

PrivateJetCoin

An Ethereum based public marketplace for private jet travel

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Abstract

PrivateJetCoin combines concepts from private jet membership programs with lessons learned from building cryptocurrencies and their communities. We explain the function of an ERC-20 compatible token launched in concert with a small fleet of super mid-size business jets. PrivateJetCoin is a utility token and the key unit of exchange on the online marketplace for business jet hours. There are 13,700 business jets in the US fleet today that generate 3.8mm flight hours per year. The tokenization of flight hours promises reduced transaction costs and, through the evolution of a marketplace, higher industry fleet utilization. PrivateJetCoin's purposeful enhancement of price discovery and reduced entry price have the potential to produce fairer and more inclusive results for aircraft owners and travelers alike.

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Introduction

The PrivateJetCoin marketplace combines concepts from fractional jet membership programs with lessons learned from building cryptocurrencies and their communities. It runs on the Ethereum network with an HTML front end (akin to Steemit) where aircraft owners may list their planes for use (i.e. charter or empty leg) and transact securely on the blockchain.

Travelers may purchase Private Jet Coin (PJC) to securely acquire private jet travel on the marketplace, or to charter company owned planes. Separately, the transmission of private jet coins to travelers who chose to buy a block of time on the company owned fleet is accomplished through the mechanism of a dual ledger: a cash ledger is debited for each flight and a private jet coin wallet that is debited in parallel for each flight. As the price of PJC fluctuates over time and as the two ledgers are respectively debited - it is possible for a customer to have exhausted their cash ledger (and flight time) and to then still have PJC left over for use on the marketplace – or for sale to third parties. Customers with limited crypto experience may still prospectively enjoy gain from PJC ownership because Jet Token Inc. holds a wallet and tokens on behalf of the customer until refund or completion of cash flight service.

There are 13,700 business jets in the US fleet today that generate 3.8mm flight hours per year, and numerous brokers and centralized databases that each attempt to improve the allocation of that capacity in return for a fee. PrivateJetCoin, operating on the Ethereum block chain, offers a superior (low cost) allocation mechanism. Instead of a collection of low-value, centralized, databases with high commissions, we propose a high-value, decentralized, database with low commission. The lifetime value of the commissions paid to a collection of fragmented databases may instead be reduced and transferred into the value of a cryptocurrency, Private Jet Coin, and its related marketplace.

By obtaining a free PrivateJetCoin address on the marketplace web site one gains community membership. The PrivateJetCoin community provides the following services to its members:

1. Decentralized marketplace for flight hours and fractional interests (arrivals, departures, aircraft description, aircraft photos, prices)
2. Cryptocurrency redeemable for flight hours
3. Cryptocurrency for transacting fractional jet interests

The community improves access to services for stakeholders; aircraft owners and travelers. Aircraft owners achieve higher revenue per average seat mile (RASM) by filling an otherwise empty plane, and travelers achieve access to luxury travel at a price that should approach marginal cost (or less) depending on the level of excess supply on a given route.

This convertibility of private travel purchase is driven by the willingness of market participants to supply inventory and to more broadly transact on the marketplace with PrivateJetCoin. Most private planes return empty from their primary destination (~75%) and many jet owners put their planes out to charter to spread fixed costs. Many private flights are used to reach third and fourth tier destinations with limited access to major airports. Those destinations necessarily have

limited market appeal, particularly at off hours. Because there are approximately 5,400 municipal airports in the US and 550 commercial airports, we estimate 5-10 major routes account for the majority of empty leg flights with market appeal.

PrivateJetCoin's purposeful enhancement of price discovery and reduced entry price have the potential to produce fairer and more inclusive results for owners and travelers alike.

PrivateJetCoin (PJC)

PrivateJetCoin is the fundamental unit of account. PrivateJetCoin is a liquid token traded on the Ethereum network, and therefore can be bought or sold on exchanges, as well as transferred to other users as a form of payment.

PrivateJetCoin Ecosystem

In the cryptocurrency space, speculators jump from cryptocurrency to cryptocurrency based mostly on which one is expected to have short-term growth. PrivateJetCoin wants to build a community that is mostly owned and entirely controlled by those with a desire for private travel.

Because Private Jet Coin connects the hyperactive cryptocurrency asset market to the service market for private jet travel, we would expect relatively low long run price volatility. If the price dropped too low one would expect market participants to swoop in and buy (fleet asset backed) coin on the cheap, and thereby restore equilibrium price. In addition, if Jet Token Inc. were to close its aircraft would be liquidated and proceeds distributed to token holders through the mechanism of a smart contract exchange offer (and supplementary traditional exchange offer if required). That is to say, the value of the currency could be said to be backed by the value of the planes less any aircraft-by-aircraft debt obligation (expected to be minimal). A larger fleet would imply a higher down-side value to the currency, all else equal – and with the caveat that private aircraft experience depreciation. Secondary market fluctuations notwithstanding, the cost of operation of the company owned fleet is collected up front at the time the dual ledgers (cash and crypto) are created on behalf of the customer and so the sustainability of fleet operations would be expected to be otherwise unaffected by fluctuations in the PJC price.

Token Creation

The number of PrivateJetCoins is initially capped at 106,250,000.

Jet Token Inc. burns coins paid to it by 25 hour customers in return for travel and ancillary services. For this reason a formulaic number of coins must be issued each time Jet Token Inc. sells 25 hour blocks related to a new fleet addition. *Network dilution is limited because issuance is tied to the presence of an asset that is burning what most or all or what is newly issued.* Coins are held in custody by JetToken Inc. until their corresponding hours are used by customers, or the customer requests a refund of their remaining hours.

Newly created Private Jet Coins are held in custody by the issuer until their corresponding hours are used by customers. Eventually, the jet card owner would redeem Private Jet Coins for fleet

usage, or be refunded their outstanding fiat (or crypto) balance plus a top-up amount of Private Jet Coins to reflect any appreciation in the Private Jet Coin at the time of refund. The customer may then sell some or all of their Private Jet Coins at their discretion. Jet card owners may not sell time per se, however, they may tender coins to the company in return for travel and then post that travel itinerary to the marketplace for sale. Private Jet Coins may be bought and sold outright or used to buy other private plane rides or related services on the marketplace.

For example, suppose a new \$17.5mm super mid-size business jet was added to the fleet and (1) 600 hours were sold for the year at a fiat equivalent price of \$10,000.00/hr and (2) the Private Jet Coin price is \$1.00. As the hours were sold, this would ratably permit the issuance of 6,000,000 new Private Jet Coins – that, again, would be burned by the company as used for air travel. In this example, the supply of coins expands by under 6% with the addition of a major capital asset, and then coin supply contracts by about 6% as the hours are flown. At the end of the year, in this example, all 600 hours have been flown and all 6,000,000 coins burned. Next year, Private Jet Coin may repeat the process and sell (and hold in custody) another 6,000,000 coins that will, again, be burned as used. In the end, the assets and coins come on the network, the hours are flown and the coins are burned, and then the asset is either re-sold in another 600 hour block, replaced or sold and removed.

Even if the PJC price falls after the purchase of hours by the customers, those same 6,000,000 coins will be honored by Jet Token Inc. in exchange for the 600 hours discussed above. Why? Because the hours were bought and paid for up front (including related profit margin). *If, however, the value of the coin rises, then a somewhat lesser number of coins will be required to redeem those 600 hours. This introduces the possibility of upside for the buyer, a unique feature in the private aviation industry.*

Buyers of 25 hour blocks of time (industry standard block) may find themselves having redeemed all 25 hours but still possessing a significant number of PJC. What could they do with the extra coins? While they cannot present them to Jet Token Inc. directly in return for travel without an intervening conversion to fiat or other crypto (having already used their 25 hours), they may use their PJC to purchase additional trips on the open marketplace. Those coins will not be burned and will remain in circulation. The increase in the PJC price (reflecting a higher network value) allowed those PJC to escape being burned while their corresponding flight hours were consumed. *That is to say, a coin only escapes burning if it's saved by an increase in network value (i.e. a higher PJC price), and that increase in network value offsets the dilutive effect of a new coin being in circulation.*

Marketplace

PrivateJetCoin is based on Ethereum, a decentralized network that is operated by witnesses in jurisdictions around the world. All user actions are publicly recorded on the blockchain, and can be publicly verified. This means that there is no single entity that can govern the aircraft posting content available to PrivateJetCoin holders.

Customers may not sell jet card hours directly on the marketplace, instead they may take a more straightforward approach and simply sell the PJC outright (peer to peer or on exchange). A jet card holder may book a desirable trip in the hope of selling it on the marketplace, but again, simply selling PJC may prove more appealing.