

## **ABSTRAK**

Pergerakan makroskopik lalu lintas terdiri dari volume, kecepatan dan kepadatan lalu lintas di Jalan Padjajaran, ketiga variabel tersebut di gunakan untuk mengetahui kualitas dari suatu sistem transportasi yang selanjutnya digunakan untuk evaluasi sebuah sistem transportasi. Hubungan volume, kecepatan dan kepadatan lalu lintas menunjukkan volume maksimum serta kepadatan kendaraan macet seperti kondisi sebenarnya.

Penelitian dilakukan di Jalan Padjajaran, untuk mengetahui karakteristik sistem transportasi pada jalan tersebut. Pencarian data dilakukan dengan survei volume lalu lintas dan kecepatan sesaat pada setiap jalur pada Hari Senin, Rabu, Sabtu dan Minggu, pada jam puncak yaitu 06:30 – 08:30, 11:00 – 13:00, 16:00 – 18:00. Dengan klasifikasi kendaraan menurut MKJI 1997. Analisis dilakukan dengan menggunakan model Greenshield, Greenberg, Underwood, Bell dan program pada Excel. Selanjutnya dari kelima model tersebut dibandingkan dan dipilih model terbaik untuk jalan Ringroad Utara.

Kinerja Jalan Padjajaran sudah melebihi nilai rencana yang ditentukan, dengan karakteristik pola arus lalu lintas yang beragam. Hasil terbaik berdasarkan  $R^2$  dan grafik hubungan setiap variabel, pada setiap jalur berbeda model yang terbaik, namun model yang mendominasi untuk Jalan Padjajaran adalah model Underwood. Maka dapat disimpulkan bahwa model Underwood sesuai untuk jalan dengan volume lalu lintas tinggi seperti pada Jalan Padjajaran.

Kata Kunci : Volume Lalu lintas, Kapasitas, Jalan Luar Perkotaan

## ABSTRACT

*A macroscopic movement of traffic consists of traffic volume, speed and density which are used to evaluate the quality of transportation system. By analysing these three variables, a result which infrom about the condition about a transportation system will be provided. The information from the analysis of the variables shows the condition of the traffic condition through the traffic volume and density. When a road has a bad condition of transportation system, the analysis will describe it through high density of traffic and the maximum traffic volume is exceeded.*

*This research is conducted on Padjajaran Road to evaluate the characteristic of transporation system on the road. The data, which were collected, consists of traffic volume and spot-speed on every lane of the road. Those were collected on Monday, Wednesday, Saturday and Sunday at peak-hours, which are 6.30am-8.30am, 11am-1pm and 4pm-6pm. The analysis used vehicles classification according to MKJI 1997 and conducted an analysis through several models, which are Greenshield, Greenberg, Underwood and Bell models. By comparing these four models, the best one is chosen and become the model to describe the quality of the transportation system on Padjajaran Road.*

*Perfomance of Padjajaran Road already exceeds the value of plan specified, with the characteristics of the forecast traffic flow of a diverse. The best result according to the value of  $R^2$  and the analysis of the traffic variables, every lane has their own best model which can be applied. However, most of the lanes are well-modelled using Underwood method. Finally, it comes to a conclusion Underwood method is suitable for high traffic as in the Padjajaran Road.*

*Key Words : Traffic Volume, Capacity, Rural Roads.*