



ACCESSIBILITY IN TRANSIT BUS AUTOMATION: SCAN OF CURRENT PRACTICES AND ONGOING RESEARCH

Background

Driving automation has the potential to improve mobility for travelers with disabilities by possibly reducing the costs of providing transit service and enabling more extensive, more flexible service. Although this promise is exciting, many technologies and services in recent and current pilots and demonstrations have experienced challenges in ensuring regulatory compliance with accessibility requirements, and some of those efforts have identified areas needing further research and development. Automated transit bus pilots and demonstrations often bring together actors from the public and private sectors who may be new to either public transportation, accessibility, or both. Many projects are using new vehicle types, or vehicle formats that are less commonly used in transit services. Additionally, some projects are exploring the potential for unstaffed service in the future, which represents a major challenge for accessibility as personnel would not be present to assist passengers with disabilities.

Objectives

This scan presents an overview of the ways that several demonstration and pilot projects are addressing identified accessibility challenges, particularly how projects comply with the Americans with Disabilities Act of 1990 and the roles of onboard staff. Also discussed is ongoing research on technologies that may enhance the accessibility of future automated buses and services. These technologies include boarding and alighting technologies, securement technologies, and wayfinding and communication technologies.

Findings and Conclusions

Although transit bus automation is at the stage of early pilots and demonstrations, future services and applications may have the potential to improve mobility for passengers with disabilities. Further accessibility research will be required as automated transit bus technologies and pilots continue to evolve and build on each other.

To help inform future research projects, this report highlights key findings and broad themes related to the current state of accessibility in transit bus automation:

- Research applications could be broad.
- Automation could improve aspects of accessibility for bus transit.
- Early pilots and demonstrations have helped to bring accessibility for automated transit buses forward.
- Accessible, automated transit buses are still prototypes.
- Accessibility in pilots and demonstrations today relies heavily on the role of the onboard attendant, and there are technical and policy challenges associated with moving toward unstaffed operations.
- Accessibility requirements must be considered for a broad range of vehicles, service types, and rider characteristics.
- Better data are needed on use by passengers with disabilities.

Benefits

This report summarizes current practices and highlights related research that could improve the accessibility of future automated transit buses. The results presented can assist transit agencies, technology developers and suppliers, academic and research institutions, and disability community and advocacy groups in pilot or demonstration project planning, research scoping, and other activities.

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This research project was conducted by the John A. Volpe National Transportation Systems Center. For more information, contact FTA Project Manager Justin John at 202-366-2823 or Justin.John@dot.gov.

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