EXAMINATION OF TRANSPORT FLEET MANAGEMENT AND ROUTING SYSTEM IN VRL LOGISTICS

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Abstract

Transportation plays an important in the field of logistics. Because the transportation is the main factor which helps in distributing a product from one place to another place in a right time at the right place. In the transportation the fleet management is a blessed process, which ensures the efficient logistics without compromising the cost and time of the fleets. The main objective is this research study to examine fleet management process with the help of software and also the routing system used by the logistics organisation.

Introduction

Fleet management is very important to logistics transportation for having an efficient and uninterrupted transportation service and to reach the customers in time. Fleet management is about the basic needs which should be provided to the transportation fleets. This fleet management includes the processes like timely service, security, replacement of damaged parts, allocation of another vehicle, vehicle tracking, driver performance, and other activities. Routing system which helps in selecting the best route to reach the right place at the right time.

Transportation

Transportation is nothing but the particular movement of goods or humans from one location to the another. But in this case, it is about goods.

There about five major modes of transportation, they are

1. Road
2. Rail
3. Air
4. Water
5. Pipe

Through the road the goods are taken by using trucks. Transportation needs some installation for each mode of transport in the form of roads, railway tracks, pipelines and stations such as bus stand, railway station, airports, sea ports.

So, our research is based on roads through which the goods are distributed from one place to the another. The logistics organisation has different types of trucks for the different types of loads. They also provide full truck load service with direct service from pick up point to the delivery point without any stoppage in the transhipment point in the way of journey. They also provide priority trucks to certain cities only. They are bit expensive when compared to the normal booking service. They have regular scheduled time in which depart from the delivery points. Even though the truck is not filled enough, the truck departs at the scheduled time from the transhipment point. These are some premium services which are provided.

The transhipment point is nothing but the centralised warehouse in one location in which goods are collected here according to the districts and then distributed to the particular district with help of another vehicle. This Transhipment point is shortly known as TPT. And it is also known as the centralised hub.

Technology

Now a day's technology plays an important role in each and every process of our life and also in the fleet management. Now a days many software is used by the logistics organisation. The software is available in the market. Some of the logistics organisation have their own fleet management software. Another important technology which is used is the GPS which is expanded as Global Positioning System. Which shows the current location of the trucks and also shows the current speed of the trucks. These are the some of the technologies used in fleet management.

Fleet Management

Fleet Management is a process which is done by the management for the efficient and smooth running of the vehicles with the idea of cost reduction and safety of the fleets. In this fleet management there are several activities in which includes the maintenance of the vehicle, services of the fleets, insurances of the fleets, renewals of the fleets, reporting about the vehicles by the drivers and other activities.

Many software is now available in the market for the management of the fleets. It is more efficient than the manual process. The maintenance process is done with the help of human resources nut other than maintenance process like insurance payment notification, fleet mandatory service date, vehicles which are available for the replacement of repaired vehicles and other activities can be easily done with the help of these fleet management software.

Maintenance

There will be scheduled vehicle maintenance for all the vehicle. Only those vehicles will be serviced or the vehicle with sudden problem. The vehicles are done with the basic service and also the wearing part of the truck and also with the feedback given by the drivers who is driving the particular vehicle. Both are taken into the account and the maintenance process is done.

In the south region the vehicle which has the scheduled maintenance will reach Salem for the maintenance purpose and the vehicle with the terminal damage will reach Hubli for the replacement of the parts like engine, gearbox and other parts of the fleets. Hubli is the place where this logistics organisation originated and the head office is also located there in Hubli.

These vehicle maintenance workshops are located only in the selective transhipment points. They have many automated equipment's for the process of maintenance. The equipment's like automatic components wash, wheel alignment and other advanced equipment's. They have their own shop for the spare parts of the vehicles. And the tyres are purchased in bulk, so that the cost in buying tyres is reduced to a certain amount.

They have well experienced mechanics for servicing the trucks. If a truck gone for maintenance, an alternate vehicle is arranged for the servicing vehicle. And the availability of

the free vehicles is known using this fleet management software. This software also shows the available drivers for driving trucks in case of driver absence or another emergency period.

Purchase

In these servicing workshops there will be need of spare parts, components, tyres for the vehicles. They have simplified and also reduced costs in purchasing processes by having their own spare parts shop. They also purchase the tyres in bulk, so that cost in purchasing tyres are reduced. They have their own fuel bunk and reducing the cost of filling the fuel from the outside bunks. Thus, by reducing cost in each and every process, the overall operational cost is also reduced.

Review of Literature

Dr. S. Saravanan and Sathiyagothai B, Reverse logistics in food processing industries in India, this study demonstrates that the Reverse Logistics (RL) is the process of backward flow of moving goods for the purpose of capturing value, proper disposal, remanufacturing and refurbishing activities.

Trends in Models and Algorithms for Fleet Management Maurizio Biellia,* , Alessandro Biellib and Riccardo Rossic, this study is about the mathematical models and computation techniques have been developed for optimizing and simulating the operation of transport fleets in order to serve the customers demand with the objective cost efficiency.

Fleet Management, Warren B. Powell and Huseyin Topaloglu, this study gives usthe problems in fleet management.

A simulation framework for real-time fleet management in internal transport systems Amel Jaoua , Diane Riopel, Michel Gamache, this paper presents a simulation framework incorporating traffic simulator with classical discrete event simulation model of internal transport systems. The objective behind this integration is to provide a simulation model in which traffic is captured in the internal haulage networks.

Bowersox D.J, Closs D.J, Helferich O.K(1986), This study determines Logistics management and the integration of physical distribution, manufacturing support, material procurement, and material handling.

Physical Security for Fleet Management Systems, Emad Hamadaqa , Ayoub Mars and Wael Adi, this study gives us how we can provide physical security to the fleets.

Direct and Indirect Environmental Aspects of an Electric Bus Fleet Under Service Bogdan Ovidiu Varga , Florin Mariasiu *, Cristian Daniel Miclea, Ioan Szabo,Anamaria Andreea Sirca and Vlad Nicolae, the reduction of pollutant emissions in the field of transportation can be achieved by developing and implementing electric propulsion technologies across a wider range of transportation types.

A Review of Empty Flows and Fleet Management Models in Freight Transportation Pierre J. Dejax, Teodor Gabriel Crainic, the transportation of freight, by any mode, usually generates a significant number of empty vehicle movements. Understanding and controlling this phenomenon is important for all levels of transportation and logistic system planning.

Thirty Years of Inventory Routing Leandro C. Coelho, Jean-François Cordeau, Gilbert Laporte, this study gives us the inventory routing for about 30 years and also the inventory routing problem.

Minimizing logistics risk through real-time vehicle routing and mobile technologies: Research to date and the future trends G.M Giaglis, I.Minis, A.Tatarakis, V.Zeimpekis, this study is about avenues for building upon recent trends in VR-related research towards an integrated approach to real-time distribution management.

Fifty Years of Vehicle Routing. Gilbert Laporte, this study is about the vehicle routing done for about fifty years and also the some of the vehicle routing problems.

Conclusion

This study may define the complete examination of fleet management process by using the software and also for improving routing system. This study may also helpful to improve the logistics operations of the management.

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