UTC Project Information	
Project Title	Decentralized Autonomous Electric Mobility-on-Demand Services for Individuals with Physical and Cognitive Disabilities
University	University of Idaho
Principal Investigator	Sameh Sorour
PI Contact Information	samehsorour@uidaho.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans $30,000 University of Idaho $30,000
Total Project Cost	$60,000
Agency ID or Contract Number	69A3551747110
Start and End Dates	August 16, 2017 – August 15, 2019
Brief Description of Research Project	This project aims to establish the foundation of innovative decentralized mobility services for individuals with physical or cognitive disabilities, using disability-friendly on-demand autonomous electric vehicles. Leveraging both the Internet-of-things (IoT) and its associated fog control capabilities, this framework will enable real-time, localized, autonomous, disability-aware, and battery-level-based dispatching and charging decisions for a fleet of DODAEVs distributed in each of multiple city zones.

Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The main outcome of the research is a fog-based architecture to distribute the optimization loads for Autonomous Electric Mobility-on-Demand (AEMoD) services in big cities over different service zones. The proposed architecture employs a multi-class dispatching and charging scheme to guarantee the fitness of the vehicle charge requirements for customer trips and prioritize services for customers with special needs.
Impacts/Benefits of Implementation (actual, or anticipated)	The fog-based optimization architecture developed as part of this project serves as the foundation for innovative decentralized mobility services that enables real-time, localized, autonomous, disability-aware, and battery-level-based dispatching and charging decisions for a fleet of Autonomous Electric Mobility-on-Demand AEMoD's distributed in each of multiple city zones. This improves both the efficiency and accessibility of AEMoD operations in large cities throughout the nation.
Web Links • Reports • Project Website	