

Florida Department of Transportation Research Travel Assistance Device (TAD) Deployment to Transit Agencies BDK85 977-12

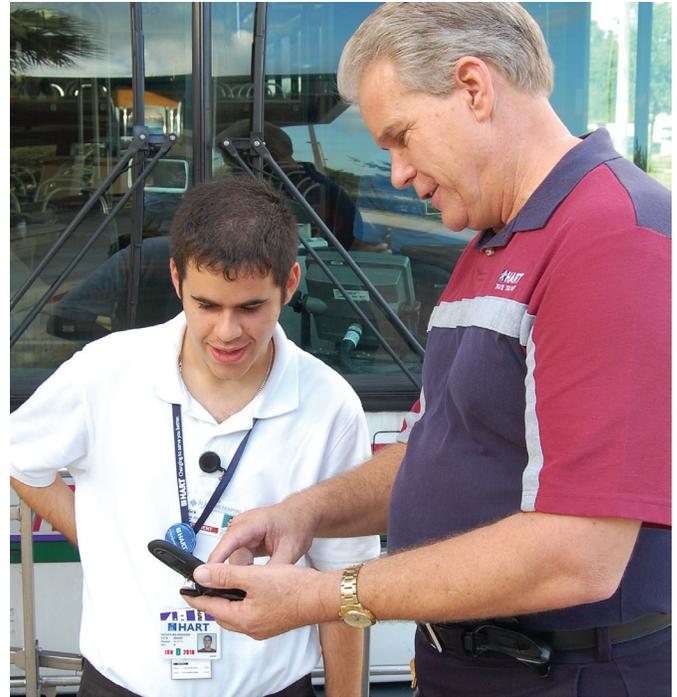
Researchers at the Center for Urban Transportation Research (CUTR), University of South Florida, have developed a mobile phone-based travel assistance device (TAD) to help cognitively disabled persons travel independently on public transit. TAD uses GPS technology to prompt users through recorded audio messages and vibration when it's time to exit a bus. Although initially designed for use by cognitively disabled transit riders, it also can help novice riders, seniors, tourists, and those with visual impairments.

Initial field tests conducted with 12 cognitively disabled young adults in Hillsborough County demonstrated that TAD supports skills needed to travel independently such as watching for and recognizing landmarks near the desired bus stop, and signaling to exit at the proper time. TAD also provides confidence and security to transit users, and allows travel trainers and family members to monitor travelers through a TAD website.

Researchers recently conducted additional field tests in Miami-Dade, Broward, Sarasota, and Pinellas counties to identify technical, policy, and administrative problems that need addressing prior to TAD deployment in those counties. The tests demonstrated that TAD can function in other cities using commercially available GPS-enabled mobile phones and existing bus stop and schedule datasets formatted in the General Transit Feed Specification (GTFS) format. However, researchers identified several technical, policy and administrative hurdles affecting implementation.

Researchers discovered that of the four county transit agencies studied, only Broward County employs a travel trainer. Researchers concluded that successful use of TAD at a transit agency will require dedicated staff, at least at the preliminary stage, to coordinate TAD users and facilitate smooth adoption of TAD technology.

In the absence of travel trainers in the test counties, researchers contacted paratransit coordi-



A travel trainer instructs a transit rider on how to use a TAD

nators, marketing specialists, customer service representatives, and technology programmers/analysts, to request their assistance with field tests. Researchers found that counties will need additional staff to field test TAD at the same level that was provided for initial tests in Hillsborough County and to train transit customers on the use of TAD prior to deployment.

Researchers recommend that the next step in the evolution of TAD is its integration into the curriculum of educational organizations, such as Easter Seals Project ACTION and the Association of Travel Instruction due to these agencies' expertise in the travel training field. Researchers also recommend software improvements to enable TAD to run on newer mobile phones, display distance in non-metric units, and display the route number on both the bus head sign and the TAD device. Researchers also identified new features to add to the TAD website.