

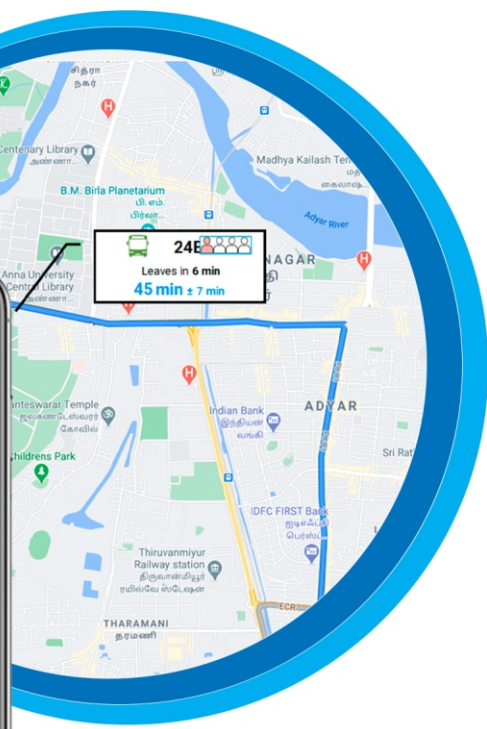
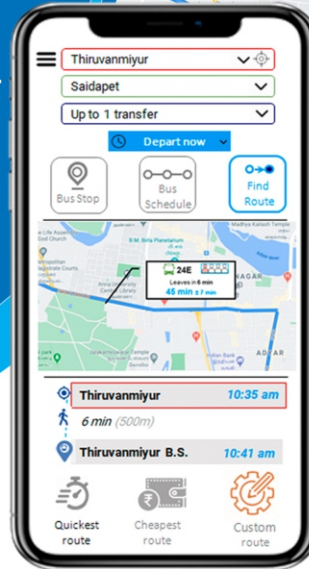


Ministry of Electronics &
Information Technology,
Government of India



InTranSE

Journey Planner (Personalized Transit Route Guidance System (PTRGS) with Fleet Management System (FMS))



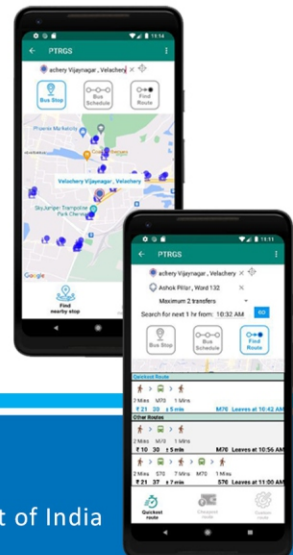
The journey planner comprises of personalized Transit Route Guidance System (PTRGS) and Fleet Management System. The PTRGS is a mobile application that provides passengers with optimal routes with due consideration of reliability and User Preferences. The FMS is scalable application combines static and real-time information (GPS data) on the buses, schedules, passenger demand and transit network with state-of-the-art-data-driven models and algorithm to provide better routes to passengers. Main functionalities of Journey Planner are Bus stop Search, Bus Schedule Search and Find Route. The Bus Stop Search module contains search nearest stops, find the directions to reach the nearest stop and to explore next buses from the stops. The Bus Schedule Search module contains provision to find the current location and expected arrival time of buses. The Find Route functionality helps to find the quickest route, Cheapest route and personalized route (reliability, crowding, walking time, service type) to reach the destination points

Present Day Technological Relevance : Due to the unreliability and bunching in public transportation results delayed arrival at stops, longer passenger wait times, Buses crowded beyond its capacity and ridership and revenue loss. Journey Planner provides passengers with optimal or customized routes based on real-time information about location of buses and passenger demand. Integrated sensing of transit demand, reliability, traffic and supply characteristics

- ▶ Accurate data driven dynamic travel time and ETA estimation
- ▶ Effective crowding prediction using deep learning models
- ▶ Scalable and fast algorithm for Multi-objective passenger routing
- ▶ User friendly mobile app interface and micro-services based architecture

Unique Features

- 1 Real Time Transit Data Using Multiple Sensors**
 - ▶ Large amount of data collected through VTU, ETM and waybill.
 - ▶ Integrated sensing of Transit demand, Reliability, Traffic and Supply Characteristics.
- 2 Dynamic Transit State Estimation**
 - ▶ Data driven and Analytical Estimation Techniques.
 - ▶ Estimation of travel time, Reliability and crowding.
- 3 Real-Time Routing on Bus Transit Network**
 - ▶ End to End Navigation.
 - ▶ Combines network topology with schedule-based routing.
 - ▶ Multi-objective and custom routing preferences.
 - ▶ High Performance and Scalable Routing Engine



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