ABSTRACT

The use of carpooling systems is an innovative solution to addressing the problems of high operating costs, traffic jams, inefficient time, and increased carbon emissions. A carpooling system connects a vehicle that still has the capacity to carry passengers with passenger that needs a vehicle to travel in the same direction or all kinds of stuff. Using GPS technology and matching algorithms, the carpooling app makes it easy for users to plan a trip together, thereby optimizing vehicle usage. The benefits resulting include vehicle use, operating cost efficiency, and significant contribution to the environment through reduced air pollution and fuel consumption. In addition, the use of carpooling systems can also enhance social interaction and solidarity among users. The challenges faces include the security and privacy of user, the reliability of services, and the adoption of technology by the wider public. Overall, carpooling applications potentially become an important component in a more sustainable and efficient transport ecosystem.

Keywords: Carpooling, GPS