



UNIVERSAL
PAYMENT BLOCKCHAIN

*Global, payment gateway
blockchain designed for
Point-of-Sale*

ICO White paper

GRAFT Blockchain, Inc
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PLEASE REVIEW THE [RISKS](#) SECTION CAREFULLY AS THEY SET FORTH MATERIAL REPRESENTATIONS AND WARRANTIES DEEMED MADE BY EACH RECIPIENT OF THIS WHITEPAPER AND OTHER IMPORTANT INFORMATION ABOUT GRAFT PAYMENTS AND THE CONTENTS OF THIS WHITEPAPER.

Mission

Graft blockchain is built upon the idea that the payment industry can benefit tremendously from the democratization brought forward by blockchain technology, but only when the right technologies are chosen and combined with accepted industry workflows and systems.

When done correctly, this transition to blockchain-based payments will likely lead to an improved credit/debit payment system through the combination of lower transaction fees, tight privacy controls, low rates on credit balances, and connected extra additive services.

GRAFT seeks to be a socially responsible organization, and will introduce a distributed, real-time payment processor and services platform into the global market covering a variety of credit and debit payment use cases. It aims to allow merchants to accept small payments and avoid dealing with big banking and government institutions, prevents fears of recourse coming from corrupt regimes; it strives to free consumers from the usurious interest rates on the credit card balances. Finally, it seeks to open up global commerce where the governments are making cross-border transacting difficult.

We believe a blockchain like Graft can have a far reaching impact, removing friction from the systems and enabling new use cases. To provide a few examples of possible impact:

- Consumers benefiting from lower prices due to merchant fees going down
- Merchants offering more products and services
- Consumers and merchants benefiting from significantly lowered administrative and transaction processing overhead
- Commerce and societies in general becoming more efficient due to inability to install artificial barriers to commerce that benefit high-power individuals or lobbies
- Decrease in physical and electronic crime due to shift to cashless and secure crypto-currency
- Consumers benefiting from lower credit card borrowing costs resulting from peer lending

While most other blockchain based payment platforms try to revolutionize the payment process, GRAFT represents an evolution based on enormous experience gathered by the payment card industry during

many years, which will allow a fast adoption by the payment mainstream, from both merchant and buyer side.

GRAFT blockchain software is under an open source license.

Executive Summary

The POS of tomorrow must be able to handle both conventional credit and debit cards as well as cryptocurrency transactions. Graft is designed to be a global, open-sourced, blockchain-based, decentralized payment gateway and processing platform capable of handling all forms of payments, instantly and with low transactions costs. Graft seeks to employ payment processing protocols and flow to enable easier and faster adoption of Graft as a mainstream payment platform, while eliminating the need for centralized intermediaries.

Graft will employ payment processing protocols and flows similar to traditional electronic payment systems – such as credit, debit, and prepaid cards – are processed, which are already familiar to and trusted by millions of users and merchants around the world. This approach should enable easier and faster adoption of Graft as a mainstream payment platform, while eliminating the need for centralized intermediaries (payment gateways and processors) currently required to facilitate transactions between buyers and merchants.

Graft blockchain could benefit merchants and consumers, as well as the entire ecosystem of payment processors, gateway and terminal providers, and crypto miners, through a wide range of applications and advantages over other payment options. Merchants could benefit through real-time authorizations, low transaction fees, special transaction types and smart contracts, free point-of-sale app accepting all payment methods, merchant payouts in local fiat currency and authenticated buyers. Consumers (senders) could benefit through no transaction fees, free fund transfers between wallets, absolute privacy, debit card capability, crowdfunded credit and zero knowledge proof identity verification.

Background

Bitcoin[1] was created as an “online cash” - very secure but relatively slow settlement system which has been unable to replace payment cards online or compete with both plastic cards and paper cash in brick-and-mortar stores (Figure 1).

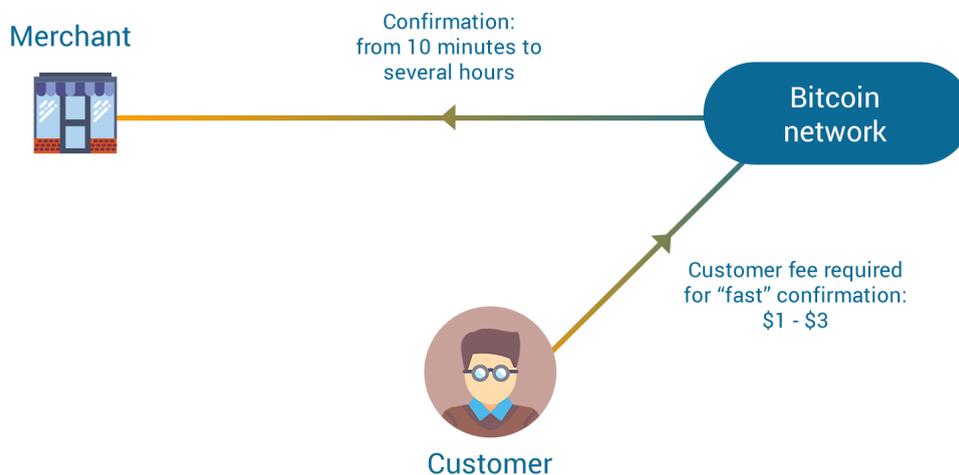


Figure 1: Bitcoin Transaction Processing without Centralized Intermediary

Even though some existing cryptocurrencies and cryptographic tokens[2] have improved confirmation times, they are still unable to process essential transaction types such as authorization and completion, which makes their adoption by retail, hospitality, and convenience store industries impossible without using intermediaries - payment processors and gateways[3] - who fill the gap (Figure 2). However, the very existence of a payment processor, which is typically a centralized commercial organization regulated by government and controlled by shareholders, as an element of cryptographic payment transaction contradicts the fundamental principles of cryptocurrencies and cryptographic tokens: decentralization, privacy, and independence.

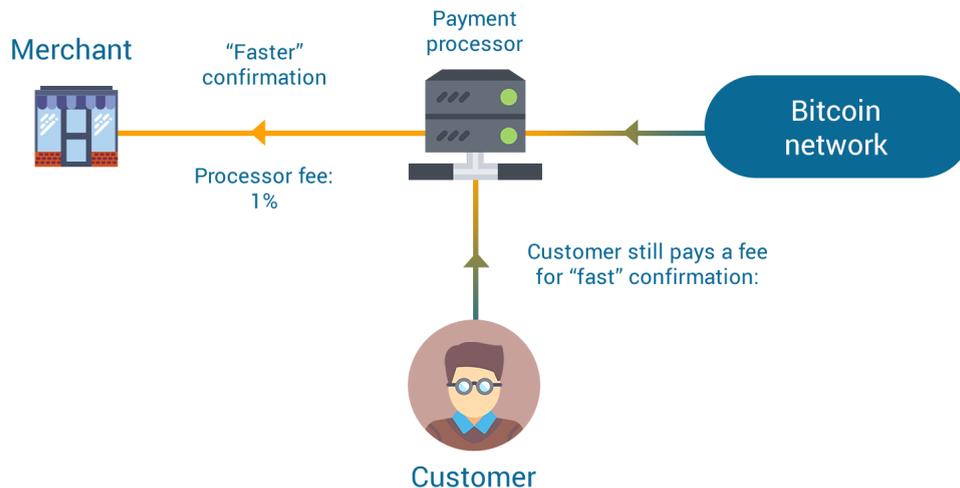


Figure 2: Processing Bitcoin Transaction by Centralized Intermediary

Most merchants are unable to accept cryptocurrencies or cryptographic tokens without a third-party payment processor due to the unique way blockchain networks process transactions, which is conceptually different from traditional electronic payment infrastructures such as payment cards or Paypal. Although the overall concept of plastic card payments may be outdated, there are technologies developed around them that have accumulated enormous amounts of merchant experience and user trust which cannot be abandoned overnight. Those technologies include real-time authorization protocols and smart cards. There are several major differences between the ways traditional and cryptographic payment systems handle transactions, which in most cases make cryptographic payment systems less attractive for merchants and/or consumers. Below is a list of some technical limitations and business flaws of the existing cryptographic payment systems as compared to traditional electronic payments:

- Lack of Essential Transaction Types, such as pre-auth/completion and return[_____]
- Unsuitable Payment Flows
- Long Confirmation Times
- Unbalanced and Unpredictable Transaction Fees
- Inability to Process Micropayments and Repeating Charges (Subscriptions)
- Lack of Offline Transactions support
- Low Scalability

- Volatility
- Incomplete Security
- Lack of Privacy Due to Traceability of Blockchain
- Lack of Trust between Buyer and Merchant
- Questionable Utility
- Poor Usability of End-User Interfaces
- Lack of Customer Support

By seeking to address these issues, Graft hopes to elevate cryptographic payment processing to a new level, and makes possible their wide acceptance by mainstream merchants and consumers for the first time without violating the fundamental principles of cryptocurrencies and cryptographic tokens. Let's review each of those issues with greater detail and see how Graft aims to address them.



Takes 10 mins to
10 hours to settle



Cost up to 50%
of the transaction
amounts for smaller
transactions



A buyer pays the
transaction fee
instead of a seller



People have to
deal with small
fractions (0.0001)

**PROBLEM: CURRENT CRYPTOCURRENCIES
ARE NOT DESIGNED FOR THE POINT OF SALE**

SOLUTION

Graft is designed to be a blockchain-based, decentralized payment gateway and processing platform that anyone can use. Any buyer and merchant should be able to use Graft in a completely decentralized and inexpensive way. The Graft ecosystem is open [22] so anyone will be able to participate by maintaining the Graft blockchain and implementing network services. Graft will also employ payment processing protocols and flows similar to traditional electronic payment systems such as credit, debit, and prepaid cards, which are already familiar to and trusted by millions of users and merchants around the world. This approach should enable easier and faster adoption of Graft as a mainstream payment platform, while eliminating the need for centralized intermediaries (payment gateways and processors) currently required to facilitate transactions between buyers and merchants.

Start accepting cryptocurrency with standard payment terminals (or GRAFT mobile POS)

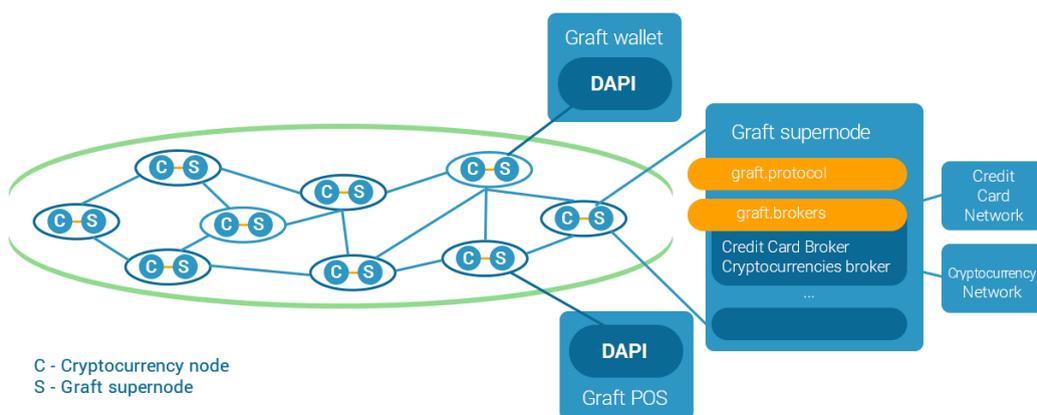


SOLUTION: GRAFT ENABLES USING ANY CRYPTOCURRENCY AT THE POINT OF SALE. NATIVELY

PRODUCT

GRAFT Blockchain

GRAFT is a decentralized network that consists of supernodes as defined below that can also double as service brokers. Supernodes will provide distributed application programming interface (DAPI) that allows inbound connections from other systems (such as point of sale systems and wallets).



The **GRAFT supernodes** will be the heart of the GRAFT Network platform. We call them supernodes because they will perform more functions than a “traditional” network node, and there are different requirements for supernode owners. Although the GRAFT Network will be open and decentralized, and anyone will be able to run a supernode, there are different levels of supernode and different conditions (and rewards) associated with each level.

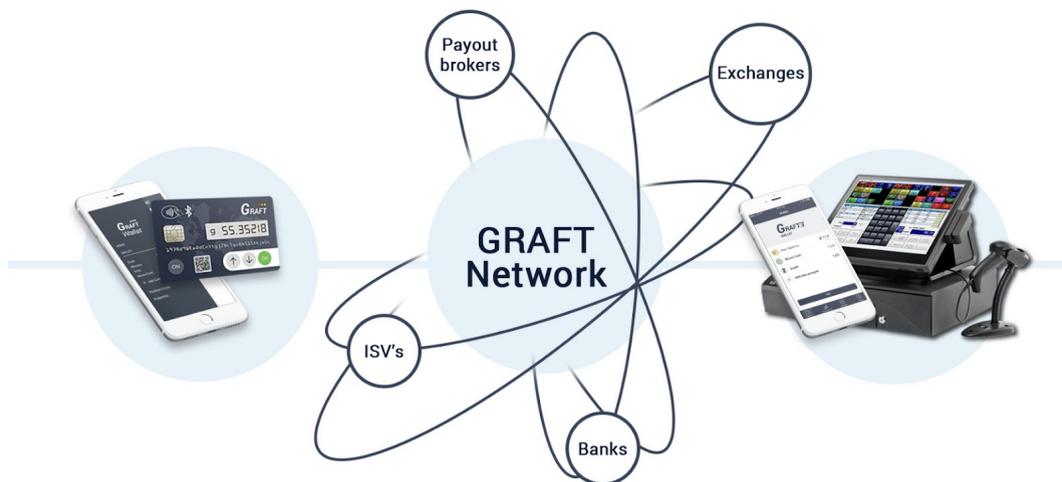
Proxy Supernode is the “entry level” - everyone will be able to install the supernode software and host a proxy supernode. Proxy supernodes can be used as a trusted relay for those who have highest privacy requirements, so they can host their own “wallet server”, or for large merchants as a “store server” for even faster transaction processing.

Full Supernode is both miner and service provider. It cannot perform its instant authorization functions or service brokerage (credit card acceptance, for example) without mining.

Service broker is a powerful fundamental concept of the GRAFT Network and completes GRAFT “Ecosystem”. Service brokers will provide additional services to the network, such as payouts, exchanges, back office functions, applications, arbitrage, etc.

Periphery

In addition to the blockchain, GRAFT seeks to provide peripheral applications, integrations, and other artifacts that will enable the use of the network in the short or long run. Examples of such peripheral pieces are mobile point of sale, mobile wallet applications, as well as payment cards.



Roadmap



GRAFT team has an ambitious roadmap with many interesting features developing over time, which address both merchant's complex reality and rich feature set and the drive to simplify and streamline things for the end user.

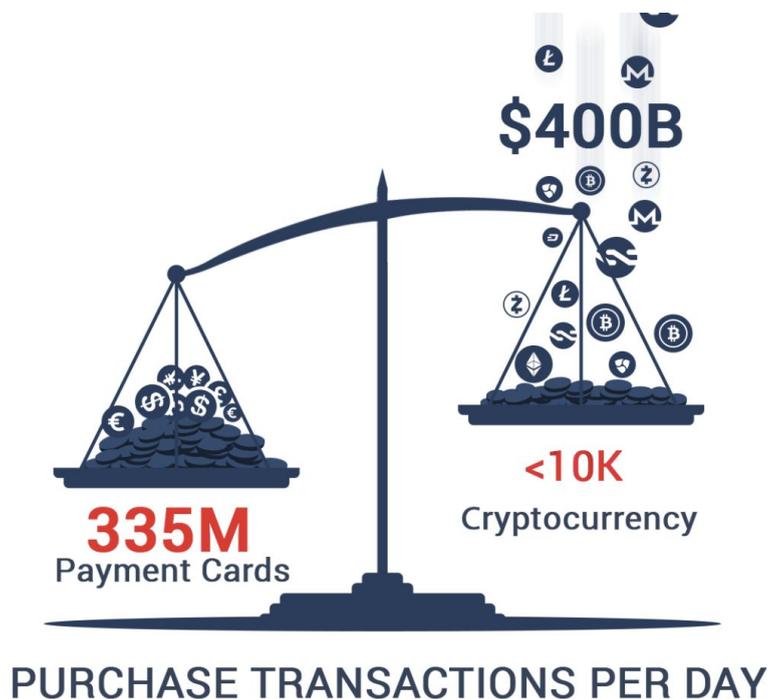
Some of the examples of these roadmap items are support for Merchant loyalty programs, Vchains (private networks), GRAFT universal cards, and much more.

Having said that, first things first - GRAFT has delivered on both TestNet and prototype applications in Q4 of 2017, and will launch the ICO on the MainNet in January of 2018!

Market

General State of the Market and Market Dynamics

The global payment mix is rapidly changing - from cash / debit / credit in the past to cash / crypto / debit / credit today, with crypto picking up market share (and fast) from all 3 segments. The use of non-cash methods world-wide is growing at double digit annual growth rates, with volume of transactions reaching 257 billion transactions per year in 2016 [21]. Mobile payment volume is expected to rise by a compound annual growth rate (CAGR) of 80 percent, which would bring mobile payments volume to \$503 billion by 2020. The Cryptocurrency market, led by Bitcoin and Ethereum, has seen dramatic growth to over \$400B in market cap over the past year. Graft believes it represents the future of this new economy, representing the shift towards non-cash and mobile payment technology with potential cryptocurrency ubiquity, privacy and low costs.



GRAFT Unique Value Proposition and Competitive Landscape

GRAFT is establishing an ecosystem that could benefit many players - merchants, consumers, payment processors and gateway solutions, issuing banks, point of sale vendors, e-commerce vendors, miners, independent software vendors, and finally society at large.

Target	USP
Merchants	Lower processing rates, customer satisfaction, free loyalty programs, customer credit
Consumers	Universal wallet/card, micro payments, lower prices
Payment Processors and Gateways	A large source of transaction volume, differentiation
Issuing Banks	Concept, brand, volume
POS SW and HW vendors	Innovative payment processing options
Ecommerce SW vendors	Innovative payment processing options
Miners	Create income by mining new alt currency; able to merge mine GRAFT and Monero
Other Service Providers	Audits, Smart Contracts, Private Networks are just some of the opportunities available for SP's
Society in General	Lower crime rates, help remove cross border barriers, removing artificial barriers to commerce

Table - GRAFT'S unique value proposition

While most other blockchain based payment platforms try to revolutionize the payment process, GRAFT represents an evolution based on enormous experience gathered by the payment card industry during many years, which will allow a fast adoption by the payment mainstream, from both merchant and buyer side.

Graft maintains the best attributes of current card processing and combines them with unique advantages provided by cryptocurrencies. Specifically, we focus on removing adoption friction on the merchant side by leveraging existing infrastructure, staying consistent with existing procedures and processes, and requiring minimum retraining of the personnel.

We believe that most other projects have not spent much time in the industry and may be addressing some but not all the friction points, whereas at GRAFT we believe in a comprehensive solution.

	MONERO	DASH	CENTRALIZED GATEWAY	INTEGRATORS	CRYPTOCARDS	GRAFT
Private / secure	✓			✓	✓	✓
Instant Authorizations		✓	✓	✓	✓	✓
Reasonable fees for typical POS transactions (5 - 100 USD)		✓				✓
Merchant paid fees						✓
Payout in fiat			✓	✓	✓	✓

BUSINESS AND ECONOMIC MODEL

Transaction Flow

The GRAFT Network transaction flow allows the acceptance of a payment in any currency and via any method, facilitating the transaction in GRF, involving service brokers to perform exchanges and conversions among currencies, as well as payouts.

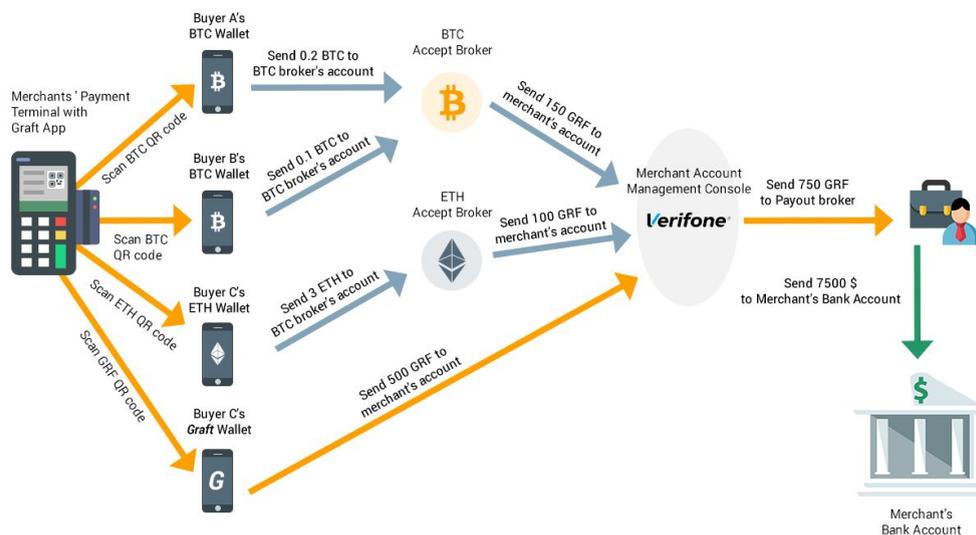


Figure: Sample transaction flow

Fees

GRAFT reintroduces a convenient fee structure with no fees for the payer so all fees are paid by the receiver (merchant or payee), just like traditional electronic methods of payment. Graft makes micropayments accessible to everyone by setting very low (as compared to credit cards[11] and online payment processors,[12] cryptocurrencies[13], and other cryptographic tokens) fees, but without a fixed fee component (Table 1).

Table 1: Graft Network Transaction Fees

Micropayments (less than 1000 GRF)	Regular Payments (more than 1000 GRF)
0.1%	\log_{1000} (significantly less than 0.1% as transaction amount grows)

The logarithmic fee schedule should provide for an incentive for processing less transactions with small amounts (i.e. combining multiple transactions together whenever possible) while keeping low transaction fees for large transaction amounts (Table 2).

Table 2: Examples of Graft Network Transaction Fees

Transaction amount	Transaction Fee Amount	Effective Transaction Fee
0.01 GRF	0.00001 GRF	0.1%
1 GRF	0.001 GRF	0.1%
10 GRF	0.01 GRF	0.1%
100 GRF	0.1 GRF	0.1%
1,000 GRF	1 GRF	0.1%
10,000 GRF	1.333333 GRF	0.01333333%
1,000,000 GRF	2 GRF	0.0002%

* Note: fees represented are GRAFT Network fees; service brokers will impose additional fees for the services they provide

** Note: current fee structure is still being flushed out, and is subject to change

DISTRIBUTION

Introducing a new method of payment is not easy - merchants have to be educated and trained on deployment, maintenance, and operation; staff has to be trained; incumbent software and hardware providers have to embrace it or provide proper integration points; then there are gateways, banks, and other participants of the current money exchange ecosystems. It is not a small feat by any means!

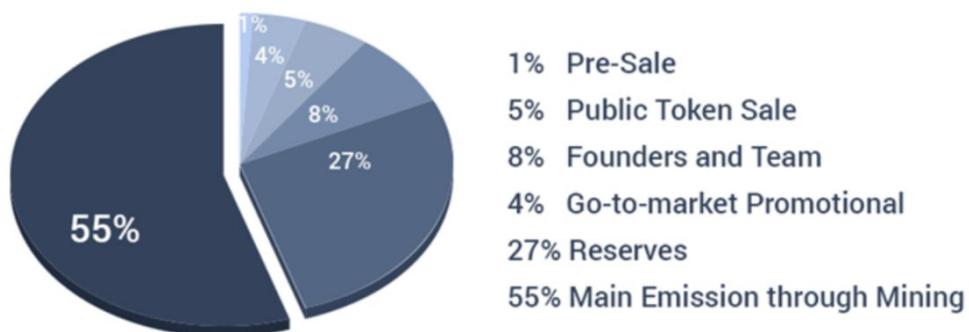
GRAFT believes its approach to enabling cryptocurrency at the point of sale makes it easy for the marketplace to adopt because 1) terminal and POS providers already provide the integration points and marketplaces to publish new method of payment applications and gateways, and 2) GRAFT provides incentives to all participants to drive simple and swift adoption. The crypto users, for example, are incentivized to popularize a system that accepts crypto funds that they own, payment terminal providers with ability to support more payment methods with higher returns on the flexible platforms they've developed, most Point of Sale and e-commerce vendors have proper configuration options in place, and independent software providers are able to build and provide back office functionality that furthers the acceptance.



ICO

GRAFT or its affiliate plans to use the initial coin offering (ICO) process to initiate the economic driver of the system - a token with a robust functionality which creates value. We are pre-mining 45% of the coin and leaving 55% to be mined over time.

Coin Distribution



We are looking to prime the economic side of the blockchain with max of 5% of the total possible coin emission through the ICO. We will retain the rest of the pre-mined coins for subsequent release as needed for ongoing operational needs. Since we're not generating any fees from the transactions on the blockchain, we intend for the reserves to last through the complete build out of the blockchain until it is completely self-sustaining (6-8 years in our estimation)

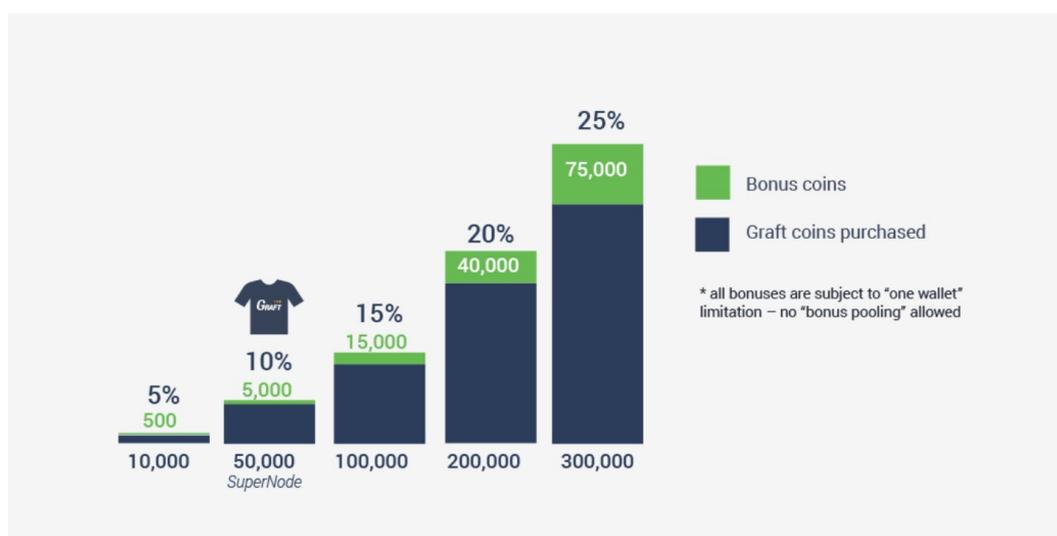
Offering

CAP AND PRICING

Total Emission	1,844,674,400
ICO HARD CAP	\$25,000,000
Token Price:	0.00002620 BTC
Supported currencies	BTC, ETH, XEM, USD
ICO Dates:	Jan 18 – Feb 18, 2018
Min Purchase:	1,500 GRFT
Maximum Purchase:	3,000,000 GRFT
First 48 hours discount:	10%

* estimated number of coins in circulation after the ICO is less than 100 million

Volume Bonuses



Participation Requirements

ICO participants will be asked to complete the following steps in order to purchase GRF coins in the ICO:

1. Pass the Know Your Customer / Anti-Money Laundering (KYC/AML) verification
2. Create and provide address of their GRAFT Wallet
(Either command line interface or mobile wallet can be used)
3. Transfer the funds in one of the crypto-currencies approved for the ICO to the GRAFT wallet address displayed at the time of ICO registration procedure

Restrictions

GRAFT reserves the right to not to sell Tokens to any individual or entity: 1) that does not comply with the Terms of Sale for GRAFT Tokens; 2) the sale to whom might violate any law or governmental regulation in any jurisdiction; 3) if the sale is deemed not to be in the best interest of GRAFT as it may determine in its sole discretion.

Risks & Disclaimers

PLEASE READ THIS SECTION AND THE FOLLOWING SECTIONS CAREFULLY AS THEY CONTAIN IMPORTANT INFORMATION. IF YOU ARE IN ANY DOUBT AS TO THE ACTION YOU SHOULD TAKE, YOU SHOULD CONSULT YOUR PERSONAL LEGAL, FINANCIAL, TAX OR OTHER PROFESSIONAL ADVISOR(S).

The GRF tokens (as defined in this Whitepaper) are not intended to constitute securities in any jurisdiction. This Whitepaper does not constitute a prospectus or offering document of any sort and is not intended to constitute an offer of securities or a solicitation for investment in securities in any jurisdiction.

This Whitepaper does not constitute or form part of any opinion or any advice to sell, or any solicitation of any offer by the distributor or issuer of the GRF tokens to purchase any GRF tokens nor shall it, or any part of it, nor the fact of its presentation, form the basis of or be relied upon in connection with any contract or investment decision.

The distributor or issuer of the GRF Tokens likely will most likely be Graft Tokens, Inc., a Delaware corporation (“[Graft Payments](#)”), and all proceeds of sale of the GRF tokens will fund Graft Blockchain, Inc. and general businesses and operations.

No person is bound to enter into any contract or binding legal commitment in relation to the sale and purchase of the GRF tokens, and no cryptocurrency or other form of payment is to be accepted based on this Whitepaper.

Any agreement relating to the sale and purchase of GRF tokens is to be governed by the Graft ICO Terms of Sale or such other agreement or document as Graft Payments may require (collectively, the “[Purchase Documents](#)”) and no other document, (including this Whitepaper). If there is any inconsistency between the Purchase Documents and this Whitepaper, the Purchase Documents shall govern.

You are not eligible to purchase any GRF tokens in the “[GRF Sale](#)” (the sale of GRF tokens, as referred to in this Whitepaper) if you are a citizen, resident (tax or otherwise) or green card holder of the U.S., unless you qualify as an “accredited investor”.

No regulatory authority has examined or approved of any of the information set out in this Whitepaper. No such action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction. The publication, distribution or dissemination of this Whitepaper does not imply that any such applicable laws, regulatory requirements or rules have been complied with.

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REPRESENTATIONS AND WARRANTIES BY YOU

By accessing or accepting possession of any information in this Whitepaper or any part thereof, you represent and warrant to Graft Payments and its affiliates as follows:

1. you agree and acknowledge that the GRF tokens do not constitute securities in any form in any jurisdiction;

2. you agree and acknowledge that this Whitepaper does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities in any jurisdiction or solicitation for investments in securities and you are not bound to enter into any contract or binding legal commitment (including the Purchase Documents) and no cryptocurrency (including the GRF tokens) or other form of payment is to be accepted based on this Whitepaper;

3. you agree and acknowledge that no regulatory authority has examined or approved of the information set out in this Whitepaper, no action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction by Graft Payments or its affiliates in connection with the dissemination of this Whitepaper, and the publication, distribution or dissemination of this Whitepaper to you does not imply that any applicable laws, regulatory requirements or rules have been complied with;

4. you agree and acknowledge that this Whitepaper, the undertaking and/or completion of the GRF Sale, or future trading of the GRF tokens on any cryptocurrency exchange, shall not be construed, interpreted or deemed by you as an indication of the merits of Graft Payments, the GRF tokens or the GRF Sale;

5. the distribution or dissemination of this Whitepaper, any part thereof or any copy thereof, or the acceptance of the same by you, is not prohibited or restricted by any laws, regulatory requirements or rules applicable to you, and where any restrictions in relation to possession are applicable, you have observed and complied with all such restrictions at your own expense and without liability to Graft Payments or its affiliates;

6. you agree and acknowledge that if you elect to purchase any GRF tokens, the GRF tokens are NOT to be construed, interpreted, classified or treated as:

- a. any kind of currency other than cryptocurrency;
- b. debentures, stocks or shares issued by any person or entity (whether Graft Payments or its affiliates), including any rights, options or derivatives thereof;
- c. units in a collective investment scheme;
- d. units in a business trust;
- e. derivatives of units in a business trust; or
- f. any other security or class of securities.

7. you are fully aware of and understand that you are NOT eligible to purchase any GRF tokens if you are a citizen of one of the countries listed in the section below titled “Notices for Particular Investors”;

8. you have a basic degree of understanding of cryptocurrencies, blockchain-based software systems, cryptocurrency wallets or other related token storage mechanisms, blockchain technology and smart contract technology;

9. you are fully aware and understand that in the case where you wish to purchase any GRF tokens, there are material risks associated with Graft Payments and its business, plans and operations, the GRF tokens, and the GRF Sale;

10. you agree and acknowledge that none of Graft Payments nor its affiliates is liable for any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including, but not limited to, loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this Whitepaper or any part thereof by you; and

11. all of the above representations and warranties are true, complete, accurate and non-misleading from the time of your access to and/or acceptance of possession of this Whitepaper or any part thereof.

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This Whitepaper may contain forward-looking statements including, but not limited to, statements as to future operating results and plans that involve risks and uncertainties. The use of words such as “expects”, “anticipates”, “believes”, “estimates”, the negative of these terms and similar expressions identify forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Graft Payments to differ materially from any future results, performance or achievements expressed or implied by those projected in the forward-looking statements for any reason.

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RISKS AND UNCERTAINTIES

Prospective purchasers of GRF tokens should carefully consider and evaluate all risks and uncertainties associated with Graft Payments and its plans, business and operations, the GRF tokens and the GRF Sale, including all information set out in this Whitepaper and the Purchase Document prior to any purchase of GRF tokens. If any of such risks and uncertainties develops into actual events, the business, financial condition, results of operations and prospects of Graft Payments could be materially and adversely affected. In such cases, you may lose all or part of the value of the GRF tokens.

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For residents of the People’s Republic of China (which, for the purposes of this Whitepaper, does not include Hong Kong, Macau, and Taiwan) only: GRF tokens may not be marketed, offered or sold directly or indirectly to the public in the People’s Republic of China (the “PRC”) and neither this Whitepaper nor the Purchase Documents, which has not been submitted to the PRC securities and regulatory commission, nor any offering material or information contained herein relating to GRF tokens, may be supplied to the public in the PRC or used in connection with any offer for the subscription or sale of GRF tokens to the public in the PRC. The information contained in this Whitepaper and the Purchase Documents will not constitute an offer to sell or an invitation,

advertisement or solicitation of an offer to buy any GRF tokens within the PRC.

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For residents of South Korea, Japan, Canada, or any country subject to sanctions from the United States: Due to the regulatory uncertainty within certain jurisdictions, including the above-mentioned jurisdictions, relating to cryptocurrency and token sales, some investors may not be eligible to purchase GRF tokens. Please note that this list of ineligible jurisdictions may be updated or expanded without notice. If you are a resident in one of these countries, or if the system rejects your participation, please do not attempt to purchase GRF tokens.

Terminology

Graft

1. Global Real-time Authorizations and Fund Transfers - decentralized global open platform for processing real-time authorizations and settlements of merchant payments and fund transfers using untraceable blockchain, decentralized API, and open community of service brokers that support variety of payment and payout methods including cryptocurrencies, cryptographic tokens, and traditional credit cards and bank transfers.
2. A plant that has a twig or bud from another plant attached to it so they are joined and grow together.[4] Grafting is an advanced technique that botanists, farmers, gardeners, and hobbyists use to add living tissue from one plant to another. Why would anyone go to all this trouble of attaching two bits of plants together? Well, it turns out that this technique has a lot of benefits. Growers can choose different parts of plants that have particular attributes, and attach them to other plants. Let's say a certain tree has really strong roots, but its fruit isn't so great. This tree would make great rootstock, or a plant selected for its roots. It can be combined with another tree that doesn't have good roots, but produces wonderful fruit. Plants that are selected for their stems, flowers, or fruit are called the scion. A desirable scion can be grafted onto a strong rootstock to create a truly great tree. This is pretty common practice in the gardening industry. It allows for plants to grow in many new areas, and gives us access to more products.[5]

Supernode

Independent, always-on server running the combined implementation of Graft blockchain node and Graft DAPI node, maintaining the blockchain via block mining, processing of real-time authorization and settlement DAPI calls between buyers and merchants, and hosting third party services such as instant cryptocurrency exchange within the Graft

network, credit/debit card acceptance, and merchant payouts in local currency. Supernode is maintaining the network using combined Proof of Work/Proof of Stake algorithm.

Authorization Sample

Selected group of trusted supernodes that approve payments in real time and guarantee that the buyer cannot spend the same money more than once before the transaction is written into the blockchain.

Relay Supernode

The supernode that facilitates the merchant transaction by communicating with the merchant POS or/and the buyer's wallet on one side, and the rest of the authorization sample supernodes on the other side.

Service Broker

Graft protocol extension hosted on supernode or a group of supernodes and owned by the supernode operator. Service Brokers implement special additional features that cannot be automatically executed by fully decentralized network or/and requires special regulation framework such as PCI DSS[6] or NIST 800-63-3.[7] Examples of service brokers are credit card payment acceptance broker and bank payout transfer broker.

Domain

Virtual decentralized independent "merchant account" where merchants can set up authorization and payout rules and triggers that will have an affect on transactions for that specific merchant.

GRF

Native cryptographic tokens supported by Graft blockchain and used for real-time payment authorizations, transfers of funds, and settlement between buyers and merchants

DAPI

Decentralized stateless API implemented by supernodes in order to support lightweight client apps such as Graft Wallet, Graft Point of Sale, and third party point of sale apps and shopping cards. Graft SDK Source code provided to third party point of sale and wallet application vendors for facilitating an integration with Graft.

Graft Wallet

“Lite” desktop, mobile, and browser extension apps that allow making payments and fund transfers using graftcoins, other major cryptocurrencies, cryptographic tokens, or credit/debit cards by calling Graft DAPI.

Graft Point of Sale

“Lite” desktop and mobile apps that allow merchants to accept payments in graftcoins, bitcoins, altcoins, or credit/debit cards; issuing and redeeming gift certificates, loyalty reward points, and store credits; configure settlement payouts in graftcoins, bitcoins, altcoins, or local fiat currencies.

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