Further Development of a Deployable Integrated Transit Operations System (IDTO), Phase 2.5

Continue to demonstrate a fully functional IDTO prototype system that enables T-DISP and T-CONNECT services as well as real-time information for transit operations and travelers.

WHAT IS THE NEED?

Transit service has been very cost ineffective and the level of service, when measured by connectivity and service frequency, has been generally undesirable in the majority of suburban regions in California. The recent development of Connected Vehicle technologies (broadly defined as communication and positioning technologies) and real-time information about the overall transportation systems (both transit and highway networks) has begun to make dynamic transit operation feasible. Dynamic transit operations, including Dynamic Dispatch (T-DISP) and Connection Protection (T-CONNECT) can substantially improve transit service quality by providing faster, more convenient, and cost effective trips to the traveling public.

T-CONNECT application scenarios are intended to improve the successful transfer between mode (from car to bus, train to bus) and between different bus routes of an individual agency. T-CONNECT enables public transportation providers and travelers to communicate to improve the probability of successful transit transfers. T-DISP application scenarios are intended to adjust transit operation to be more responsive to travelers demand and traffic conditions. University of California (UC) Berkeley California Partners for Advanced Transportation Technologies (PATH) proposes transforming current fixed route operation into dynamically focused transit services in suburban regions across California.
WHAT ARE WE DOING?

This proposed study is a continuation of the second phase of the research on IDTO. The objectives of the proposed research are:

1. Developing D-RIDE Strategy
2. Demonstration of T-CONNECT in AC-Transit
3. Assisting in the Development of the Transit/[C-] V2X road map
4. Improving efficiency and safety of bus transit operations at or near signalized Intersections

WHAT IS OUR GOAL?

The goal is to address the needs of suburban transit agencies in California and across the country. This research best serves three of the California Department of Transportation’s (Caltrans’) Goals, namely, flexibility, reliability, and Performance. For flexibility, the strategic focus is to enable transit as an integral portion of solutions to congestions; for reliability and performance, the strategic focuses are operation and reliability improvements.

WHAT IS THE BENEFIT?

What has been envisioned is that by transforming current fixed route operation into dynamic focused transit services in suburban regions across California, transit service will become a faster and better transportation option for significant more travelers, the transit operation costs will be reduced, and transit systems will assume a greater role in the total solution to transportation congestion, safety, and improved air quality.

WHAT IS THE PROGRESS TO DATE?

The contract was executed on June 1, 2020. During this timeframe, a preliminary review for initial deliverables was conducted. Setting up and preparing for kickoff meetings was also completed during this timeframe.