

ABSTRACT

Traffic light usually uses constant waiting time in each road, especially 4-way intersection traffic light. That system is not fair and not efficient because each road of 4-way intersection has different condition, as an example number of queue factor. This research poposes more efficient traffic light system using Round Robin Dynamic Time Quantum in which traffic light system will adjust waiting time dynamically for each road following number of queue. That distribution dynamic time performed with inference fuzzy sugeno. Fairness can be measured with the fairness value that is comparison between the minimum quantum value with the maximum quantum value. The minimum quantum value obtained from the lowest dividing between the time quantum to the length of a queue and the maximum quantum value is the highest dividing value between the time quantum to the length of a queue. The results in this study on case of Simpang Samsat Kiaracandong traffic lights show the proposed system provides a higher value of justice with an average is 0,63. While the average for a conventional traffic light system is 0,254. The results of this research show the proposed traffic light system provides better fairness. Fairness here is waiting time that proportional to the number of queue for each road.

Keyword: *Traffic Light System, Round Robin Dynamic Time Quantum, Inference Fuzzy Sugeno.*