

CASE STUDY



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St. Lucie County Public Schools

Zone Routing Made Easy

BUSINESS PROBLEM

In 1990 St. Lucie County, Florida developed Controlled Choice, a student assignment process to achieve better racial balance in their schools. After dividing the county into three zones the district created computer-generated assignments based on school choice and seat availability. The parameters have since been expanded to include sibling attendance, student economic status, and more.

The new zones created a much more complex bus routing and scheduling process. In particular, adding new students without increasing the number of buses posed a challenge, as did the county's five special "magnet schools" for students who excel at academics, the arts, or science. Magnet schools accept students from all three zones and the county must provide transportation, regardless of where the students live.

Further complicating the transportation scenario, St. Lucie also provides transportation to in-zone day care providers for after-school care.

GOALS

St. Lucie could no longer assign and route buses using thumbtacks and string. They needed software to build routes and schedule students, some of whom had multiple addresses, to different schools within the three zones. The district also needed to tackle busing students from every zone to the magnet schools, and it was essential that new students be added easily to the system with no additional buses.

SOLUTION

St. Lucie chose Trapeze MapNet in 1990, and upgraded to MapNet NT in 1998. "We needed

SNAPSHOT

Students Transported:	27,000
Number of Vehicles:	338
District Size:	553 Square Miles
Miles Driven Per Day:	39,100; 7.3 million miles per year
Number of Workstations:	13
Trapeze Products:	MapNet NT

a lot of flexibility in our routing and scheduling software," says DarLeen Savela, Routing Specialist. "No other program had the functions for the customized routing we perform."

Trapeze MapNet optimizes stop placements, route times and bus use regardless of where the student lives. The application automatically adds additional students to current routes, taking into account load capacities, and has the capability to route and schedule students with different pick-up and drop-off locations.

RESULTS

Savela credits MapNet with the ability to transport 27,000 students per day while complying with the Controlled Choice program. "MapNet can handle any routing scenario," she says. "For every transportation issue we have, the Trapeze support staff always find a way to make the software perform the functions we need."

MapNet allows St. Lucie to use automatic or manual coordination for routing in the zones or throughout the county, along with the ability to test scenarios when adding new students to existing routes. MapNet also supports multiple addresses, which streamlines St. Lucie's school-to-daycare transportation program.

In 2002, an additional high school began accepting students from any zone throughout

St. Lucie County. To support this, St. Lucie set up transfer sites for students from each zone to catch an express bus to two high schools. St. Lucie staff use MapNet's Via feature to coordinate the transfers to the express buses.

Also in 2002, St. Lucie increased the walking distance for high school students to make room on the buses for 1,200 new students. Staff easily changed the walking parameter in MapNet and automatically recalculated all of the routes. This allowed the county to optimize vehicle capacity and accommodate the new students without adding extra buses.

BOTTOM LINE

MapNet has simplified zone routing for St. Lucie and easily handled special situations as they arose. In addition to supporting the Controlled Choice initiative, MapNet has helped them cope with increasing enrolment, policy changes and school-to-daycare transportation, all while facing severe budget constraints. "Among the many benefits of Controlled Choice is our ability to accommodate rapidly growing enrolment by assigning new students throughout a zone with numerous schools, rather than overcrowding one school," Savela explains. "MapNet has made this process much easier."