

EDITOR'S NOTE: This is the second of two articles about how innovative planning and the use of computer technology is changing MTA's service planning and scheduling process, improving Metro Bus service and saving budget dollars.

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Pieces of a Puzzle: Scheduling MTA's 16,000 Daily Bus Trips

By BILL HEARD, Editor

(July 16, 2003) Every day, the 2,000 buses that roll out of MTA's 11 operating divisions make some 16,000 different trips over 185 routes throughout Los Angeles County.

Figuring out where the buses must go, which divisions they'll come from and who among the 4,500 operators will be assigned to drive them is a monumental task. At MTA, those tasks traditionally were performed mostly on paper by schedulers who kept much of the information in their heads.

"The problem," says Ed Muncy, director, Service Performance and Analysis, "was that we were performing a very labor-intensive manual process that could have been done by a computer."

No longer. For the June shakeup – the period when bus routes are realigned to meet changing customer demands or to make them more efficient – schedule makers employed a computer program called HASTUS and a newly purchased module called MINBUS to help make the tough decisions.

Cut 175,765 hours

The result was startling. Not only were all Metro Bus lines properly planned and staffed, but HASTUS cut 175,765 hours off the 7.5 million hours of vehicle operating time schedulers had planned using the manual system.

It's not that the buses will run their routes faster. The time saving was made by eliminating 123,033 layover hours between runs and 52,732 hours in deadheading time between routes or between a division and the start or end of a route.

The computer program also showed schedulers how to achieve greater efficiency by, in some cases, moving responsibility for a bus line to another division or by transferring buses among divisions.

In the scheme of things, 175,765 hours is only a 2.3 percent reduction, but Muncy thinks it's pretty good for the first time out. He believes HASTUS will provide even bigger savings the more often it's used.

Millions of solutions

"With the computer, you can test millions of different solutions, until you get the solution that meets your criteria," he says. "Manually, you can do only one or two solutions before you run out of time or energy."

Although the computer program was a useful tool for planning the June shakeup, Muncy credits the five service sector schedule

development teams for the achievement.

Heading the teams were Jon Hilmer in the San Gabriel Valley sector, Madeline Van Leuvan in South Bay, Mike Brewer in San Fernando Valley, Scott Page in Westside/Central and Dan Nguyen in the Gateway Cities sector.

“They’re the ones who set the computers, evaluated the solutions and did the supplemental work that went along with the process,” says Muncy. “They did the work and they got the results.”

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