SOLOMON Decentralized ecommerce in the age of DeFi.

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THE SOLOMON PROJECT

The era of Decentralized Ecommerce (DeCom) is here. Introducing the Solomon Plugin and the Solomon (SLM) token.

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PROJECT OVERVIEW

The mission of the Solomon Project is to bring about the mainstream adoption of online cryptocurrency payments.

Solomon will achieve this by offering traditional ecommerce protections while preserving the benefits of decentralization. Our online plugin will allow any merchant to easily accept cryptocurrency and inspire widespread consumer confidence with chargebacks, preorders, and escrow.

A decentralized community will share ownership of the project and earn on-demand income for maintaining the network. By removing the powerful, profit-driven institutions in the middle, Solomon reimagines and democratizes consumer protection and accessibility in ecommerce.

We call this model "decentralized ecommerce", or DeCom for short. By combining the virtues of decentralized finance with the protections demanded by consumers, Solomon will finally bring cryptocurrency payments into the mainstream.

PROBLEMS FOR CONSUMERS

It is telling that the biggest problem with cryptocurrency in regards to ecommerce is the fact that nearly everyone has heard of it yet hardly anyone *uses* it.

The advantages of cryptocurrency over credit cards are known and many: accessibility, low fees, fast transactions, unparalleled security, globalization, and more.

The only disadvantage appears when transactions happen in the real world, such as in the delivery of goods and services. If a buyer sends cryptocurrency to buy a product online, it is impossible today to reverse the charge if what they receive is not what was promised.

PROBLEMS FOR SELLERS

If this problem of consumer confidence can be solved, sellers will be eager to move away from the credit card-driven system.

In short, the current financial system is overly exclusive and centralized. Profit-driven institutions enforce onerous and often arbitrary rules, hurting smaller sellers.

Sellers are at the mercy of these institutions, otherwise they are unable to accept payments and earn a living. In the best case scenario, sellers put up with high fees, slow payment terms, demanding cash deposits, and chargeback penalties. Worst case, they are excluded from banks and cannot open an account at all, or they are dropped without warning due to rules that favor larger sellers.

There are many reasons why sellers are currently excluded that have nothing to do with the value they offer consumers.

Independent sellers, especially immigrants, may not have a long credit history or the correct paperwork for traditional bank accounts. They may be unable to afford the high "Reserve Account" deposits that banks require for new sellers, anywhere from 10-20% of monthly revenue. They may get throttled by monthly payment processing maximums during times when banks should be supporting their growth. Or the bank may simply not understand or like their products and cut the relationship.

Even if a seller can maintain a relationship with a bank and merchant gateway, they can fall victim to fraudulent chargebacks and associated high fees.

Credit card companies almost never side with sellers for chargebacks, no matter the evidence. Instead, they are incentivized to keep their cardholders happy because cardholders can easily switch cards, while sellers are desperate to stay on the network and accept payments. Not only do sellers lose out on vital revenue, banks will tack on extremely high processing fees on top.

In addition, sellers can rarely, if ever, find credit card processors willing to support selfhosted preorder campaigns. Instead, they must turn to additional third parties who charge a high percentage of revenue on top of credit card fees. Thus, small-scale sellers have limited options to raise early cash flow, which is when they need it the absolute most.

In today's pandemic-ravaged world, it has never been more important to give smaller entrepreneurs a chance to earn their livelihoods online. Hosting and helping only large-scale sellers, such as Amazon, will hurt all consumers in the long run.



SOLUTION

The Solomon Plugin is an easy-to-use software tool that allows entrepreneurs to accept cryptocurrency payments for their businesses. Any business can implement the plugin on their sites with only a few lines of code, and consumers and merchants will be protected equally and fairly.

Immediately they will be able to accept payments from around the world and at significantly lower cost than the traditional 3-5% taken by credit card processors. The fee is further reduced if paid by the merchant in a native token called the Solomon token (SLM). Users locked out of traditional access to major ecommerce platforms can now easily incorporate payment processing on their websites without difficulty.

In addition, Solomon introduces completely new features inspired by the Decentralized Finance (DeFi) movement, and is the pioneering project behind the new concept of Decentralized Ecommerce (DeCom).

Decentralized ecommerce will democratize access and ownership of online commerce while simultaneously improving security and trust. Fraudulent chargebacks will be eliminated by smart contracts that provide the benefits of traditional escrow but without the traditional costs and exclusiveness. Escrow smart contracts also enable trustworthy crowdfunding and preorder features because funds can be released on a schedule, and only if goods are delivered as promised.

Traditional dispute resolution usually entails high costs, bad outcomes, and unfair incentives, with credit card companies protecting their cardholders and escrow agents protecting their profit margins. Instead, Solomon incentivizes a community of decentralized jurors with Solomon (SLM) token to handle any disputes if they arise.

SOLOMON JURORS

If chargeback or delivery disputes arise, specially elected Solomon jurors will be selected at random on the blockchain to arbitrate and earn SLM tokens for their work. This creates a lucrative and decentralized gig economy for users. And because these jurors are both specially elected and paid in SLM that are locked for 4 months, they are incentivized to believe in the platform and produce good work. Only then will their tokens maintain or grow their value over time.

SOLOMON STAKERS

The Solomon Project is owned by a decentralized community of SLM holders who stake their tokens to long term nontrading. In return for demonstrating long term alignment akin to traditional owners, stakers receive the fees generated by the Solomon Plugin each month minus any payments made to jurors.

Due to their demonstrated financial investment, stakers will be trusted to elect new jurors to the system. Stakers are incentivized to elect only high-quality, trusted jurors in order to protect their investment, and to elect as many qualified individuals as possible to make the system robust and stable.

SUMMARY

Solomon ushers in a new era of decentralized ecommerce (DeCom) that will solve the remaining issues with accessibility and security in traditional ecommerce. The native Solomon token (SLM) ensures that ownership is decentralized and incentivizes a gig economy that maintains the quality of the system.

While at first glance this appears to taint blockchain with human intervention, the reality is that trade has and always will require cooperation between human parties. The difference is that Solomon does not rely on "good faith" or bloated, centralized institutions motivated by profits over fairness.

Instead, Solomon replaces the same features with a decentralized and efficient system where all stakeholders are *personally invested* in fairness and long-term success. The result will be fairness, accessibility, and the long-awaited adoption of cryptocurrency payments around the world.



THE STATE OF PAYMENTS TODAY

Processing credit card payments is a complicated process involving numerous stakeholders with differing priorities. The majority of ecommerce transactions can be generalized into the following diagram:



Figure 1. Credit card processing system

The *card holder* buys a product online from a seller, also called the *merchant*.

The merchant sends the payment request through their *merchant account,* which is held with an *acquiring bank.* This bank will process the credit card transactions on the merchant's behalf in return for a fee. (Completing the process is more complicated than

this, involving the credit card network, the bank that issued the credit card to the card holder, and more checks and handoffs not covered in detail here.)

Setting up a merchant account is a difficult process involving extensive background checks and approval of the products for sale. The bank can and will suspend this account for any reason at any time, such as selling a new product and forgetting to get it approved by the bank. Losing this merchant account will leave the merchant unable to accept payments.

Because of these conditions, nearly all independent merchants rely on an aggregator platform (Shopify is one such example) in order to share their merchant account. While getting started on these platforms is much faster, they charge additional fees and can also drop a merchant at any time.

THE ISSUE WITH CHARGEBACKS

Consumers initiate chargebacks when they do not receive what they paid for and do not receive a refund from the merchant. In other cases, consumers may receive the goods and initiate a chargeback anyway, which is called chargeback fraud.

When a chargeback is initiated, the issuing bank (the one issuing the credit card to the card holder) forwards the request to the acquiring bank and then to the merchant. The merchant either accepts the chargeback (returns the money plus pays a fee to the bank) or disputes it with evidence.

The evidence is then sent back to the issuing bank, who makes a decision on the case. The problem is that the deciding bank has no financial skin in the game and worse, is incentivized to rule in favor of their actual customer, the card holder.

The numbers bear out this obvious conflict of interest. In 2016, the average merchant chargeback win rate was only 22%. Many merchants resign themselves to losing a percentage of sales to chargeback fraud as a "cost of doing business", or else hire one of many costly specialist firms whose entire purpose is fighting chargeback charges against the banks.

Merchants have even sued Visa, MasterCard, and Amex for failing to protect against fraud and profiting from chargeback fees, but the system remains virtually unchanged to this day.

PROTECTED BY SOLOMON™

Chargeback fraud is an unhappy consequence of human trade, but the alternative may be even worse. If all transactions were permanent and irreversible, which is the case with cryptocurrency payments now, then consumers may be unwilling to shop online at all.

SOLOMON STATE OF PAYMENTS



Figure 2. Solomon processing system

The ideal solution will protect *both consumers and merchants in a fair and unbiased manner.* Enter Solomon.

Solomon simplifies the payment process by connecting the consumer and merchant directly through their cryptocurrency wallets and smart contracts. Although the process is simplified, the consumer will still enjoy the same level of protection and confidence but without the opportunity for fraud.



HOW IT WORKS

When a consumer completes a purchase on a website through the Solomon plugin, they simply need to send an accepted cryptocurrency (such as Bitcoin, Ethereum, USDT, etc.) to the merchant's Solomon wallet address. There, the payment will remain securely held in a smart contract until the transaction is complete.

When the merchant fulfills their end of the bargain, whether it be shipping an item or performing a service, they will mark the transaction as complete on their Solomon merchant interface. This will then trigger a 7-day countdown after which the funds will automatically settle into their personal cryptocurrency wallet.

If the consumer does not agree that the terms of the bargain were met, they should first request a refund from the seller. If the seller does not agree with the dispute, the consumer can then initiate a chargeback within that 7-day period settlement period.

Both the consumer and merchant may then submit statements and upload evidence to support their side. For example, a merchant may share a tracking number to prove that an item was delivered as promised. As another example, a consumer can upload a photo to show that the wrong product was sent.

If the merchant never marks the transaction as complete, the payment will automatically be returned to the consumer in six weeks.

A JUST SYSTEM

The major advantage of Solomon becomes clear at this point. Instead of having the consumer's credit card issuer make a final judgment, it is made instead by the Solomon community. This eliminates any conflict of interest because the decision maker is a part-owner of Solomon and thus incentivized to keep the system fair and successful. To continue the hypothetical example from before, let us imagine that a consumer has initiated a chargeback because a product did not arrive. The merchant is notified and will have one week to respond before the case is automatically ruled in the consumer's favor.

In our hypothetical case, the merchant responds with a tracking number showing the package was delivered, a copy of the packing slip with the contents described, and a snippet of the customer policy stating that items shown as delivered via tracking number will be considered final sales.

This information is then submitted to the Solomon community for judgment as follows:

- 1. Seven jurors will be selected randomly by smart contract.
- Any or all of these seven may render a judgment within 72 hours.
- Judgments will be tallied after 72 hours, with the funds released to the winner by a simple majority.
- All jurors in the voting majority receive payment by smart contract. Non-voters and those in the minority receive no pay. If no votes were received, all jurors are penalized and the process is repeated.

This system eliminates bias in several ways. First, the case is tried by a random jury, eliminating risk of personal involvement in the case. Second, jurors are incentivized to vote "justly", because in the absence of collaboration between jurors, it is the best strategy according to game theory in order to ensure that they will join the majority. Even if only one juror responds out of the seven, the optimum strategy still holds because they must assume others will respond justly.

Third, jurors are incentivized to decide justly because they are paid in Solomon tokens. The system can only grow if both consumers and merchants trust and use it. Therefore, jurors are incentivized to protect the value of their tokens by acting in ways that increase trust and value on the platform.

ADDITIONAL USE CASES

Solomon can be used for more than just chargebacks—the system is suitable for addressing all forms of online counter-party risk.

Preorders (including crowdfunding campaigns) are a very popular way for merchants to raise early funding for products still in development. Consumers enjoy finding and supporting these budding projects, but they do not like when the funds are misused or they do not receive what is promised.

Solomon enables safe preorders (and crowdfunding) because such transactions involve the same elements as a normal purchase—a consumer, a merchant, a payment, and a promise. In the case of preorders, the original payment will be held out of circulation for up to two years before being automatically returned to the consumer. In that time, the merchant may trigger their payment and 7day review period at any point that they feel they have delivered what was pre-ordered. If there is any dispute by the consumer, the normal chargeback procedure is initiated and settled by Solomon jurors.

Crowdfunding campaigns can be conducted in much the same way as preorders, except because it is a joint fundraising effort, a simple majority of the backers must decide to initiate a chargeback procedure. Solomon jurors will then decide which party will receive the funds in their entirety.

Finally, escrow can be offered in a similar way to preorders. The main difference is that the value of the goods in question are usually much higher, which deserves an elevated standard of thoroughness.

With escrow arrangements, consumers have up to 15 days to gather evidence to dispute a completed transaction. The merchant will also have 15 days to register a response. Jurors will be randomly selected and asked to render judgment on a rolling basis. The first party to achieve a decisive majority (7 + logX votes where X is the total pool of jurors) will win the case. Participating jurors will split a bonus payment on top of the usual pay, which will be funded by the increased fee charged to the merchant for offering the escrow feature.

CONSIDERING PRICE FLUCTUATIONS

Until cryptocurrency becomes a widespread method of payment (which Solomon aims to help achieve) price volatility must be considered in decentralized systems. Problems arising from price volatility will be minimal on Solomon for the following reasons.

Firstly, stable coins such as USDT can be used for payments and are designed to hold a steady value over time. Thus, payments held during normal shipment, preorders, or escrow periods will not change materially in value.

If Bitcoin or Ethereum are used instead, let us consider what will happen if the value were to decrease over time. The consumer is not affected because they will receive the goods or services they originally paid for. The merchant is affected because they are unable to receive their payment and liquidate until their transaction is successfully completed.

The merchant is therefore incentivized to fulfill their promises as quickly as possible and receive payment. If the merchant wishes to avoid this possibility altogether, they may accept stable coins only, or else only cryptocurrencies they are willing to risk accepting as a way to increase business.

If the value of Bitcoin or Ethereum were to rise over time, there may be an incentive for consumers to issue chargebacks and recover the cryptocurrency. However, they will not be able to gather evidence to support their chargeback, because there is none. This is a clear case of chargeback fraud, and one that jurors will be able to easily detect with proof evidence from the merchant.

A misguided consumer may worry that a merchant may hold off on fulfilling orders to try and "time" the market. However, such a merchant that routinely fails to deliver on their promises will quickly have the bigger problem of tarnishing their brand and losing future customers.

If at any point merchants finalize their transactions based on market actions and not the reality of fulfillment, jurors will quickly penalize them by returning funds to the consumer. The strongest strategy is to fulfill as quickly as possible and get the cryptocurrency in hand, at which point they can decide to liquidate or not. There are much easier ways to speculate on the market.

THE USER EXPERIENCE

A secondary but still extremely important factor for mass adoption is the user experience. Thankfully, designers in the blockchain space have been improving the experience for non-blockchain savvy users for years. Solomon will gratefully build upon this legacy of work to introduce the new features unique to our system. Consumers will experience the Solomon plugin as a checkout module on regular ecommerce websites, similar to how PayPal or Stripe exists today. Selecting the option to pay by Solomon will guide the consumer through a checkout process that will be customized based on the merchant's offerings.

The consumer can select a cryptocurrency to pay with, view the terms and schedule of the transaction, and complete the transfer. They will receive a confirmation email and receive notifications of shipment and if necessary, how to initiate a claim. The process will be as seamless as the current process consumers are used to; it will simply be more fair and secure under the hood.

Merchants simply need to implement a few lines of open-source code on their website to implement the plugin. The plugin code will be open and transparent to all, and can be modified to capture the prices, terms, and features the merchant desires.

In order to connect with and fund the juror system, the plugin will collect 1.5% of payments as a flat fee (reduced to 0.5% if paid using Solomon tokens). Compare this to the 5-10%+ merchants currently sacrifice to payment aggregators, interchange fees, and chargeback fees. This fee is not-for-profit and is solely used to pay jurors for maintaining the system.



THE SOLOMON TOKEN

The Solomon Token (SLM) is an ERC20 token that facilitates payments to jurors and allows decentralized ownership of the platform.

The total allocation will be 100 million SLM tokens:

- 50 million : Presale
- 25 million : Development
- 15 million : Rewards & promotion
- 10 million : Team (12 mo. vesting)

A wide distribution is essential to the decentralization of the platform and facilitated by an initial presale of 50 million SLM.

SLM holders may use their tokens as a cryptocurrency of exchange, such as by purchasing items through the Solomon plugin or receiving a discount for transaction fees.

To access additional features, SLM holders may send their tokens to a non-trading "staking" contract for a specific period of time until a maturity date. Once the individual staking minimum is reached, the staker is now considered a trusted custodian of the platform.

Custodians may now "elect" new jurors, including themselves, by submitting their Ethereum wallet addresses and email addresses to the Solomon smart contract. These jurors will then be eligible for random selection and payment for services. Custodians may revoke this privilege at any time if the elected juror neglects their duty, and the juror must then seek a new sponsor if they wish to remain a part of the system.

In addition to this important power, custodians will also receive any surplus of processing fees not paid to jurors in a given year. As the platform grows in usage, average transaction value, and overall efficiency and trustworthiness, fees collected will likely outpace the payments to jurors.

In any such years of surplus, unused fees will be distributed to the custodians in proportion to their relative token stakes. In other words, the larger their stake, the greater their reward.

As transaction volume through Solomon increases, demand for SLM will also increase due to its utility for discounts. Such an increase in demand would raise the value of staking tokens and motivate more individuals to stake. Such a result will create a positive feedback loop that incentivizes a widespread and completely decentralized custodian class. Custodians in this system will be highly motivated to select good jurors and maintain the quality of the system.

Ecommerce will no longer be subject to the whims of outdated, profit-driven financial institutions. Solomon will finally make online cryptocurrency payments fair and open to all.



Figure 3. The Solomon plugin - Owned and maintained by the community



FAQ

What is the Solomon Project?

Solomon aims to achieve mass adoption of online cryptocurrency payments through a system of decentralized ecommerce (DeCom). The project involves an open-source ecommerce plugin, the Solomon Plugin, that will allow any merchant to easily accept cryptocurrencies online. The Solomon Community will own and maintain this payment network, and receive Solomon tokens (SLM) as payment.

How is Solomon different from existing cryptocurrency solutions?

Solomon boosts mainstream consumer confidence by offering decentralized versions of popular fraud protection features, such as chargebacks and escrow. The lack of these features has been the major factor in limiting the mass appeal of cryptocurrency payments. Nevertheless, Solomon preserves the benefits of blockchain by decentralizing ownership and management of the ecommerce plugin and these features, ensuring both security and fairness for consumers and merchants.

How is Solomon different from banks and credit card processors?

Solomon combines all of the benefits of cryptocurrency payments (accessibility, low fees, fast transactions, unparalleled security, globalization, and more) and eliminates the biased and inefficient ways the banks and processors penalize merchants. Small merchants, immigrants, and first-time entrepreneurs are often blackballed from holding accounts, required to place large cash deposits, pay high fees, and suffer from chargeback fraud. Especially in today's pandemicraged world, it is more important than ever to help these smaller entrepreneurs pursue their livelihoods online.

What is the Solomon token?

The Solomon token (SLM) is an ERC20 token that is necessary for incentivizing the community members that maintain the Solomon system. Custodians are SLM stakers who receive the revenues from the platform, and jurors are gig workers who receive SLM for mediating chargeback disputes in a decentralized manner. There will be no central entity who receives revenues or profits from the system; the Solomon project instead belongs to the community. Merchants will be able to receive a wide range of cryptocurrencies from customers through the Solomon plugin, including USDT, BTC, ETH, SLM, and more, and can use SLM to reduce their (minimal) payment processing fees.

THANK YOU

