PENERAPAN MODEL *MAXIMUM COVERING LOCATION PROBLEM* DALAM MENENTUKAN *COVERAGE AREA* SERTA TITIK KUNJUNGAN KURIR (STUDI KASUS : PT ERAJAYA SWASEMBADA Tbk.)

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ABSTRAK

Distribusi mempunyai peranan cukup krusial karena dari aktivitas inilah produk dapat digunakan konsumen. PT. Erajaya Swasembada Tbk melakukan kegiatan distribusi produk dari DC ke toko dan dealer dengan terdapat beberapa permasalahan pengiriman diantaranya adalah area cover kurir pengiriman yang masih belum optimal dan seimbang untuk masing-masing kurir serta rute kunjungan yang masih belum ditentukan sehingga kurir melakukan pengiriman berdasarkan keinginan kurir tersebut sehingga dapat meningkatkan jarak tempuh distribusi. Oleh karena itu penelitian ini bertujuan untuk untuk menyeimbangkan jarak jangkauan maksimum tiap kurir menggunakan *maximum covering problem model* serta menentukan rute kunjungan optimal tiap kurir menggunakan model *vehicle routing problem*. Hasil perhitunggan menggunkan model *vehicle routing problem* mendapatkan total jarak sebesar 2892.627 Km selama satu minggu. Hasil tersebut dapat memagkas 432.366 Km dari total jarak rute eksisting, sehingga total jarak yang didapatkan juga berpengaruh terhadap biaya distribusi. Maka dengan menggunakan *vehicle routing problem* didapatkan rute optimasi yang mampu menghemat jarak distribusi sebesar 13% dibandingkan dengan rute eksisting.

Kata kunci: *Coverage area*, rute pengiriman, *maximum covering problem*, *vehicle routing problem*.

IMPLEMENTATION OF MAXIMUM COVERING LOCATION PROBLEM MODEL IN DETERMINING COVERAGE AREA AND COURIER VISIT POINTS
(CASE STUDY : PT ERAJAYA SWASEMBADA Tbk.)

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ABSTRACT

Distribution has a quite crucial role because it is from this activity that the product can be used by consumers. PT. Erajaya Swasembada Tbk carries out product distribution activities from DC to shops and dealers with several delivery problems including the delivery courier cover area which is still not optimal and balanced for each courier and the visit route which has not yet been determined so that the courier delivers based on the courier's wishes so as to increase the distribution mileage. Therefore, this study aims to balance the maximum distance range of each courier using the maximum covering problem model and determine the optimal visit route for each courier using the vehicle routing problem model. The calculation results using the vehicle routing problem model get a total distance of 2892,627 Km for one week. These results can cut 432,366 Km from the total distance of the existing route, so that the total distance obtained also affects distribution costs. So by using the vehicle routing problem, an optimization route is obtained that can save 13% of distribution distance compared to the existing route.

Keywords*: Coverage area, delivery route, maximum covering problem, vehicle routing problem.*