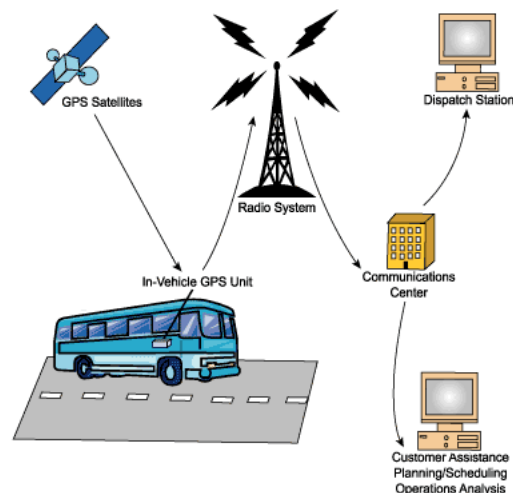


Automated Vehicle Location (AVL)

GPS-based Automatic Vehicle Location

General Description:

Automatic Vehicle Location (AVL) Systems provide a dispatch center capable to monitor the location of all vehicles continuously in real time. AVL is usually integrated with digital communications and Geographic Information System (GIS) mapping systems to streamline instructions from the dispatcher who is able to view vehicle itineraries and locations graphically. Each driver has a Mobile Data Terminal (MDT) in the vehicle that allows extensive planning information to be collected at a lower cost than by manual methods (i.e., schedule adherence, location-based passenger counts, and location-based fare collection information).



Source: www.calccit.org/itsdecision/serv_and_tech/Telecommunications/diagrams/AVL%20GPS-based/avlgpsbased.htm

Effects of Solution:

- Increase Passenger Mobility
- Increase Roadway Capacity
- Manage System Efficiency
- Reduce Local Demand

AVL is primarily used for tracking vehicles, such as buses, so that a transit system can be managed more efficiently. However, it may also be used for safety purposes (i.e., snow plows, service vehicles, etc.).

Costs/Financial Information:

Costs will vary upon size of system.

GPS/DGPS for Vehicle Location
Cell Based Communication Equipment

Capital Cost
\$.5-2.0
\$.15-.25K

Source: United States Department of Transportation Intelligent Transportation Systems ITS Benefits, Costs and Lessons Learned Databases. Available at www.benefitcost.its.dot.gov (Cost/financial information is estimated, and will vary based on size and scope of project, number of units, etc.)

Additional Resources:

- King County (Seattle, WA) AVL system
transit.metrokc.gov/oltools/autovehlocsyst.html
- City of San Diego, CA V-TRAC web page
www.sannet.gov/environmental-services/collection/vtrac.shtml