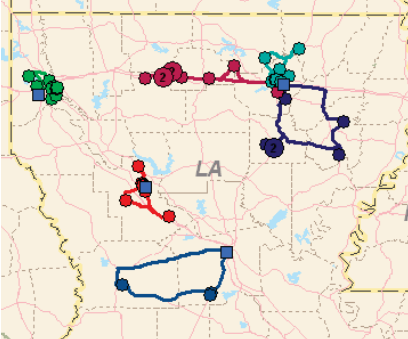




# Ivan Smith Furniture

## ArcLogistics™ Helps Retailer Reduce Miles Driven and Use Less Fuel

### CASE STUDY



### CHALLENGE

Corporate office must build routes and schedules with one seat of software while supporting more than 20 stores over a 250-by-250-mile service area.

### RESULTS

- Reduced number of daily routes
- Fewer miles driven and less fuel consumed
- Less overtime
- Improved arrival-time estimates based on actual streets and drive times
- Decreased time spent building routes

*"We realized that using routing software that just gave us 'crow-fly' distances wasn't enough. It was time for a solution that considered real-world factors."*

Trey Smith, Operations Manager

Ivan Smith Furniture, a third-generation-family-owned furniture retailer, has 48 stores in Louisiana, Arkansas, and Texas and runs up to 23 delivery routes per day out of seven locations. Approximately half the fleet departs and returns to the main warehouse in Shreveport, Louisiana, and the other half departs and returns to store locations throughout northwest Louisiana.

### The Challenge

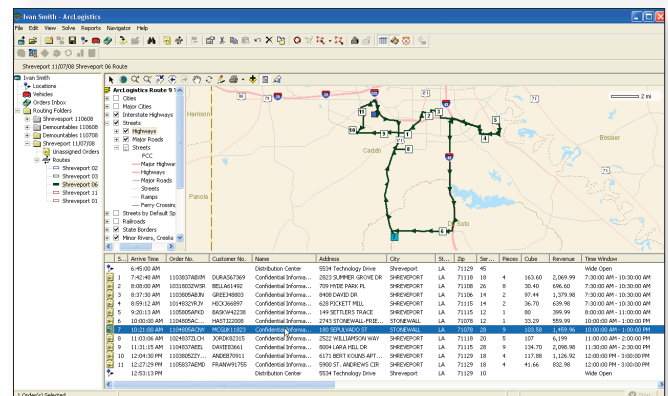
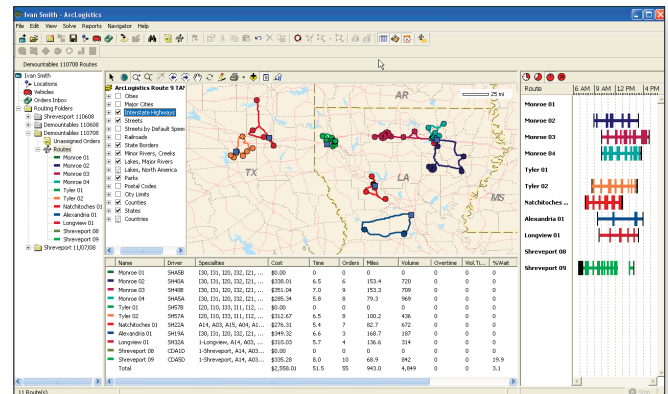
Ivan Smith Furniture was using an outdated routing software product to create its routes. The older, less sophisticated tool required a dispatcher to manually assign stops to a particular driver and sequence the stops in what appeared to be the most logical order.

The dispatcher would perform load balancing based on the number of stops and the space in the truck.

The tool did not have an algorithm to look at the entire routing problem and solve it for lowest cost. As a result, management was never confident that the delivery routes were optimized for cost savings.

Additionally, the old software did not have the capability to accurately estimate drive times and sequence stops correctly over a real street network by taking into account the actual roads used, bridges, natural barriers, one-way streets, and so forth. Like many less sophisticated programs, it simply estimated drive times and suggested sequences (sometimes erroneously) based on straight-line ("as-the-crow-flies") distances.

"We realized that using routing software that just gave us 'crow-fly' distances wasn't enough. It was time for a solution that considered real-world factors," said Trey Smith, Operations Manager of Ivan Smith Furniture.



Ivan Smith dispatchers are able to view and edit their routes at a regional level or zoom in for route-by-route detail.

Learn more at [www.esri.com/arclogistics](http://www.esri.com/arclogistics).

# Ivan Smith Furniture

**Esri SOFTWARE USED**  
ArcLogistics desktop

**DATA USED**  
Tele Atlas® street data

## The Solution

Ivan Smith Furniture contacted Esri, to help identify and implement a routing and scheduling solution that would give the company confidence that it was building optimal routes that reduced miles driven and fuel consumption. The company selected the ArcLogistics™ desktop application because it was a low-cost solution that worked out of the box but still had highly sophisticated route-solving algorithms.

Ivan Smith Furniture was able to premodel, install, set up, and test the software, as well as train end users, in about two weeks.

“I am pleased we were able to implement the solution so quickly and successfully,” Smith said.

## The Results

With ArcLogistics, Ivan Smith Furniture is able to solve for lowest cost while considering factors such as delivery windows, truck capacity, length of workday, and drive times.

“We are working more efficiently and saving time. Our local delivery drivers are back one to two hours earlier each day,” Smith said. “Our initial estimates are that we are saving \$1,000 to \$2,000 each week.”

**Dispatcher Summary**  
Print Summary 18/02/09 3:06:20PM

Routes: 26 in 6 hours

Vehicle	Driver	Orders	Cost	Volume	Volume	Weight	Volume	Custom	Custom 2	Mile	OverTime	Service	Drive	Start	End
Reading Folder: Demountable 110706															
Maxine 01 SH400		0	\$0.00	0.00	0	0	0	0	0	0	0.00	0.00	0.00	12:00:00 AM	12:00
Maxine 02 SH400A		8	\$336.81	0.00	0	0	720	280	6,285	153.4	0.00	1.87	4.82	9:00:00 AM	3:27
Maxine 03 SH400B		6	\$351.04	0.00	0	0	700	38	7,814	153.3	0.00	2.77	3.88	10:00:00 AM	4:58
Maxine 04 SH45A		8	\$295.34	0.00	0	525	660	44	14,503	78.3	0.00	2.80	2.80	10:00:00 AM	3:49
Total 01 SH400		0	\$0.00	0.00	0	0	0	0	0	0.00	0.00	0.00	0.00	10:00:00 AM	12:00
Total 02 SH400		0	\$0.00	0.00	0	0	0	0	0	0.00	0.00	0.00	0.00	10:00:00 AM	12:00
Total 03 SH400		0	\$0.00	0.00	0	0	0	0	0	0.00	0.00	0.00	0.00	10:00:00 AM	12:00
Total 04 SH45A		8	\$332.87	0.00	0	450	29	7,452	100.2	0.00	2.30	4.04	6:45:00 AM	3:15	
MatchbookSH22A		7	\$276.31	0.00	0	0	672	36	12,500	82.7	0.00	2.37	2.66	7:45:00 AM	1:08
AlexandriaSH19A		3	\$346.22	0.00	0	0	187	5	2,560	169.7	0.00	0.67	6.77	9:30:00 AM	4:05
LongviewSH22A		4	\$316.02	0.00	0	0	314	11	3,810	136.8	0.00	1.90	4.47	8:45:00 AM	3:25
ShreveportCDA1D		0	\$0.00	0.00	0	0	0	0	0	0.00	0.00	0.00	0.00	12:00:00 AM	12:00
ShreveportCDA5D		10	\$235.28	0.00	0	787	842	43	9,800	68.9	0.00	3.10	2.42	6:45:00 AM	2:47
<b>Total</b>		<b>55</b>	<b>\$2,556.01</b>	<b>0.00</b>	<b>0</b>	<b>1,282</b>	<b>4,940</b>	<b>226</b>	<b>64,325</b>	<b>943.0</b>	<b>0.00</b>	<b>16.70</b>	<b>30.74</b>		

**Route Manifest**

Vehicle: Shreveport 06    Print Job File: 18/02/09 3:03:31PM  
Driver: C060    Reading Folder: Shreveport 110706

Route: 110706    Order: 1

Start (Shreveport Center)    6:45:00 AM    0.00 Miles  
Turn    7:15:00 AM

SVC: 493

Start at Shreveport Center  
Turn left on Techwood Dr. at 7:15:00 AM. Drive 0.4 Miles.  
Turn left on State Park Dr. at 7:22:00 AM.  
Turn right on Boudrois Rd. at 7:25:00 AM.  
Turn right on 10115 Dr. at 7:30:00 AM. Drive 0.1 Miles.  
Turn right on 10115 Dr. at 7:30:00 AM. Drive 0.1 Miles.  
Turn left on 10115 Dr. at 7:30:00 AM. Drive 0.1 Miles.  
Turn left on 10115 Dr. at 7:30:00 AM. Drive 0.1 Miles.  
Turn left on 10115 Dr. at 7:30:00 AM. Drive 0.1 Miles.  
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Turn left on 10115 Dr. at 7:30:00 AM. Drive 0.1 Miles.

Order: 110706    Order: 1

Order: 110706    Order: 1    6:45:00 AM    0.00 Miles    1107060101  
Order: 110706    Order: 1    7:15:00 AM    0.40 Miles    1107060102  
Order: 110706    Order: 1    7:22:00 AM    0.80 Miles    1107060103  
Order: 110706    Order: 1    7:25:00 AM    0.90 Miles    1107060104  
Order: 110706    Order: 1    7:30:00 AM    1.00 Miles    1107060105  
Order: 110706    Order: 1    7:30:00 AM    1.10 Miles    1107060106  
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Order: 110706    Order: 1    7:30:00 AM    2.80 Miles    1107060123  
Order: 110706    Order: 1    7:30:00 AM    2.90 Miles    1107060124  
Order: 110706    Order: 1    7:30:00 AM    3.00 Miles    1107060125  
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Order: 110706    Order: 1    7:30:00 AM    10.50 Miles    1107060200

Dispatchers can quickly create route summary reports for detailed information on the cost of each route as well as provide maps and driving directions for drivers.

**FOR MORE INFORMATION**



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