Accessible Transportation Technologies Research Initiative (ATTRI)

ADVANCING MOBILITY SOLUTIONS FOR ALL

PURPOSE

The Accessible Transportation Technologies Research Initiative (ATTRI) focuses on research to improve the mobility of travelers with disabilities through the use of intelligent transportation systems (ITS) and other advanced technologies. ATTRI aims to work cooperatively with research partners to leverage technologies and innovations from Federal ITS and related disability research and development activities to improve accessible transportation for travelers with disabilities, and extend these benefits to all travelers.

The ATTRI program leads the research, development, and implementation of transformative solutions, applications, or systems for all people, including those with disabilities, to effectively plan their travel. ATTRI will enhance the capability of these travelers to reliably, safely, and independently execute their travel plans. ATTRI leverages recent advances in vehicle, infrastructure, and pedestrian-based technologies, as well as accessible data, mobile computing, robotics, artificial intelligence, object detection, and navigation. The technology is enabled by wireless communications that connect travelers and their mobile devices; vehicles; and infrastructure. The technologies used by ATTRI provide almost ubiquitous access to a wealth of real-time situational data sources, including data specific to transportation, municipalities, points of interest, crowd-sourced information, and accessibility.

USER GROUPS

ATTRI will identify, develop, and deploy new transformative applications or systems, along with supporting policies and institutional guidance, to address the mobility challenges of travelers with disabilities.

ATTRI research focuses on the needs of three stakeholder groups: people with disabilities, veterans, and older adults. ATTRI will develop technological solutions to remove barriers to transportation according to four functional disabilities: visual, hearing, cognitive, and mobility.

COLLABORATION

ATTRI is a U.S. Department of Transportation (USDOT) joint research and development initiative co-led by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) with support from the ITS Joint Program Office (ITS JPO) and other Federal agencies. USDOT recognizes the interdisciplinary nature of accessible transportation research and actively seeks opportunities to leverage resources, accomplishments, and knowledge advances both within USDOT and across Federal agencies. ATTRI has established collaborations with key Federal partners and other organizations to explore the formation of an accessible transportation network that is far more economical, expansive, and welcoming, which is of increasing importance not only to travelers with disabilities, but to all travelers in the United States.

TECHNOLOGY SOLUTIONS

ATTRI solutions will leverage advances in vehicle and infrastructure-based technologies, automation, robotics, and wireless communication. USDOT research in the program areas of vehicle automation, vehicle-to-vehicle, vehicle-to-infrastructure, vehicle-to-pedestrian, the Veterans Transportation Community Living Initiative, and Mobility Services for All Americans (together with emerging research and other technological innovations, such as assistive robots and crowdsourcing) could be possible areas that would help produce seamless transportation capability for all citizens in general, and for travelers with disabilities in particular. Five technology areas have emerged as potential ATTRI focus areas to improve transportation for people with disabilities: wayfinding and navigation, assistive technologies, automation and robotics, data integration, and enhanced human service transportation.

ATTRI APPROACH

ATTRI is being implemented in three phases over 6 years. The phases include: the Exploratory and User Needs Research Phase; the Innovation, Prototype Development, and Testing Phase; and the Demonstration Phase.

The ATTRI program aims to maximize benefits from coordinated Federal investment, national and international research, recent technology innovations, and traveler-focused solutions to solve door-to-door accessible transportation issues for persons with disabilities, including veterans and older adults.

FOR MORE INFORMATION

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