CASE STUDY

Southeastern Pennsylvania Transportation Authority

Reducing Fixed Route Service Costs Through Better Scheduling

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BUSINESS PROBLEM

The Southeastern Pennsylvania Transportation Authority (SEPTA) provides public transit services in the five-county region of Southeastern Pennsylvania including Philadelphia. The sixth largest transit authority in the U.S., SEPTA features an integrated network of bus, trolley, subway, high-speed rail, commuter rail and paratransit services.

In 1992 SEPTA contracted with Trapeze to implement a computerized scheduling system to replace the labor-intensive, manual processes it had been using to schedule its fixed route services. That software system resulted in vast improvements over the manual system, but by the year 2000 the DOS-based technology was becoming dated and did not support SEPTA's initiatives for a more integrated corporate IT infrastructure.

GOALS

SEPTA decided that the time was right to migrate to a more advanced, Windows-based version of the Trapeze products in order to realize more efficiencies in the scheduling environment as well as a more integrated corporate environment.

The system had to deliver comprehensive features to support the development and management of schedules, vehicle assignment and driver assignment as cost effectively and efficiently as possible. As Maureen Lichtner, Chief Schedule Maker at SEPTA explained, "We were looking for a system that would allow us to adjust parameters and work with multiple scenarios until we reached a cost-efficient solution that respected all union rules and site policies."

SEPTA was looking for a system flexible enough to handle the agency's complex contractual agreements. SEPTA has three distinct labor contracts, each with a different set of work rules. The scheduling system had to generate vehicle and driver solutions that respected the diverse work rules.

Equally as important was a system that integrated effectively with other systems such as the CAD/AVL and traveler information applications.

SNAPSHOT

Type of Operation:	Fixed route and paratransit
Number of Peak Vehicles:	1,825
Number of Routes:	195
Passengers Per Year:	298,000,000
Trapeze Products Used:	FX, Blockbuster, PASS, suspensions module, mobile computing interfaces
Operating Environment:	Windows NT platform with SQL Server

SOLUTION

In 2001, SEPTA implemented Trapeze FX for Windows and Trapeze Blockbuster, an advanced runcutting application. Blockbuster seamlessly integrates with FX and enables SEPTA to progressively modify parameters and save the results until an optimal runcut has been achieved.

In 2003 SEPTA began interfacing the Trapeze system with an AVL system, which will enable the control center to track vehicle location and schedule adherence in real-time.

RESULTS

Since the Trapeze system went live, it has delivered substantial savings in vehicle and operator costs. In some divisions, the number of runs has been reduced by as much as 3.4%, and driver pay hours are down by 1.5%. This amounts to savings of more than $900,000 per year. Service levels have not been reduced in this period.

In addition to shrinking operating costs, SEPTA has also moved toward a more integrated IT environment. Web and IVR customer information and other enterprise applications, such as payroll, are fed with data from the scheduling system. It is easier to ensure that consistent data is being communicated, and easier to maintain and update the data.

SEPTA partly attributes the success of the fixed route scheduling project to the strength of the training and the expertise and attentiveness of the Trapeze team. "Trapeze really worked with us throughout the implementation," explained Ms. Lichtner. "The technical trainers assigned to our project thoroughly understood our operations and made sure that our requirements were communicated to and understood by the rest of the project team."

BOTTOM LINE

"With the savings we are realizing through more efficient deployment of vehicles and drivers and better productivity in our scheduling operations, we expect to recover our investment in the software within four years," said J. Thomas Collins, Director, City Schedules and Support Services.

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