

## Dynamic Ride Matching System

**R**esearchers at the University of South Florida have developed a dynamic ride matching system that matches drivers and passengers using a novel software algorithm.

In the traditional ride matching (carpooling) system, the user is asked the source and destination addresses for the trip, along with the days and times when the trip will take place. The list of potential matches is then narrowed down to those that fit the trip schedule and a radial search is conducted around the source and destination points.

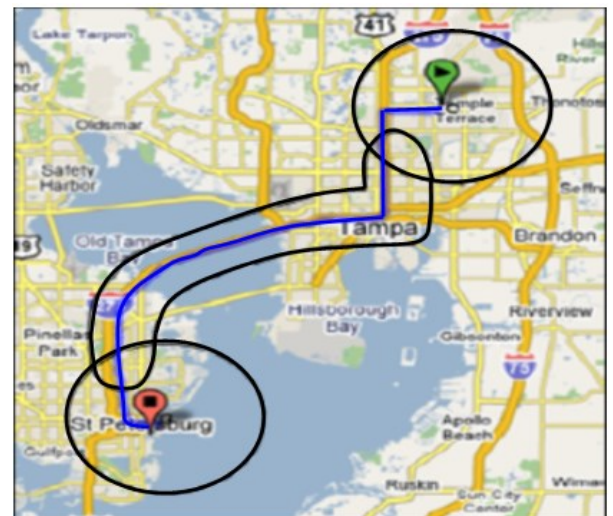
Traditional methods are limited by many factors including that they are either designed for regular weekly trips and cannot accept other recurrence patterns, they search for matches by looking at the end points only, or driving distance calculations are based on straight-line distances instead of using the actual street network. These estimates can vary greatly from the true distance when dealing with barriers such as rivers or highways. Furthermore, these methods also fail to include potential carpoolers that lie on the driver's route. Hence, there is a need for a system which can overcome these limitations.

Researchers at USF have developed a software algorithm for dynamic ride matching system to address the above limitations. This system includes a method of matching individuals in an online community with others that they could potentially carpool with based on preferences entered by the users and the similarities in their planned trips. The method is unique in its ability to accept trips with schedules that cannot be expressed in terms of a simple recurrence pattern. Moreover, it can handle both one-time and occasional trips. The ride matching method performs a search along the path of a user's trip, in addition to the customary radial search around the endpoints. Therefore, this is an effective carpooling system.

### ADVANTAGES:

- Addresses wider range of recurrence patterns amongst users
- Uses actual street distances, ensuring accuracy
- Focus on all points rather than on end points alone

*Novel Ride Matching System for an Online Community*



*Creation of Buffers from a Source to a Destination in a Trip*

Tech ID # 06A064

Patent #: [8,140,256](#)