

Identification of least congested and shortest distance path in traffic network

ABSTRACT

Traffic congestion, a mobility problem that exists as the traffic volume demand exceeds the capacity of the existing intersections. Conventional approaches such as building flyover and road widening might not be very effective in solving traffic congestion. Therefore, a suggested approach in this study was to change the driver's behavior in selecting the best path. The shortest path may not be the best path. The added criterion in selecting the best path was the level of service of the path, while the included parameter that determines the level of service was the degree of saturation. Dijkstra's algorithm was applied to solve the network graph. Excel solver was used to find the solution. Percentage of difference between paths was carried out to find out the difference and significant of the paths. In conclusion, the path with combined criteria of shortest distance and least congested (degree of saturation) would be the best path, instead of solely based on the shortest distance or minimum degree of saturation.