Intelligent Charging Query System of Traffic Energy Based on Internet of Things

Jialiang He, Kebin Zhan and Qinshan Han

ABSTRACT

The key technologies of Internet of Things includes RFID technology, sensor network and detection technology, intelligent technology, it has been applied in various areas and plays a vital part in normal life. This paper introduces the concept of electric traffic energy inquiry system, operating mode, main technology and project value.1

BACKGROUND

At present, the development tendency to the large-scale economic system in our country is in good condition, the number of the private car is in process of high-speed growth. And because of this, the demand of the transportation energy is growing continually. Some of the transportation energy such as gasoline, diesel oil, electricity and natural gas, their cost is being paid more attention in this reason[1][2]. The service platform of transportation energy price rises in response to the proper time and conditions because of this. A kind of platform services concerning about transportation energy price’s inquiry are being imported pertinently[3]. The purpose is to provide a series of intelligent transportation energy solutions to the owners who are in China. With the O2O pattern coming into the marketplace, consumers’ acceptances to the O2O pattern are increasing rapidly[4]. We have reconfigured the market ecosystem of automobile backstage by the pattern of the mobile internet O2O. The online platform is providing shopping guide, information of privilege, convenient service (reservation, paying online, geographical map, navigation and so on) and platform of sharing for consumers. At the same time, the commercial businesses offline are concentrating on providing the services of transportation

1Jialiang He, Kebin Zhan, Qinshan Han, College of Information and Communication Engineering, Dalian Nationalities University, China
energy price inquiring. In this way, the platform which is about the service of transportation energy price has become the most reliant and the most pleasing platform to Chinese owners and terminal services to obtain information and transaction. And it has been conformed to the current development of economy and the requirement of society.

**THE MAIN FUNCTIONS OF THE SYSTEM**

GoEasy has the ability to provide the inquire service for owners about transportation energy price. By this platform, they can find out the message of transportation energy price throughout the land. And they can also learn about the locations of traffic energy station, and be aware of real-time price, discounted price, sales promotion, sustaining credit card sales, the quality of energy, busy degree of station and service for the convenience of the customers (lavatory, convenience store in gas station) of various transportation energy products. In the meantime, accurate navigation is bound to find the best gasoline station on the roadside more convenient.

We have obtained the experience from the existing APPs on the market, take in the essence and shake off the drawback. And have fixed the position of a more comprehensive and more humanized service. As follows, you will realize more concrete content. Such as catching the whole lot in an action of various energy, transmitting message timely and accurately, having unambiguous predicted trends of price, making the dynamic condition explicit and optimizing assessment, using the navigation to go straight to the station at a high rate of speed, fixing location accurately for you, enjoying service as soon as you place an order, convenient and efficient service makes you stay away from waiting, value-added services and promotion consulting, enjoying privilege continually, plenty of stations and multiple message, convenient service facility salvages your time, recommending stations to collect intelligent, tailor made of specific sign that you can patronize, guaranteeing the safety of personal information and payment environment and you can use or consume on it trustingly. Earlier stage, the inquiry of transportation energy price as a breakthrough point in the project, on the basis of mobile interconnect data platform and map platform such as aggregating data and Baidu Sitemap to make the functions like price inquiring and navigation fixing come true. And then it will be combining with mature mobile terminal, WeChat payment, Alipay payment and data arithmetic to realize the kernel of O2O marketing pattern which is paying online. Later period, we will break the dependence on the platforms which have existed, enhance security and reliability, devoting greater effort to science and technology. The development platform chooses Windows as its operating system, IBM System x3650 as its Web server, Android Studio as its procedure exploiting platform and MySQL as its background database. And on this basis, we have been added our secondary development and encryption to the project. We firmly believe that it is bound to finish making thousands of people exchange steadily every day.
THE INNOVATION VALUE OF THE PROJECTS

Being based on the model of vehicle energy station detection existing and the arithmetic of detecting traffic resources query system, this project has analyzed superiority and deficiency of its own, and then making improvement and perfection specifically. Accordingly, the assignment of scientific research and practice to the project could be accomplished. The target is being established in national economy, and the living standard of people is relying on Internet of Things. In accordance with the delivery between network service station and intelligent terminal of information, owners will be able to learn about the message of energy station nearby, such as geographical location, energy charge, user evaluation and whether having free parking or not timely, in order to deal with the matter of feeding car fleetly and effectively. And working with some internet applications such as alipay, can not only offering more convenient and more favorable pattern of payment to user, but expedite generalizing products as well, and amplifying user group. As the personal butler to owners, we can resolve the difficulties of users in all directions, what’s more, economizing time, strength and property.

1. Updating various transportation energy prices in time: At present, there are a large number of APPs can inquire the price of transportation energy domestic and overseas, but the varieties of them that can be inquired are much too single, and that it can’t update timely if the price of energy changes. In addition, the APPs are short of administration after they are online. The information of this platform can be synchronously with market and update the dynamic condition of transportation energy price immediately.

2. According to the historical prices, we can predict: Taking advantage of big data to obtain the trend of previous oil price, and then we can forecast it in the next three days. Making the owners learn about the situation ahead of time.

3. Accurate navigation is based on the actual measurement of developer: This kind of service has extraordinary accuracy, and the existing APP which can inquire
the price of transportation energy still can’t provide the best route and selection mode for owners by the message circumjacent and the comprehensive assessment of energy station. And it will cause major perplexity to owners. Supporting speech input can make them catching the best gas station along the road on the basis of destination.

CONCLUSIONS

In this paper, we purpose a solution, it can help you fix the best energy station nearby rapidly. That can provide the contrast of energy price, the message of discount, gift promotion, credit card sales promotion and exclusive privilege for you. It can help you paying by WeChat, paying by Alipay and data algorithm can make the online paying come true, which is the kernel of O2O marketing pattern. Nowadays, there are only a few APPs have provided payment platform. In the era of mobile payment is becoming more and more convenient, it is more aligned with public demand that you can just use your fingers to realize transaction. You can glance over the stations frequently after you marking them by stars. Furthermore, if you fell in love with a certain station, you could collect it.

REFERENCES