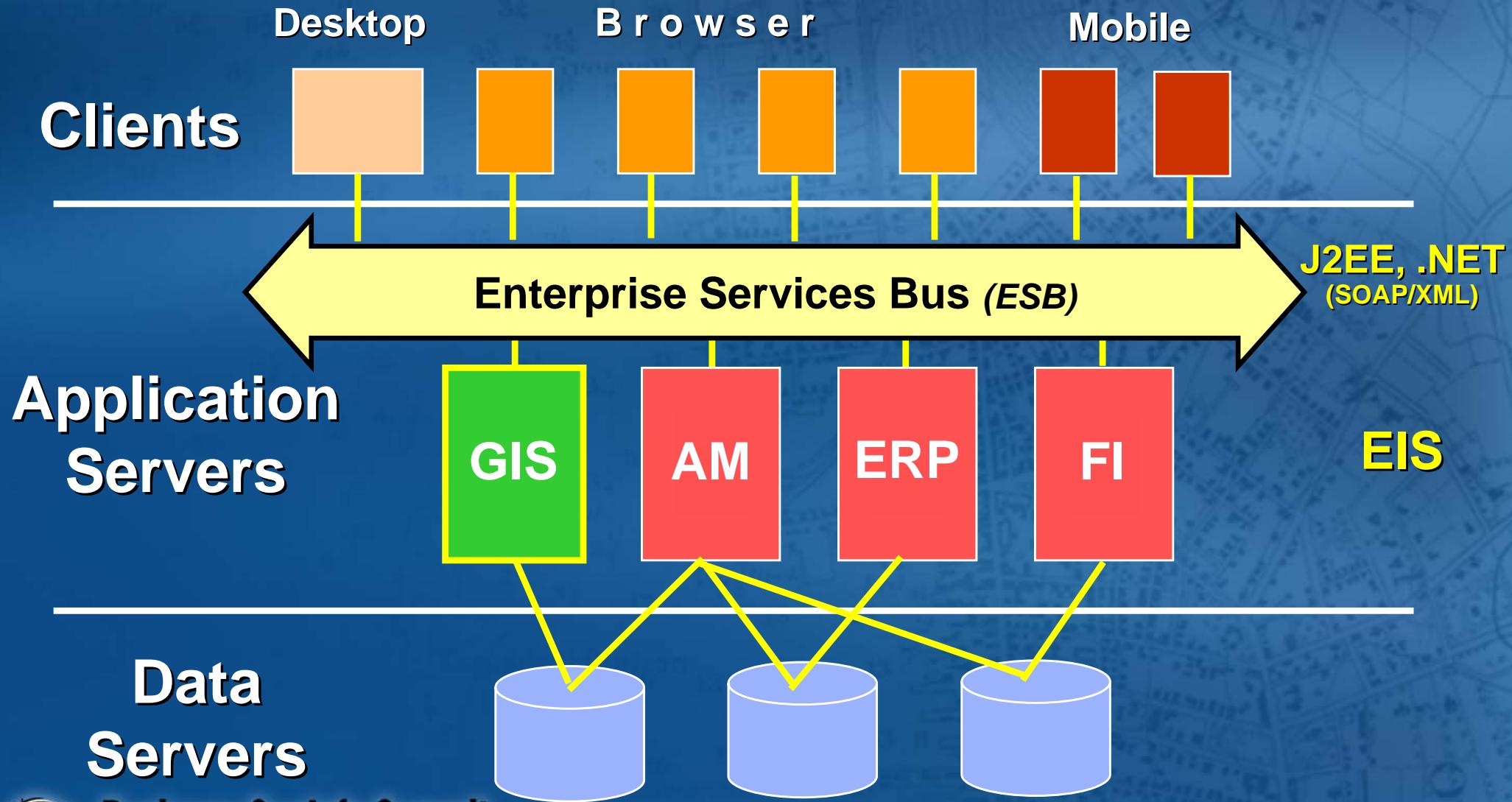
... To best serve the work flows of
the organization



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Enterprise Architectures



Advantages to Application Tier Logic

- **Flexibility**
 - Loose Coupling - separate applications from data
 - Utilize multiple RDBMS (SQL Server, Oracle, etc)
- **Reusability**
 - Centralized business logic/processes
- **Agility**
 - Take advantage of new hardware (blade, GRID) and software.
- **Interoperability**
 - Achieve Application Integration with web services



Application Server Architecture Support

Enterprise Vendors:

- **BEA** (Weblogic)
- **SAP** (NetWeaver- Xi)
- **IBI** (iWay)
- **Microsoft** (BizTalk)
- **IBM** (Websphere)

New !
Spatial Integration Adapter
for WebSphere Studio



Enterprise Application Integration (EAI) Examples

Geographically Enable...

- Customer Relationship Management (CRM)
- Customer Information System (CIS) Call Center
- Supply Chain Management (SCM) and Logistics
- Human Resources (HR)
- Enterprise Resource Planning (ERP)
- Asset Lifecycle Management (ALM)
- Many others...



CRM

Company (Sales) - YORK INTERNATIONAL CORP, PA, YORK

Company

Customer #	189256	Primary <input type="checkbox"/>
Name	YORK INTERNATIONAL CORP	
Dept/Div1		
Dept/Div2		
Dept/Div3		
Phone	717-771-6471	
Fax		Don't Fax <input type="checkbox"/>
WWW	www.york.com	
Cust Group	01 End-User	

Account Management

Acct. Mgr.	James Higgins		Override <input type="checkbox"/>
Region	Philadelphia		
Territory	Pennsylvania		

Contacts | **Opportunities** | **Open Issues** | **Notes** | **Leads** | **Quotes** | **Business**

	Primary	First Name	Last Name	Job Title
		Nan	Dixon	GLOBAL WEBMASTER
		Stephanie	Jones	MANAGER ORGANIZATIONAL
	<input checked="" type="checkbox"/>	Robert	Wernly	VICE PRESIDENT
		Don	Willemstien	MANAGER CHANNEL
		Debra	Russell	MANAGER BUSINESS

Audit

Created By:	<Not Available>	3/23/2000 12:00 AM
-------------	-----------------	--------------------

[New Activity](#) | [New Alert](#) | [Dia](#)

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Total Number of Steps: 14 **Estimated Driving Distance:** 87 miles **Estimated Driving Time:** 1 hour(s) : 40 minute(s)

Step	Directions	Distance (mi.)	Time (h:m)
1	Depart from ESRI-Philadelphia Go East on W 9th Ave	0.0	0:00
2	Turn left on Moore Rd	0.0	0:00
3	Turn left on State Hwy 23	0.4	0:01
4	Take ramp and go South East on Us Hwy 422	0.7	0:01
5	Go West on I 76 (Pennsylvania Tpke)	41.1	0:45
6	Go South West on Us Hwy 222	16.8	0:19
7	Go West on Us Hwy 30 (Lincoln Hwy)	1.0	0:01
8	Take ramp and go West on State Hwy 283	0.2	0:00
9	Go West on Us Hwy 30 (Lincoln Hwy)	22.5	0:25
10	Turn left on N Sherman St	1.0	0:02
11	Turn right on State Hwy 462 (E Market St)	1.1	0:02
12	Turn left on S Pershing Ave	0.4	0:01
13	Turn right on Kings Mill Rd	1.0	0:02
	Turn right on S Richland Ave		

Facility Distribution and Performance Metrics

D&B Family Tree of 'Alascom Inc' - Microsoft Internet Explorer provided by ESRI

File Edit View Favorites Tools Help

Show me the D&B Family Tree of company 'Alascom Inc' (DUNS 612258723)
(Prospects, Concept Demo)

Family tree with 18 subsidiaries and 68 branches found:

D&B Ratios of Zeneca Inc - Microsoft Internet Explorer provided by ESRI

File Edit View Favorites Tools Help

Show me the industry specific performance of company 'Zeneca Inc' (DUNS 194947512, SIC 2834) (Prospects, Concept Demo)

D&B Industry Ratio Quantiles based on SIC 2834 (Pharmaceutical Prep), 1995

SAP ORION Demo, U.S. Patent Pending, Concept Demo, Copyright 2000 SAP Labs Palo Alto, Enjoy! Feedback welcome: orion@saplabs.com

CIS Call Center - GM

GIS Services - v1.0 (5/30/2000)

Map Display Route Search

Routing Assistance

Narrative

Total Distance: 1.4 mi.

Estimated Time: 2.9 min.

Routing Directions from B St to W Harbor Dr

Direction	Road Name	Distance
1. Go left (W)	B ST	0.1 mi.
2. Go left (S)	10TH AVE	0.4 mi.
3. Go right (W)	MARKET ST	0.5 mi.
4. Continue (W)	W MARKET ST	0.1 mi.
5. Go left (S)	FRONT ST	0.2 mi.
6. Go left (SE)	W HARBOR DR	0.1 mi.

Source: Primary Display Road Labels

Accept Reject

generated.

Map Size: 1.37 Miles

OnStar
WHEREVER YOU GO, HERE WE ARE.

Logistics – Sears

6:17:36 PM PST 11/18/2003 AC 0.0 hrs/100% ? Help

Stop List

- 1: Mr. Jon Archer
- 2: Mr. William Miller
- 3: My Own Stop
- 4: Mrs. Elizabeth Bowman
- 5: Mr. Michael McCormack

Route Overview

Remaining Trip Distance: 17.6 miles Remaining Travel Time: 3:15

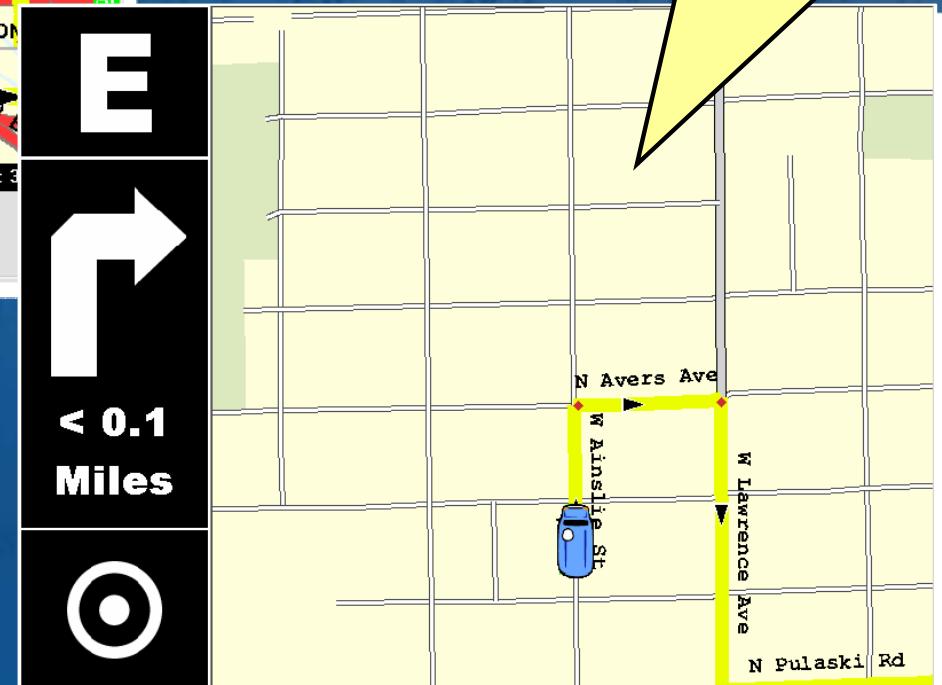
Route Management Tools

- Enter New Destination
- Set New Stop Complete
- Modify Stop Information
- Review Driving Directions

Vehicle in Motion

- Vehicle Tracking
- Audible Navigation Instructions

Turn **RIGHT** on North Avers Ave...



Vehicle Stationary

- Suite of Mapping Functionality
- Route Management Tools



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HR Planning – Emergency Response

Resource Planning Tool

Locator Processing Period Assignment Availability

Assignment Detail

Reference Time Zone: EST / Processing Period

Agency A

Bruce Caldwell
Robin Levine
Robert Marcus
Donna Martin
Marie Tobia

Period

Start Date: 09/25/2003 Start Time: 12:51:11
End Date: 09/25/2003 End Time:

Service Rep. 43 Robert Marcus

Corresponding Service Task

Parameter	Value
1	
No. of Assignments	0
Priority	5
Priority Text	Medium
Transaction Type	ZEI2
Transaction Number	393
Item	10
Item Category	ZSRP
Item Status	REL
Item Status	Released
Service Task	Inspection
Requested Start Time	18:00:00
Requested Start Date	09/25/2003
Requested End Time	18:00:00
Requested End Date	09/25/2003

Done

Homeland Security Map

Map Legend

- Airports
- Heliports
- Hospitals
- Schools
- HazMat Response Units
- Response Personnel (City)
- coordinators (fire)
- hazmat (police)
- Response Personnel (Regional)
- coordinators (fire)
- hazmat (police)
- Incident Location
- ALOHA Model
- footprint (hazard area)
- HPAC Model
- ERPG (IPHL STEL)
- Evacuation Shelters
- Evacuation Routes
- Distribution Warehouses

Click on Map to: Zoom In Zoom Out Re-center Select: Response Personnel (Regional)

Done

Summary

- ESRI provides a **generic platform** or information system for dealing with geographical information and processes.
- ESRI offers a single **scalable architecture** with multiple complimentary products based on **industry standards** for both end users and developers.
- ESRI offers a rich suite of **enterprise integration** options, solutions and experience.



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