

BLOCKCHAIN SOLUTION FOR LOYALTY PROGRAMS

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Introduction

For a long time, companies have used loyalty programs as a marketing strategy to retain existing customers and encourage repeat purchases by offering points, discounts and coupons. However, traditional loyalty programs present challenges for both companies and customers. Many loyalty programs suffer high cost, low redemption rate and low customer satisfaction rate. Blockchain, as a distributed ledger technology (DLT) which based on a peer-to-peer (P2P) topology has the potential to revolutionize loyalty programs by eliminating some of the inefficiencies of traditional programs and provide better customer experience.

History of Loyalty Programs

Some believe that “premium marketing” in the late 18th century was one of the earliest loyalty programs. Since 1793, American retailers began to give customers copper tokens with purchases that could be collected and exchanged for items later [1]. This kind of rewards was very popular throughout the 19th century.

In the late 19th century, a less expensive medium, trading stamps were used to replace the copper token. The first trading stamps were introduced in 1891 at Schuster's Department Store, Wisconsin [2]. At the beginning, trading stamps were redeemed at the issuer's store. After that, there emerged third-party providers of trading stamps for various companies, such as Sperry and Hutchinson Company which was the first providers started in 1896, S&H Green Stamps which founded in 1897 and became popular from the 1930s to the 1980s. Merchants paid a third-party trading stamp company for the

stamps and customers attached stamps to the booklet and took the booklet to a trading stamp company redemption center to exchange for items. By 1957, there were approximately 200 trading stamp companies in operation in the United State.

In the early 20th century, trading stamps still was the most popular method of rewards. Meanwhile, individual brands and retailers began to introduce their own ways of engaging customers, with "box tops" as one of the original brand specific programs [2]. Box tops were coupons that were printed directly onto product packages and could be redeemed for premiums later. Betty Crocker introduced their box top program in 1929, which lasted until 2006 and was one of the longest running loyalty programs.

In the late 1900s, modern loyalty programs started to sweep across the market. American Airlines launched their frequent flyer program in 1981, which is the first full-scale loyalty program of the modern era. Within a few years, many other travel industry companies launched similar programs.

Card-based loyalty programs gained popularity since the 1990s. In recent years, companies have introduced loyalty apps in replace of loyalty cards as part of their loyalty programs. These apps are downloaded onto a customer's mobile phone. With the rise of information technology, it is now possible for anyone to start a loyalty program app for their store or site.

Issues of Traditional Loyalty Programs

Loyalty programs help companies on growing and retaining existing customers through incentives. However, traditional loyalty programs present challenges for both companies and customers. First, companies are concerned with estimating liabilities related to loyalty programs which may be recorded on the company's financial statements [3]. The cost of operating a loyalty program may be high. According to a report from LoyaltyOne, more than 71% companies invests 2% - 4% of total revenues for loyalty and CRM to activate customers and leverage the data asset to create personalized offers and extensions [4].

Companies are also concerned with the personalization, which has long been considered as an important part of the customer experience. Only 22% of the customers are satisfied with the level of personalization at The Loyalty Report 2019 from Bond [5].

In addition, there are other shortcomings such as restrictions and rules on redemption, limited reward choices, expiration, losing track of accumulation of rewards points and complex registration process. Consumers also tend to wait longer than expected to earn enough points for their desired products. This results in customers leaving the program earlier than expected with poor customer experience and low customer satisfaction rate. According to Bond, only 37% of hotel loyalty members are satisfied with their programs. Meanwhile, airlines is slightly better at 42%, Credit Cards is at 46% and Movie is the highest at 50%. In this year's survey, 44% of members indicate they are very satisfied with the program, down from 47% in 2018 [5].

Benefits by Adopting Blockchain Loyalty

Blockchain, as a distributed ledger technology (DLT) which based on a peer-to-peer (P2P) topology has the potential to revolutionize loyalty programs by eliminating some of the inefficiencies of traditional programs and provide better customer experience.

First, transactions on a blockchain ledger are

cryptographically secured, immutable and time-stamped, hence increasing transparency and making everything trackable. A blockchain token transaction cannot be revoked and is recorded publicly on the blockchain. The token is stored in a digital wallet and can be redeemed at any time. This is both a win for consumers, who no longer have to worry about their points being expired and a win for companies, who will gain greater customer loyalty by providing a better and more transparent shopping experience.

According to the KPMG survey, 82 percent of consumers are willing to use tokens as part of membership in an existing loyalty program, and 81 percent would trust the use of tokens more readily if they are already a part of a company's loyalty program [6]. Program enhancements driven by tokenization could further cement a brand's engagement with loyalty members.

Moreover, blockchain can decrease the cost of setting up and operating a loyalty program. For example, a blockchain-based partnership between two companies can be set up to enable exchanges of tokens by the customers with no centralized management. Smart contracts can be used to enforce contract terms, automate processes and reduce organizational costs.

Loyal is one of the earliest developers of blockchain-based loyalty and rewards solutions. It started a pilot program with airline Emirates Group in 2018 [7]. Emirates has 120 partners earning or redeeming mileage points. Previously, it takes Emirates 30 to 60 days to reconcile the partner transactions and complete the redemption for fiat currency from the partners. Through the pilot program, Emirates were able to reduce that relationship cost by 80% by using smart contract. The blockchain based solutions provides real time visibility into partner transactions as well as increased operation efficiency.

Furthermore, blockchain enables a frictionless system and provides more flexibility in customizing tokens. Through a trustless,

decentralized technology solution, loyalty provider can build a loyalty system with their partners, deciding the rules of how the blockchain tokens can be used by customers. On the other hand, from a consumer's perspective, his or her ability to access and manage the token is practically frictionless. Singapore Airlines is a good example. In July of 2018, Singapore Airlines officially launched its blockchain-based loyalty program for frequent customers. Their frequent flyer program KrisFlyer is reinvented as KrisPay, a digital wallet developed in partnership with KPMG and Microsoft, allowing Singapore Airlines customers to turn travel miles into units of payment, which can be used with partner merchants in Singapore [8]. The press release announcing KrisPay describes it as "the world's first blockchain-based airline loyalty digital wallet." At launch, KrisPay was partnered with 18 merchants through categories ranging from beauty and food services to gas and retail.

In October 2020, Singapore Airlines announced the launch of its newest payment, lifestyle, and rewards app, Kris+, an extension of its existing blockchain wallet KrisPay [9]. Kris+ has more than 150 partners with over 650 outlets in Singapore to provide exclusive deals for the Airline's customers. Kris+ has updated its interface and user experience, now allowing personalized offers to its customers based on location and interest. Travelers can earn miles from everyday expenditure, or vice versa, miles can be used as a means of payment. The app also offers customers discounts on dining, entertainment, and retail.

A Blockchain-based Solution

Here we will briefly introduce a blockchain-based and data-driven solution for loyalty points programs, called Points Self-management and Service Platform (PSSP). PSSP aims to use blockchain technology to reduce the costs of setting up and operating a loyalty program for both large and small companies, improve the program execution efficiencies, customer experience and customer satisfactions.

PSSP is consisted of blockchain wallet, reward protocol, loyalty ecosystem and data analysis services. Through PSSP, companies create tokens that function as loyalty points and reward them to their customers. Each customer owns a PSSP digital wallet (blockchain wallet app) to accumulate tokens. Through the PSSP digital wallet, customers can flexibly manage their tokens by themselves, including redeeming rewards at any time, transferring token, making payment by using token in stores.

PSSP also offers the potential to connect different loyalty programs across brands, creating a consolidated loyalty network. Tokenization of loyalty points transforms points into digital assets, which can be exchanged among different loyalty programs.

Besides points program, PSSP also provides data analysis services. PSSP can capture and analyze customer data for segmentation and profiling, and deliver personalized offers to customers. In the longer run, companies can launch bundled offerings and joint campaigns based on the segments identified. Not only does this extend the reach to a larger customer base, it also helps cut down advertising and branding expenses, increase sales, and improve brand recall and customer stickiness.

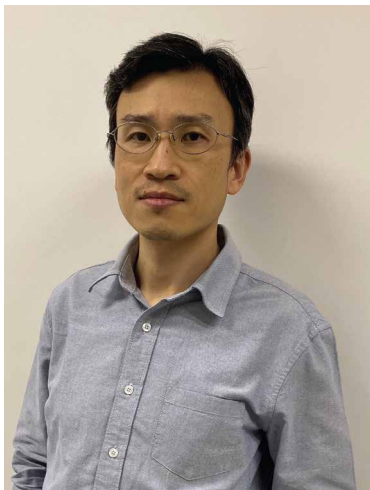
Conclusion

The development of a loyalty program has been undergoing for several years. Besides the increasing number of its applications, the unsolved inefficiencies of current programs are still causing the lack of users' activity [10].

To conclude, we believe that the best option for loyalty marketing could be using the state-of-the-art technology to make the program efficient, fast, and secure in the long term. In this sense, using blockchain technology is highly encouraged for creating a network of partnerships where consumers can use and trade their tokens, where a business can also gain access to an ecosystem of potential customers. ■

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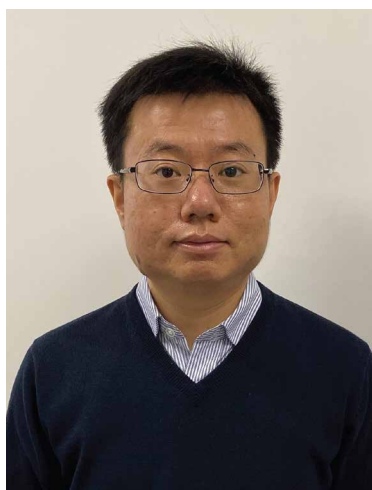
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