

# CASE STUDY



*"PRTC can serve as a model for other suburban, low density areas wishing to increase transit attractiveness and improve efficiency by operating one service that serves all populations."*

Eric Marx

Director of Planning and Operations,  
PRTC



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# PRTC

## Improving services with flexible routing

### BUSINESS PROBLEM

The Potomac and Rappahannock Transportation Commission (PRTC) in Woodbridge, VA provides bus service to Prince William County and the cities of Manassas and Manassas Park. With tremendous suburban growth beginning in the 1980s, PRTC was faced with the challenge of providing conventional and ADA services in car-dependent, commuter-oriented subdivisions. Fixed route services were impractical in these commuter-oriented subdivisions, and ADA legislation required that paratransit services be available.

### GOALS

In 1995, PRTC launched OmniLink, a flex route service laid out along five corridors, with designated stops and time points. The corridors are the center lines for deviation, and with prior arrangement, a bus will divert to serve a ¾-mile wide corridor on either side of the route for riders unable to get to a stop. This meets ADA requirements, and is about two-thirds the cost of running separate fixed route and paratransit services.

The agency needed a computerized system to route vehicles efficiently, provide real-time reservations and accommodate same-day requests. "About 12% of OmniLink trips entail a deviation on one or both ends of a trip," explains Eric Marx, Director of Planning and Operations for PRTC. "We needed a software application that would allow us to negotiate real-time reservations and allow people to make same-day bookings."

### SOLUTION

Working with PRTC, Trapeze developed a flexible routing,

### SNAPSHOT

<b>Type of Operation:</b>	Flex Route, Express Bus
<b>Daily Trips:</b>	2,600 Flex, 4,800 Express
<b>Daily Deviations:</b>	300
<b>Number of Peak Vehicles:</b>	13 Flex, 57 Express
<b>Trapeze Products Used:</b>	FLEX, MDT/AVL Interface, FX (2003)
<b>IT Environment:</b>	Windows 98 on 11 workstations using NT databases and servers

scheduling, dispatch and client management application. The software, now known as FLEX, allows vehicles to be deviated easily to accommodate off-route passenger reservations. More recently, PRTC began installing mobile data terminals (MDTs) and automatic vehicle location (AVL) systems in its vehicles.

"The integration of these technologies into the FLEX system will allow PRTC to proactively monitor on-time performance, relieve bus operators of cumbersome paper manifests, provide in-vehicle navigation, and supply a wealth of historical data for analysis," Marx said. "It will also allow customer service agents to provide real-time bus location information to waiting customers," he added.

In mid 2003, PRTC and First Transit, Inc. (which will manage service operations and maintenance under contract to PRTC) will add Trapeze FX for its fixed route scheduling, routing and runcutting operations.

### RESULTS

As the first FLEX user, PRTC was able to reduce the minimum reservation lead-time from 24 hours to as little as two hours, improving customer communication and increasing the overall efficiency of the operation. Call center staff have also benefited from the ability to examine

multiple travel options for callers.

PRTC estimates that operating both fixed route and paratransit services would require an additional 62 daily service hours and eight vehicles. A recent passenger study showed 34% of riders have a car available, but chose to ride the bus. Twenty-six percent of those who ride OmniLink to college or vocational school report they would not have been able to make the journey without the service. While the study showed that 74% of riders like the flexible aspect, only 24% regularly use the deviation feature.

### BOTTOM LINE

"PRTC can serve as a model for other suburban, low density areas wishing to increase transit attractiveness and improve efficiency by operating one service that serves all populations," says Marx.

Along with a stellar 89% rider approval rating, PRTC has received numerous awards for OmniLink, including the Outstanding Service Award for Applied Technology and the Creative Excellence Award from the Association for Commuter Transportation (ACT).