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A Survey on Smart Logistic Transportation System Based on Datamining

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ABSTRACT-Logistic Management systems have emerged recently with the development of Global Positioning System (GPS), mobile communication technologies, sensor and wireless networking technologies. Logistic management systems are very important as they can contribute to several benefits such as suggesting right places for getting Customer, increasing revenue to truck drivers, reducing waiting time, traffic jams as well as minimizing fuel consumption and hence increasing the number of trips the drivers can perform. The main purpose of Logistics management is a supply Truck that is used to meet customer demands through the planning, control and implementation of the effective movement and storage of related information and services from origin to destination. Logistics refers to the responsibility to design and administer systems to control movement and geographical positioning of raw materials, work-in-process, and finished inventories at the lowest total cost. Logistics involves the management of order processing, inventory, transportation, and the combination of warehousing, materials handling, and packaging, all integrated throughout a network of facilities.

KEYWORDS: Intelligent Transportation System, Global Positioning System(GPS), balanced assignment mechanism for online truckBooking (BAMOTB), Local shortest path algorithm.

I. INTRODUCTION

In this paper we propose BAMOTB, a balanced assignment mechanism for online truck booking, which can considerably bridge the gap drivers and guarantee a short waiting time for Customer. We theoretically and experimentally prove that range refinement algorithm with the local shortest path algorithm (RRA-LSP) ensures the same recommendation result as brute-force algorithm; however it greatly reduces the time overhead. We evaluate the fairness in recommendation and shortening of waiting time by BAMOTB based on the real city network. Experimental results show that BAMOTB greatly reduce the differences in drivers' and guarantee a short waiting time for Customer. According to the logistical characters, logistics information management systems include modules such as system management, resources management, customer management, contract management, exceptional management, storage management, transaction management and invoicing management. Each subsystem has different functionality and the logistical information systems are the thread that links logistics activities into an integrated process. Logistical information systems initiate activities and track information regarding processes, and assist in management decision making.

II. RELATED WORK

Logistic management systems focused on public transportation service have been studied extensively. Generally, these logistic management systems can be divided roughly into two categories. The first category showing truck according to dynamic requests. The second category showing truck according to historic trajectories from which mobility of patterns of customer using GPS.

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[1]Supriyanto, Hilwadi Hindersah, and Ary Setijadi Prihatmanto:

The application of gasification in the service. The aim is to encourage certain behaviors and motivate the users of the system, in this case would be used to encourage people to use public transportation via taxi booking service. Taxi booking services integrated with location-based social media applications. This enables taxi service can be used easily, fast, and fun.

[2]AlbaraAwajan:

This work proposes that designated parking's for taxis are provides to stop taxis from randomly cruising the roads and wait for the booking in the parking's available. In this paper, ATB is implemented and tested by running different simulation scenarios to study the effect of implementing this system in the real world.

[3]Chunyan Wang:

In this paper, perceived value is used as an intermediate variable to test the impact of Electronic Word-of- Mouth (eWOM) on the tourists' decision-making of online travel booking. It builds a conceptual model and carries out empirical research, on the basis of sample investigation, analyzes data by applying the structural equation.

[4]HuanyangZheng and Jie Wu:

this paper studies the taxi dispatch problem for the O2O taxi business. The interests of passengers and taxi drivers are modeled. For non-sharing taxi dispatches (multiple passenger requests cannot share a taxi), a stable marriage approach is proposed. It can deal with unequal numbers of passenger requests and taxis through matching them to dummy partners. Given dummy partners, stable matchings are proved to exist.

[5]KapilKamble, Mohd. Irfan, SurajPhalake, SandeepKamble:

The growth of urbanization is propagating rapidly and hence people are preferred to travel in their own vehicle rather than using a public transport system. Therefore the problems in global warming, traffic congestion, depletion of fuel arises. A social based community for carpooling has been proposed for both the rider and the passenger in order for reduction of fuel costs by sharing among the fellow passengers. The implications for environment sustainability are sufficiently high.

[6]Cheng Qiao, Mingming Lu, Yong Zhang, and Kenneth, N. Brown:

Our research aims to provide a solution to balance the supply and demand of taxi-service market. We propose an evolutionary game approach to maximize drivers' profit and minimize passengers' cost. With the aid of widely deployed Global Position System(GPS) technology, we assume that the true location of taxis and passenger smartphones are already available. By considering the incentive to drivers and the true location of all participants, we develop a taxi dispatch mechanism.

III. EXISTING SYSTEM MECHANISM

the taxi dispatch problem for the O2O taxi business. The interests of passengers and taxi drivers are modeled. For non-sharing taxi dispatches (multiple passenger requests cannot share a taxi), a stable marriage approach is proposed. It can deal with unequal numbers of passenger requests and taxis through matching them to dummy partners. Given dummy partners, stable matching's are proved to exist. Three rules are presented to find out all possible stable matching's. For sharing taxi dispatches (multiple passenger requests can share a taxi), passenger requests are packed through solving a maximum set packing problem. Packed passenger requests are regarded as a single request for matching taxis. Extensive real data-driven experiments demonstrate how well our approach performs. The proposed algorithms have a limited performance gap to the literature in terms of the dispatch delay and the passenger satisfaction, but they significantly improve upon existing algorithms in terms of the taxi satisfaction.

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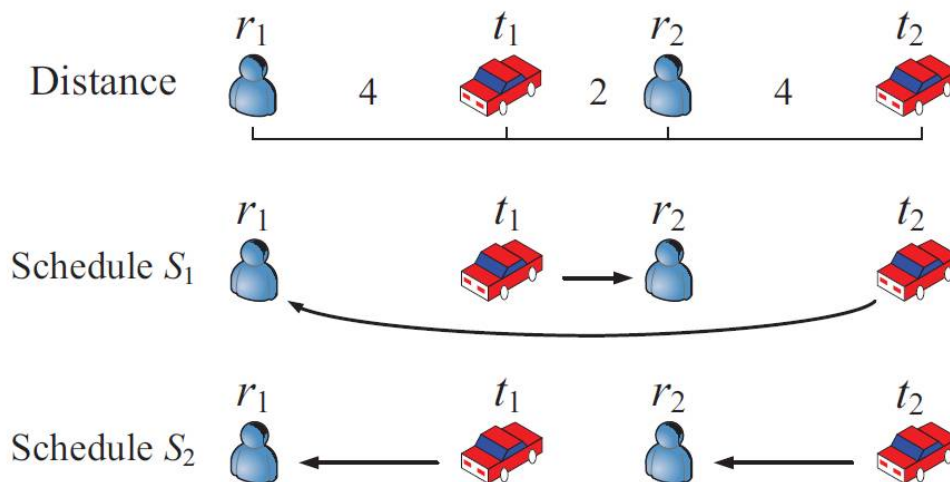


Fig.1 Existing System Mechanism

IV. PROPOSED SYSTEM ARCHITECTURE

We propose a balanced assignment mechanism for online truck booking (BAMOTB). BAMOTB provides a mechanism for fair assignment of drivers at some locations with specific routes to reach up to customer location and ensures a short waiting time for Customer. Analysis shows out that fair assignment of drivers and shortening the time the customer wait, as well as customer should trace the current location of truck. In this paper, we set a regulatory factor that can adjust the trade-off between fair assignment of drivers and shortening of waiting time of customer. We also propose an efficient range refinement algorithm to solve online truck booking problem in BAMOTB. It is theoretically and experimentally proved that range refinement algorithm ensures the same recommendation result as brute-force algorithm; however it greatly reduces the time overhead. We validate the performances of BAMOTB with extensive evaluations. Experimental results show that BAMOTB achieve better recommendation fairness than compared approaches and guarantee a short waiting time for customer and showing live location of truck. Logistics refers to the responsibility to design and administer systems to control movement and geographical positioning of raw materials, work-in-process, and finished inventories at the lowest total cost. Logistics involves the management of order processing, inventory, transportation, and the combination of warehousing, materials handling, and packaging, all integrated throughout a network of facilities.

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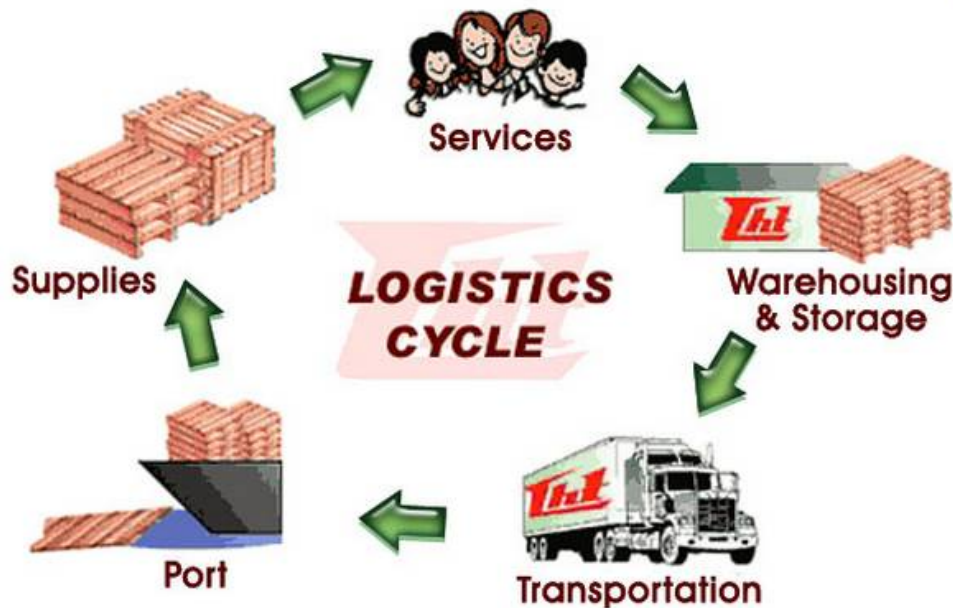


Fig 2. Proposed System Flow

Explanation-

According to the logistical characters, logistics information management systems include modules such as system management, resources management, customer management, contract management, exceptional management, storage management, transaction management and invoicing management. Logistics management is a supply chain management component that is used to meet customer demands through the planning, control and implementation of the effective movement and storage of related information, goods and services from origin to destination. The supply chain is a vital part of this process, including transportation, shipping, receiving, storage, and management of all these areas.

1. Transaction activity functionality: - Transaction activities major include order entry, inventory assignment, order selection, shipping, pricing, invoicing, and customer inquiry. A transaction system is characterized by formalized rules, procedures, and standardized communications; a large volume of transactions; and an operational, day-to-day focus.
2. Business control functionality: - The information system should control the logistical service level, performance measurement and resource utilization. It should build on the perfect index system to evaluate the planning and performance. Information systems play a role of controlling and strengthening the efficacy of control.
3. Coordination functionality:- In logistical operation, strengthening the information integrated and information circulated is propitious to improve the timeliness, quality and efficiency; and minimize the work intensity. The logistical information systems play the important role of coordinating operation such as order processing, order assignment, inventory management, warehouse operations, transportation and shipping, and procurement.

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4. Design analysis and strategic planning: - Decision analysis focuses on software tools to assist management in identifying, evaluating, and comparing strategic and tactical alternatives to improve effectiveness. Strategic planning focuses on information to evaluate and refine logistics strategy.

V. APPLICATION

1. Provide a simple method for customers to book a truck instead of looking for one.
2. Reduce the congestion that arises from the truck that drives around the city searching for customers.
3. We online trace the current position of truck using GPS.
4. Increase customer relationship with provider who is registered in the system.
5. Ensure the safety of the customers by providing registered drivers and truck.

VI. CONCLUSION

We design logistic management system between truck provider and customer, admin is one of the most important parts in our system. Here customer will book the truck and trace the current location using GPS tracking. Logistics refers to the responsibility to design and administer systems to control movement and geographical positioning of raw materials, work-in-process, and finished inventories at the lowest total cost. Logistics involves the management of order processing, inventory, transportation, and the combination of warehousing, materials handling, and packaging, all integrated throughout a network of facilities.

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