



The Arizona Republic

GIS Supports Market-Focused Selling at Newspaper

Problem

Newspaper needed to target customers more specifically for advertisers

Goals

- Target specific markets for individual advertisers.
- Create different versions of inserts for various stores.
- Select demographic criteria.
- Target subscribers and nonsubscribers.

Results

- Query time on data has been decreased from hours to minutes.
- Number of advertisers has increased.
- Amount of advertising from legacy accounts has increased.
- Overlapping advertising areas have been found.
- Analysis is performed more quickly.

"The GIS data that we can now show our advertising customers, along with raw numbers, has really made selling inserts easier. It has aided our customers' competitive edge."

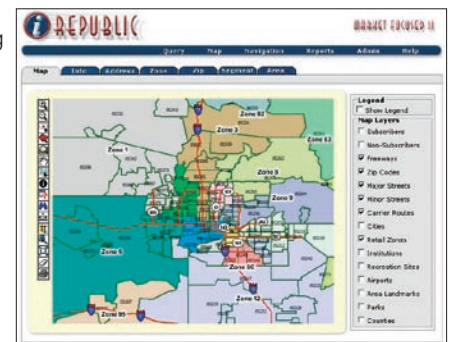
Jay Visnansky, Senior Systems Analyst,
the Arizona Republic



The Arizona Republic brings news and information to approximately one-half million households and targeted advertising materials to 1.275 million households in Maricopa and Pinal counties in Arizona each week. Of the Arizona Republic subscribers, 800,000 receive advertisements by mail, and 475,000 are reached through an insert in the paper itself. The newspaper covers all its customers, subscribers or not, through an innovative total market coverage product called the Buyer's Edge that allows it to reach everyone throughout the Phoenix market.

The Challenge

The Arizona Republic needed to fine-tune targeting of customers for its advertisers. Some advertisers wanted the ability to target their ads to certain segments of the population (for example, dog owners) or just to certain areas. A drugstore, for example, requested to target customers within a certain number of blocks near its storefront. The drugstore did not want to pay to advertise to people living on the other side of a bridge or on the opposite side of a major street, realizing these people will visit a store easier to access, though not necessarily as close.



The initial screen at logon shows the Phoenix metro area and the selling area.

Other chain merchants, including retail merchants and grocery stores that have multiple locations, also want to "version" their ads for different parts of their coverage territory. The owner wants to put one set of items on sale at one store and a different set of items on sale at another. This means advertising salespeople at the Arizona Republic needed to be able to produce the means for their customers to target ads precisely.

The Solution

Already a user of ESRI® software, the Arizona Republic was looking for a solution that would allow it to query its customer base quickly, taking location into account. The company stayed with ESRI and selected ArcIMS®, Web-based geographic information system (GIS) software; ArcSDE® for maintaining its large datasets of customers and location information; and MapObjects® for creating custom-built applications. Senior systems analyst Jay Visnansky and principal application analyst Karen Parrilla created applications ranging from newspaper route configuration to applications for easily viewing custom map layers. These layers consisted of information about subscribers, nonsubscribers, and carrier routes along with streets, retail zones, and area landmarks. One of the layers was created using ArcEditor™. While the customer information is maintained by the Arizona Republic, the location information (streets, retail zones, etc.) is on a subscription basis from Tele Atlas and is updated quarterly.

The combination of ArcIMS and ArcSDE gives the Arizona Republic a thin-client architecture, making queries on the data very fast. By storing data in one central ArcSDE and Microsoft® (MS) SQL Server, salespeople no longer need to download the entire marketing database to a

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ESRI Software Used

ArcSDE
ArcIMS
MapObjects
ArcEditor

Other Software Used

MS SQL Server
MS Visual Studio .NET
MS Internet Explorer
Internet Information Services

Data Used

Tele Atlas streets, ZIP Codes
Tele Atlas MatchMaker SDK

Hardware

Database Server: Dell PowerEdge 2650,
dual processors, 6 GB memory,
Windows 2000 Server,
2 x 36 GB RAID 1 Storage

Application Server: Dell PowerEdge 2650,
single processor, 4 GB memory,
Windows 2000 Server,
5 x 73 GB RAID 5 Storage

For More Information



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PC or laptop. Instead they log on to the database and produce targeted marketing information for advertisers in just a few seconds. Before ArcSDE, this process could take up to an hour or more.

This system supports between 200 and 250 registered users across the Phoenix Valley. "It is easy to use, thanks to the open architecture of ESRI's software products," says Visnansky. "We were able to build custom forms for query, display, and reporting."

Today, a salesperson logs on and views a map interface of the *Arizona Republic's* coverage territory. A legend and the map layers are displayed, and tools for manipulating the map are available. A query can be created in a pop-up box chosen from the pull-down menu. For example, the salesperson can input the street address of a customer's storefront and the area radius (in miles) the customer would like to look at for potential advertising coverage. The software standardizes the address and calculates its latitude and longitude coordinates.

The radius is displayed on the map along with carrier routes, ZIP Codes, subscribers, and nonsubscribers. The software calculates how many and which subscribers and nonsubscribers are located in the radius. If an advertiser is interested, he/she can select a pull-down list of demographics to target customers even more precisely. Then, specific values for the demographic can be selected. For example, if an advertiser is interested in looking at income, he/she can choose that demographic variable, then the value such as income between \$50,000 and \$74,999. If requested, more demographic variables can be queried such as pool owners in the income bracket he/she selected. Using GIS, advertisers are able to specifically market to the customers they would like to target.

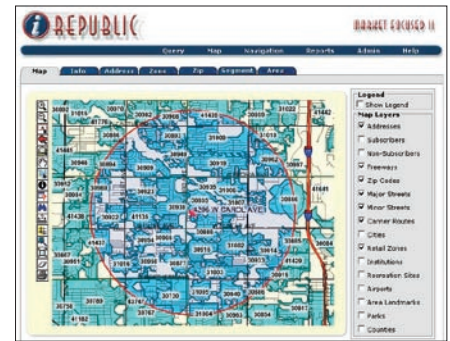
Results

By providing this information more quickly to advertisers, the newspaper company has been able to increase both the number of advertisers and the revenue from legacy advertisers.

The Buyer's Edge allows advertisers to hit every household in Maricopa County by U.S. mail and through delivery in the *Arizona Republic*. Advertisers also have the capability of picking ZIP Codes around their specific locations. This allows full saturation around store locations and provides versioning capabilities at the store level.

Address ID	Region	Area	Population	Households	Subscribers	Non-Subscribers	Query Results Calculated
00000	01	01	100	100	0	0	100
00001	01	02	100	100	0	0	100
00002	01	03	100	100	0	0	100
00003	01	04	100	100	0	0	100
00004	01	05	100	100	0	0	100
00005	01	06	100	100	0	0	100
00006	01	07	100	100	0	0	100
00007	01	08	100	100	0	0	100
00008	01	09	100	100	0	0	100
00009	01	10	100	100	0	0	100
00010	01	11	100	100	0	0	100
00011	01	12	100	100	0	0	100
00012	01	13	100	100	0	0	100
00013	01	14	100	100	0	0	100
00014	01	15	100	100	0	0	100
00015	01	16	100	100	0	0	100
00016	01	17	100	100	0	0	100
00017	01	18	100	100	0	0	100
00018	01	19	100	100	0	0	100
00019	01	20	100	100	0	0	100
00020	01	21	100	100	0	0	100
00021	01	22	100	100	0	0	100
00022	01	23	100	100	0	0	100
00023	01	24	100	100	0	0	100
00024	01	25	100	100	0	0	100
00025	01	26	100	100	0	0	100
00026	01	27	100	100	0	0	100
00027	01	28	100	100	0	0	100
00028	01	29	100	100	0	0	100
00029	01	30	100	100	0	0	100
00030	01	31	100	100	0	0	100
00031	01	32	100	100	0	0	100
00032	01	33	100	100	0	0	100
00033	01	34	100	100	0	0	100
00034	01	35	100	100	0	0	100
00035	01	36	100	100	0	0	100
00036	01	37	100	100	0	0	100
00037	01	38	100	100	0	0	100
00038	01	39	100	100	0	0	100
00039	01	40	100	100	0	0	100
00040	01	41	100	100	0	0	100
00041	01	42	100	100	0	0	100
00042	01	43	100	100	0	0	100
00043	01	44	100	100	0	0	100
00044	01	45	100	100	0	0	100
00045	01	46	100	100	0	0	100
00046	01	47	100	100	0	0	100
00047	01	48	100	100	0	0	100
00048	01	49	100	100	0	0	100
00049	01	50	100	100	0	0	100
00050	01	51	100	100	0	0	100
00051	01	52	100	100	0	0	100
00052	01	53	100	100	0	0	100
00053	01	54	100	100	0	0	100
00054	01	55	100	100	0	0	100
00055	01	56	100	100	0	0	100
00056	01	57	100	100	0	0	100
00057	01	58	100	100	0	0	100
00058	01	59	100	100	0	0	100
00059	01	60	100	100	0	0	100
00060	01	61	100	100	0	0	100
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00062	01	63	100	100	0	0	100
00063	01	64	100	100	0	0	100
00064	01	65	100	100	0	0	100
00065	01	66	100	100	0	0	100
00066	01	67	100	100	0	0	100
00067	01	68	100	100	0	0	100
00068	01	69	100	100	0	0	100
00069	01	70	100	100	0	0	100
00070	01	71	100	100	0	0	100
00071	01	72	100	100	0	0	100
00072	01	73	100	100	0	0	100
00073	01	74	100	100	0	0	100
00074	01	75	100	100	0	0	100
00075	01	76	100	100	0	0	100
00076	01	77	100	100	0	0	100
00077	01	78	100	100	0	0	100
00078	01	79	100	100	0	0	100
00079	01	80	100	100	0	0	100
00080	01	81	100	100	0	0	100
00081	01	82	100	100	0	0	100
00082	01	83	100	100	0	0	100
00083	01	84	100	100	0	0	100
00084	01	85	100	100	0	0	100
00085	01	86	100	100	0	0	100
00086	01	87	100	100	0	0	100
00087	01	88	100	100	0	0	100
00088	01	89	100	100	0	0	100
00089	01	90	100	100	0	0	100
00090	01	91	100	100	0	0	100
00091	01	92	100	100	0	0	100
00092	01	93	100	100	0	0	100
00093	01	94	100	100	0	0	100
00094	01	95	100	100	0	0	100
00095	01	96	100	100	0	0	100
00096	01	97	100	100	0	0	100
00097	01	98	100	100	0	0	100
00098	01	99	100	100	0	0	100
00099	01	100	100	100	0	0	100

The Data Grid with the Resultant Numbers Displayed for the Area Selected



This map interface shows the store address that has been selected along with the newspaper carrier routes in the area. The radius indicates the one-mile selection that was made. The carrier route numbers are also displayed.



A One-Extent Zoomed-in View of the Selected Area with the Subscriber Layer Selected

Salespeople at the *Arizona Republic* can pinpoint customers even more by selecting carrier routes that deliver to the profile the advertiser is looking for. This gives the *Arizona Republic* the ability to target prime market areas demographically and also provide versioning capabilities at the store level.

For the most targeted market-focused selling, advertisers can target customers using criteria for their perfect customer by address-specific delivery. This gives advertisers the ability to get their message to the exact customer they want.

Learn more at www.esri.com/business.