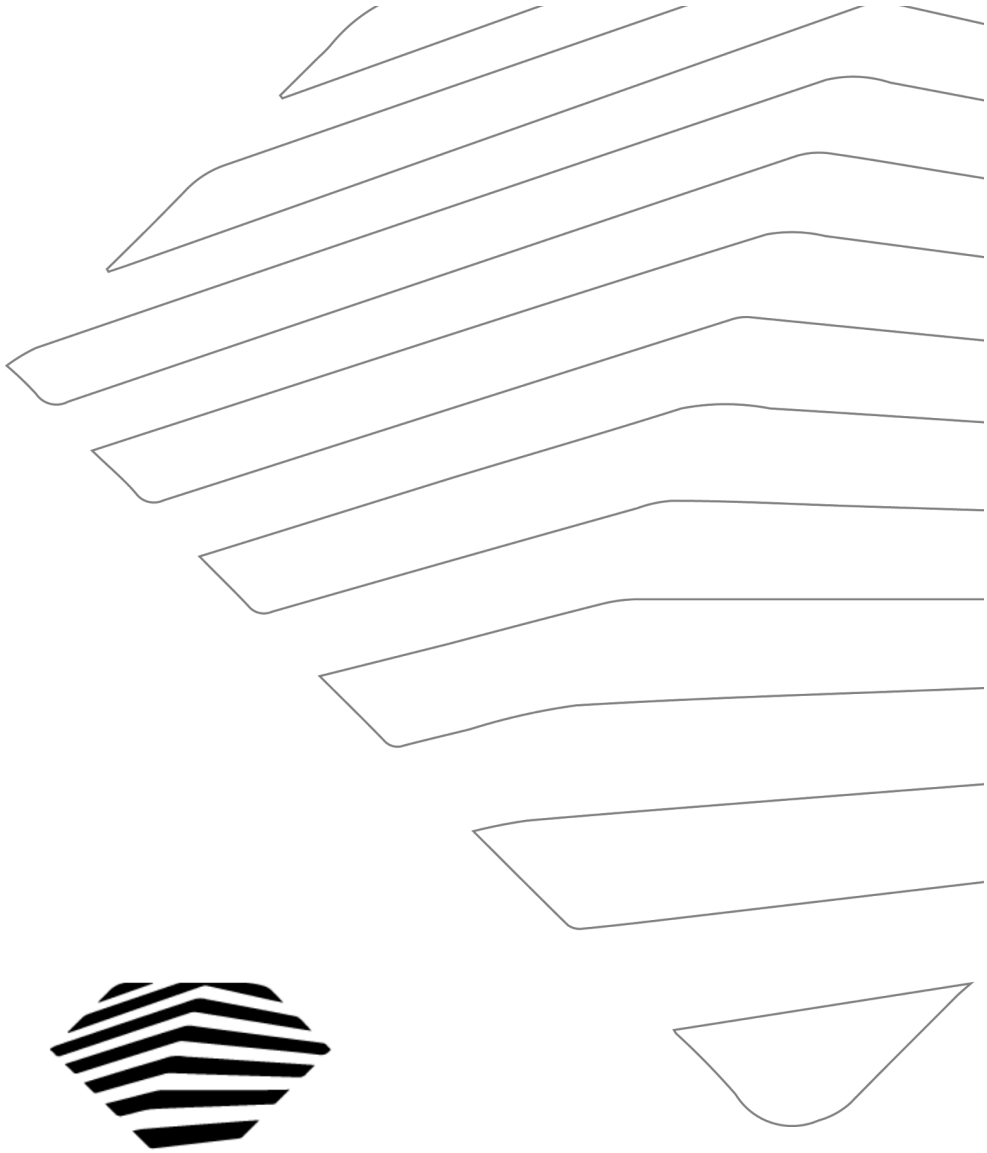

Canonical

CANONICAL CREDIT
WHITE PAPER

WORKING DRAFT 0.01

Table of Contents

Executive Summary

The global credit system is broken. Credit reporting agencies (CRAs), whose role is to evaluate trustworthiness, have demonstrated that they are error-prone, insecure, exclusionary, and unworthy of public trust.

The credit reporting industry's resistance to innovation has inhibited economic growth and risked the financial stability and security of millions.

26 percent of Americans currently have errors on their credit report, collectively costing as much as $600B.[1] Security breaches are common. In early 2017, after years of willfully ignoring weaknesses in its data security,[2] Equifax fell victim to a hack that stole the personally identifiable information (PII) of 146 million Americans.[3] Meanwhile, nearly 20 percent of Americans are credit-invisible or unscorable by CRAs.[4] The credit system has become a financial burden that perpetuates systemic inequity.

A fully inclusive global financial system requires an accurate, secure, and decentralized source of credit information. Blockchain technologies, whose chief innovation has been the decentralization of trust, must inevitably replace centralized credit systems.

Canonical proposes a distributed software system that uses the Ethereum blockchain to create a decentralized and publicly auditable repository of both traditional and non-traditional credit data. Canonical democratizes credit data by giving consumers uninhibited access to and control of their credit data. Consumers will be notified when changes to their data are made, may easily dispute records, may choose to permit or deny access to their credit data and will be compensated for the use of credit information.

By democratizing credit data, Canonical aligns credit data storage incentives with consumer interests and provides the foundation upon which a truly safe, accurate, transparent, and inclusive credit system may be built.

[1] Assuming an average credit score error of 20 points and average FICO score, this figure represents the interest increased expense of a 30 year fixed mortgage. Source: http://www.myfico.com/credit-education/calculators/loan-savings-calculator/. Assumes average mortgage rate of $196,014: https://www.experian.com/blogs/ask-experian/how-much-americans-owe-on-their-mortgages-in-every-state/

[2] https://www.forbes.com/sites/thomasbrewster/2017/09/08/equifax-data-breach-history/#2522490b677c

[3] http://www.businessinsider.com/equifax-hack-millions-more-affected-2017-10

[4] http://files.consumerfinance.gov/f/201505_cfpb_data-point-credit-invisibles.pdf

Introduction

This paper proposes Canonical, a distributed software system built utilizing the Ethereum blockchain that functions as a publicly accountable credit utility of the global financial system. Canonical accurately collects and safely stores traditional and non-traditional credit data including consumer identity and account information. Credit event history, including consumer[5] disputes and credit file requests, are obfuscated and stored publicly on Ethereum, preserving anonymity while enabling public transparency and accountability.

Canonical provides a consumer-facing client application that offers consumers unprecedented ownership of their credit data while ensuring the validity of account information. With this application, consumers can control access to their credit file, and can easily dispute records to ensure accuracy.

Canonical compensates data furnishers and other participants in the Canonical ecosystem with a native utility token, called Canon Token. By making data furnishers part owners in the system, they become incentivized to provide accurate information, thus aligning incentives of consumers, furnishers, and data requesters while creating a competitive market for credit reporting and risk analysis.

While Canonical will have global reach, its first launch and initial user acquisition will be in the United States. Therefore, much of the background information in this paper focuses on the American credit system.

Background

To make a loan, lenders must be able to evaluate the trustworthiness of a borrower. As societies have grown in size and complexity, initially lenders and then insurance companies, employers, and landlords have increasingly relied on credit reporting agencies (CRAs) including Equifax, Experian, and TransUnion, to determine identity and trustworthiness. These agencies compile credit data into reports that attempt to approximate trustworthiness, but their repeated failure to maintain the security and accuracy of this data has proven that the CRAs we rely on to evaluate trustworthiness are themselves untrustworthy.

Overview of the U.S. Consumer Credit System

U.S. credit bureaus began as local non-profit associations and cooperatives,[6] but in the 1950s, Equifax, Experian, and TransUnion started to consolidate local operations to form national networks with standardized products.[7] Today, Equifax, Experian, and TransUnion operate as a regulated oligopoly.[8]

The role of CRAs is to collect and securely store data material to the evaluation of consumer trustworthiness. The understanding of which data is material has evolved since their inception. Before 1970, being black, gay, a single woman, having strong political opinions, drinking, philandering, or a person's 'moral character' would affect their credit score.[9] [10] In 1970, the Fair Credit Reporting Act (FCRA) limited the scope of credit data with anti-discrimination requirements. CRAs now collect data about repayment history, the amount of credit available and used, information from debt buyers and collectors including medical debt, and public information including bankruptcies, liens, and judgments.[11] Data collection practices have evolved with the widespread adoption of the internet. CRAs now collect consumer digital footprints[12] including social media data,[13] [14]as well as income data.[15]

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[5]Consumer are defined as the individual associated with a particular credit file
[6] http://siteresources.worldbank.org/INTWDRS/Resources/477365-1257315064764/2429_olegario.pdf
[7] http://lsb.scu.edu/faculty/creditreporting.html
[8] https://www.nytimes.com/2017/09/22/your-money/equifax-breach.html?_r=0
[9] http://www.huffingtonpost.com/entry/equifax-credit-bureaus-reform_us_59b95627e4b0edff97187e7d
[10]https://www.nytimes.com/2017/09/21/opinion/get-rid-of-equifax.html?rref=collection%2Ftimestopic%2FCredit%20Scores&action=click&contentCollection=your-money&region=stream&module=stream_unit&version=latest&contentPlacement=1&pgtype=collection
[11] http://files.consumerfinance.gov/f/201604_cfpb_list-of-consumer-reporting-companies.pdf
[12] https://www.nytimes.com/2017/09/28/us/politics/immigrants-social-media-trump.html?_r=0; https://www.ffiec.gov/press/pr121113.htm
[13]https://www.forbes.com/sites/moneybuilder/2015/10/23/your-social-media-posts-may-soon-affect-your-credit-score-2/
[14] https://www.nytimes.com/2017/09/23/business/equifax-data-breach.html?_r=0

CRAs create a financial identity for millions of individuals. [16] This identity takes the form of a credit report and credit score which play a role in determining where people work,[17] live,[18] and go to school,[19] as well as how much they pay for insurance,[20] utilities, [21] and debt.

Although critical to economic well-being, CRAs felt limited responsibility towards consumers until the FCRA. The FCRA gave consumers the right to see their credit score once annually and to dispute accounts, but neither the FCRA nor the subsequent regulations governing CRAs did much to change the attitude of these bureaus. Today, CRAs exist in a regulatory grey area, jointly supervised by the CFPB and the FTC who have limited ability to impose fines.[22]

CRAs occupy a unique position in the American economy. They are an oligopoly regulated by a public authority that has little ability enforce regulation.[23] Meanwhile, these CRAs have spent prolific sums in lobbying efforts that steer and reduce regulatory oversight.[24] Leveraging this market power, CRAs operate a business model that has banks supply data for free and then sells that data it back in the form of credit reports at a 90 percent margin.[25]

The Cost of Oligopoly

CRAs, who face a vacuum of competition and minimal incentive to improve, have demonstrated indifference to the welfare of those whose financial wellbeing depends on them. This apathy has resulted in the exclusion of many from the financial system, a proliferation of inaccuracies on credit reports, and rampant security breaches.

Nearly 20 percent of adult Americans are either unscorable or are credit-invisible.[26] These individuals predominantly represent vulnerable populations. Most immigrants, 15 percent of black and Hispanic Americans, and 30 percent of Americans living in low-income neighborhoods are unscorable or credit-invisible and, as a result, have been wholly excluded from the financial system.[27] Without credit reports, these populations turn to predatory lenders, are restricted from educational opportunities, and have increased difficulty finding housing. [28] Unscorability and credit-invisibility prohibit these communities from economic advancement.

Another 26 percent of adult consumers have errors on credit report, in part due to the use of suspect and opaque data mining techniques.[29] [30] While the FCRA created a process for disputing credit errors, the process is lengthy, onerous, and often either ineffectual or has an adverse impact on the consumer. During the dispute process, the disputer's credit score is negatively affected, and the process itself limits their ability to maintain good credit in the future. [31]Only 20 percent of people who dispute errors on their reports see a change.[32] Consumers with lower levels of education and income are disproportionately affected by credit report errors,[33] and while these errors can cost

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[15] https://www.bloomberg.com/news/articles/2017-10-02/equifax-has-amassed-salary-details-for-people-at-7-100-companies; http://www.nytimes.com/2013/07/17/us/politics/credit-reporting-agency-hired-to-verify-incomes-for-insurance-subsidies.html

[16] see: https://muse.jhu.edu/article/236961/pdf

[17] https://www.forbes.com/sites/kerryhannon/2012/01/31/bad-credit-can-cost-you-a-job/#2424aa447e9a

[18] https://twocents.lifehacker.com/how-to-rent-an-apartment-when-your-credit-history-is-po-1566847914

[19] https://som.georgetown.edu/prospectivestudents/financialaid/programs/impactofcredit

[20] http://www.gmacinsurance.com/legal/creditfaq.asp

[21] https://www.wsj.com/articles/SB109469015834513166

[22] https://www.nytimes.com/2017/09/08/business/equifax.html

[23] https://www.nytimes.com/2017/09/20/business/equifax-hack-penalties.html

[24] http://www.npr.org/2017/09/21/552427628/equifax-breach-puts-credit-bureaus-oversight-in-question; http://www.huffingtonpost.com/entry/us-house-considers-trojan-horse-bill-to-weaken-credit_us_59b03c6be4b0c50640cd6411; also see: http://www.uspirg.org/blogs/eds-blog/usp/if-cfpb-weakened-won%E2%80%99t-credit-bureaus-run-amok-again;

[25] https://www.youtube.com/watch?v=lZzqUnQg-Us

[26] http://files.consumerfinance.gov/f/201505_cfpb_data-point-credit-invisibles.pdf

[27] http://files.consumerfinance.gov/f/201505_cfpb_data-point-credit-invisibles.pdf

[28] https://www.cbsnews.com/news/federal-agency-cracks-down-on-payday-lenders/

[29] http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1122&context=yjolt

[30] http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1122&context=yjolt

[31] https://qz.com/1079490/the-equifax-breach-is-proof-its-time-to-overhaul-the-credit-bureau-industry/

[32] https://www.ftc.gov/news-events/press-releases/2015/01/ftc-issues-follow-study-credit-report-accuracy

[33] http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1122&context=yjolt

someone a potential house or job, CRAs have mostly succeeded in ensuring they are not liable for these mistakes.[34] They have, in fact, profited from this deficient dispute process by charging fees to consumers for monitoring and freezing changes to their credit.[35] The proliferation of credit errors and the dispute process suggests a callous relationship to the financial well being of Americans.[36]

CRA databases retain a wealth of information that inevitably attracts the attention of hackers. Despite prodigious efforts to maintain security, they have a long history of data breaches. In March 2017, 146 million, or about 75 percent of consumer accounts, fell victim to a hack of Equifax.[37][38] This was not the first CRA security failure. Before Equifax, there was Experian in 2015,[39] Equifax, Experian, and TransUnion in 2013,[40] and Experian in 2012.[41] In 2016, a researcher found a cross site scripting security vulnerability, which went unaddressed for a year.[42] So long as the credit industry relies on access controls alone to protect its data, hacks will continue.

This exclusionary, error-prone, and insecure credit system operated by these CRAs prioritizes profits over consumer financial health and disproportionately affects vulnerable communities, perpetuating systemic inequity.

Blockchain Solution

The current credit system is a network wholly controlled by a corporate oligopoly whose interests conflict with the consumers whose data they store. This system results in exclusivity, inaccuracy, and insecurity. Blockchain technologies, whose chief innovation is the decentralization of trust, must inevitably replace centralized credit bureaus.

Canonical is a decentralized credit data software system built on the Ethereum blockchain that accurately collects and securely stores traditional and non-traditional credit information. At its core, Canonical acts as a data marketplace specialized for identity and credit history records. It employs a utility token called Canon Token which is used to compensate users of the system. Canonical additionally provides an application that gives consumers uninhibited access to and control of their data.

Blockchain technology enables Canonical to function as a public utility, creating a credit system with fully transparent and accountable governance. Blockchain provides a trustless environment for credit data that permits auditability of all changes to data while using advanced cryptography to ensure confidentiality of data rather than attempting security through inaccessibility. Automating the process through software is additionally less prone to human error and allows for redundancy of data stores, creating systemic resilience.

Using blockchain technology, Canonical enables joint custody of data between furnishers and consumers. This aligns furnisher and consumer incentive while promoting data accuracy.

Stakeholders

The three core participants in the Canonical system are:

1. **Data furnishers** including banks, collection agencies, educational institutions, etc.
2. **Data requesters** including banks, employers, landlords, etc.
3. **Consumers**, or people whose credit data is stored with Canonical

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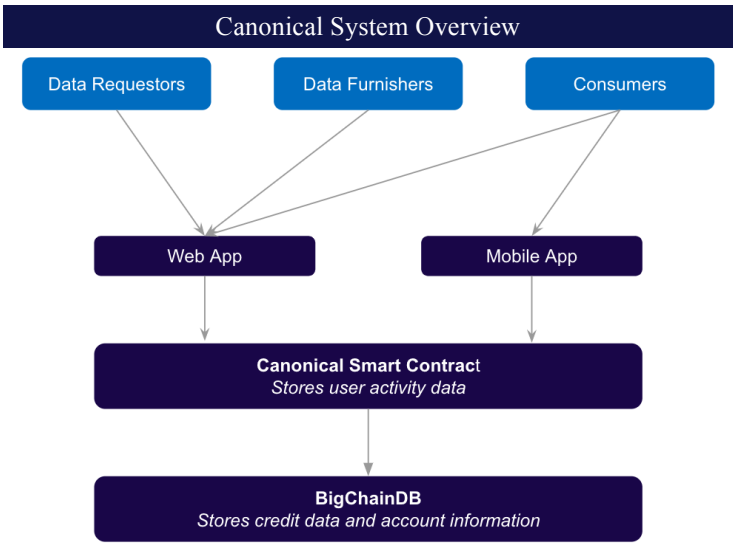
[34] http://www.cleveland.com/consumeraffairs/index.ssf/2013/09/cfpb_warns_creditors_theyre_ac.html
[35] https://qz.com/1079490/the-equifax-breach-is-proof-its-time-to-overhaul-the-credit-bureau-industry/
[36] Even proving to a CRA you're not dead is difficult. See: https://www.theverge.com/2015/9/16/9340511/perstin-experian-bank-death-credit-reporting
[37] https://www.nytimes.com/2017/10/02/business/equifax-breach.html?_r=0
[38] http://files.consumerfinance.gov/f/201212_cfpb_credit-reporting-white-paper.pdf
[39] https://www.law360.com/articles/499418/t-mobile-discloses-customer-data-breach
[40] http://www.crn.com/news/security/240150683/equifax-other-credit-bureaus-acknowledge-data-breach.htm
[41] https://www.tripwire.com/state-of-security/security-data-protection/4-credit-bureau-data-breaches-predate-2017-equifax-hack/
[42] https://www.forbes.com/sites/thomasbrewster/2017/09/08/equifax-data-breach-history/

Data Furnishers

Data furnishers provide credit data to the Canonical system in exchange for Canon Tokens. Invariably, every update to a consumer's credit history is disputable, in that it is open to review and protest by the subject of the update. However, all furnished data, whether disputed or not, is immutably stored by Canonical. In the event of a dispute that affects a credit report, a new time-stamped pointer to the latest version is added to the blockchain. Data furnishers provide data through integrations with Canonical's API.



Data Requesters

Requestors buy credit data from Canonical to better evaluate consumer trustworthiness. Requesters issue requests directly to the consumer, and, if approved, pay into the system with Canon Token in exchange for data. Requests are only approvable if a consumer has linked their identity using one of the client applications. Data requesters pull reports using existing reporting software or through the Canonical web portal.

While furnishers are predominantly requesters, not all requesters are furnishers. An example of a furnisher and requester is a bank who requests credit information from Canonical to underwrite a consumer loan, and then furnishes Canonical with the borrower's repayment history. An example of a requester who is not a furnisher is an employer who checks credit reports before hiring.

Consumers

Consumers are typified in two categories: on-app consumers and off-app consumers. On-app consumers have increased control over their data and are compensated with Canon Tokens for supplying it. However, Canonical stores credit data as supplied by data furnishers, for both on-app and off-app consumers. Consumers may dispute and approve access to data, but they may not change data unilaterally.

Credit Data

All data in Canonical are classified into two categories: disputable and approvable.

Disputable

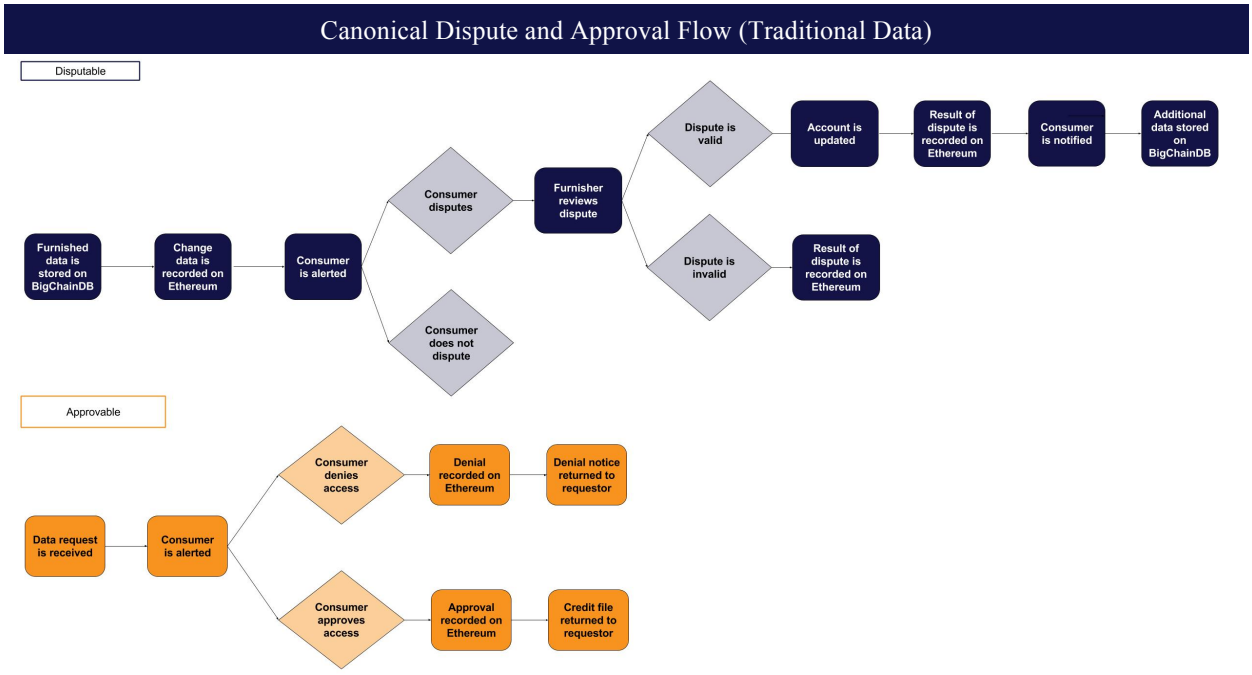
Disputable data is the bulk of all data stored on Canonical. All data in a credit file is disputable by the consumer, including identity information and consumer account history. Ease of disputation increases data accuracy and improves confidence in scores generated by the data. Dispute history is stored on the Ethereum blockchain. That history can be used to tune bad actors in the ecosystem - regulating customers who dispute valid records, and furnishers who consistently provide erroneous data.

Approvable

Approvable data is the record of access to the consumer's credit file. All credit file access takes the form of a request which is either approved or denied by the consumer. The approvable process obviates credit freezes. Approvable data requests and the results of those requests are stored on the blockchain.

Canonical stores this data in two distributed layers: the Ethereum blockchain and on BigChainDB. On the public Ethereum blockchain, Canonical stores an anonymized record of activity, including changes to disputable data, types of disputes, an obfuscated furnisher ID, an obfuscated requester ID, type of request, etc., as well as pointers to records in the database. Canonical stores the credit file including identity data, account data, public record data, and collection history data on a secure distributed database, BigChainDB.

The simplified dispute and approval processes are outlined below:



Interfaces

Consumers interface with Canonical through a web or mobile app. This app allows consumers to directly dispute items and to approve requests. Upon signing up, an identity verification process matches the consumer to the correct data file stored on Canonical. At this point, the consumer has the option of giving Canonical direct access to credit information from Experian, Equifax, and TransUnion in exchange for tokens. This access ensures the data stored on Canonical is complete. The app contains four core components:

1. A summary of credit information including debt-to-income ratio, credit limit, risk alerts, and a generalized 'Canon Score.' While a numerical indicator of the consumer's credit health, the Canon Score will be a rule of thumb and will not be used for credit underwriting.
2. An alert panel, on which the consumer can see a history of requests for credit file access, a history of disputes, and can toggle push notifications for alerts.
3. The full credit report which will be live updated, and contains all identity information, accounts, public records, collections, inquiries, and alerts and remarks on file.
4. A screen providing information on consumer rights under FCRA, EOCA, Dodd-Frank, etc.

Swifthereum

Mobile is an integral part of Canonical's consumer-facing strategy. Tools for dApps, however, have focused on web development. In an effort to expand the Ethereum ecosystem, to stimulate mobile development, and to begin the development of Canonical's mobile interface, Canonical, with the support of the Geth team, has created a native

Swift framework that encapsulates mobile Geth. The aim of this framework is to lower the barrier to entry for mobile developers that want to work with Ethereum by dramatically reducing the time of building native iOS apps.

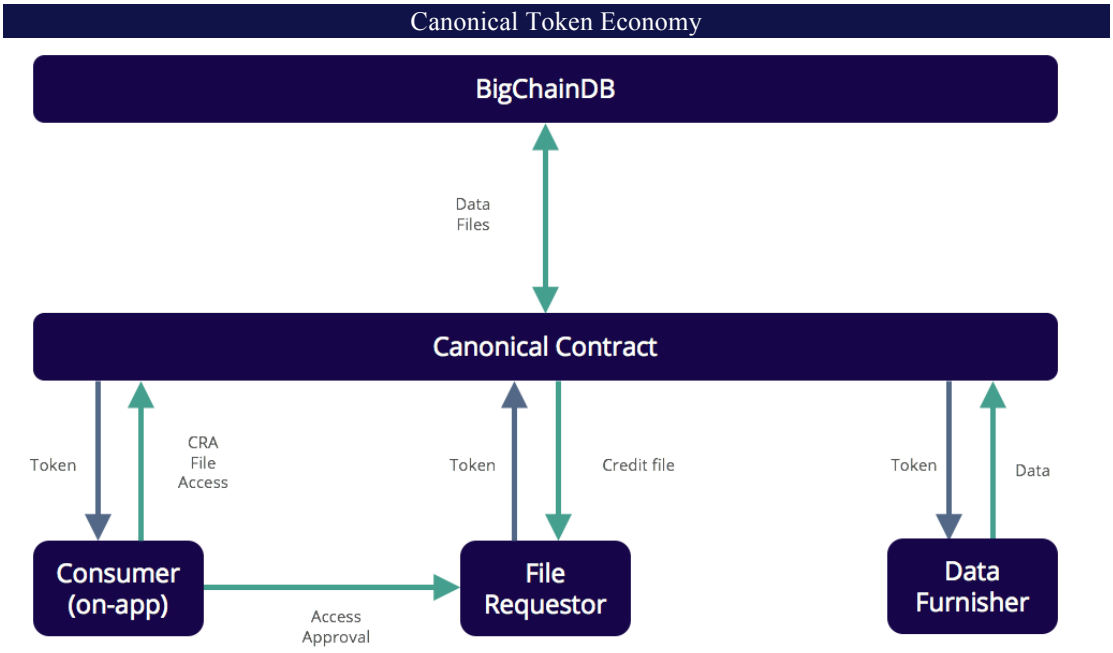
Swifthereum is open source and Canonical welcomes additions from the Ethereum community. The GitHub repo may be found here:

https://github.com/IndisputableLabs/Swifthereum

Token Economy

Canonical's token economy rewards participants and aligns incentives. The value of the token is proportional to the quality, accuracy, and security of the data contained in the application, and to the number of consumers on the application. Where in the existing credit system, furnishers predominantly provide data for free, with Canonical, furnishers are compensated with Canon Token which may be used to request data, reducing the cost of underwriting, or exchanged for fiat. Since furnishers are token holders, they become stakeholders in the system which incentivizes accuracy.

When consumers sign up to the app, they are offered tokens in exchange for access to verified CRA credit files.



Impact

Canonical's mission is to create an accurate, secure, transparent, and inclusive global finacial system, thereby reducing systemic economic inequality. Its impact goals may be summarized thus:

1. *To reduce the number of inaccuracies on credit reports, thereby facilitating greater access to credit, transportation, housing, employment, and education*
2. *To create the most secure repository of credit data ever*
3. *To create a publicly auditable credit data system, while preserving the anonymity of consumer data*

4. *To create the first globally inclusive repository of credit data, and the most nationally inclusive data system possible*

Canonical's impact will be evaluated predominantly using the data it stores, emphasizing how this application increases consumer financial security, stability, and mobility. Measuring this impact will use the existing credit system as a contrafactual. Impact metrics used will include:

- Accuracy:
    - *Number of disputes over time*
    - *Dollars saved per consumer due to accuracy vs. existing credit system*
- Security:
    - *Number of leaked accounts*
    - *Dollars saved per consumer due to reduction in hacks*
- Inclusivity:
    - *Number of credit files total, of underserved demographics, and in underserved markets, including change over time of credit made available to these demographics*

Canonical will be the largest database of financial activity in the world. This data will be used to measure global financial health in an unprecedented manner. Canonical will not only function as a catalyst of impact but will serve as a global barometer of impact.

Competition

Canonical's primary competitors are the existing CRAs: Experian, Equifax, and TransUnion. Other competitors include blockchain applications, IdPs that seek to support the functionality of CRAs. A number of P2P lenders develop alternative credit scoring mechanisms, but Canonical considers these primarily as future collaborators, not competitors.

The most material of Canonicals' competitors are detailed below:

Canonical's Competition					
Name	Description	Regional Focus	Assessment	Competition Type (1= direct; 5 = indirect)	Risk Level (1=high, 5=low)
Blockchain Applications					
Credit Evaluation					
Bloom	Decentralized credit scoring system on the blockchain	Global	While innovative and potentially a direct competitor, Bloom is a) highly ambitious in the scope and b) using credit assessment practices that are experimental, poorly tested, and incongruous with the existing credit system. While Bloom may ultimately add dimensionality to credit reporting and increase access to credit for underserved populations, it is unlikely that they will become foundational to a distributed credit reporting system	2	3
Blockmason	Focused on IdP; attempting to create an ethereum-based protocol to record credits and debits	Global	Blockmason appears to be a relativly direct competitor, but the whitepaper is poorly detailed and declines to specify whether Blockmason intends to import existing credit data onto the blockchain or merely provide a decentralized vehicle to record debt transactions. If the latter, there is little incentive for anyone to have this data stored on the blockchain; if the former, Blockmason poses a competative threat. Their whitepaper, however, suggests a poor understanding of the existing credit data system, including a failure to detail the actual contents of credit information they might keep and unrealistic expectations for market entry. Both of these facts suggest that Blockmason is not seeking to challenge the function of credit bureaus, but to simply provide an option for those bureaus to record credit information on the blockchain. The team, however, is interesting, and CAN believes it is important to keep a close watch on them - but expects little real competitive threat.	2	3
Riders	Looks at public wallet transaction history and attempts to evaluate reliability	Gobal	Rider is an indirect competitor that is using the blockchain to gather indicators of reliability which is used for credit evaluation; not working in traditional credit space but may be useful for CAN for gathering alt data	4	5
BanQ	IdP for unbanked / underbanked / financially excluded	Developing World	Focuses on developing identity for those without identity; no white paper but presumably using alt. data; less competitor more collaborator / prospective furnisher	5	5
CRAs					
CRAs	American credit bureaus	USA	Refer to background section of white paper for detailed assessment	1	1
GlobalID	IdP	USA	Intends to provide KYC & AML data while helping store and protect PII for banks. While not a direct competitor GlobalID could strengthen the CRAs position	5	2
CITIC	Chinese state owned investment company	Asia	Launched BCLC, blockchain based letter of credit system; while not directly competitive could indicate a move towards blockchain based credit system in china's future	4	4
KYCchain	Provides KYC service to businesses	Asia	Not a direct competitor, but attempts to improve accuracy, efficiency, and security of NCRAs in Asia	4	4
Government					
Nationalization of CRAs	Federal government nationalizes credit bureaus	USA	Due to political climate, cost, and potential risk to banking system, this option is very unlikely	2	5

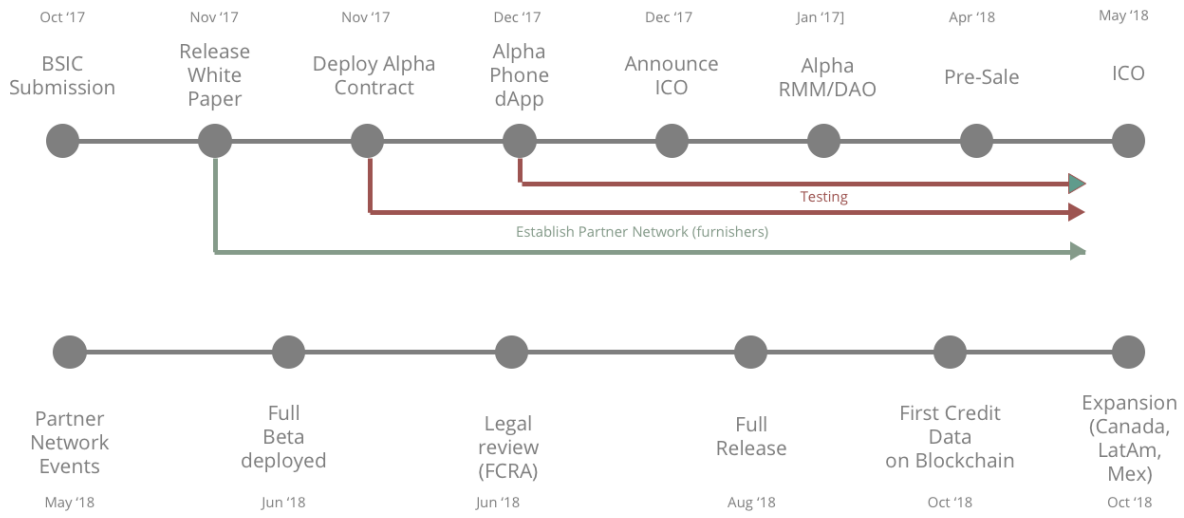
A detailed list of Canonicals' Competitive universe may be found here:

https://docs.google.com/a/indisputable.io/spreadsheets/d/1hCXA7-X_UWuKf50MFhSn228fMuyipLMCyAEnIFTou_k/edit?usp=sharing

Roadmap

Canonical plans an initial coin offering (ICO) in March 2018. The alpha contract will deploy in November 2017, shortly followed by alpha phone app launch, allowing five months for testing and validation before ICO. Canonical estimates eleven months from the release of its whitepaper until the first data is stored. In those eleven months, a network of partners will be established to build support and industry acceptance. Since no processes must change to expand internationally, this expansion will begin soon after the first data is stored. Canonical estimates that within two years, it will become a core component of the global financial system.

Canonical's Roadmap



Team

David Kuchar
Engineering, Sales

David is a PhD dropout, who studied Virtual Reality and Neuroscience before raising from Angelpad and Google Ventures to start LendFriend, one of the first financial inclusion products. He now applies his startup experience to help guide strategy for Fintech companies and NGOs.

Ronald Mannak
Engineering

Ronald is a PhD dropout, who researched trust in peer-to-peer networks and wrote several papers on the subject. Ronald has been active in the San Francisco crypto community since 2012 and has been mining crypto since 2013. Ronald has founded several hardware and mobile startups. His products have won many awards.

Harrison Dahme
Engineering, Product

Harrison has a rich background in the skillset required to build and run a lean startup, honed from a lifetime of working in (and mentoring) companies at every stage. Over the years he's found his stride in engineering, product management, design, research, data science, growth marketing, and emergent leadership. BSc (Artificial Intelligence & Mathematics) and MBA.

John Bruce
Engineering, Sales

John is an entrepreneur and leader with 12 years of experience in the SaaS / Enterprise Software space with formal background in Computer Science. Generalist with experience in both building and deploying software applications,

as well as managing pre and post sales teams. AngelPad founder (@Feedgen). Additional highlights: Monitoring (@SignalFx), Billing (@Zuora), Advertising (@FreeWheel) and Music (@Pandora).

Jonathan Gillon
Sales, Marketing

Jonathan is a sales and marketing executive with 10 years experience, and serial entrepreneur with two exits and four failures. Jon sold his marketplace startup, Roost to Spacer Inc. in November 2016. Prior to Roost, Jon co-founded and sold Dropertytax.com, and has been leading sales and BD teams at multiple startups in-between. Jon is an active angel investor, advisor, and blockchain community builder.

Malcolm Garland
Operations, Research

Malcolm has focused his career on the intersection of innovative technology and financial inclusion, both from an academic and investment perspective. Obsessed with blockchain's potential to create a more equitable global economy. BA in Philosophy, MBA in Sustainable Finance.

Sean Blake
Branding, Design

Sean is a creative, graphic designer, UX designer, and front-end developer with over 11 years of experience. Providing innovative and stunning designs that have generated millions of dollars in the tech and alarm system industry. Passion is focused on UX/UI on all devices and platforms.

Austin Bourdier
Engineering

Austin is an experienced professional web developer, who has spent extensive time learning and developing on solidity on the side. A blockchain enthusiast and evangelist, he's interested in anything that can move the world towards a more decentralized reality.