ABSTRACT

Transportation problems that often occur in Bandung city is the traffic jam. The cause of the traffic jam is public transports which no longer correspond to its primary purpose as a mode of transporting passengers with a service that is safe, fast, convenient and inexpensive. Another factor that causes traffic jam is the number of private vehicles used by the public, so that the large number of public transport vehicles are not balanced with the city transport users. The purpose of this final project is to simulate and analyze occupancy distribution pattern of public transport passengers spatially in the city by using simple kriging method. In simple kriging method using semivariogram value in searching for spatial data correlation value.

The validly theoretical semivariogram values are tested by using cross validation, and the best model is selected based on the value of Root Mean Square Error (RMSE). Estimation on the occupancy sample data is done by using simple kriging method, so in this final project, the distribution of the estimated value is obtained and then shown to the contour map created. The results of the contour map display the occupancy distribution pattern of public transport passengers in the city of Bandung. In this final project, research about spatial analysis of occupancy weight prediction has been conducted on the route of Abdul Muis - Dago, Dago – Abdul Muis, Abdul Muis – Elang, Elang – Abdul Muis, Abdul Muis – Ledeng, Ledeng – Abdul Muis, Antapani – Ciroyom, Ciroyom – Antapani, Cicaheum – Ciwastra, Ciwastra – Cicaheum, Cijerah – Sederhana, Sederhana – Cijerah, Sadang Serang – ST.Hall, ST.Hall – Sadang Serang, Abdul Muis – Cicaheum (Via Aceh), Cicaheum – Abdul Muis (Via Aceh), ST.Hall – Dago, Dago – ST.Hall, Buah Batu – Sederhana, Sederhana – Buah Batu. The data obtained is the result of direct surveys on each route. Time of observation is on weekdays and holidays with three divisions of time in the observations made, which began at 6:30, 11:00, 16:00. The final result obtained shows that the weight that affect occupancy at any point hustle shown from simple kriging estimate and the resulting distribution curve formed occupancy that can be seen on a contour map. When weekdays highest occupancy distribution is around schools, offices, markets, shopping, dining, and classes. While during holidays highest occupancy distribution is around shopping, dining, and markets. The distribution pattern of passenger occupancy resulting from the calculation of the theoretical semivariogram semivarogram and fittings for the stretch in the analysis, the model chosen is a model that is the result of its smallest RMSE. When weekdays elected spherical models as much as 15%, 45% exponential model, and the model gaussian 40%. Meanwhile, when the holiday was chosen spherical models as much as 45%, 20% exponential model, and the model gaussian 35%. So in the direction of the curve to get the distribution of occupancy on each route, for the curve of the most leads from the north northeast to north northwest with a degree of 45 ° to the elliptical shape in a color cast occupancy.

Keywords: *Spatial Data, Experimental semivariogram, Theoreticalsemivariogram, Kriging Variance, Simple Kriging estimation.*