

Source	Date	Link	Brief Description
<b>SOURCES IN EFF REEXAM</b>			
U.S. Patent No. 5,835,377 to Bush	24-Mar-97	<a href="http://www.google.com/patents/US5835377">http://www.google.com/patents/US5835377</a>	Patent which describes tracking shipping in a manufacturing setting using GPS. The purpose of the system is to predict arrival of items to increase efficiency.
Lawrence Labell et al., Advanced Public Transportation Systems: The State of the Art Update '92, U.S. Department of Transportation, April 1992	1-Apr-92	<a href="http://ntl.bts.gov/lib/jpodocs/repts_te/2484.pdf">http://ntl.bts.gov/lib/jpodocs/repts_te/2484.pdf</a>	A government report on implementations of vehicle tracking in 1992. This document gives a technical overview of what kinds of technology were already implemented or being considered.
Thaai Walker, Gadget May End Lengthy Bus Waits: Inventor's Locator Device Could Stop Bus-Stop Blues, S.F. Chron., Nov. 25, 1996	25-Nov-96	<a href="http://www.sfgate.com/new/article/Gadget-May-End-Lengthy-Bus-Waits-Inventors-2958569.php">http://www.sfgate.com/new/article/Gadget-May-End-Lengthy-Bus-Waits-Inventors-2958569.php</a>	Newspaper article detailing the NextBus system, which tracks vehicles in order to minimize wait times at bus stops.
U.S. Patent No. 6,006,159 to Schmier	13-Aug-96	<a href="http://www.google.com/patents/US6006159">http://www.google.com/patents/US6006159</a>	Patent describing the technical aspects of the NextBus system and its implementation.

### ARTICLES

Randolph Hall et al., Evaluation of ITS Technology for Bus Timed Transfers, California PATH Program, Oct. 1997.	1-Oct-97	<a href="http://escholarship.org/uc/item/1wq2v1p4#page-36">http://escholarship.org/uc/item/1wq2v1p4#page-36</a>	Analytical models for determining efficient timed transfers, including incorporating vehicle location information.
A Forum for the SIAM Activity Group on Optimization, SIAG/OPT Views and News, vol. 10-1, Feb. 1999.	1-Feb-99	<a href="http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.137.8558&amp;rep=rep1&amp;type=pdf">http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.137.8558&amp;rep=rep1&amp;type=pdf</a>	Set of three articles discussing optimization issues in train scheduling, including the importance of accurate tracking of train positions.
Lee Yang and James Kuchar, Prototype Conflict Alerting System for Free Flight, Dep. Of Aeronautics and Astronautics at MIT, Jan. 6 1997.	6-Jan-97	<a href="http://web.mit.edu/jkkuchar/www/prototype.pdf">http://web.mit.edu/jkkuchar/www/prototype.pdf</a>	Discusses a prototype alerting system for detecting and resolving aircraft flight path conflicts
Nick Hounsel and Frazier McLeod, Automatic Vehicle Location Implementation, Application, and Benefits in the United Kingdom, Transportation Research Record 1618 (1998)	1998	<a href="http://trb.metapress.com/content/e025448115135375/">http://trb.metapress.com/content/e025448115135375/</a>	Article on AVL in the UK.
Richard Zygowitz et al, State of the Art in Automatic Vehicle Location Systems, Center for Urban Transportation Studies, Feb. 1998.	1-Feb-98	<a href="http://www4.uwm.edu/cuts/its/avlapa.pdf">http://www4.uwm.edu/cuts/its/avlapa.pdf</a>	Survey of various AVL systems in place or planned by 1998
Denis Symes, Automatic Vehicle Monitoring, A Tool for Vehicle Fleet Operations, IEEE Transactions on Vehicular Technology, Vol. VT-29, No.2 (May 1980).	1-May-80	<a href="http://ieeexplore.ieee.org/xp/abs_all.jsp?arnumber=1622759&amp;tag=1">http://ieeexplore.ieee.org/xp/abs_all.jsp?arnumber=1622759&amp;tag=1</a>	An early paper outlining the potential benefits of vehicle location technology, and looking at possible implementations.
D.J. Daily et al, BusView and Transit Watch, an Update on Two Products from the Seattle SMART-TREK Model Deployment Initiative, ITS America, 1999.	1999	<a href="http://www.its.washington.edu/pubs/wc99.pdf">http://www.its.washington.edu/pubs/wc99.pdf</a>	Overview of two bustracking technologies.
Robert Dial, Autonomous Dial-a-Ride Transit Introductory Overview, Transportation Research Part C: Emerging Technologies Vol. 3 Iss. 5, 261-275 (Oct. 1995)	1-Oct-95	<a href="http://www.sciencedirect.com/science/article/pii/0968090X9500010G">http://www.sciencedirect.com/science/article/pii/0968090X9500010G</a>	Overview of a system that uses AVL to coordinate dynamic scheduling based on requests for pickup/dropoff.
TCRP Synthesis 24: AVL Systems for Bus Transit, Transit Cooperative Research Program, 1997.	1997	<a href="http://web.tongji.edu.cn/~yangdy/its/AVL/1wf01!.pdf">http://web.tongji.edu.cn/~yangdy/its/AVL/1wf01!.pdf</a>	Long article going into great detail regarding multiple AVL systems and their implementation.
ITS Deployment Guide For Transit Systems: Technical Edition, U.S. Dept. Of Transportation, April 1997.	1-Apr-97	<a href="http://ntl.bts.gov/lib/jpodocs/repts_te/4963.pdf">http://ntl.bts.gov/lib/jpodocs/repts_te/4963.pdf</a>	Overview of many aspects of transit systems that has some discussion of AVL systems. (see pages 8-9 for an example).
<i>Intelligent Transportation Systems--Early Deployment Plan for the San Francisco Bay Area, Metropolitan Transportation Commission, July 2, 1996.</i>	2-Jul-96	<a href="http://ntl.bts.gov/lib/jpodocs/repts_te/4983.pdf">http://ntl.bts.gov/lib/jpodocs/repts_te/4983.pdf</a>	Prospective article that explains implementation of vehicle tracking and informing passengers.
<i>German "Smart Bus" Systems: Potential for Application in Portland Oregon Volume 1 Technical Report, Office of Technical Assistance and Safety, Jan. 1993.</i>	1-Jan-93	<a href="http://ntl.bts.gov/lib/jpodocs/repts_te/2487.pdf">http://ntl.bts.gov/lib/jpodocs/repts_te/2487.pdf</a>	Discusses vehicle tracking in Germany and the potential benefits of introducing such a system in Portland. Has information on vehicle tracking systems.
D.J. Daily et al, BusView: an APTS Precursor and a Deployed Applet, ITS Research Program, June 2000.	1-Jun-00	<a href="http://www.its.washington.edu/pubs/busview_report.pdf">http://www.its.washington.edu/pubs/busview_report.pdf</a>	Article on the Busview tracking system.
<i>Daily et al, A Structured Approach to Developing Real-Time Distributed Network Applications for ITS Deployment, ITS Journal, vol. 3 no. 3, 1996.</i>	1996	<a href="http://www.its.washington.edu/pubs/its_jour.pdf">http://www.its.washington.edu/pubs/its_jour.pdf</a>	Article discussing utilizing real-time tracking information to improve transportation systems
Dimitris Scapinakis, Communications and Positioning Systems in the Motor Carrier Industry, Program on Advanced Technology for the Highway, Jan. 1, 1992.	1-Jan-92	<a href="http://escholarship.org/uc/item/15j086pf#page-4">http://escholarship.org/uc/item/15j086pf#page-4</a>	Excellent article that explicitly discusses location systems, although it is less thorough discussing their applications.
S.M. Thompson, Exploiting Telecommunications to Deliver Real Time Transport Information, 9th International Conference on Road Transport Information and Control, Pub. No. 454, April 21-23, 1998.	21-Apr-98	<a href="http://trid.trb.org/view/1998/C/499196">http://trid.trb.org/view/1998/C/499196</a>	Discusses both vehicle location technology and how to use it to contact members of the public.

Demonstration Project No. 105, Advanced Transportation Management Technologies, April 1997.

Cathey and Daily, A Prescription for Transit Arrival/Departure Prediction Using Automatic Vehicle Location Data, U. of Wash., 2003.

D.J. Dailey et al., A Structured Approach to Developing Real Time Distributed Network Applications for ITS Deployment, ITS Journal vol. 3 iss. 3, 1996.

D.J. Dailey et al., Busview and Transitwatch: an Update on Two Products from the Seattle SMART TREK Model Deployment Initiative, ITS America Meeting, 1999.

Z. Wall and D.J. Dailey, An Algorithm for Predicting the Arrival Time of Mass Transit Vehicles Using Automatic Vehicle Location Data, Transportation Research Board, Jan. 10, 1999.

Carleton Williams, Radiodetermination Satellite Service: Application in Railroad Management, Vehicular Tech. Conference, May 20, 1986.

Robert Casey et al., Advanced Public Transportation Systems: The State of the Art Update '98, U.S. Dept. of Transportation, Jan. 1998.

Thomson and Sheat, Exploiting Telecommunications to Deliver Real Time Transport Information, 9th International Conference on Road Transport Information and Control, April 21, 1998.

Dailey and Haselkorn, Demonstration of an Advanced Public Transportation System in the Context of an IVHS Regional Architecture, First World Congress on Applications of Transport Telematics and Intelligent Vehicle-Highway Systems, Nov. 30, 1994.

#### **PATENTS**

US 5554982 to Shirkey: Wireless Train Proximity Alert System

US 5739774 to Olandesi: Mass Transit Monitoring and Control System

US 5541854 to Klein: Monitoring of Route and Schedule Adherence

1-Apr-97 [http://ntl.bts.gov/lib/jpodocs/repts\\_te/13480.pdf](http://ntl.bts.gov/lib/jpodocs/repts_te/13480.pdf) Chapters 6-8 (linked) discuss relevant tracking applications.

<http://ntl.bts.gov/lib/jpodocs/edldocs1/13480/ch6.pdf>  
<http://ntl.bts.gov/lib/jpodocs/edldocs1/13480/ch7.pdf>  
<http://ntl.bts.gov/lib/jpodocs/edldocs1/13480/ch8.pdf>

2003 <http://www.its.washington.edu/pubs/trc2003.pdf> Details ways to implement AVL to predict arrival times.

15-May-96 [http://www.its.washington.edu/pubs/its\\_jour.pdf](http://www.its.washington.edu/pubs/its_jour.pdf) Discusses the best ways to implement a real time tracking service.

/1999 <http://www.its.washington.edu/pubs/wc99.pdf> Discusses two different bus tracking systems.

1-Jan-99 [http://www.its.washington.edu/pubs/trb99\\_zach.pdf](http://www.its.washington.edu/pubs/trb99_zach.pdf) Explains how an algorithm is implemented to inform passengers of arrival times derived from AVL data.

20-May-86 <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1623465> Applies one type of vehicle tracking to railroads.

1-Jan-98 <http://ntl.bts.gov/lib/8000/8700/8710/aptssoa98.pdf> Surveys the most recent developments in public transportation, including vehicle location technology.

21-Apr-98 <http://trid.trb.org/view/1998/C/499196> Discusses the important of delivering real time information and how to do so via a web application that uses AVL information.

30-Nov-94 <http://www.its.washington.edu/pubs/wc94.pdf> Describes a transportation system utilizing vehicle tracking technology.

1-Aug-94 <http://www.google.com/patents?id=YsAaAAAAEBAJ> Patent regarding a proximity based location system.

12-Jul-96 <http://www.google.com/patents?id=PaMeAAAAEBAJ> Patent regarding coordinating mass transit, particularly by utilizing estimated times of arrival.

2-Aug-94 <http://www.google.com/patents/US5541845> Patent about using tracking to help schedule adherence.