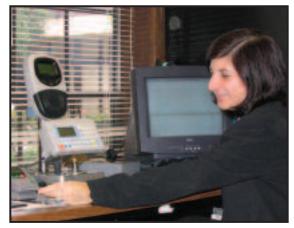This wide array of technologies is of particular benefit to the transportation disadvantaged but will also improve accessibility for all people using transit.

Fare Payment Technology Can Benefit Transit Providers and Passengers

For those passengers who have difficulty handling money due to a disability, an electronic fare card can be very helpful. For transit agencies, the proper fare card technology can improve boarding times. In addition, electronic payment systems allow for more sophisticated fare pricing structures and cost sharing opportunities. These systems help ensure that transportation providers get reimbursed correctly and that funding agencies get billed correctly.

Adding value to a smart card, Ventura County Transportation Commission, Ventura, California

"Success in the world of transit can be measured in three ways: technical success, political success, and consumer success. The tracking and information dissemination technology has been a huge success in all three of these areas."

– **Steve DeGeorge, Ventura County Transportation Commission**

For more information on the use of Intelligent Transportation Systems (ITS) in transit operations, please see *ITS Applications for Coordinating and Improving Human Services Transportation: A Cross-Cutting Study*, EDL #14140, at www.itsdocs.fhwa.dot.gov/jpodocs/repts_te/14140.htm.

For more information on how to improve transit for the transportation disadvantaged, please see the United We Ride website at www.unitedweride.gov.

INTELLIGENT TRANSPORTATION SYSTEMS

U.S. Department of Transportation
Room 340, HOIT-1
400 7th Street, SW
Washington, DC 20590
Call the Operations/ITS HelpLine toll-free
866-367-7487
Visit our website at www.its.dot.gov

IMPROVING TRANSIT EQUITY

STREAMLINING OPERATIONS

Technologies That Benefit the Transportation Disadvantaged

Coordination Among Transit Providers, Human Services Agencies, and Passengers Is Critical for Quality Service and Efficient Operations

Many transit systems automate a wide range of transit functions. Technologies such as geographic information systems (GIS), automatic vehicle location (AVL) systems, and computer-aided dispatching (CAD) help transit providers increase route and schedule efficiency and passenger carrying productivity, which result in lower unit costs. When information from these systems is shared among agencies for service coordination, further efficiency and productivity gains are made. In addition, data are generated automatically, which helps to ensure that billing and reporting are accurate. These improvements also result in improved service for the customer.

To help states and communities overcome obstacles to coordination, several Federal agencies came together in 2004 to create the United We Ride program - a five-part interagency initiative that assists in the development of coordinated human service delivery systems.

System Flexibility Enables Transit Providers to Adapt to Changing Conditions

Flexibility within a system allows for choices or alterations that suit particular circumstances. Transit providers with real-time vehicle tracking capability are able to react to spontaneous road conditions or last-minute requests by clients.

Technologies that assist agencies to provide flexible service include AVL software and devices, computer-aided dispatch, mobile data terminals (MDTs), and coordination/integration software.

Operator at Wheels of Wellness, Philadelphia, using automated vehicle tracking to assist clients

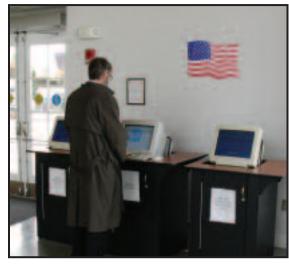## Safety and Security Are Important to Both Passengers and Transit Providers

All transit providers are concerned for the well-being of their passengers as well as their drivers. Due to their increased vulnerability, older adults and those with disabilities consider security of particular concern. There are a variety of technologies today that can help to address these concerns.

- Vehicle tracking systems make it possible for authorities to pinpoint a vehicle's exact location at all times, providing quick response for emergencies.
- Driver-activated emergency buttons and covert microphones notify authorities in the event of an emergency and allow monitoring of on-board conversations.
- Security cameras at key stops and stations as well as on vehicles can have a strong deterrent effect.
- Systems specifically designed to help those with visual or cognitive impairments can also prevent accidents by helping these individuals safely navigate through transit facilities.

Information Dissemination Is Vitally Important for Transit Providers Looking to Maximize Ridership and Is Essential for Those Relying on Public Transit

Even among the general population, some people are more comfortable with a telephone while others prefer to get their information through the Internet. For those with physical or financial limitations, providing a variety of formats is of particular importance. A person with a speech impediment will be unable to use an automated voice recognition system, while a low-income family may not have access to the Internet. Thus, it is important to consider all available technologies for information dissemination:

- Web- and telephone-based travel planners
- Real-time next vehicle arrival signage at transit stops and on the Internet
- Personalized automated vehicle arrival notification via the telephone or e-mail
- Automated next stop enunciators in vehicles
- Audible signage

Obtaining transit information at the Hyannis Intermodal Center, Cape Cod Regional Transit Authority

Technologies That Benefit the Transportation Disadvantaged Also Streamline Operations for All Passengers