

ABSTRACT

CV Mitra Mulia Kalasan is a company of bottled mineral water distribution named Aqua serving to deliver gallon-based products to areas of Klaten District, there were some 2100 customers, including shops and wholesales. The process of distribution was divided into 9 teams using single trucks in which each of the trucks could transport 210 gallons. Each of them served approximately 40 customers and the company had owned daily fixed customers.

This study discusses designing of Clarke and Wright Savings software because the company wanted perfect system support to organize routes and schedule of distribution in short time and minimize distance and cost of distribution in the CV Mitra Mulia Kalasan. The process of the software designing used SDLC Waterfall method and the used analytic study was algorithm of Clarke and Wright Savings to minimize distance and cost of transportation. Then, the results of Clarke and Wright Savings software became basis to organize the routes and schedule of distribution in the company.

The results of study were tested by the software and implementation of data calculation of Huda-Senin team using software of Clarke and Wright Savings and manual. Functional testing of software showed validity, it means that function of all software types was good; results of calculation showed economic distance and cost incurred between the software and manual calculation of 21.4%, it means that the calculation using the Clarke and Wright Savings software was better.

Keywords: *software Clarke and Wright Savings, SDLC Waterfall, routes and schedule, distribution.*

ABSTRAK

CV Mitra Mulia Kalasan adalah perusahaan distribusi air mineral dalam kemasan (AMDK) bermerek Aqua yang bertugas mengirimkan produk jenis galon ke daerah Kab. Klaten, terdapat kurang lebih 2100 pelanggan seperti toko dan grosir. Proses distribusi terbagi menjadi 9 tim menggunakan kendaraan truk engkel dengan kapasitas kendaraan mampu mengangkut 210 galon, masing-masing tim melayani \pm 40 pelanggan dan sudah memiliki pelanggan tetap setiap harinya.

Penelitian ini membahas mengenai perancangan software Clarke and Wright Savings dikarenakan perusahaan menginginkan dukungan sistem yang mampu menyusun rute dan jadwal distribusi dengan waktu yang singkat serta dapat meminimasi jarak dan biaya distribusi di CV Mitra Mulia Kalasan. Dalam proses perancangan software digunakan metode SDLC Waterfall, dan penelitian analitis yang yg digunakan adalah algoritma Clarke and Wright Savings guna meminimasi jarak serta biaya transportasi. Hasil software Clarke and Wright Savings kemudian dijadikan dasar dalam penyusunan rute dan jadwal distribusi pada perusahaan.

Hasil dari penelitian dilakukan pengujian software dan implementasi perhitungan data tim Huda-Senin menggunakan Software Clarke and Wright Savings dan manual. Pengujian fungsional software menunjukkan valid yang artinya fungsi dari keseluruhan software baik kemudian hasil perhitungan yang dilakukan menunjukkan penghematan jarak dan biaya yang terjadi antara software dan perhitungan manual 21.4% yang berarti perhitungan menggunakan Software Clarke and Wright Savings lebih baik.

Kata kunci: software, Clarke and Wright Savings, SDLC Waterfall, Rute dan Jadwal, Distribusi