Use of Advanced Public Transportation Systems Is Described

A dvanced Public Transportation Systems embrace technology and practices new to public transportation, if not necessarily new in other spheres of activity. Advanced Public Transportation Systems: The State-of-the-Art—Update 1998 describes the extent to which new technologies have been adopted by the public transportation industry in the United States and Canada.

For example, fleet management techniques focus on passenger safety and on the vehicle, improving the efficiency and effectiveness of the service that is provided. Research shows that the application of new communication technologies to transit has been limited. Public transportation makes substantial use of communication, but this is mainly in the form of conventional analog land communication services. Intelligent transportation systems and the implementation of so-called smart-vehicle technologies demand additional communication support; whether currently used communications and special capabilities will meet the demand is doubtful.

On the other hand, public transportation systems have embraced geographic information systems (GIS), which are computerized database management systems in which databases are related to one another by means of a common set of locational coordinates. Most frequently GIS have been used in the maintenance of schedule information on urban bus routes and in presenting the information to customers.

A promising management tool is automatic vehicle location systems. They operate by measuring the real-time position of each vehicle and relaying the information to a central location. A recent report shows that 86 transit properties were operating, implementing, or planning, testing, and demonstrating automatic vehicle locator systems.

Automatic passenger counters have been used increasingly to gather information on passenger boardings and alightings by time and location. Usually a small percentage of an agency’s buses are equipped with automatic counters, and they are moved around the system to take the measurements. Automatic passenger counters are in use or being planned in 31 fixed-route bus systems. With traffic signal priority treatment, another technology in use, a traffic signal may be held green or made green earlier than scheduled so that a particular transit vehicle can pass through the intersection more quickly.

An aspect of advanced public transportation technology is better traveler information, including pretrip information so that travelers can more easily plan their trips, information provided in terminals or at wayside locations, and information provided by in-vehicle

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sources either verbally or by signs. The various types of customer information systems are typically made possible by an automatic vehicle location system. Automating the provision of in-vehicle information permits the vehicle operator to concentrate on driving. Other aspects of advanced systems are electronic fare payment and transportation demand management.


Financially Constrained Planning Is Discussed

How do metropolitan planning organizations (MPOs) and state departments of transportation (DOTs) interact in the exchange of financial data? How are federal obligation authority adjustments made and how do they affect both MPO and DOT planning and programming efforts? How are MPO transportation improvement plans (TIPs) and long-range plans incorporated into statewide TIPs and plans? These questions arose out of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the generally expanded authority that MPOs were given.

New requirements imply changed working relationships with transit authorities, state DOTs, other transportation providers, and the general public. ISTEA required that MPO plans and transportation improvement programs be constrained within reasonably available financial resources. The states also had limited their state transportation improvement programs (STIPs) to undertakings that could be expected to receive funding within the time period covered by the STIP. In earlier times, guidelines from the federal government allowed MPOs to plan without regard to funding availability and to propose, as part of the TIP, any project that had support from constituents. This meant that, in the absence of state guidelines, TIPs became less useful in many cases and included projects that could not reasonably be expected to receive funding.

Financially constrained Transportation Planning and Programming Process was prepared to help MPOs and transit properties understand the importance of financial information in the planning and programming process. The report focuses on how MPOs and state DOTs work together to implement projects while financially constraining both the TIPs and the long-range plans. Interviews were carried out with state DOT and MPO officials in seven states: New York, California, Pennsylvania, Ohio, North Carolina, Florida, and Oregon.

For more information, contact Sara Campbell and Jim Fralick, TransMan-agement, Inc., 505 Capital Court, N.E., #300, Washington, D.C. 20002 (202-547-2717); or Richard Hartman, National Association of Regional Councils, 1700 K Street, N.W., Suite 1300, Washington, D.C. 20006. The report (FTA-DC-26-7014-97-1) is available through the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (703-487-4650). The study was supported by a grant from the Office of Planning, Federal Transit Administration.

Accident and Crime Statistics Analyzed in Report

The Safety Management Information Statistics 1995 Annual Report compiles and analyzes transit accidents and casualty and crime statistics as submitted by transit systems to the Federal Transit Administration's National Transit Database during 1995. The publication provides uniformly collected comprehensive safety data from approximately 400 U.S. transit agencies. The 1995 report has been expanded and now includes grade-crossing accident data for light rail transit systems, as well as security data for transit systems serving urbanized areas with populations of 200,000 or more. Moreover, it is now possible to tell whether the crime victim or person involved in a safety incident was a patron of the system, an employee, or neither.

For more information contact Eric Aftandilian or Allison Thompson, Unisys, Inc., 4 Cambridge Center, Cambridge, Massachusetts 02142 (617-374-5000). The report (FTA-MA-26-9033-97-1) is available through the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (703-487-4650).
Progress in Meeting ADA Requirements Assessed

Probably no law has created as much puzzlement, and in some cases outright difficulty, as the Americans with Disabilities Act (ADA). Enacted in 1990 (Public Law 101-336), ADA guarantees that individuals with disabilities have access to employment, public accommodations, transportation, public service, and telecommunications. The Federal Transit Administration has developed regulations setting forth the elements that comprise access to public transportation services.

Much attention has been focused on the requirement that transit systems provide complementary paratransit service for individuals who are unable to use fixed-route services. Transit systems hurried to establish paratransit services by January 1997. Changes in accessibility in fixed-route service have been more gradual, and, as they take place, old equipment is replaced with accessible vehicles, and passenger facilities are renovated to improve accessibility. A assessment of ADA Research and Development Needs was conducted by the Volpe National Transportation Systems Center and Technology and Management Systems, Inc., to help the Federal Transit Administration (FTA) assess the progress that transit systems have made in overcoming the technical and operational challenges they faced in putting ADA into practice. The report had three objectives:

- To determine the progress of transit systems in increasing accessibility of their services,
- To identify innovative solutions developed by transit systems to meet the requirements of ADA, and
- To identify potential research and development in improving transit accessibility for FTA to support.

The assessment methodology was based on the collection and organization of information from the perspective of disabled passengers as they make a complete trip, from learning about and preparing to use the available transit service up to leaving the vehicle or station or terminal at the destination. Thirty-two transit systems agreed to participate. At least one on-site visit was conducted in each of FTA’s 10 regions, and all major transit modes were covered. More than 70 innovative technologies and practices were explored; they are organized in the report by passenger activity, such as finding a correct vehicle. The researchers concluded that FTA has already initiated research and technical assistance projects on a number of the most difficult ADA implementation issues, including location of bus stops by visually impaired persons, on-vehicle securement and occupant restraint, and travel training. The researchers concluded that no major technical problems remained concerning ADA accessibility for fixed-route transit.

For more information contact H. Norman Ketola or David Chia, Technology and Management Systems, Inc., 99 South Bedford Street, Suite 211, Burlington, Massachusetts 01803. The report (FTA-MA-26-0031-97-1) is available through the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (703-487-4650).

Information on Taxi-Based Paratransit Technology in Europe Is Updated

TaxiCom ’95: International Survey of Leading Innovative Taxi Communications and Operations Approaches updates information on taxi-based paratransit technology/operation packages in Europe. The original work was a 1985 technical survey prepared by EcoPlan and distributed by the Federal Transit Administration’s Technical Assistance and Technology Sharing Program. The report’s coverage is limited to European developments and accomplishments. The reason for its availability is to serve U.S. transit, paratransit, and taxi operators, planners, and policy makers and to enhance understanding of state-of-the-art taxi paratransit operations abroad.

TaxiCom defines a wide range of computer and communication technologies applicable not only to the taxi industry but also to transit and especially paratransit operators. Included are computer dispatch, mobile data transmission, fleet management, accounting and management software, PBX telephone systems, “smart” taximeters, cellular/global systems for mobile communications, magnetic card readers, vehicle location systems, and many similar related technologies.

The report was prepared by EcoPlan International, 10, Rue Joseph Bara, Paris, France 75006 and Leber Planificacion e Ingenieria S.A., 48930 Las Arenas, Dizkia, Spain, under the direction of Gardner Consulting Planners, 22010 South Wilmington Avenue, Suite 109, Carson, California 90745. The study was prepared for the Federal Transit Administration of the U.S. Department of Transportation. The report (DOT-T-97-22) is distributed in cooperation with the Technology Sharing Program, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C. 20590.
Case Studies of Public Involvement in Transportation Planning Are Described

The Intermodal Surface Transportation Efficiency Act of 1991 called for public involvement in transportation planning and implementation. Community Empowerment Program: Nurturing Public Involvement in the Transportation Planning Process provides information to metropolitan planning organizations (MPOs) and others developing a community-based planning approach. Under such an approach, MPOs work in partnership with transportation stakeholders to develop transportation plans and programs with a maximum of community involvement.

In September 1994, the Surface Transportation Policy Project and the Federal Transit Administration chose five communities for a pilot community empowerment program. Its purpose was to move each community from a basic level of understanding to active participation in the transportation decision-making process. The five community nonprofit organizations were each given $20,000 to enable them to develop innovative community development processes. The organizations evaluated the needs of the community and determined current public concerns and the level of public understanding of transportation issues. Work plans were based on individual assessments and included everything from educational workshops to community planning sessions. Five case studies are included:

- Sustainable Community Planning: Kansas City’s Empowerment Project;
- Community Education: Austin’s Empowerment Project;
- A New Community Vision: Montana’s Empowerment Project;
- Traffic Calming in Minneapolis; and
- The South Bronx Transportation Education Initiative.


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