FHWA-NJ-2019-003, JULY 2019

New Jersey Department of Transportation

Research at a Glance

Technical Brief

Principal Investigator

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BUREAU OF RESEARCH

Traveler Information Application for Route 1 and Route 18 Corridors

Research Problem Statement

The New Jersey Department of Transportation (NJDOT) created this project as a means to develop a hands-free Mobile Application (app) platform to aid travelers by offering travel information that utilizes the data it currently collects from its real-time transportation information systems and includes additional travel related information such as transit and shuttle schedules and availability of parking.

Before conducting this project, the only way New Jersey travelers could obtain travel time information was through Dynamic Messaging Signs (DMS), the 511 NJ website or through commercially available sources such as Google Maps and Waze. These traveler information technologies, however, have their own deficiencies. While DMS technology is strategically deployed, it cannot provide the variety of information necessary to assess alternate route options, parking availability, transit schedules, or cause of delay.

Research Objectives

The Bureau of Mobility and Systems Engineering at NJDOT felt a need to develop a hands-free Mobile Application (app) platform to aid travelers by offering travel information that utilizes the data it currently collects from its real-time transportation information systems and includes additional travel related information such as transit and shuttle schedules and availability of parking.

Methodology

Dr. Catherine T. Lawson and her team at the Albany Visualization and Informatics Lab (AVAIL), in partnership with Information Logistics (ILOG), developed an enhanced mobile application platform that builds upon ILOG's GeoTalkerTM Platform, by integrating travel time and delay related information from the NJ DOT central data fusion engine, parking information from various sources, transit/shuttle schedule information in real time from NJ TRANSIT and MTA, and utilizes the commercially available real-time routing technology of Google Maps. This enhanced computer application included auditory and visual information features that prompted travelers with pertinent travel information related to corridor specific travel time as well as transit/shuttle and parking information.

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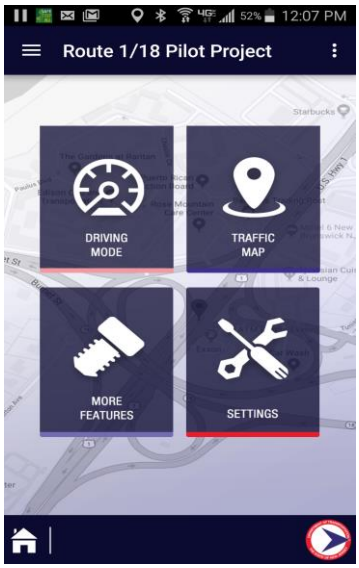
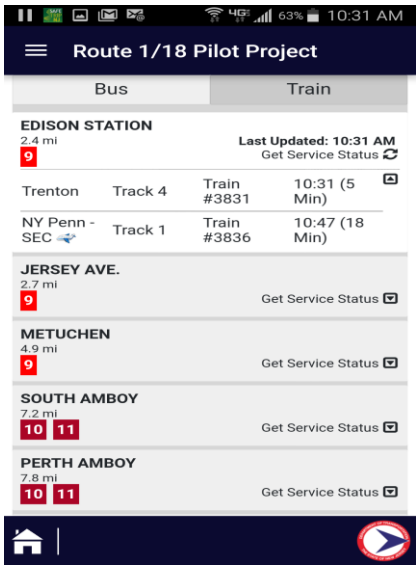
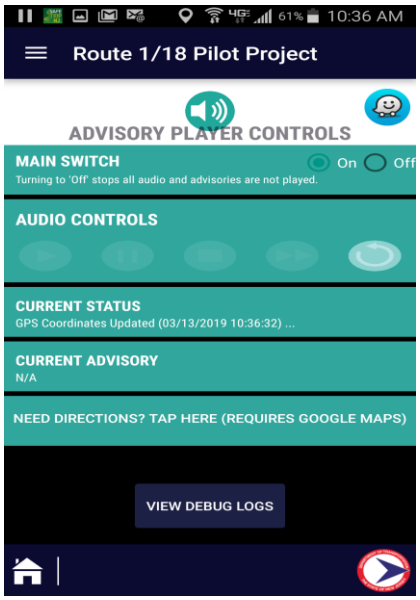
Results

The final product of this research was an enhanced mobile computer application platform that receives travel time information, parking information and transit/shuttle schedule information in real time for the Routes 1 (from I-295 to Garden State Parkway) and 18 (from New Jersey Turnpike to Rutgers University – Piscataway, NJ) corridors, specific to certain destinations such as colleges and/or large employment destinations. The application was designed so that other corridors and/or destinations could be added to the system by the owner of the application. This mobile application enhancement provided auditory and visual information related to corridor specific travel time as well as transit/shuttle and parking information in the study area.







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